

MAYOR
Barbara Jo Blain-Bellamy

MAYOR PRO TEM
Justin D. Jordan



COUNCIL MEMBERS
K. Autry Benton
Amanda Butler
William M. Goldfinch IV
Beth Helms
Larry A. White

PLANNING & DEVELOPMENT DEPARTMENT

PLANNING COMMISSION AGENDA

Thursday, August 3, 2023 | 5:30 p.m.

Planning & Building Dept. Conference Room – 196 Laurel Street

I. CALL TO ORDER

II. MINUTES

- A. Approval of July 13, 2023 Planning Commission Meeting Minutes

III. PUBLIC INPUT

IV. OLD BUSINESS

A. ANNEXATION / REZONING REQUEST(S)

1. ***PREVIOUSLY DEFERRED***...(items IV.B.3 – IV.B.6 from July 13, 2023 agenda have been combined) Request to annex approximately 1,763 acres (+/-) of property located on or near the intersection of HWY 701 S and Pitch Landing Rd, Hwy 701 S and Wildair Circle, and Hwy 701 S, Pitch Landing Rd, and Blaze Trail (PIN 381-00-00-0003, 381-08-01-0006, 381-08-04-0009, 381-08-04-0010, 380-00-00-0038, 403-00-00-0001, 403-00-00-0002, and 403-00-00-0022), and rezone from the Horry County Highway Commercial (HC), Commercial Forest Agriculture (CFA), and Community Retail Services (RE2) districts to the City of Conway Planned Development (PD) district.

B. LAND DEVELOPMENT AGREEMENT

1. ***PREVIOUSLY DEFERRED***...Proposed development agreement by G3 Engineers and Shep Guyton (applicants) for development of property located on / near the intersection of Pitch Landing Rd and Hwy 701 S, known as the Warden Station tracts, containing +/-1763 acres, (PINs 381-00-00-0003, 381-08-04-0009, 381-08-04-0010, 380-00-00-0038, 381-08-01-0006, 403-00-00-0001, 403-00-00-0002, and 403-00-00-0022).

V. PUBLIC HEARINGS

A. ANNEXATION / REZONING REQUESTS

1. Request to annex approximately 4.48 acres of property located on Hwy 501 Business at 1136 Hwy 501 Business (PIN 367-11-03-0003), and rezone from the Horry County Highway Commercial (HC) district to the City of Conway Highway Commercial (HC) district.

MAYOR
Barbara Jo Blain-Bellamy

MAYOR PRO TEM
Justin D. Jordan



COUNCIL MEMBERS
K. Autry Benton
Amanda Butler
William M. Goldfinch IV
Beth Helms
Larry A. White

VI. BOARD INPUT

VII. STAFF INPUT

VIII. UPCOMING MEETINGS

<u>MEETING</u>	<u>DATE</u>	<u>TIME</u>	<u>LOCATION</u>	<u>ADDRESS</u>
City Council	August 7, 2023	4:00 p.m.	City Hall	229 Main St.
Community Appearance Board (CAB)	August 9, 2023	4:00 p.m.	Planning & Building Dept. Conference Room	196 Laurel St.
City Council	August 21, 2023	4:00 p.m.	City Hall	229 Main St.
Community Appearance Board (CAB)	August 23, 2023	4:00 p.m.	Planning & Building Dept. Conference Room	196 Laurel St.
Board of Zoning Appeals (BZA)	August 24, 2023	5:30 p.m.	Planning & Building Dept. Conference Room	196 Laurel St.
City Council	September 5, 2023	4:00 p.m.	City Hall	229 Main St.
Planning Commission (PC)	September 7, 2023	5:30 p.m.	Planning & Building Dept. Conference Room	196 Laurel St.

IX. ADJOURNMENT

CITY OF CONWAY
PLANNING COMMISSION MEETING
THURSDAY, JULY 13, 2023
Planning & Building Dept. Conference Room – 196 Laurel Street

Present: Danny Hardee, Kendall Brown, David Sligh, Ellen Watkins, Samantha Miller

Absent: Jessica Wise, Brian O’Neil, Virginia Norris

Staff: Jessica Hucks, Planning Director; Mary Catherine Hyman, Deputy City Administrator; Jasmin Waites Parker, City Attorney; Brent Gerald, Planner; June Wood, Public Information Officer; Tyler Swanson, Police Officer; Katie Dennis, Planning Concierge; Charlie Crosby IT; Anne Bessant, Planning Assistant

Others: Barbara Goodman, Jack Goodman, Connie Hicks, James Hicks, Dana Natale, Maryann Massengill-Black, Walter Johnson, Suzette Johnson, Mike Ziegler, Cheryl Strunge, Val Grassi, Joe Grassi, John Polivitch, Harold Phillips, Henry Thomas, Michael Visnich, Annette Lawrance, Janice Skalski, Jim Skalski, Aphonso McCray, Marc Schofel, Charles Jordan, Karen White, Bob Parro, Clint Richarson, Martha Conniff, Jane Realmonte, Caroline Richardson, Pamela Diclintio, Mark Hoban, Nancy Hoban, Tim Wolfe, D Huggins Wolfe, Bobbi Ann Dragone, Wanda Dillard, Jordan Dillard, Cheryl Jalbert, Brandon Truesdale, Roger Colby, Felix Pitts, Paul Ridgaud, Michelle Ridgaud, Robert Posner, Mary Posner, Elin Lindsay Kemp, Connie Kemp, Patt Quin, Shep Guyton, Joe Ellzondo, Candy Deane, Dick Twigg, Constance Whallen, Steve Trull, Ashley Proctor, Dean Shank, Robert Gardiner, Linda Chang, Carol Restauri, Wayne Finney, Mary Nelson, Rodney Harris, & others

I. CALL TO ORDER

Commissioner Sligh called the meeting to order at approximately 5:30 p.m. Sligh mentioned the absence of both Chairman and Vice-Chairperson. Hardwick made a motion to elect Sligh to Chair the meeting and seconded by Watkins. The vote in favor was unanimous and the motion carried.

II. APPROVAL OF MINUTES

Hardee made a motion, seconded by Hardwick to approve the May 17, 2023 Workshop minutes and the June 1, 2023 minutes as written. The vote in favor was unanimous. The motion carried.

III. SUBDIVISIONS

A. Colonial Farms, phases 1& 2 – requesting street name approval and preliminary plan approval (located on Hwy 548).

Hucks stated that the applicant, David Norris, DN Engineering Inc., request preliminary approval of phases 1 and 2 of the subdivision and development of PIN: 326-00-00-0027 and 326-00-00-0047, located on S.C. Hwy 548, with frontage on and access to S.C. Hwy 501.

Phase 1 is a 131-lot single-family subdivision, located on: PIN 326-00-00-0027. The tract contains: 65.03-acres, which would be a calculated gross density of: 2.01 units per acre. This parcel is zoned: R-1, which requires a minimum lot size of: 7,500 sq. ft. and 75-ft. minimum lot width for single-family lots. This phase provides a total 28.34-acres of Open Space with 14.28-acres excluding; ponds, wetlands and buffers. Phase 1 proposes two points of access onto S.C. Hwy 548 and a connection to the roadway system in Phase 2, as well as a stub-out to adjacent PIN: 327-00-00-0035.

Phase 2 is a 97-lot fee-simple townhome development, located on PIN: 326-00-00-0047. The tract contains: 19.12-acres, which would be a calculated gross density of: 5.07 units per acre. This parcel is zoned: R-2, which requires a minimum lot size of: 2,000 sq. ft and an 18-ft. minimum lot width for townhome lots. This phase provides a total 3.30-acres of Open Space with 2.80-acres excluding; ponds, wetlands and buffers. Phase 2 proposes two additional points of access; one on S.C. Hwy 548 and another on S.C. Hwy 501 and will provide connectivity for Phase 1, as well as a stub-out to adjacent PIN: 326-00-00-0029.

Upon completion of both phases, this development will have: 228 residential units with four points of access and inner-connectivity provided to adjacent parcels both on the east and south of the development.

In September 30, 2019 the tracts were separated, while still in Horry County, August 16, 2021 a sketch plan for the entire project was submitted for review, December 20, 2021 both tracts were annexed into and rezoned by: The City of Conway, December 14, 2022 preliminary plans were submitted for Phase 1, January 31, 2023 preliminary plans were submitted for: Phase 2, May 26, 2023 revised plans were submitted for: Phase 2, and on June 7, 2023 revised plans were submitted for Phase 1. The plans are still being reviewed by the Technical Review Committee (TRC).

The applicant is requesting approval of the following street names. Horry County has already reserved these names for this development: **Colonial Farms, Dissident, Dragoon, Freedom, Haversack, Little Mill, Old Wagon, Parapet, and Skirmish**. The suffixes for the street names were intentionally left off to allow for any subsequent changes between now and preliminary approval by TRC. City Council is required to approve the names of subdivisions / developments. The name of this development is scheduled for consideration by Council at their July 17th meeting.

If Planning Commission recommends approval of the applicant's requests, staff recommends that it be contingent upon subsequent review and approval by the Technical Review Committee (TRC).

Clint Richardson, Beverly Homes was present to answer any questions.

Sligh made a motion to recommend approval of the preliminary plan for Colonial Farms, as well as approval of all the street names presented. Hardwick seconded the motion and the motion carried unanimously.

IV. PUBLIC HEARINGS

A. REZONING REQUESTS

1. **Request to rezone approximately 15.61 acres of property located at 300 Bellamy Ave (PIN 383-00-00-0381) from City of Conway Institutional (IN) to High-Density Residential (R-3).**

Hucks stated that on May 23, 2023, the applicants submitted a rezoning application for the subject property, located on Bellamy Lane. The property is currently zoned Institutional (IN). The property is accessed via Bellamy Lane, an entrance off Lonestar Street and within Commerce Plaza; a primarily industrial area.

The property was annexed into the City limits in 2017 as Institutional (IN), in order to facilitate the development of student housing. Per Article 4 – Use Tables, of the UDO, student housing is identified as an “accessory use” to a college or university. Some of the student housing developments along HWY 544 are zoned IN as well for this reason. However, current staff has come to interpret this “use” as only being permitted in conjunction with a principal use on the same property in which the student housing is proposed to be constructed (i.e. dormitory). Construction of the Bellamy Student Housing development began in 2018, and the units were issued a certificate of occupancy in the same year.

The applicants have not specified a reason for the rezoning, other than that the proposed buyer(s) are concerned with the residential use of the property under the current zoning, as they intend to rent entire units to families (lease entire units), rather than to lease individual bedrooms to college students. However, the zoning of the property does not dictate “who” the units can be leased to. Evidence suggests that since the buildings were completed, the units have been leased to anyone who qualifies, not just college students.

Per *Section 3.2.5* of the UDO, the intent of the High-Density Residential (R-3) district is to provide areas for high-density attached, detached, semi-attached, and multifamily residential development in the City of Conway and to prohibit uses that would substantially interfere with the development or continuation of residential structures in the district.

The property is directly adjacent to Commerce Plaza, with parcels zoned City Heavy Industrial (HI). Property behind the development is zoned Horry County CFA and property beside the development is zoned Horry County PUD and MA2 (a manufacturing district).

The future land use map of the Comprehensive Plan also identifies the property as being High-Density Residential (R-3).

While staff supports the City’s Future Land Use Map of the Comprehensive Plan, there are concerns that some of the existing uses (businesses or properties) within the commerce plaza industrial area will become legal-nonconforming, based on their distance from the subject property, as there are certain uses that must be a minimum distance from residentially zoned property. For example, per *Section 5.1.24* of the UDO, tattoo parlors and body piercing establishments are required to be located a minimum of 600-ft from all residential zoning districts. If the subject property is rezoned to R-3, an existing tattoo parlor that directly abuts the property will become legal-nonconforming. The existing business can continue, but if it were to cease operating at the location for 180 days or longer, it cannot be re-established at the current location, nor can any other use that is required to be a certain distance from residentially zoned property.

Staff recommends that Planning Commission give a thorough review of the request and make an informed recommendation to Council after said review.

Charles Jordan Jr., agent for applicant, was present and further explained the request.

Barbara Goodman, Michael Visnich, and Gina Patron spoke with concerns during public input.

Hardee made a motion, seconded by Brown, to close public input. Motion carried unanimously.

Sligh made a motion to recommend approval for this request to City Council as presented. Hardee seconded the motion and the motion carried unanimously.

B. REZONING/ANNEXATION REQUESTS

- 1. Request to annex approximately 7.18 acres of property located on HWY 501 [PIN's 338-09-02-0008 (2197 Church Street), 338-09-02-0009, 338-09-02-0010 (2199 Church Street), 338-09-02-0011 & 338-09-02-0014 (2201 Church Street)], and rezone from the Horry County Highway Commercial (HC) to City of Conway Highway Commercial (HC).**

Hucks stated that in May, the applicant submitted annexation and rezoning applications for the subject property, located on HWY 501. The property is currently in Horry County's jurisdiction, zoned Highway Commercial (HC).

The applicant is seeking to annex the property into the City limits to facilitate development of commercial/retail establishments. Staff has reviewed one conceptual plan of the proposed layout, and comments regarding the conceptual plan were sent back to the applicant last month. The conceptual (sketch) plan that was reviewed by TRC in April is included in your packet.

One of the current uses of one of the properties is the Roadrunner Antiques store.

Per *Section 3.2.10* of the UDO, the intent of the Highway Commercial (HC) district is to provide compatible locations to serve the automobile-oriented commercial activities in harmony with major highway developments, reduce traffic congestions and to enhance the aesthetic atmosphere of the City.

The properties are surrounded by property in the City limits, already zoned Highway Commercial. The High School, located on the other side of the HCS Transportation office, is zoned Institutional (IN). Property behind these parcels is zoned Conservation Preservation (CP); likely due to the proximity of the Crabtree Swamp in relation to these parcels.

The future land use map of the Comprehensive Plan identifies the properties with frontage along HWY 501 as HC and the remaining parcel (PIN 338-09-02-0014) as HC and Conservation Preservation (CP), as this parcel is within the AE flood zone and contains wetlands.

Per *Section 3.2.15* of the UDO, the intent of the Conservation Preservation (CP) district is to provide needed open space for general outdoor and indoor recreational uses, and to protect environmentally sensitive areas and flood prone areas from the encroachment of any residential, commercial, industrial, or other uses capable of adversely affecting the relatively undeveloped character of the district.

Staff supports the City's Future Land Use Map zoning classifications. Earlier this year, Council passed an ordinance that addressed the split zoning of parcels. In general, split-zoning is not permitted. However, in cases where the Future Land Use Map identifies parcels (or portions) as Conservation Preservation (CP) which are seeking annexation and/or rezoning of property and/ or containing environmentally-sensitive areas (i.e. flood zones, flood ways, wetlands), Planning Commission may recommend to council zoning these parcels

(or portions containing the environmentally-sensitive areas) as Conservation Preservation. This language is found in *Section 6.1.14* of the UDO; a copy of which is included with the packet.

The City's Future Land Use Map identifies PIN 338-09-02-0014 (also the largest parcel included in this request) shows the entire parcel as CP.

Per the conceptual plan submitted by the applicant, approximately 3.02 acres of PIN 338-09-02-0014 is within a flood zone or contains wetlands, leaving approx. 2.2 acres of the parcel that could be zoned HC upon annexation. Should split zoning of the parcel be recommended, the final determination of acreage to be zoned CP would be determined via a survey and/or wetlands delineation. Additionally, per the conceptual plan, no development is proposed to occur in the wetlands that were identified. There does appear to be a portion of the parking lot proposed for this parcel to be within the X-shaded area (flood zone) but not the AE flood zone.

Note: The applicant has requested that the entirety of all the parcels be zoned HC upon annexation.

Staff recommends that Planning Commission give a thorough review of the request and make an informed recommendation to City Council.

Mike Zeigler, agent for owners was present and further explained the request.

There was no public input.

Sligh made a motion, seconded by Hardee, to close public input. Motion carried unanimously.

Sligh made a motion to recommend approval for this request to City Council contingent on split zoning to Highway Commercial and Conservation Preservation. Hardwick seconded the motion and the motion carried unanimously.

2. Request to annex approximately 0.09 acres of property located on HWY 501 (PIN 338-09-02-0007), and rezone from the Horry County Highway Commercial (HC) to City of Conway Highway Commercial (HC).

Hucks stated in May, the applicant submitted annexation and rezoning applications for the subject property, located on HWY 501. The property is currently in Horry County's jurisdiction, zoned Highway Commercial (HC).

The applicant is seeking to annex the property into the City limits to facilitate development of commercial/retail establishments. Staff has reviewed one conceptual plan of the proposed layout, and comments regarding the conceptual plan were sent back to the applicant last month. The conceptual (sketch) plan that was reviewed by TRC in April was included in the packet.

This property is currently vacant.

Per *Section 3.2.10* of the UDO, the intent of the Highway Commercial (HC) district is to provide compatible locations to serve the automobile-oriented commercial activities in harmony with major highway developments, reduce traffic congestions and to enhance the aesthetic atmosphere of the City.

The property is surrounded by property in the county's jurisdiction, zoned HC, some of which is proposed to be annexed into the city limits as well. Current uses adjacent to this property include the Roadrunner Antiques

store, a vape/smoke shop, and on the opposite side (although not abutting) is a retail sports store (N2WIN Sports), which is within the city limits.

The Future Land Use Map of the City's Comprehensive Plan also identifies this parcel as Highway Commercial (HC).

Staff recommends that Planning Commission give a thorough review of the request and make an informed recommendation to City Council.

Mike Ziegler, agent for owners was present and further explained the request.

Hardee made a motion, seconded by Brown, to close public input. Motion carried unanimously.

Sligh made a motion to recommend approval for this request to City Council as presented. Hardee seconded the motion and the motion carried unanimously.

Sligh asked that Item IV.B.6 be moved up on the agenda, as it included a bulk of the information pertaining to Items IV.B.3-5 as well.

3. Request to annex approximately (+/-) 1,740 acres of property located on HWY 701 S., Pitch Landing Rd, and Blaze Trail (PIN's 380-00-00-0038, 403-00-00-0001, 403-00-00-0002, and 403-00-00-0022), and rezone from the from Horry County Commercial Forest Agriculture (CFA) district to the City of Conway Planned Development (PD) District.

Hucks stated that last year, staff began discussions with an engineering firm on annexation of this property. At that time, the property was not contiguous to property in the City. Since then, Dollar General at 3546 Hwy 701 South was annexed February 6th, Bucks Township Storage at 3550 Hwy 701 South was annexed on March 20th. However, Council voted NOT to annex The Gun Store, located at 3594 Hwy 701 South at their June 20th meeting, due to property owner concerns with becoming a legal nonconforming use if annexed into the city limits. In lieu of annexing The Gun Store, the property owner of The Gun Store and the adjacent property owned by White Oak Forest, LLC (PIN 381-00-00-0003) had a combination plat done (and recorded) that combined a rear portion of PIN 381-01-04-0022 (The Gun Store) to PIN 381-00-00-0003 (White Oak Forest, LLC), which accomplishes the contiguity needed to proceed with the annexation requests of the Warden Station tracts. Plat Book 313 at Page 296 was provided in the packet.

This project is outside of the City's utility service area. Sewer would be provided via GSWSA and water would be provided via Bucksport Water Systems.

The total acreage, when including the parcels that were not originally part of the request, is approximately 1,763 (+/-) acres.

This application for annexation encompasses a majority of the acreage to be included in the Warden Station Planned Development – an approximate 1,740 acres. The PD will contain a mixture of fee-simple single-family lots, in-common townhomes, multifamily units, and commercial outparcels.

The total number for each type of dwelling unit includes the following:

- 1,303 single-family detached
- 1,031 single-family attached (townhome)

- 928 multifamily units

The applicant states that the development is intended to promote the conservation and stewardship of the natural resources located on the property by creating a centralized Master Open Space at the heart of the site, which preserves the existing wetlands and creates a network of open space, pathways, waterbodies, and amenities that draw the sub-developments together. Per an ACOE preliminary jurisdictional determination (PJD) letter dated January 6, 2021, the property contains 714.3 acres of wetlands. Additionally, approx. 507 acres of the tract is located within the AE flood zone. The wetlands and the flood zone overlap in some areas (as seen on the preliminary site plan for the project).

The anticipated start date of the first phase of development is in late 2024. Remaining phases to be determined by owner and as lot inventory is required unless otherwise specified in the PD. The timing for completion of the project is approx. 20-25 years for full buildout.

The current zoning of the property is Horry County Commercial Forest Agriculture (CFA). Per Horry County's Zoning Ordinance, Section 201 – Districts Intent Statements, the CFA district is intended to be reserved and utilized for agriculture, forestry, residential, commercial, social, cultural, recreational, and religious uses.

Permitted or conditional uses in CFA, per the county's Zoning Ordinance (Section 204 – Zoning Use Tables) include (but not limited to): residential uses: manufactured homes, multiple single-family homes on a single parcel (conditional), single-family, townhomes; lodging & transient accommodation uses: non-profit and/or religious spiritual centers/retreat, bed and breakfasts (with a special exception granted by BZA), group homes (not fraternities & sororities), campers and/or RV's as temporary living accommodations; animal facility uses: animal facilities, fishery/hatchery, animal services, livestock/agricultural auction facility, commercial agricultural facility up to 500,000 lbs. (conditional), commercial animal raising facilities (conditional), agricultural uses: commercial crop production, horticulture farm, produce stand (conditional), value-added product processing (conditional), beer, wine, and spirit production, tastings, and retail sales of related merchandise (conditional) storage uses: accessory outdoor storage (conditional); repair & service uses: vehicle & equipment repairs (conditional), boat service, repair services; outdoor amusement uses (limited): golf course, firearm training & sports facilities (conditional); transportation uses: residential subdivision airparks (conditional), commercial marina, fishing and shipping facility, railroad depot, water transportation service (not casino boats); medical uses: medical offices and clinics; professional uses: banks, beauty salons, commercial cemeteries/mausoleums (conditional), community/personal services, laundromat, offices (i.e. administrative, business, general, etc.), therapeutic massage (conditional); industrial uses: trade shops (conditional), warehouse retail uses: bait & tackle, grocery stores, retail, lawn/garden, etc. high bulk retail uses: bulk landscape material supplier, hardware store, bottled gas dealer less than 1,000 gallons; other commercial uses: ATM & ice vending machines (conditional); commercial centers, gas stations, mini-warehouse/self-storage, restaurants/bars (with special exception); institutional uses: civic/fraternal/social associations (conditional); private schools (conditional). Individual / specific uses, along with conditions associated with some uses, can be found in the county's zoning ordinance.

The requested zoning designation upon annexation is Planned Development (PD) District. Per *Section 3.3.2 – Planned Development (PD) District*, of the UDO, the intent of the PD District is to provide for large-scale,

quality development projects (3 acres or larger) with mixed land uses which create a superior environment through unified development and provide for the application of design ingenuity while protecting surrounding developments. Planned Developments are also subject to the standards contained within Article 6 – Design Standards, Section 6.4.2 of the UDO. This property is not currently identified on the City’s Future Land Use Map of the Comprehensive Plan. It is identified on Horry County’s Imagine 2040 Comprehensive Plan as 3 future land uses: Scenic and Conservation Areas, Rural, and Rural Communities.

The City’s Technical Review Committee (TRC) met on May 3rd to discuss the request. Planning Commission Workshop met on May 17th to discuss the request. If Planning Commission provides a recommendation for council following this public hearing, First Reading of the annexation and rezoning requests could tentatively be scheduled for the August 7th OR August 21st Council meeting agendas. However, the development agreement would need to be advertised 30 days in advance of the council meeting agenda, and that has not yet occurred.

Staff recommends that Planning Commission give a thorough review of the request and make an informed recommendation to Council after said review. Staff sent comments relating to the PD Narrative on May 30, 2023. Staff received the proposed development agreement (draft) on June 5th. The proposed development agreement was advertised in the Horry Independent on June 8th (requires a 30-day public hearing notice). The annexation / rezoning requests were advertised in the Horry Independent on June 15th (requires a 15-day public hearing notice).

Staff emailed the applicant on June 30th regarding the status of updated information for Planning Commission, as the other parcels surrounding this proposed PD amended their request to also be a PD. As such, the conceptual plans would need revisions. The applicant replied that they planned to have the information to us the following week. A link was provided in the response to be able to access files that were previously submitted. There was one new additional document included in the link – the “Warden Tract Theme Book.”

When the packet was sent out, staff had not received any updated information. This request has been advertised for a public hearing twice. The first public hearing was scheduled for the May 4th Planning Commission meeting. The applicants requested deferral to the July PC meeting, and the agenda for the May meeting stated the requests had been deferred. Therefore, the public hearing was not held. There was public input at the end of the PC agenda, where several people spoke in opposition to the requests. Development agreements require 2 public hearings: one at Planning Commission and one at City Council. Staff has not advertised the public hearing for City Council, as there are additional discussion and revisions needed to the development agreement before it can be considered.

Hucks noted that staff did receive updated information just a day ago and staff had not had an opportunity to review the information in its entirety.

Shep Guyton, Felix Pitts, and Brandon Trusedale, agent for owners was present and further explained the request.

Tim Wolfe, Sam Viola, Steve Trull, Connie Kemp, Donna Nelson, Michael Visnich, Maryann Massengill-Black, Barbara Goodman, Robert Posner, Anne Bowman, Robert Gardiner, and Gina Patron spoke in opposition of the request during public input.

Hardwick made a motion, seconded by Brown, to close public input. Motion carried unanimously.

4. **Request to annex approximately 12.56 acres of property located near the intersection of HWY 701 S. and Pitch Landing Rd (PIN 381-00-00-0003), and rezone from the Horry County Highway Commercial (HC) district to the City of Conway Planned Development (PD) district.**

Hucks provided an overview, similar to that of the previous requests related to the Warden Station. Information specific to this request that is different is included below.

The current zoning of the property is Horry County Highway Commercial (HC). Per Horry County's *Zoning Ordinance, Art. 2 – Established Districts, Sec. 201 – Districts Intent Statements*, the HC district is intended to establish and appropriate land reserved for general business purposes and with particular consideration for the automobile-oriented commercial development existing or proposed along the county's roadways. The regulations which apply within this district are designed to encourage the formation and continuance of a compatible and economically healthy environment for business, financial, service, amusement, entertainment, and professional uses which benefit from being located in close proximity to each other; and to discourage any encroachment by industrial or other uses capable of adversely affecting the basic commercial character of the district.

This project is outside of the City's utility service area. Any development which would require utilities would be provided sewer via GSWSA and water via Bucksport Water Systems.

Previously, the requested zoning upon annexation was Highway Commercial (HC). The applicants recently revised the request, in order to include this property with the Warden Station PD.

Permitted or conditional uses in HC, per the county's *Zoning Ordinance (Section 204 – Zoning Use Tables)* include single-family residential, hotel/motels, group homes, campers/RV's as temporary living accommodations (with conditions), agricultural uses, animal services, storage-related uses (with conditions), sales/rental uses, repair/service uses, indoor amusement uses, certain outdoor amusement uses (some with conditions or temporary), some transportation uses, medical uses (some which require that a special exception be granted by the Board of Zoning Appeals), professional uses, limited industrial uses (i.e. salvage yard, trade shops with conditions, warehouse), retail uses, including high-bulk retail, other commercial uses (ATM, gas stations, mini-warehouse/self-storage, restaurants/bars – which could be subject to additional restrictions, etc.), and institutional uses. Individual / specific uses, along with conditions associated with some uses, can be found in the county's zoning ordinance.

The requested zoning designation upon annexation is Planned Development (PD) District. Per *Section 3.3.2 – Planned Development (PD) District*, of the UDO, the intent of the PD District is to provide for large-scale, quality development projects (3 acres or larger) with mixed land uses which create a superior environment through unified development and provide for the application of design ingenuity while protecting surrounding developments.

Planned Developments are also subject to the standards contained within *Article 6 – Design Standards, Section 6.4.2* of the UDO. This property is not currently identified on the City's Future Land Use Map of the

Comprehensive Plan. It is identified on Horry County's Future Land Use Map (Imagine 2040 Comprehensive Plan) as Rural Communities.

Staff recommends that Planning Commission give a thorough review of the request and make an informed recommendation to Council after said review.

Because the request was revised to be a PD and is proposed to be part of the Warden Station PD, the applicant should provide updated plans to reflect the inclusion of this property in the PD so that it can be reviewed by staff and to ensure the most current information is being considered.

Shep Guyton, Felix Pitts, and Brandon Trusedale, agent for owners were present to answer any questions.

Randy Stacey and Michael Visnich spoke in opposition for this request during public input.

Brown made a motion, seconded by Sligh, to close public input. Motion carried unanimously.

5. Request to annex approximately 5.26 acres of property located at the corner of HWY 701 S. and Pitch Landing Rd, and Wildair Circle (PIN 381-08-01-0006), and rezone from the Horry County Community Retail Services (RE2) district and Commercial Forest Agriculture (CFA) district to the City of Conway Planned Development (PD) district.

Hucks provided an overview, similar to that of the previous requests related to the Warden Station. Information specific to this request that is different is included below.

This property originally was requested to be zoned HC upon successful annexation into the City limits. The applicants have revised the application to instead request the PD district to tie into the Warden Station PD. Additionally, in April of this year, the property owner combined and added all of the tracts (including an additional tract not part of the original request) which now make up the 5.26 acres of property being considered for annexation and rezoning, via Plat Book 311 at Page 343 (partially redacted copy was in the packet).

Per the applicant's revised application, the current zoning of the property is Horry County Community Retail Services (RE2) and Commercial Forest Agriculture (CFA). Per the County's GIS, if any of the property is zoned CFA following the platting action, it is a minimal amount, and would not be enough property to be developed as CFA on its own. Per Horry County's Zoning Ordinance, *Art. 2 – Established Districts, Sec. 201 – Districts Intent Statements*, the RE2 district is intended to provide opportunities to locate and develop businesses primarily engaged in the sale, rental, and provision of goods or merchandise for personal or household use. Uses within this district are generally located outside or on the edge of established residential developments along transportation corridors providing easy access to established business. Uses permitted in this district may be freestanding or located in minor retail centers with out-parcel development. Uses permitted in this district are intended to not impair existing or future residential development.

Permitted or conditional uses in RE2, per the county's Zoning Ordinance (*Section 204 – Zoning Use Tables*) include (but not limited to) multi-family residential, quadruplexes and townhome developments, single-family residential, hotel/motels, animal services, repair services, car washes, auditorium/theaters, medical offices and clinics, professional uses (i.e. banks, beauty salons, fitness centers, spas, office uses, etc.), retail uses (i.e. grocery stores, retail sales, lawn & garden), other commercial uses (i.e. ATM/Ice Vending Machine, gas stations, restaurants/bars – which may require a special exception, etc.), and institutional uses

(civic/fraternal/social clubs and specialty schools). Individual / specific uses, along with conditions associated with some uses, can be found in the county’s zoning ordinance.

The requested zoning designation upon annexation is Planned Development (PD) District. Per *Section 3.3.2 – Planned Development (PD) District*, of the UDO, the intent of the PD District is to provide for large-scale, quality development projects (3 acres or larger) with mixed land uses which create a superior environment through unified development and provide for the application of design ingenuity while protecting surrounding developments. Planned Developments are also subject to the standards contained within *Article 6 – Design Standards, Section 6.4.2* of the UDO.

This property is not currently identified on the City’s Future Land Use Map of the Comprehensive Plan. It is identified on Horry County’s Future Land Use Map (Imagine 2040 Comprehensive Plan) as Rural Communities.

Staff recommends that Planning Commission give a thorough review of the request and make an informed recommendation to Council after said review.

Because the request was revised to be a PD and is proposed to be part of the Warden Station PD, the applicant should provide updated plans to reflect the inclusion of this property in the PD so that it can be reviewed by staff and to ensure the most current information is being considered.

Shep Guyton, Felix Pitts, and Brandon Trusedale, agent for owners were present to answer any questions.

Michael Visnich, David Victor, Connie Kemp, and Mary Nelson spoke in opposition for this request during public input.

Hardwick made a motion, seconded by Hardee, to close public input. Motion carried unanimously.

6. Request to annex approximately 4.56 acres of property located near the southwest intersection of HWY 701 S. and Pitch Landing Rd (PIN’s 381-08-04-0009 and -0010), and rezone from the Horry County Commercial Forest Agriculture (CFA) district to the City of Conway Planned Development (PD) district.

Hucks provided an overview, similar to that of the previous requests related to the Warden Station. Information specific to this request that is different is included below.

This property originally was requested to be zoned HC upon successful annexation into the City limits. The applicants have revised the application to instead request the PD district to tie into the Warden Station PD.

Per the applicant’s revised application, the current zoning of the property is Horry County Community Commercial Forest Agriculture (CFA).

The current zoning of the property is Horry County Commercial Forest Agriculture (CFA). Per Horry County’s Zoning Ordinance, Section 201 – Districts Intent Statements, the CFA district is intended to be reserved and utilized for agriculture, forestry, residential, commercial, social, cultural, recreational, and religious uses.

The requested zoning designation upon annexation is Planned Development (PD) District. Per *Section 3.3.2 – Planned Development (PD) District*, of the UDO, the intent of the PD District is to provide for large-scale, quality development projects (3 acres or larger) with mixed land uses which create a superior environment through unified

development and provide for the application of design ingenuity while protecting surrounding developments. Planned Developments are also subject to the standards contained within *Article 6 – Design Standards, Section 6.4.2* of the UDO.

This property is not currently identified on the City’s Future Land Use Map of the Comprehensive Plan. It is identified on Horry County’s Future Land Use Map (Imagine 2040 Comprehensive Plan) as Rural Communities.

Staff recommends that Planning Commission give a thorough review of the request and make an informed recommendation to Council after said review.

Because the request was revised to be a PD and is proposed to be part of the Warden Station PD, the applicant should provide updated plans to reflect the inclusion of this property in the PD so that it can be reviewed by staff and to ensure the most current information is being considered.

Shep Guyton, Felix Pitts, and Brandon Trusedale, agent for owners were present to answer any questions.

James Hicks and Michael Visnich spoke in opposition for this request during public input.

Sligh made a motion, seconded by Watkins, to close public input. Motion carried unanimously.

Sligh made motion to defer items IV. B. 3, 4, 5, & 6 until the meeting to give staff & commissioners the opportunity to review the updated information that was just received. Hardwick seconded the motion and the motion carried unanimously.

C. LAND DEVELOPMENT AGREEMENT

1. Proposed development agreement by G3 Engineers (applicant) for development of property located on Pitch Landing Road and Hwy 701 South, known as the Warden Station, containing +/-1763.28 acres, (PINs 381-00-00-0003, 381-08-04-0009, 381-08-04-0010, 380-00-00-0038, 381-08-01-0006, 403-00-00-0001, 403-00-00-0002, and 403-00-00-0022).

Hucks stated that the applicants are seeking to enter into a development agreement for development known as the Warden Station, also proposed to be annexed into the City as a Planned Development (PD). These requests were included and considered on the same meeting agenda. Please refer to Items IV.B.3 to IV.B.6 on this PC agenda. Per Title 6, Chapter 31, § 6-31-10 of the SC Code (SC Local Government Development Agreement Act, 1993), authorizes binding agreements between local governments and developers for long-term development of large tracts of land. A development agreement gives a developer a vested right for the term of the agreement to proceed according to land use regulations in existence on the execution date of the agreement. Principal among the General Assembly’s statement of findings for the Act was the desire to provide some measure of certainty as to applicable land development law for developers who made financial commitments for planned developments. The Act also expresses the intent to encourage a stronger commitment to comprehensive and capital facilities planning, ensure the provision of adequate public facilities, encourage the use of resources and reduce the economic cost of development (Comprehensive Planning Guide, 2018).

The length of the development agreement varies, and depends on the size of the property to be included in the agreement. The minimum size for a property to be included in any development agreement is 25 acres of highland – which is determined by local ordinance (*i.e.* land above the 100-year flood plain).

Property with 1,000 to 2,000 acres of highland is limited to a term of 20 years.

Prior to adoption of a development agreement, the governing body must hold at least two (2) public hearings, which if authorized by the governing body, can be conducted by Planning Commission (per SC Code § 6-31-50(A)). Notice of the intent to consider a development agreement must be published in a newspaper of general circulation, which should include the property location, proposed uses, and a place where a copy of the agreement can be obtained. The date, time and place of the second hearing must be announced at the first hearing (SC Code § 6-31-50(B)).

Additional information regarding development agreements can be provided if needed. A DRAFT of the proposed development agreement, as well as a copy of the ad that ran in the Horry Independent on June 8, 2023, was included in the packet.

Staff recommends that Planning Commission give a thorough review of the request and make an informed recommendation to City Council after said review.

Shep Guyton, Felix Pitts, and Brandon Trusedale, agent for owners were present to answer any questions.

Walter Johnson and Michael Visnich spoke in opposition for this request during public input.

Sligh made a motion, seconded by Hardwick, to close public input. Motion carried unanimously.

Sligh made motion to defer this item until the meeting to give staff & commissioners the opportunity to review the update information that was just received. Hardwick seconded the motion and the motion carried unanimously.

V. PUBLIC INPUT

None

VI. BOARD INPUT

None

VII. STAFF INPUT

None

VIII. ADJOURNMENT

A motion was made to adjourn the meeting. The vote in favor was unanimous. The motion carried. The meeting adjourned at approximately 8:09 pm.

Approved and signed this _____ day of _____, 2023.

Brian O'Neil, Chairman

DATE: AUGUST 3, 2023

AGENDA ITEM: IV.A.1

ISSUE:

Previously Deferred... (items IV.B.3 – IV.B.6 from the July 13th agenda have been combined) Request by G3 Engineering, agent, to annex approximately 1,763 (+/-) acres of property located on / near the intersection of Hwy 701 S & Pitch Landing Rd, Hwy 701 S & Wildair Circle, and Hwy 701 S. Pitch Landing Rd, and Blaze Trail (PIN's 381-00-00-0003, 381-08-01-0006, 381-08-04-0009, 381-08-04-0010, 380-00-00-0038, 403-00-00-0001, 403-00-00-0002, 403-00-00-0022), and request to rezone from the Horry County Highway Commercial (HC), Commercial Forest Agriculture (CFA), and Community Retail Services (RE2) districts to the City of Conway Planned Development (PD) district.

BACKGROUND:

Last year, staff began discussions with an engineering firm on annexation of the properties. At that time, the property was not contiguous to property in the City. Since then, Dollar General at 3546 Hwy 701 South was annexed February 6th, Bucks Township Storage at 3550 Hwy 701 South was annexed on March 20th. However, Council voted NOT to annex The Gun Store, located at 3594 Hwy 701 South at their June 20th meeting, due to property owner concerns with becoming a legal nonconforming use if annexed into the city limits. In lieu of annexing The Gun Store, the property owner of The Gun Store and the adjacent property owned by White Oak Forest, LLC (PIN 381-00-00-0003) had a combination plat done (and recorded) that combined a rear portion of PIN 381-01-04-0022 (The Gun Store) to PIN 381-00-00-0003 (White Oak Forest, LLC), which accomplishes the contiguity needed to proceed with the annexation requests of the Warden Station tracts. Plat Book 313 at Page 296 is provided in your packet.

The smaller outparcels that are identified as the commercial tracts initially intended to be annexed as Highway Commercial; however, the requests were amended to be included in the overall Planned Development. The requests were re-advertised as a PD. The ads, as placed in the Horry Independent, have been included in your packet.

The applicant has provided updated documents, as of July 12th, which could not be considered at the last Planning Commission meeting, as staff had not had an opportunity to review and make comments. These updated documents are included in your packet, and summary information is provided in this report.

The proposed PD will also be bound by a Development Agreement; the details of which are included in this packet (*draft document*), and is on this agenda for consideration. City Council is currently scheduled to hold the 2nd required public hearing on the development agreement at their August 21, 2023 meeting.

Project / Request Overview (*updated*):

The total acreage, including the parcels that were not part of the original request, is approx. 1,763 (+/-) acres.

The proposed PD will contain a mixture of single-family detached dwellings, single-family attached dwellings, townhomes, multifamily units, and commercial outparcels.

The total number for each type of dwelling unit includes the following:

- 1,303 single-family detached (Tracts D, F, G, H, I, and J)
- 1,031 single-family attached (townhomes) (Tracts A, C, E, and N – may be townhomes or multifamily)
- 928 Multifamily units (Tracts L, M) (Tracts A, C, E, and N may be townhomes or multifamily)

The applicant states the commercial square footage across all tracts proposing a commercial use will not exceed 1,368,000 sq. ft. Commercial uses are planned for Tracts B, O, P, Q, R, S, and T, and are identified as Commercial Type 1, Type 2, or Type 3.

Warden Station PD – Intent and Purpose (*Updated*)

Per the applicant's *updated* PD Narrative, the intent of the Planned Development is to provide for large-scale, quality development projects (3 acres or larger) with mixed land uses which create a superior environment through unified development and provide for the application of design ingenuity while protecting surrounding developments. More specifically, the PD will permit:

- A. Flexibility in design to take the greatest advantage of natural land, trees, historical, and other features;
- B. Accumulation of large areas of usable open space for recreation, preservation of natural amenities, and provision of community facilities;
- C. Creation of a variety of residential and compatible neighborhood arrangements that give the home occupant greater choice in selecting types of environment and living units;
- D. Clustering of one residential type for better use of the land and open space;
- E. Allowance of sufficient freedom for the developer to take a creative approach to the use of land and related physical development, as well as utilizing innovative techniques to enhance visual character of the city;
- F. Efficient use of land which may result in reduction in development and maintenance cost of street and utility systems;
- G. Simplification of the procedure for obtaining approval of proposed development through simultaneous review by the city of proposed land use, site consideration, lot and setback consideration, public needs and requirements, and health and safety factors.

Wetlands / Flood Zones (*Updated*)

The largest portion of the PD (PINs 403-00-00-0002, 403-00-00-0001, and 380-00-00-0038), which is approx. 1,668 acres (+/-), contains 714.3 +/- acres of wetlands, per an ACOE preliminary jurisdictional determination (PJD) letter dated January 6, 2021. Also contained on the subject parcels is 107,688 LF

+/- of non-wetland waters. A Wetland Assessment Report was provided, dated June 21, 2023, for an approximate 165-acre portion of this PIN (located closer to the Hwy 701 portion of the property), that shows this portion of the property contains 126 +/- acres of wetlands, which appears to be a slight reduction in the overall wetlands for the subject property.

PIN 403-00-00-0022 (TMS 160-00-01-0004), referred to as the Richardson Tract and containing 72.8 +/- acres, provided a delineation concurrence exhibit map showing 9.52 +/- acres of wetlands and linear non-aquatic resources. This tract is part of the main PD that will contain a majority of the residential dwellings.

For properties closer to or at the intersection of Pitch Landing Rd and Hwy 701 S (including PIN's 381-00-00-0003, -0006, -0009, and -001), ACOE provided a letter dated March 5, 2023, stating that these properties do not contain aquatic resources subject to regulatory jurisdiction. The map provided as an exhibit to the letter shows that 0.25 +/- acres is a non-aquatic resource (pond).

Additionally, approx. 507 acres of the largest tract is located within the AE flood zone. The wetlands and the flood zone overlap in some areas (as seen on the site plan for the project). There is also a portion of a floodway on this property, as shown on the master site plan and flood zone overlay exhibits.

Current Zoning of Property

PINs 403-00-00-0001, 403-00-00-0002, 380-00-00-0038, and 403-00-00-0022, which make up a majority of the proposed PD (1,740 +/- acres), is currently zoned Horry County Commercial Forest Agriculture (CFA).

Per Horry County's Zoning Ordinance, Section 201 – Districts Intent Statements, the CFA district is intended to be reserved and utilized for agriculture, forestry, residential, commercial, social, cultural, recreational, and religious uses.

PINs 381-08-04-0009 and -0010 (4.3 acres) are also zoned Horry County CFA.

PIN 381-08-01-0006 (5.26 acres) is zoned Horry County Community Retail Services (RE2).

Per Horry County's Zoning Ordinance, Art. 2 – Established Districts, Sec. 201 – Districts Intent Statements, the RE2 district is intended to provide opportunities to locate and develop businesses primarily engaged in the sale, rental, and provision of goods or merchandise for personal or household use. Uses within this district are generally located outside or on the edge of established residential developments along transportation corridors providing easy access to established business. Uses permitted in this district may be freestanding or located in minor retail centers with out-parcel development. Uses permitted in this district are intended to not impair existing or future residential development.

PIN 381-00-00-0003 (12.56 acres) is zoned Horry County Highway Commercial (HC).

Per Horry County's Zoning Ordinance, Art. 2 – Established Districts, Sec. 201 – Districts Intent Statements, the HC district is intended to establish and appropriate land reserved for general business purposes and with particular consideration for the automobile-oriented commercial development existing or proposed along the county's roadways. The regulations which apply within this district are designed to encourage the formation and continuance of a compatible and economically healthy environment for business, financial, service, amusement, entertainment, and professional uses which benefit from being located in close proximity to each other; and to discourage any encroachment by industrial or other uses capable of adversely affecting the basic commercial character of the district.

Requesting Zoning of Property Upon Annexation into the City of Conway

The requested zoning designation upon annexation is (City of Conway) Planned Development (PD) District. Per *Section 3.3.2 – Planned Development (PD) District*, of the UDO, *the intent of the PD District is to provide for large-scale, quality development projects (3 acres or larger) with mixed land uses which create a superior environment through unified development and provide for the application of design ingenuity while protecting surrounding developments.*

Planned Developments are also subject to the Design Standards contained within *Article 6 – Design Standards*, of the City's *Unified Development Ordinance (UDO)*.

Water / Sewer Availability

This project is outside of the City's utility service area. Sewer would be provided via GSWSA and water would be provided via Bucksport Water Systems.

COMPREHENSIVE PLAN:

This property is not currently identified on the City's Future Land Use Map of the Comprehensive Plan. It is identified on Horry County's Imagine 2040 Comprehensive Plan as 3 future land uses: Scenic and Conservation Areas, Rural, and Rural Communities.

The county's current Comprehensive Plan was adopted in 2019. The Future Land Use Map was developed based on a strategy of public input and geo-spatial analysis. Public input included hearings in front of Planning Commission and County Council, as well as a community survey, open houses held throughout the county, and a land use workshop held in May 2018. Framework for the future land use map included development trends, existing land use, planned infrastructure, natural assets, priority conservation areas, and environmental constraints.

Below are brief descriptions for each future land use from the county's Imagine 2040 Comprehensive Plan describing each future land use (complete descriptions provided in packet as excerpts from the Imagine 2040 Comp Plan):

Scenic and Conservation Areas: applied to areas of the county that scored exceptionally high on the environmental analysis and/or received strong recommendation from the community for future conservation. Estuarine and forested wetlands, and agricultural lands are examples of Scenic and Conservation. While not off limits to development, policy guidance is clear; in cases where more site-specific information is available to show that a property or a portion of a property is not environmentally constrained, that information may be presented...to be considered for uses other than those defined. *(taken from Horry County PC Decision Memo re: future land use amendment for property in same area as the subject property).*

Rural: applied to areas of the county with prime agricultural soils, extensive farm and timberlands, as well as natural resources and scenic views. These areas scored high in terms of soil and land cover data, have associated rural area management plans, and/or received feedback from the community for future preservation as a rural land use. Policy guidance suggests the county protect active agricultural and forestry operations, farmland and erodible soils in the rural areas by minimizing residential subdivisions, but also consider such things as rural tourism and a potential density transfer program *(taken from Horry County PC Decision Memo re: future land use amendment for property in same area as the subject property).*

Rural Communities: would allow for lots sizes of 14,500 sq. ft. or with a max of 3 net units per acre. It would also allow for lot sizes as small as 10,000 sq. ft. in certain zoning districts if sustainable development criteria are used to preserve substantial open space and natural features, utilize buffers for screening from roadways and adjacent properties, avoid natural hazards, and not impeded on adjacent farming operations.

Development Schedule

The Development Agreement (DA) proposed allows the length of the initial agreement to be for a period of 20 years, which is based on the highland acreage of the project. The DA may be extended for up to three (3), five (5) year increments; provided that the developer is not determined to be in default of the agreement.

The developer will begin construction following the receipt of permits from the City and other regulatory agencies. Exact dates for commencement of construction, future phases, or completion dates cannot be determined at this time; however, the developer anticipates starting installation of infrastructure within 24 months from approval of the PD and Development Agreement.

The timing for completion of the project is approx. 25 years for full buildout.

Use Table Comparison of Zoning Districts (County v. City)

(comparison provided by staff – complete list of uses and any applicable conditions for such uses are provided via the City of Conway Unified Development Ordinance (UDO) or the Horry County Zoning Ordinance)

PIN / Location of Property	Current Zoning District (Horry County)	Permitted / Conditional uses in Current County Zoning District	Proposed Zoning	Proposed Uses <i>(as identified in the Master Site Plan/Phasing Plan/PD Narrative)</i>
PIN's 380-00-00-0038; 403-00-00-0001; -0002; -0022 (Pitch Landing Rd, Hwy 701 S, & Blaze Trail)	Commercial Forest Agriculture (CFA)	<p><u>Residential:</u> manufactured homes; single-family detached dwellings (site built); townhomes; multiple homes on a single parcel</p> <p><u>Lodging & Transient Accommodations:</u> bed & breakfasts; non-profit/religious centers; group homes; RV's as temp. living accommodations</p> <p><u>Animal Facilities:</u> fishery/hatchery; animal services; livestock/agricultural, auction facility; commercial agricultural facility; animal raising facility</p> <p><u>Agricultural:</u> commercial crop production; horticulture farm; product processing; beer, wine & spirit production, tastings, and retail sales of related merchandise</p> <p><u>Storage uses:</u> accessory outdoor storage</p> <p><u>Repair & Service uses:</u> vehicle & equipment repairs; boat service; repair services</p>	Planned Development (PD)	<p>Tracts/Areas D, F, G, H, I, J:</p> <p><u>Residential:</u> single-family detached dwellings</p> <p>*Tracts A, C, E, N:</p> <p><u>Residential:</u> duplex/townhome dwellings</p> <p><i>*may be developed in-common or fee-simple</i></p> <p>Tracts/Areas L, M:</p> <p><u>Residential:</u> Multifamily dwellings</p> <p><i>Note: densities may be shifted between residential tracts/areas with like uses/densities (i.e. single-family to single-family tracts) and considered a "minor" PD amendment.</i></p> <p>Tract/Area O:</p> <p><u>Type 2 Commercial:</u> Assisted Living Facilities; Continuing Care Retirement Community (CCRC); Nursing Homes; Adult Day Care Services; Child Day Care Facilities; Funeral Homes/Mortuaries; Assembly Halls; Banquet Halls; Civic Clubs; Religious Institutions;</p>

<p>PIN's 380-00-00-0038; 403-00-00-0001; -0002; -0022 (Pitch Landing Rd, Hwy 701 S, & Blaze Trail)</p>	<p>Commercial Forest Agriculture (CFA)</p>	<p><u>Outdoor Amusement Commercial (limited):</u> golf course; firearm & sports facilities</p> <p><u>Transportation uses:</u> residential subdivision airparks; commercial marina, fishing & shipping facility; railroad depot; water transportation service (not casino boats)</p> <p><u>Medical uses:</u> medical offices and clinics</p> <p><u>Professional uses:</u> banks, beauty salons, commercial cemeteries/mausoleums; community/personal services; laundromat; offices (i.e. admin., business, general, etc.); therapeutic massage</p> <p><u>Industrial uses:</u> trade shops; warehouse</p> <p><u>Retail uses:</u> bait & tackle; grocery stores; retail; lawn & garden, etc.</p> <p><u>High Bulk Retail uses:</u> bulk landscape material supplier; hardware store; bottled gas dealer (less than 1,000 gallons)</p> <p><u>Other Commercial uses:</u> ATM & ice vending machines; commercial centers; gas stations; mini-warehouse/self-storage; restaurants/bars</p>	<p>Planned Development (PD)</p>	<p>Libraries; Museums; Business Offices; Medical/Clinical uses; Fabric Shops; Furniture Repair & Upholstery; Jewelers; Leather Shops; Package Store (<i>i.e.</i> liquor stores); Shoe Stores; Sign Shops; Farmers' Markets; Fitness Centers / Athletic Clubs; Mini-Storage Units (Mini-Storage Warehouse); Sporting Goods Stores; Veterinarian / Animal Clinics; Microbrewery; Building Supply/Lumber Yards; Warehousing; Wholesaling; Storage & Distribution (light), specifically including multi-unit indoor storage, combined w/ outdoor storage (condition that outdoor storage is screened by fencing 6' in height and landscaping along the perimeter of such outdoor storage where visible from a public roadway or adjacent property; All permitted uses within Type 3 Commercial (<i>as identified in applicants PD narrative</i>).</p> <p>Tract/Area B:</p>
--	--	--	---	---

<p>PIN's 380-00-00-0038; 403-00-00-0001; -0002; -0022 (Pitch Landing Rd, Hwy 701 S, & Blaze Trail)</p>	<p>Commercial Forest Agriculture (CFA)</p>		<p>Planned Development (PD)</p>	<p><u>Type 3 Commercial uses:</u> Golf Driving Range; Gymnasiums; Tennis Facilities; Miniature Golf; Nursery/Garden Center; Cellular/Wireless Telecommunication Tower; Municipal Improvements for Sanitation, Fire, Public Safety, and Sanitation; Construction, Building, and Agricultural Supplies and Distribution; Schools and Educational Facilities.</p> <p>Tracts/Areas P, Q:</p> <p><u>Type 1 Commercial uses:</u> Personal Services; Food & Convenience Stores; Clothing stores; Specialty Retail; ATM; Gas & Service Station; Optical & Hearing Center; Big Box Retail stores; Department stores; Boat Service; Computer Sales & Service; Copy/Print Center; Discount stores; Furniture stores & showrooms; Shopping centers; Auto Accessory stores; Auto Dealership; Car Wash & Detailing; Rental Car Agency; Truck & Auto Repair Service; Building Supply Equipment Sales; Office Supply stores;</p>
--	--	--	---	--

<p>PIN's 380-00-00-0038; 403-00-00-0001; -0002; -0022 (Pitch Landing Rd, Hwy 701 S, & Blaze Trail)</p>	<p>Commercial Forest Agriculture (CFA)</p>		<p>Planned Development (PD)</p>	<p>Paint, Wallpaper, Flooring Supply & Sales; Arcades / Billiards / Bingo Establishments; Bowling Alley; Multiplex Movie Theater; Drive-In Movie Theater; Amphitheaters; Theaters; Storage & Distribution (light) (specifically including multi-unit indoor storage, combined with outdoor storage (w/ condition(s) that outdoor storage will be screened with fence of 6' in height and landscaping installed along perimeter of such outdoor storage where visible from a public roadway or adjacent property); All permitted uses within Type 2 Commercial (<i>as identified in the PD narrative</i>). Tract K: Master Open Space</p>
--	--	--	---	---

<p>PIN 381-00-00-0003 (intersection of Pitch Landing Rd & Hwy 701)</p>	<p>Highway Commercial (HC)</p>	<p><u>Residential uses:</u> single-family detached dwellings</p> <p><u>Lodging & Transient Accommodation uses:</u> bed & breakfasts; hotel/motel; campers/RV's as temp. living accommodations; group homes</p> <p><u>Agricultural uses:</u> commercial crop production; horticulture farm; produce stand; beer, wine & spirit production, tastings, and retail sales of related merchandise</p> <p><u>Storage uses:</u> automobile storage, including tow yards; accessory outdoor storage; outdoor storage; boat storage</p> <p><u>Sales & Rental uses:</u> vehicle, equipment manufactured home, & building sales/rentals; outdoor sales/rental; boat sales/rental</p> <p><u>Repair & Service uses:</u> vehicle & equipment repairs; boat service; repair services; car wash</p> <p><u>Indoor Amusement uses:</u> indoor amusement (general); adult entertainment; auditorium/theater; event center</p> <p><u>Outdoor Amusement uses:</u> batting cages; paintball facility; golf amusements (driving ranges, miniature golf); golf course; family</p>	<p>Planned Development (PD)</p>	<p>Tract/Area: T</p> <p><u>Type 1 Commercial uses:</u> Personal Services; Food & Convenience Stores; Clothing stores; Specialty Retail; ATM; Gas & Service Station; Optical & Hearing Center; Big Box Retail stores; Department stores; Boat Service; Computer Sales & Service; Copy/Print Center; Discount stores; Furniture stores & showrooms; Shopping centers; Auto Accessory stores; Auto Dealership; Car Wash & Detailing; Rental Car Agency; Truck & Auto Repair Service; Building Supply Equipment Sales; Office Supply stores; Paint, Wallpaper, Flooring Supply & Sales; Arcades / Billiards / Bingo Establishments; Bowling Alley; Multiplex Movie Theater; Drive-In Movie Theater; Amphitheaters; Theaters; Storage & Distribution (light) (specifically including multi-unit indoor storage, combined with outdoor storage (w/ condition(s) that outdoor storage will be screened</p>
--	--------------------------------	--	---------------------------------	--

<p>PIN 381-00-00-0003 (intersection of Pitch Landing Rd & Hwy 701)</p>	<p>Highway Commercial (HC)</p>	<p>fun parks (temporary); sports facility</p> <p><u>Transportation uses:</u> taxi, limousine & ground transportation vehicles; railroad depot (passengers & freight)</p> <p><u>Medical uses:</u> counseling facilities that distribute prescription medication onsite; psychiatric hospitals; healthcare facilities (excluding standalone psychiatric facilities); outpatient drug & alcohol addiction treatment clinic; assisted living facilities</p> <p><u>Professional uses:</u> banks/savings & loans, barber/beauty shop/salons; commercial cemeteries & mausoleums; community & personal services; fitness centers / health spas; laundromat, coin operated / dry cleaners store & pick up station (<i>excluding industrial launderer</i>); motion picture production studio & allied services; office uses (i.e. administrative, business, general purpose, professional); therapeutic massage</p> <p><u>Industrial uses:</u> manufacturing of precision instruments; salvage yards; trade shops (includes contractors office); warehouse</p>	<p>Planned Development (PD)</p>	<p>with fence of 6' in height and landscaping installed along perimeter of such outdoor storage where visible from a public roadway or adjacent property); All permitted uses within Type 2 Commercial (<i>as identified in the PD narrative</i>).</p>
--	--------------------------------	---	---------------------------------	--

<p>PIN 381-00-00-0003 (intersection of Pitch Landing Rd & Hwy 701)</p>	<p>Highway Commercial (HC)</p>	<p><u>Retail uses:</u> bait & tackle shops; grocery stores; retail; lawn/garden nurseries</p> <p><u>High Bulk Retail uses:</u> bulk landscape material supplier; hardware stores; high bulk retail stores; LP Gas (bottled gas dealer) dealer less than 1,000 gallons</p> <p><u>Other Commercial uses:</u> ATM & ice vending machines (free-standing); commercial center; gas stations; mini-warehouse/self-storage; restaurants/bars</p> <p><u>Institutional uses:</u> civic/fraternal/social associations; schools (private); specialty schools</p>		
<p>PIN 381-08-01-0006 (Hwy 701 S, Pitch Landing Rd, & Wildair Circle)</p>	<p>Community Retail Services (RE2)</p>	<p><u>Residential uses:</u> Multifamily dwellings; Quadraplex dwellings; townhomes</p> <p><u>Lodging & Transient Accommodation uses:</u> hotel/motel</p> <p><u>Animal Facility uses:</u> animal services</p> <p><u>Repair & Service uses:</u> repair services; car wash</p> <p><u>Indoor Amusement uses:</u> auditorium/theater</p> <p><u>Medical uses:</u> medical offices & clinics</p> <p><u>Professional uses:</u> banks/savings & loan;</p>	<p>Planned Development (PD)</p>	<p>Tract/Area S</p> <p><u>Type 2 Commercial:</u> Assisted Living Facilities; Continuing Care Retirement Community (CCRC); Nursing Homes; Adult Day Care Services; Child Day Care Facilities; Funeral Homes/Mortuaries; Assembly Halls; Banquet Halls; Civic Clubs; Religious Institutions; Libraries; Museums; Business Offices; Medical/Clinical uses; Fabric Shops;</p>

<p>PIN 381-08-01-0006 (Hwy 701 S, Pitch Landing Rd, & Wildair Circle)</p>	<p>Community Retail Services (RE2)</p>	<p>barber shops/beauty salons; commercial cemeteries / mausoleums; community & personal services; laundromats, coin operated / dry cleaners store & pick up station (<i>excluding industrial launderers</i>); office uses (administrative, business, general purpose, professional); therapeutic massage</p> <p><u>Retail uses:</u> bait & tackle shops; grocery stores; retail</p> <p><u>High Bulk Retail uses:</u> LP Gas (bottled gas) dealer less than 1,000 gallons</p> <p><u>Other Commercial uses:</u> ATM & ice vending machines (freestanding); commercial centers; gas stations; restaurants/bars</p> <p><u>Institutional uses:</u> civic/fraternal/social associations; specialty schools</p>	<p>Planned Development (PD)</p>	<p>Furniture Repair & Upholstery; Jewelers; Leather Shops; Package Store (<i>i.e.</i> liquor stores); Shoe Stores; Sign Shops; Farmers' Markets; Fitness Centers / Athletic Clubs; Mini-Storage Units (Mini-Storage Warehouse); Sporting Goods Stores; Veterinarian / Animal Clinics; Microbrewery; Building Supply/Lumber Yards; Warehousing; Wholesaling; Storage & Distribution (light), specifically including multi-unit indoor storage, combined w/ outdoor storage (condition that outdoor storage is screened by fencing 6' in height and landscaping along the perimeter of such outdoor storage where visible from a public roadway or adjacent property; All permitted uses within Type 3 Commercial (<i>as identified in applicants PD narrative</i>).</p>
<p>PIN 381-08-04-0009 & -0010 (Hwy 701 S)</p>	<p>Commercial Forest Agriculture (CFA)</p>	<p><i>See list previously provided</i></p>	<p>Planned Development (PD)</p>	<p>Tract/Area R <u>Type 1 Commercial uses:</u> Personal Services; Food & Convenience Stores; Clothing stores;</p>

PIN 381-08-04-0009
& -0010 (Hwy 701 S)

Planned
Development
(PD)

Specialty Retail;
ATM;
Gas & Service Station;
Optical & Hearing Center;
Big Box Retail stores;
Department stores;
Boat Service;
Computer Sales & Service;
Copy/Print Center;
Discount stores;
Furniture stores &
showrooms;
Shopping centers;
Auto Accessory stores;
Auto Dealership;
Car Wash & Detailing;
Rental Car Agency;
Truck & Auto Repair
Service;
Building Supply
Equipment Sales;
Office Supply stores;
Paint, Wallpaper, Flooring
Supply & Sales;
Arcades / Billiards / Bingo
Establishments;
Bowling Alley;
Multiplex Movie Theater;
Drive-In Movie Theater;
Amphitheaters;
Theaters;
Storage & Distribution
(light) (specifically
including multi-unit indoor
storage, combined with
outdoor storage (w/
condition(s) that outdoor
storage will be screened
with fence of 6' in height
and landscaping installed
along perimeter of such
outdoor storage where
visible from a public

PIN 381-08-04-0009 & -0010 (Hwy 701 S)			Planned Development (PD)	roadway or adjacent property); All permitted uses within Type 2 Commercial (<i>as identified in the PD narrative</i>).
---	--	--	--------------------------------	---

Packet Inserts *(updated)*:

The applicants have also provided the following *updated* exhibits, also included in your packet:

- Traffic Impact Study (*updated May 2023*)
- PD Narrative (*updated June / July 2023*)
- PD Exhibits (*all updated, as of 7.11.23*):
 - Ex. B.1: Wetlands & Topography
 - Ex. I.c: Existing Conditions / Downstream Analysis
 - Ex. I.d: Aerial
 - Ex. II: Master Site Plan
 - Ex. III: Phasing Plan
 - Ex. IV: Open Space Plan
 - Ex. V: Stormwater Management Plan
 - Ex. VI: Transportation Plan
 - Ex. VII: Traffic Hierarchy Plan
 - Ex. VIII: Utility Plan
 - Ex. IX: Flood Zone Overlay
- Warden Station Pattern Book
- Kinlaw Lane road improvements (Horry County project)
- Cultural Resources Background Review
- Biological Evaluation
- Federally Listed Species and Habitat Assessment
- Wetland Letters
- Draft of the proposed Development Agreement

Staff inclusions in packet:

- PD narrative with staff's comments (in red)
- Annexation / rezoning applications (all tracts)
- GIS maps for each request of the Warden Station PD
- Additional staff comments on the entire Warden Station PD
- City of Conway Future Land Use Map 2019-2029
- Horry County Future Land Use Map (Imagine 2040 Comprehensive Plan)

- FEMA National Flood Hazard Area Map (for this area – screenshot of)

PREVIOUS PLANNING COMMISSION MEETINGS:

May 4th Planning Commission:

The first public hearing was scheduled for the May 4th Planning Commission meeting. However, the applicants requested deferral to the July PC meeting, and the agenda for the May meeting stated the requests had been deferred. Therefore, the public hearing was *not* held. There was public input at the end of the PC agenda, where several people spoke in opposition to the requests. The concerns raised included:

- Issues with contiguity
- Strain on city services
- Traffic concerns
- Lack of needed infrastructure
- Strain on affordable housing
- Cost of the development to the city
- Comments made during a request on East Cox Ferry annexation discussion a few months prior compared to now
- Concerns with having a gas station across the street from a residence

July 13th Planning Commission:

A public hearing on the requests was held at the July 13 meeting. The conference room of the building was at capacity, with several people outside waiting to come inside. An estimate of the number of people present to speak at the meeting is approx. 60-70 people. All those who spoke were in opposition to the request. Their concerns included:

- Existing and future traffic on Highway 701 South and surrounding roadways
- Strain on emergency services
- Lack of water / sewer facilities
- Capacity of public schools in area
- Higher taxes on surrounding residents as a result of development of the property
- Stormwater runoff
- Distance from residences immediately adjacent to property
- Uncontrolled growth
- Concern with area becoming like Carolina Forest
- Flooding of surrounding properties as a result of this development
- Tree removals
- Destruction of forestland and animal habitats
- Lack of hospitals on the west side of the Waccamaw
- Multifamily and townhouse dwellings – too dense for area
- More cookie-cutter developments

Staff recommended that the request be deferred to the August 3rd meeting, in order to give staff and Planning Commission time to review updated documents submitted the day before the meeting. Planning Commission voted to defer the request.

STAFF ANALYSIS OF REQUEST:

A majority of the property is zoned Horry County Commercial Forest Agriculture (CFA), which currently permits several types of land uses, including residential, commercial, agricultural, and limited industrial. If developed in the County under the current zoning of CFA, single-family detached (site built), manufactured homes, and townhomes could be constructed on half-acre lot sizes. The tracts included in the request that contain proposed residential development, including the master open space / recreational tract is of approx. 1,631 acres. Removing an approximate wetland acreage of 700 acres (realizing it's probably less than this) from these tracts would leave approx. acreage of 931 acres that could be developed (with no wetland impacts). While some of the wetlands on the subject tracts are within the flood zone; there is a significant amount outside of wetlands within a flood zone. Subtracting 20% of the remaining acreage for infrastructure requirements (estimate only), stormwater ponds, roads, open space, etc., approx. 745 acres remain, and with half-acre lot size requirements under CFA zoning, the total number of lots that could result is 1,490 lots and/or units containing single-family, site-built homes, manufactured homes, or townhome units. Note that this is an estimate only, and site design and the county's land development regulations could result in a lesser number.

Gross v. Net density

Gross Density example: Gross density can be described as the ratio of the number of dwellings to the area (total) that they will occupy, including internal roadways, open space, stormwater, etc. (this is typically calculated based on site plans showing lot layouts or having the overall total of lots ahead of time) Using the total acreage of the tracts proposed to contain all of the residential units – 1,631 +/- acres, with the number of lots that *could* be created on the “developable” acreage: of 1,490 lots/units, the “gross density” is less than 1 dwelling unit per acre (DU/A).

Net Density example: Net density is described as the ratio of the number of dwellings to the area of land they occupy, excluding roads, open space, stormwater, etc. Using the 1,490 lots/units and the estimated acreage that the lots/units would occupy of 745 acres, the “net density” is 2 DU/A.

Additionally, per *Article 9, Section 917 (B) of the Horry County Zoning Ordinance*, the CFA zoning district permits multiple homes on a single parcel of land at a maximum of 5 on a tract of land not less than 3 acres in size. This could result in additional density across the entire acreage.

Single-Family “Gross” Density

The tracts to be developed as single-family are even less dense, which per the Master Site Plan, propose to contain 1,380 single-family lots on 838 +/- acres. This is a “gross” density of 1.6 dwelling units per acre (DU/A).

Townhome “Gross” Density

The tracts proposed to be developed as townhomes include 1,018 units on 178 +/- acres. This is a gross density of 5.7 DU/A.

Multifamily “Gross” Density

The tracts proposed to contain multifamily residential includes 920 units on 62 acres. This is a gross density of 14.8 DU/A.

Overall Density (SF, MF, and Townhomes)

Using the data provided, the same acreage in the example above, and the acreage included in the PD proposed to contain residential development (including master open space tract K) – 1,631 approx. acres, the “gross” density can be calculated as 3,318 lots/units / 1,631 acres, yielding a **gross density of 2 DU/A**. Net density is calculated as 3,318 lots/units / 745 “developable” acres, yielding a net density of 4-5 DU/A.

Access & Circulation

All tracts within the overall development will be accessed directly from the internal spine road that will be constructed, and none will be accessed from external roadways. There are 3 access points to the project: one on Pitch Landing Rd, and 2 on Hwy 701. The tracts with the greatest density will be located closer to Hwy 701; directly behind the commercial tracts. Situating higher density adjacent to arterial roadways is ideal, and multifamily density between commercial uses and less dense, single-family uses serves as a buffer from the commercial uses. The spine road will contain roundabouts for speed control rather than 3 or 4-way stop signs.

Internal and Perimeter Buffers

In addition to the 25’ perimeter buffer required per the PD ordinance, there are natural buffers due to wetland areas that far exceed the 25’ requirement. The applicant is also proposing increased perimeter buffers where there are townhome/multifamily tracts adjacent, or increased perimeter buffers from residential uses to external roadways, where applicable (*i.e.* Tract A to Pitch Landing Rd). The buffers vary from 50 -100’ in width.

Wetland buffers, approx. 25-30’ in width, will also be provided between wetlands and developable areas.

Landscape buffers will also be required within individual tracts between multifamily / townhome tracts and adjacent land uses. Single-family tracts will be required to install landscape buffers to prevent double-frontage of lots (lots that front internal, local streets, but with rear yards facing external, spine roads). Specific widths need to be identified; however, the City’s UDO requires a 15’ Type B buffer, which can be reduced to 10’ with the installation of an opaque fence, a minimum of 5’ in height.

Offsite Improvements

Intersection improvements recommended by the Traffic Impact Study (dated May 2023). There are 5 intersection improvements recommended in the traffic study. Refer to the traffic plan for specific location in relation to the project site.

1. Improvement 1: Pitch Landing Rd & Willow Springs Rd intersection:

- Westbound right-turn lane on Pitch Landing Rd.
- Recommended when 1,300 homes are occupied.
- *Staff comment on recommended improvement:* does the traffic study consider other properties currently under development in the area, along Pitch Landing Rd / Willow Springs Rd / Pauley Swamp Rd?

2. Improvement 2 at Access #3: on Pitch Landing Rd:

- Right-turn and left-turn lanes on Pitch Landing Rd.
- Recommended once access provided (*i.e.* when construction of the spine road on this side of the project is started with construction/development of the tracts which would utilize this Access).

3. Improvement 3: US Hwy 701 & Pitch Landing Rd intersection:

- Southbound right-turn lane onto US Hwy 701.
- Recommended once US 701 & Pitch Landing Rd improvements are built.
- As noted in traffic study, this improvement is recommended with or without development of the Warden Station PD.
- Additional recommendations in traffic study:
 - Eastbound dual left lanes are likely needed for improved operation; dual left lanes along the westbound approach of Pitch Landing Rd; additional northbound through lane; and additional southbound lane.
 - Existing and future ADT's should likely earmark the northern portion of US 701 to Pitch Landing Rd as a candidate for widening. The addition of the proposed development also contributes to the need for widening.
 - *Staff comment:* The GSATS 2040 MTP Update, finalized in 2017, identified US Hwy 701 as a recommended "widening" project, from Georgetown County to Conway. However, this does not imply that any funding has been earmarked for it or that it will be in future plans.

4. Improvement 4 at Access #1: US Hwy 701:

- Right-turn and left-turn lanes on US 701.
- Recommended once access is provided.

5. Improvement 5 at Access #2: US Hwy 701 & Kinlaw Lane:

- Right-turn and left-turn lanes on US Hwy 701 at Kinlaw Lane.
- Recommended to be completed once access is provided.

Additional notes mentioned in the traffic study:

The Perimeter Road and Southern Evacuation Lifeline projects are both planned projects in this area. Even if funded and implemented, traffic from the Warden Station will not be significantly impacted or rerouted.

Additionally, background growth in the area may require roadway and municipal facility improvements.

Limitations on Number of Permits to be Issued for Traffic Improvements

In lieu of completing the offsite improvements recommended in the traffic study, the applicant has requested to pay the fee in lieu of the cost of the estimated improvements to the City for all 5 offsite improvements on or before the date on which 900 building permits have been issued for the property, citing that the developer has no power of eminent domain with regards to acquisition of right-of-way in order to complete such improvements.

Staff comments on Offsite Improvements:

Hwy 701 S appears to be a 75' right-of-way width. Pitch Landing Rd is a 66' wide right-of-way, although verification is needed. Both of these roadways are State roads, owned and maintained by the SC Dept. of Transportation. Staff would recommend that the applicant verify that property acquisition would even be necessary in order for such improvements to be made.

Even if the developer is permitted to provide the costs for such improvements to the city in advance of development, phased with the number of lots allowed to be created with final plats for developments, or the issuance of a certain number of many building permits for each improvement, with the rising costs of materials and other unknown variables (*i.e.* ability/cost associated with acquisition of additional rights-of-way, relocation of easements, utilities, any wetland impacts, legal fees, etc.), it would be difficult to determine future costs for these improvements.

Additional Public Safety Recommendations by Public Safety (not included in applicants' proposal)

- Installation of License Plate Readers (LPR's) OR cameras to be installed at each residential entrance for each development, at the developer's expense.
 - LPR's are an annual rental agreement rate of approx. \$4,000 each (per LPR). Conway Police Dept. would get access to the data, but they would be maintained by the company that installs them.
 - Cameras are an initial cost of approx. \$4,000 each (per camera). The monthly cellular fee per camera is approx. \$30.

All rates/costs are estimates, based on information currently available. A minimum of 18 LPR's or Cameras would be required, if the applicant is required to install LPR's or cameras as outlined above.

At minimum, cameras / LPR's should be installed at each access point to the development. There are 3 entrances / access points to the project site.

Onsite Improvements (not included required infrastructure for developments)

Not including the necessary infrastructure improvements, the following is proposed:

- A master open space area on Tract K, per the master site plan and phasing plan, to include at least 4 pickle ball courts, passive park space, and recreation fields with parking and other improvements within the areas of the project to eventually be conveyed to the City. The developer intends to convey the area to the City on or before the issuance of 750 building permits.
- Installation of a multipurpose path, 8-ft in width, which will follow the spine road in the project, to be completed on or before the issuance of 750 building permits.
- The applicants have also provided a pattern book to highlight development themes throughout the project area, which include:
 - Boulevard streetscapes, with street tree installation, raised pedestrian / golf cart crossings, sidewalks, evergreen shrubs to screen homes, multi-use path(s);
 - Major monumentation (for project entry), Neighborhood entry monumentation, featuring stone columns, timber beams, and high-density urethane (HDU) signs, and marker columns;
 - Roundabout designs for Spine road, with multi model paths within the community surrounding the design and center of roundabout to include stone/brick center with planting area in the middle;
 - Pocket parks (large and small) to include open grass play areas, trees and plantings / planters, and benches along sidewalks / central seating areas.
 - Multiuse paths to feature seating areas with benches and decorative concrete or pavers, with wayfinding signage;
 - Street blade signage to include major trailhead markers, directional signs, minor trailhead markers and misc. signage.
 - A master bark (dog) park featuring benches, dog waste station, dog water station, a fenced area separating small and large dogs, a parking lot for residents that do not walk to the park, and various trees and plantings in and surrounding the park;
 - Character images, including fencing, street lights, benches, waste receptacles, and arbors can be found in the pattern book provided with the PD documents.
- *Staff recommendations include the following (for improvements on tract K):*
 - Installation of four (4) pickle ball courts;
 - A playground area with associated equipment, to include flood proof design, a size adequate enough to support the number of children estimated to live within the project at buildout;
 - Wildlife Refuge Trail Connection, in accordance with the City's Pathway's & Trails Plan (adopted in 2022). Details of trail types/materials were provided to applicant.
 - Installation to be complete before conveyance to the City. In lieu of completion (and before conveyance), a financial guarantee can be provided, if approved by City Council, for such improvements. Recommended completion: on or before the issuance of 500 building permits.
 - All improvements need to be included on the Master Site Plan to be adopted with the PD, if annexation occurs.

Development Enhancement Fees Proposed to be Included in the Development Agreement

- **Sanitation Service enhancement fee.** Fee will apply to each residential unit and each commercial unit, payable at the time of permit application. Fee amount not yet established.
- **Public Safety enhancement fee.** Fee will apply to each residential unit and each commercial unit, payable at the time of permit application. Fee amount not yet established.
- **Staff recommends adding the following:**
 - **Parks and Recreation enhancement fee.** Fee will need to apply to each residential unit, payable at the time of permit application. Staff recommends a fee of no less than \$1,000 per residential unit.
 - **Planning and Development enhancement fee.** Fee will need to apply to each residential unit, payable at the time or permit application. Staff recommends a fee of not less than \$200 per residential unit.
 - **ALL FEES, PROPOSED AND RECOMMENDED, ARE STILL BEING CONSIDERED.**

Stormwater Design & Management

The applicant's submittal addresses stormwater in a few different areas of their PD narrative and Development Agreement.

Staff Recommendation / comments:

Prefer that stormwater be addressed in one place in each document and contain the same language. Staff has also proposed / requested the following, and may represent an option rather than a requirement. Further discussion may be needed.

- Provide a larger, common plan (LCP) for stormwater design. (option)
- The City does not have regulations for permitting compensatory storage. Therefore, Compensatory Storage shall not be permitted within this project. Language will need to be added to state this in both the PD and D.A. (requirement)
- Add a statement that *“all stormwater will be designed to meet or exceed the standards contained within the City of Conway Stormwater Ordinance that is in effect at the time of plan submittal/permit application.”* (requirement, unless a LCP will be provided)

Development of Adjacent Property / Surrounding Area:

Immediately adjacent to the subject property are 2 developments proposed in Horry County's jurisdiction: *“Pitch Landing Crossing”* on Pauley Swamp Rd, near the intersection of Pitch Landing Rd, on property zoned SF10 (single-family site-built homes on 10,000 sq. ft. min. lot size), with 77 lots proposed. The other is *“Willows at Pitch Landing”*, located on Pitch Landing Rd, on property also zoned SF10, with 121 lots proposed.

Staff researched back to 2019 to identify any rezoning of property in the vicinity of this project to see if there were any trends in what types of rezoning requests had been applied for and approved. There were

3 requests that have been approved in recent years for major developments in the area; all of which were rezoned to MRD1.

Per the County's Zoning Ordinance, the MRD1 district (Multi-residential One) district, allows for mixed residential development in rural areas of the county, as specified on the future land use maps. Per *Section 207* of the Zoning Ordinance (Horry County), permitted uses include: single-family detached dwellings (no mobile homes), duplex dwelling, semi-detached dwellings, patio homes, quadruplex dwellings, townhomes, multifamily, in-common development of such dwelling types, and Boarding Houses as a conditional use in the MRD districts.

The rezoning of these tracts to MRD1 include the following acreage and density for each tract:

- 75 acres to MRD1 to develop 169 single-family lots with average lot size of 10,000 sq. ft.
- 179.34 acres to MRD1 to develop 385 single-family lots with an average lot size of 10,000 sq. ft. (gross density of 2.19 DU/A as specified by the applicant in the request).
- 43.85 acres to MRD1 to develop 100 single-family lots with approx. min. lot size of ½ acre.

Including the developments immediately adjacent to the subject tract(s), the total number of lots that could be created, based only on recent rezoning of properties in areas within a few miles of this project and those developments under review, would be 855 lots.

In order for the rezoning requests to MRD1 to occur, a future land use map amendment would have been needed so that the request was consistent with the County's Imagine 2040 Comprehensive Plan.

South of the project is also a development that appears to be recently approved with lots created, called "Saddle Ridge, Phase 1", and remainder tracts that could contain future phases, that is zoned SF8.5 (single-family with minimum lot size of 8,500 sq. ft.).

City of Conway Residential Design Standards for Single-Family, Townhome, and Multifamily Dwellings

The City's Unified Development Ordinance has contained design standards for townhome and multifamily development for several years; however, the City adopted design standards for single-family development as well, and increased design standards for townhome/multifamily development. The requirements include restrictions on siding, garage placement and depth, overhangs/eaves, shingle types, among other items. A complete list of these standards can be found in *Article 6, Section 6.2* of the City's UDO.

Development within Flood Zones

The applicant has agreed to not build any structures within a flood zone. The Master Site Plan, while there are tracts (residential and commercial) that contain flood zones, no actual structures are shown to be within a flood zone. Staff notes that there is no City or County law that prohibits construction within flood zones; only that the buildable area(s) of the lots must be elevated to meet base flood elevation requirements.

Staff recommendation – Add the following sections / statements:

Flood Damage Prevention. The site shall be and remain in compliance with the City’s Flood Damage Prevention Ordinance. The project will be compliant with the Flood Damage Prevention Ordinance that is in effect at the time of plan submittal / permit application, and shall not be exempt from the ordinance.

Tree Preservation Ordinance

Requirements for protected / landmark trees differ between county and city. Staff recommends that a section be added to the PD document and D.A. for Tree Preservation. Example below:

Tree Preservation. Property included in the project area shall comply with the City of Conway Tree Preservation Ordinance that is in effect at the time of plan submittal / permit application. Protected trees / landmark trees, per the Tree Preservation Ordinance, shall not be removed without a protected tree removal permit and submission of a tree survey.

NEXT STEPS AND DATES/ESTIMATES:

If Planning Commission provides a recommendation for council at the August 3rd meeting, First Reading of the annexation / rezoning requests could tentatively be scheduled for the August 21st Council meeting. The second public hearing on the development agreement is scheduled to occur at the August 21st Council meeting as well, and was advertised as such.

STAFF RECOMMENDATION:

Staff recommends that Planning Commission give a thorough review of the request and make an informed recommendation to Council after said review.

There are additional items that need revisions in the PD. Staff emailed these requested changes on 7/27/23.



A written project description of

**WARDEN STATION
PLANNED DEVELOPMENT
DISTRICT (PD District)**

April 5, 2023

Latest Revision: June 27, 2023

Prepared by:

Robert S. Guyton, P.C.
4605 B Oleander Drive, Suite 202
Myrtle Beach, SC 29577
(843) 839-2100

And

G3 Engineering & Surveying, LLC
24 Commerce Drive
Pawleys Island, SC 29585
(843) 237-1001

PD DISTRICT DOCUMENT TABLE OF CONTENTS

PD DISTRICT NARRATIVE

- Section 1: PURPOSE AND INTENT STATEMENT
- Section 2: LEGAL DESCRIPTION
- Section 3: PROJECT DEVELOPER AND TITLE
- Section 4: MASTER SITE PLAN
- Section 5: DEVELOPMENT DESCRIPTION
- Section 6: GENERAL DEVELOPMENT STANDARDS THROUGHOUT THE PD DISTRICT
- Section 7: RESIDENTIAL REGULATIONS
- Section 8: COMMERCIAL REGULATIONS
- Section 9: MAINTENANCE AND CONTROL
- Section 10: CONSTRUCTION SCHEDULE
- Section 11: OFF-SITE AND STREETScape IMPROVEMENTS
- Section 12: AMENDMENTS AND ENFORCEMENT

APPENDICES:

Appendix A: PD District Documentation (Submitted Separately as a Supplement)

- (I) Existing Conditions – (a) Boundary Survey, (b) Wetlands and Topography, (c) Downstream Analysis, (d) Aerial, and (e) Existing Zoning.
- (II) Master Site Plan
- (III) Phasing Plan
- (IV) Open Space Plan
- (V) Stormwater Management Plan
- (VI) Transportation Plan
- (VII) Traffic Hierarchy Plan
- (VIII) Utility Plan – (a) Potable water, (b) Sanitary Sewer
- (IX) Flood Zone Overlay

Appendix B: Project Aesthetics (Submitted Separately as a Supplement)

- (I) Pattern Book

Appendix C: Reports and Addendums (Submitted Separately as a Supplement)

- (I) Project Traffic Report
- (II) Threatened and Endangered Species

SECTION 1: PURPOSE AND INTENT STATEMENT

The intent of the Planned Development District (PD District) is to provide for large-scale, quality development projects (three acres or larger) with mixed land uses which create a superior environment through unified development and provide for the application of design ingenuity while protecting surrounding developments. More specifically, the intent of the PD District is to permit:

- A. Flexibility in design to take the greatest advantage of natural land, trees, historical and other features;
- B. Accumulation of large areas of usable open space for recreation, preservation of natural amenities, and provision of community facilities;
- C. Creation of a variety of residential and compatible neighborhood arrangements that give the home occupant greater choice in selecting types of environment and living units;
- D. Clustering of one residential type for better use of the land and open space;
- E. Allowance of sufficient freedom for the developer to take a creative approach to the use of land and related physical development, as well as utilizing innovative techniques to enhance visual character of the city;
- F. Efficient use of land which may result in reduction in development and maintenance cost of street and utility systems;
- G. Simplification of the procedure for obtaining approval of proposed development through simultaneous review by the city of proposed land use, site consideration, lot and setback consideration, public needs and requirements, and health and safety factors [*City of Conway Unified Development Ordinance Adopted December 12, 2011 (Last Amended November 21, 2022)*].

The real property that is the subject of this PD District consists of approximately One Thousand Seven Hundred Sixty Five and 29/100 (1,765.29) Acres, more or less (the “**Subject Parcels**”). The Subject Parcels are located within the Conway and Bucksport Sections of Horry County, but outside of the jurisdiction of the City of Conway, bounded generally by U.S. Highway 701 to the East, Pitch Landing Road to the North, Kinlaw Lane to the South and Bear Creek to the West. Simultaneously with the adoption of this PD District, the Subject Parcels will be annexed into the City of Conway, by separate petition for annexation (the “**Annexation Agreement**”), and will be subjected to the terms of a separate development agreement between BRD Land & Investment Management, LLC, a North Carolina limited liability company (the “**Developer**”), of the Subject Parcels, its successors and assigns and the City of Conway (the “**Development Agreement**”), which Development Agreement will also be adopted simultaneously with the adoption of this PD District. The Subject Parcels are generally located Southwest of the intersection of U.S. Highway 701 and Pitch Landing Road.

Pursuant to the terms of the Development Agreement and the requirements of the City’s Unified Development Ordinance (the “**City’s UDO**”), public benefit is not required under the City’s UDO as a part of the PD District, the Developer, and its successors and assigns, have nevertheless agreed to provide certain public benefits, which are as follows:

1. The creation of a direct internal roadway network with public rights-of-way ranging in width from 50' to 100', including a 100' right-of-way connection from U.S. Highway 701 to Pitch Landing Road, and the roadway improvements thereon (the "Spine Road"), such Spine Road to be completed not later than the date on which the City has issued 750 building permits for the Project.
2. A sanitation service enhancement fee in an amount equal to \$_____ per Residential Unit, as hereinafter defined, and \$_____ per Commercial Unit, as hereinafter defined, which shall be payable at the time of building permit application.
3. A public safety enhancement fee in an amount equal to \$_____ per Residential Unit, as hereinafter defined, and \$_____ per Commercial Unit, as hereinafter defined, which shall be payable at the time of building permit application.
4. The installation of an multi-purpose path of 8' in width, following the internal Spine Road, in accordance with the requirements of the City for other similar-situated properties, to be complete on or before the date on which the City has issued 750 building permits for the Project.
5. Installation of at least One (1) new sewer pump station on the Subject Parcels, and, to the extent required in order to provide sufficient capacity as necessary for the proposed development of the Project, a second sewer pump on the Subject Parcels. Sewer pump installation shall be in accordance with the requirements of the City for sanitary sewer service.
6. Stormwater conveyance and retention facilities sufficient in capacity to accommodate the storm water generated from the Subject Parcels, and provide the City with evidence of the necessary and required permanent and perpetual easements necessary to facilitate such drainage from the Subject Parcels.
7. Fee in an amount representing the engineers estimated cost of roadway improvements to Five (5) separate roadway intersections, Three (3) existing roadway intersections, and Two (2) proposed intersections, each lying on the boundary of the Subject Parcels, in accordance with the Transportation Plan submitted as part of the Exhibit Supplement under Appendix A, Exhibit VII. The intent of this provision is to insure that the costs of such improvements have been paid to the City on or before the date on which 900 building permits have been issued by the City for the Property. Developer and the City recognizing that Developer has no power of eminent domain with regards to acquisition of public right-of-way, and therefore Developer cannot complete the proposed intersection improvements which require the acquisition of additional public right-of-way.
8. Installation of at least Four (4) pickle ball courts, passive park space, and recreation fields, together with parking and other improvements within the areas of the Project to be conveyed to the City, as indicated on the Open Space Plan submitted as part of the

Exhibit Supplement under Appendix A, Exhibit IV, not later than the date on which 750 building permits have been issued by the City for the Property.

9. Conveyance to the City of approximately 500 acres of real property, which includes uplands, wetlands and flood plain areas for ownership, perpetual maintenance and preservation, also as indicated on the Open Space Plan submitted as part of the Exhibit Supplement under Appendix A, Exhibit IV, which acreage may be conveyed in one or more parcels, each at the time an adjoining parcel is submitted for final plat, provided that, in any event all of such acreage shall be conveyed to the City on or before the date on which 1,500 building permits have been issued by the City for the Property.

*Items 1, 4 and 7 are included in public benefit, although not recommended by current Traffic Study for the PD District.

It is the specific intent of this PD District document (“***PD Document***” or “***PD District Document***”) approved by the City on or about the ____ day of _____, 2023, to create and maintain an interconnected pedestrian and active lifestyle driven residential community which includes a variety of single family areas, a limited number of commercial areas, open spaces, common areas, and amenities, including parks, recreational and passive spaces, which are together referred to as “**Warden Station PD District**” (the “***Project***”), in accordance with the City’s UDO, which are specifically addressed as follows:

1. The proposed land uses within the PD District are a combination of various residential uses consisting of approximately 1,628.57 Acres, including single family detached homes, single family subdivided attached homes ranging from Two (2) to Eight (8) homes per individual building, single family attached townhomes, mid-rise multi-family condominiums, mid-rise multi-family apartments, and mid-rise multi-family apartments with elevators, which, dependent upon the product, may be offered for sale or rent, or a combination of both, together with those amenities and recreational facilities as set forth herein. The commercial component of the PD District consists of approximately 136.78 Acres, which may include many different commercial uses which would typically be associated with a development of this scale, such uses being set forth herein. The proposed land uses for the Project were selected in an effort to compliment and blend with the existing surrounding uses, while exemplifying the primary components of the active lifestyle market for both families and retirees.
2. Connections between the proposed PD District and the surrounding roadways are designed to enhance both the interconnectivity and the usability of U.S. Highway 701, Pitch Landing Road and Kinlaw Lane and to allow residents to safely travel along the interior of the Project from neighborhood to neighborhood with minimal impact to adjoining neighborhoods outside of the PD District.
3. Pathways adjacent to public rights-of-way, and pedestrian and bicycle connections reflected on the Master Plan to be constructed within the PD District provide for safe and accessible travel for pedestrians and bicycles.

4. The variety of housing products provided within the PD District are intended to appeal to single adults, working families, pre-retirees, early retirees and late in life retirees by providing opportunities for home ownership at a variety of price points.
5. Streets follow the City's design standards, except to the extent revised standards are included within the PD District Appendices, reflecting a revised design standard, and where varied, consist of wider green space, and multi-purpose paths, rather than additional asphalt. Build-out demand considerations have been incorporated in the initial project design, including exterior connections from the PD District to existing public roadways to avoid constricting traffic flow. Notwithstanding the above requirements, Developer and the City acknowledge and agree that the right-of-way of Kinlaw Lane does not comply with the City's design standards. To the extent improvements are required by the City to Kinlaw Lane, Developer will reserve and dedicate any additional right-of-way from the Subject Parcels, at no additional cost to the City, for the City to make such improvements, at the City's expense, and at the time the City deems such improvements appropriate.
6. The PD District incorporates both water, open space and passive amenities, among the Subject Parcels, that may include, at the election of the Developer with regards to each individual parcel, swimming pool, neighborhood clubhouse, docks, shelters and open air gazebos to encourage resident's maximization of outdoor spaces, and these improvements, to the extent included in any individual parcel, shall be for the benefit of one or more individual neighborhoods within the PD District, and not as a master amenity for the benefit of of the entire PD District. Site design has been guided, and actual construction will be guided by an effort to maintain key trees and environmentally sensitive areas. Stormwater will be handled through reuse and expansion of existing water features, additional new retention facilities and the use of existing topography, including the excavation of flood plains within the Subject Parcels for additional storage capacity, to meet all regulatory requirements.

All development within this Project will be regulated by the terms of the master site plan, approved ordinance, the City's UDO, the Development Agreement, and other applicable codes and ordinances of the City of Conway. *The definitions applicable throughout this Document are set forth in Article 2 of the City of Conway Unified Development Ordinance.*

SECTION 2: LEGAL DESCRIPTION

The Subject Parcels are described as all of those certain pieces, parcels or tracts of land lying and situate near the City of Conway, Horry County, South Carolina, and being more particularly depicted on **Appendix A** (i) attached hereto.

SECTION 3: PROJECT DEVELOPER AND TITLE

The Project title of this development is "***Warden Station PD***", although the Project may be branded among various neighborhoods within the Project following the approval of this PD District by the City. The developer for the Project is BRD Land & Investment Management, LLC. The term

“**Developer**” throughout this Document will include all subsidiaries and affiliates of BRD Land & Investment Management, LLC, and the term will also include any of its successors in interest or successors in title and/or assigns by virtue of assignment or other instrument.

SECTION 4: MASTER SITE PLAN

Appendix A of this Document, attachment hereto, contains the PD District Documentation, and the Twelve (12) different neighborhoods, together with the commercial parcels located on each side of the Spine Road, within the Project (“**Master Site Plan**”). The Master Site Plan shall be binding on the Subject Parcels and any materially major departure, other than as set forth in Section 6 and Section 12 below, shall be authorized by amendment only. The controlling Master Site Plan shall negate any contradiction between the Master Site Plan and any other plan, and this PD District Document.

- A. This Project will ultimately include Nineteen (19) phases, including Twelve (12) phases of residential product, and Seven (7) phases of commercial product, together with amenity areas, park and open space areas, and each of such components may be developed at various times relative to the residential development and commercial development portion of the PD District, any one of which may be further developed in sub-phases, and any of which may be developed in any particular order, with all homes remaining under ownership of the Developer, its successors and assigns, until such time as a final plat approved by the City may be recorded in the public records of Horry County, South Carolina. Although the timing of completion of any particular Phase of the PD District is subject to then current market demands, the Developer anticipates a period of approximately Eighteen (18) months from approval of the PD District for design, and permitting, and additional period of approximately Twelve (12) months from the issuance of permits and approvals for the installation of initial required infrastructure, and that approximately One-Fifth of the Project would be complete within Five (5) years of approval of the PD District, with an additional One-Fifth of the Project being completed in each of the subsequent Five (5) year periods, with a projected build-out period for the Project of Twenty Five (25) years. A general description of each Phase of the Project is set forth in the Tables included herein. The relevant infrastructure necessary for development of the individual Phases of the PD District, including water, sewer, drainage and other supporting utilities and other improvements will be installed in accordance with construction plans to be approved by and in accordance with the requirements as per City departmental reviews.

SECTION 5: DEVELOPMENT DESCRIPTION

The Developer has significant experience in bringing new communities that meet the needs of both the local community and the new residents, throughout the Southeast region of the United States, with a significant concentration of such communities within North Carolina and South Carolina. By being involved in the creation of the new development, the Developer is able to insure the desires of future homebuyers are incorporated in the initial land design, and carried through consistently to the completion of the final home. Often in today’s market, the Developer is disconnected from the builder’s targeted homebuyer, and that disconnect can have a significant

impact on the success of the community. For this PD District, the Developer has planned the amenities and the product offerings to reflect an active lifestyle to accommodate families, soon to be retirees and retirees. The key word in the phrase “Master Planned Community”, is Community, since success for an active community is dependent upon substantial amenities encouraging an active lifestyle with outdoor activity and interaction among residents. In today’s real estate market, communities are typically a collection of one or more neighborhoods, with compatible architectural character, promoting a way of life and diversity with a common purpose. The Project is designed to anticipate a variety of users, and to balance the environment between them.

Neighborhoods are the building blocks of a community. The neighborhood is where we experience our family and friends, it’s where life happens, and it’s where we tell people we live. Residents are offered a range of options for getting where they want to go rather than having to depend solely on their automobile. Each neighborhood within the PD District will offer distinctive product type, to appeal to the needs of a particular targeted resident. The offering of various product types further encourages the diversity of both residents and their interests. In addition, the covenants, conditions and restrictions for the various neighborhoods within the PD District will provide for limitations on certain types of uses that conflict with the target resident for that particular neighborhood. As an example, a particular neighborhood may be restricted for leases terms of less than One (1) year, while other neighborhoods are intentionally design to attract the short-term, transition resident, who may be building are anticipating the building of a permanent residence within another area of the PD District.

Public spaces are the social heart of communities. Today, modern development has arranged public space into two forms; the first being activity areas for organized leisure activities and sports; and the second being preservation areas such as lakes, wetlands, pocket parks, groves of preserved trees, and drainage channels. The recreational areas are designed to accommodate leisure activities and sports, but also to create places where one can go simply to be outside, enjoy nature and maybe have a picnic. The relationship between leisure and recreation has to be better understood. Leisure is time and experience based, while recreation is activity and space based. One is aesthetically oriented and the other is functionally oriented. While a good community should provide both, the two are not the same, and must be balanced so the needs of the residents are being met in equal proportion. The Project incorporates a significant flood plain area, which contributes to the Developer’s efforts to separate uses, provide buffers between neighborhoods, and preserve the flood plain areas and wetlands in order to accommodate any rising water during an historical storm event. Portions of the flood plain area within the PD District may be supplemented with docks, recreation lawns and preservation of existing vegetated border areas. Public space and green areas help provide a transition between the various neighborhoods and residences, and provide a sense of movement, and enhances the feeling of being in a distinct place. The interconnection of activities, through the use of pathways, provides opportunities for activities to all residents.

The public spaces, including open space, flood plain areas, jurisdictional and non-jurisdictional wetlands to be conveyed by Developer, its successors and assigns, including the owners of the individual parcels comprising the Subject Parcels, to the City, shall be conveyed in conjunction with the development of the individual Phases, on or before the date on which the development within a particular Phase has been completed. To the extent any area within the PD District is, at the time of the development of the Phase in which such area is located, designated as a

jurisdictional or non-jurisdictional wetland, or required wetland buffer, then, and only then, will the same be conveyed by Developer to the City, provided, however, that the Developer, its successors and assigns, including the owners of the individual parcels comprising the Subject Parcels, such conveyance shall be subject to reservations of ingress, egress, access and the installation, extension, tie-in, repair, maintenance and replacement of utilities serving the Subject Parcels.

The Project is planned to include a mix of land uses, which together form an integrated active lifestyle community. The Project will be the subject of master covenants, conditions and restrictions, which will apply to the community as a whole, as well as additional covenants, conditions and restrictions which may be applicable only to certain portions of the community (collectively the “CCRs”). The CCRs will define the building size, aesthetic style and shared amenities and open spaces of each of the respective neighborhoods within the Project.

The arterial roadway providing access through the Project from U.S. Highway 701 to Pitch Landing Road, as a spine road, is anticipated to be a variable width public roadway. The interior roadways within the Project, to the extent the same meet with requirements of the City for a public roadway, are also anticipated to be public roadways. Roadways within the Project, in addition to public roadways, may include private roadways, internal drives and other areas within the multi-family areas of the Project where subdivision from a public right-of-way is not required and planned by the Developer. Setbacks and easements will be arranged so as to allow for off-street parking of at least one car in depth for the residences. All water and sewer systems within the Project, upon completion, will be dedicated to one or more of the City, Grand Strand Water & Sewer Authority or Bucksport Water System, Inc. The neighborhoods within the Project may consist of detached single family lots of varying width, single family subdivided attached duplex, tri-plex and quadraplex homes, attached duplex, tri-plex and quadraplex homes, townhomes, mid-rise multi-family buildings and many different commercial uses within the commercial areas of the PD District. The architectural style of the homes will be consistent and compatible, but will also allow for an identity to be established within each neighborhood by its distinctive elements. Elevated entries, varying rooflines, oversized windows and durable but distinctive roofing materials will be present in each of the neighborhoods, the elements and style of each neighborhood being reflected in the appendixes attached to this PD District Document.

Single Family residences may include Single Family Detached, Single Family Duplexes (not more than Two (2) units), Single Family Townhomes ranging from Three (3) to Eight (8) units per building. Single Family Duplexes and Single Family Townhomes may be subdivided, or may be in common. To the extent such units are subdivided, each unit shall comply with the subdivision requirements of the City, including, but not limited to the requirement that in order to be subdivided, lots must adjoin a public right-of-way.

Multi-Family residences may include mid-rise condominiums, and mid-rise apartments, not exceeding Four (4) stories, all of which may be offered for sale, for rent or both.

The Commercial areas may include subdivided commercial lots, shopping centers and commercial condominium complexes, combining various uses within a single development.

Architecture, signage design and landscaping are proposed to be controlled with detailed design guidelines, which will be administered by a Subject Parcels owners association (“**POA**”) and/or an architectural review board (“**ARB**”). Table 1 below identifies the proposed uses for the Subject Parcels within the PD District.

**TABLE 1
PROPOSED USES FOR SUBJECT PARCELS**

Master Plan Tract	Approximate Acres	Proposed Land Use	Product Type	Proposed Density
Tract D	56.84 AC	Single Family	SF Type A (60') Detached	135
Tract F	128.54 AC	Single Family	SF Type A (60') Detached	302
Tract G	178.76 AC	Single Family	SF Type A (60') Detached	341
Tract H	232.97 AC	Single Family	SF Type A (60') Detached	321
Tract I	153.20 AC	Single Family	SF Type A (60') Detached	91
Tract J	90.22 AC	Single Family	SF Type A (60') Detached	190
Tract A*	40.47 AC	Duplex/Townhome	SF Type D (20') Attached	246
Tract C*	21.66 AC	Duplex/Townhome	SF Type D (20') Attached	104
Tract E*	50.94 AC	Duplex/Townhome	SF Type D (20') Attached	408
Tract N*	64.46 AC	Duplex/Townhome	SF Type D (20') Attached	260
Tract L	27.82 AC	Multi-Family	3-4 Story Multi-Family	480
Tract M	34.81 AC	Multi-Family	3-4 Story Multi-Family	440
Tract K**	546.47 AC	Open Space	Recreational Open Space	N/A
Tract B	10.72 AC	Commercial	Type 3 Commercial	107,000 SF
Tract O	23.47 AC	Commercial	Type 2 Commercial	235,000 SF
Tract P	66.33 AC	Commercial	Type 1 Commercial	663,000 SF
Tract Q	14.14 AC	Commercial	Type 1 Commercial	141,000 SF
Tract R	4.30 AC.	Commercial	Type 1 Commercial	43,000 SF
Tract S	5.26 AC.	Commercial	Type 2 Commercial	53,000 SF
Tract T	12.56 AC.	Commercial	Type 1 Commercial	126,000 SF
TOTAL	1,765.29 AC		Residential	3,318 UNITS
			Commercial Space	1,368,000 SF

*Tract A, Tract C, Tract E and Tract N each represent Duplex/Townhome use at the highest intensity. Developer may elect to less the intensity of these tracts from SF Type D, to SF Type B or SF Type C by submittal of a minor amendment to the Planning Director for approval.

**Tract K represents acreage to be conveyed to the City by the Developer, in one or more parcels during the course of development of the Project.

Table 2 below identified the dimensional standards for each of the proposed uses within the PD District.

**TABLE 2
PROPOSED DIMENSIONAL STANDARDS CHART
[PD District Perimeter Setback shall be 25', in addition to the setbacks set forth below]**

Permitted Uses	Min. Site Area S.F.	Min. Lot Width	Min. Lot Depth	Setbacks (Feet)			Max. Height*	Impervious Surface	Separation of Structures*
				Front	Side	Rear			
Single Family Detached SF Type "A"***	6,000	60'	100'	20'	5'	15'	35'	80%	10'
Duplex/Townhome SF Type "B"****	3,000	38'	84'	20'	0'	10'	35'	75%	20'
Duplex/Townhome SF Type "C"****	2,300	28'	84'	20'	0'	10'	35'	75%	20'
Duplex/Townhome SF Type "D"****	1,650	20'	84'	20'	0'	10'	35'	75%	20'
Multi-Family	5,000	50'	150'	15'	10'	10'	52'	75%	20'
Amenities	1,000	N/A	N/A	10'	10'	10'	35'	N/A	10'
Commercial	4,500	30'	150'	40'	0'	20'	52'	75%	20'
Accessory	N/A	N/A	N/A	10'	10'	10'	35'	N/A	20'

*Minimum wall to wall separation for single family homes shall be Ten (10) feet.

**SF Type A Minimum Front Foot shall be reduced to 40' along curves, and 35' along cul de sac.

***SF Type B, SF Type C and SF Type D Minimum Front Foot shall be reduced to 18' along curves and along cul de sac.

SECTION 6: GENERAL DEVELOPMENT STANDARDS THROUGHOUT THE PD DISTRICT

- A. Densities. The overall density for the Project through all Phases, as shown on the Master Site Plan, shall not exceed 1,380 detached single family residential units, 1,018 attached single family residential units, 920 multi-family residential units, and 1,368,000 square feet of commercial space.

The anticipated number of bedrooms per unit for single family homes is between two (2) and five (5).

- B. Permitted Uses.

Permitted Uses are as follows:

- (1) Commercial Uses: Commercial may include each of the uses set forth in Table 3 below, the definition of such uses being consistent with the definitions set forth in the City's

UDO, or, to the extent not defined in the City’s UDO, and classified and designated, for purposes of the PD District, as Type 1 Commercial, Type 2 Commercial or Type 3 Commercial:

Type 1 Commercial	Type 2 Commercial	Type 3 Commercial
Personal Services.	Assisted Living Facility, Continuing Care Retirement Community, Nursing Home.	Golf Driving Range, Gymnasiums, Skating Rink, Tennis Facilities and Miniature Golf.
Food & Convenience Stores.	Adult Day Care Services, Child Day Care Facility.	Nursery, Garden Center.
Dining.	Funeral Home, Mortuary.	Cellular/Wireless Communication Tower, Municipal Improvements for Sanitation, Fire, Public Safety and Public Transportation.
Clothing.	Assembly Hall, Banquet Hall, Civic Club, Religious Institution.	Construction, Building and Agricultural supplies and distribution.
Specialty Retail.	Library, Museum.	Schools and educational institutions.
ATM Bank Machine, Gas & Service, Optical & Hearing Center.	Business Office.	
Big Box Retail Store, Department Store, Boat Sales, Boat Service, Computer Sales & Service, Copying Center, Print Shops, Discount Store, Furniture Store & Showroom, Shopping Center.	Medical/Clinical.	
Auto Accessory Store, Automobile Dealership, Car Wash & Detailing, Rental Car Agency, Truck & Auto Repair Service.	Fabric Shop, Furniture Repair & Upholstery, Jeweler, Leather Shop, Package Store, Liquor Stores, Shoe Store, Sign Shop.	
Building Supply, Equipment Sales, Office Supply Store, Paint, Wallpaper, Flooring Supply & Sales.	Farmers’ Market, Fitness Center, Athletic Club.	
Arcades, Billiard, Bingo Establishment, Bowling Alley, Multiplex Movie Theater, Drive-in Movie Theater, Amphitheaters, Theaters.	Mini Storage Unit (Mini Storage Warehouse), Sporting Goods, Veterinarian/Animal Clinic.	
Hotel, Motel, Inn, Restaurant w/Drive-thru.	Microbrewery.	
Storage and Distribution (Light) specifically including Multi-Unit Indoor Storage, combined with Outdoor Storage, provided such Outdoor Storage shall be screened by fencing and landscaping, each not less than 6’ in height, along the perimeter of such Outdoor Storage where visible from a public roadway, or an adjacent property.	Building Supply Lumber Yard, Warehousing, Wholesaling, Storage & Distribution (Light) specifically including Multi-Unit Indoor Storage, combined with Outdoor Storage, provided such Outdoor Storage shall be screened by fencing and landscaping, each not less than 6’ in height, long the perimeter of such Outdoor Storage where visible from a public roadway, or an adjacent property.	

All of the permitted uses within Type 2 Commercial.	All of the permitted uses within the Type 3 Commercial.	
---	---	--

*For purposes of the PD District, the above referenced Commercial Uses within each of the Type 1, Type 2 and Type 3 as designated in the Master Site Plan for the PD District, shall be deemed permitted uses, and shall be not subject to further conditions, stipulations or additional approvals.

- (2) Additional Commercial Uses: Prior to the completion of the Project, and the sale of all homes from the Developer to third party purchasers, the Developer may operate a commercial sales center and a design center, as a freestanding structure, within any model home, or as a part of any Amenity buildings within the PD District, which uses shall be in addition to the commercial uses set forth in Table 3 above.
- (3) Single Family: Fee simple single family detached, fee simple single family subdivided attached, and single family attached in common. Elevations for the single family detached homes shall include elevations which are consistent in architectural style and materials as those elevations included in the PD District Pattern Book attached in Appendix B, and which are representative of the improvements intended within the PD District, such PD District Pattern Book being submitted with the PD District Documentation.
- (4) Multi-Family: Multi-Family homes shall not exceed 4 stores. Elevations for the multi-family homes shall include elevations which are consistent in architectural style and materials as those elevations included in the PD District Pattern Book attached in Appendix B, and which are representative of the improvements intended within the PD District, such PD District Pattern Book being submitted with the PD District Documentation.
- (5) Amenity and Recreational Areas. Commons areas, common elements, clubhouses, pools, bath houses, picnic shelters, barbeque/fire pits, multi-purpose paths, jogging trails, recreation fields, sports courts and open spaces.
- (6) Decks and Promenades. Decks, docks, gazebos, bridges and elevated walkways.
- (7) Temporary Uses. Temporary uses shall be reviewed and sanctioned by the POA subsequent to issuance of a City business license, provided that:
 - (i) No more than Ten (10) temporary uses will be allowed at one time, within the amenity and commercial areas of the PD District.
 - (ii) Unenclosed structures associated with temporary uses shall not occupy more than 400 square feet of surface area unless prior approval has been obtained from the City.
 - (iii) Any single temporary use shall not remain in place longer than ninety (90) calendar days unless prior approval has been obtained from the City.

Written permission must be obtained from the Developer, its successors and assigns, and appropriate permits obtained from the City prior to commencement of a temporary use.

- (8) Change of One Permitted Use to Another Permitted Use. Should a designated use change after the final construction of a building, any construction modifications of the building must be completed and the PD District approvals obtained for the proposed use, as necessary, to bring it into compliance with the current development standards of this Document and the building code.
- C. Tree Preservation. For purposes of the PD District, tree preservation shall conform to the City's Tree Preservation Regulations, Chapter 4, Conway South Carolina Code of Ordinances.
- D. Development Activity, Clearing and Grading. The Subject Parcels which are the subject of the PD District, are primarily undeveloped. Clearing and Grading of the PD District will require both removal of inferior materials, and replacement with structurally sound materials, in addition to providing for storm water and erosion control measures over the Subject Parcels, in accordance with the requirements of the Stormwater Management and Sediment Control Ordinance for the City of Conway, South Carolina, Ordinance #2015-05-04(C).
- E. Temporary Storm Drainage Maintenance. Developer will provide temporary storm drainage measures, which incorporate storm drainage facilities located on the Subject Parcels to the reasonable satisfaction of the Public Works Director for the City, such that prior to commencement of Development Activities, the Subject Parcels shall continue to maintain the existing storm drainage facilities until the storm drainage facilities which are a part of the Development Activities for each respective Phase of the PD District are complete, and the same are dedicated to the City.
- F. Signage. Signage within the PD District shall comply with Article 11 of the City's UDO, as the same may be amended from time to time.
- G. Parking. Parking with the PD District shall comply with Article 8 of the City's UDO.
- H. Governing Documents. To the extent the provisions of the approved PD District could be read so as to conflict with the City's UDO, and the other ordinances of the City, the PD District shall be deemed to govern, as an approved, intended departure, written into this PD District Ordinance, amending the standards otherwise applicable to the Subject Parcels under the City's UDO and other ordinances.

SECTION 7: RESIDENTIAL REGULATIONS

- A. Geographic Description. The residential regulations applicable to the single family homes portions of the Project shall be included in a set of restrictive covenants, either applicable

to all residential neighborhoods as a master declaration, or applicable to each neighborhood individually, or both.

- B. Public Purpose. The public purpose of the Residential Regulations is to establish and thereafter maintain for its residents, tenants and visitors a sense of community through the design of exterior spaces and buildings at a human scale with appropriate architectural transitions. The sense of community will be further enhanced by the utilization of generous vegetation in and around the residential portion of the Project.
- C. Residential Design Standards. All residential development within the PD District shall comply with the City's Residential Design Standards.

Typical and encouraged elements and architectural styles are attached as **Appendix B** of this Document along with conceptual elevations of other proposed buildings, structures, amenities and streetscapes within the PD District.

SECTION 8: COMMERCIAL REGULATIONS

- A. Geographic Description. The commercial regulations applicable to the Commercial portions of the Project, shall be included in a set of restrictive covenants, either applicable to all commercial areas as a master declaration, or applicable to the commercial area.
- B. Public Purpose. The public purpose of the Commercial Regulations is to establish and thereafter maintain for its residents, tenants and visitors a sense of community through the design of exterior spaces and buildings at a human scale with appropriate architectural transitions. The sense of community will be further enhanced by the utilization of generous vegetation in and around the residential portion of the Project.

SECTION 9: MAINTENANCE AND CONTROL

It will be the responsibility of the Developer to maintain or provide for the maintenance of the Subject Parcels within the PD District, including any private roadways, pathways and driveways. The Developer's maintenance responsibilities and restrictions will cover the private rights-of-way, driveways, landscape areas, trees, parking areas, pathways, walkways, open space, common areas, stormwater conveyance and retention facilities, buildings and other features of the development as appropriate under this Document, applicable City UDO provisions and other ordinances. Upon execution and recording of the declarations of conditions, covenants and restrictions, which must occur prior to the conveyance of any single family residential lot to a third party buyer, the foregoing responsibilities shall be assumed by the applicable POA. In addition to the standards set forth within the PD District, the CCRs will establish additional requirements for landscaping, particularly foundation landscaping and layering, signage and materials for single family residences.

SECTION 10: CONSTRUCTION SCHEDULE

Construction will begin following receipt of permits from the City and from other regulatory bodies. The nature of this Project, together with the current economic conditions, prevents the Developer from providing exact dates for commencement of future phases or exact completion dates. Although the timing of completion of any particular Phase of the PD District is subject to then current market demands, the Developer anticipates a period of approximately Eighteen (18) months from approval of the PD District for design and permitting, and an additional period of Twelve (12) months from the issuance of permits for the installation of initial required infrastructure. Developer estimates that approximately One-Fifth of the Project would be complete within Five (5) years of approval of the PD District, with an additional One-Fifth of the Project being completed in each of the subsequent Five (5) year periods. Notwithstanding the fluid nature of development, and that various Phases of the PD District may be developed in non-numerical order, the number of building permits issued for single family residential units, including both attached and detached homes, and multifamily residential units shall not exceed Three Thousand Three Hundred Eighteen (3,318) total units, and the total commercial square footage of the PD District shall not exceed One Million Three Hundred Sixty Eight Thousand (1,368,000) square feet.

SECTION 11: OFF-SITE AND STREETScape IMPROVEMENTS

Certain vehicular traffic improvements outside of the boundaries of the Project may be required, including right-of-way connections to existing public roadways, in accordance with the requirements of the regulations of the regulatory body having jurisdiction over the respective roadway, all as shown in the Exhibits to this PD District Ordinance, prior to the date on which Six Hundred (600) total building permits have been issued for the Project, all of which will be installed in accordance with the terms of this document or the Development Agreement; however, additional improvements shall be required as per the Transportation and Utilities Plan and the roadway typical section plans, which shall also be installed prior to the date on which Six Hundred (600) total building permits have been issued for the Project.

SECTION 12: AMENDMENTS AND ENFORCEMENT

For purposes of this Ordinance, amendments to the PD District shall be determined as administrative, Minor or Major, by the Planning Director for the City.

Notwithstanding the classification of amendments to the PD District, revisions to the approved Master Site Plan made during the preparation of construction design documents to account for topography, soil quality, trees, grading, minor adjustments to roadway alignment, and changes to the location of lot lines, provided such revisions do not increase the maximum allowable density of the PD District, shall be deemed administrative revisions or amendments to the PD District.

The Developer shall record the approved ordinance in the public records of Horry County and return two (2) time-stamped copies to the City.

Expansions and further amendments to this PD District shall not be permitted without review by the Planning Director and approval as prescribed by the City's UDO.

APPENDIX A

PD District Documentation

Submitted by Separate Supplement

APPENDIX B

Project Aesthetics

Submitted by Separate Supplement

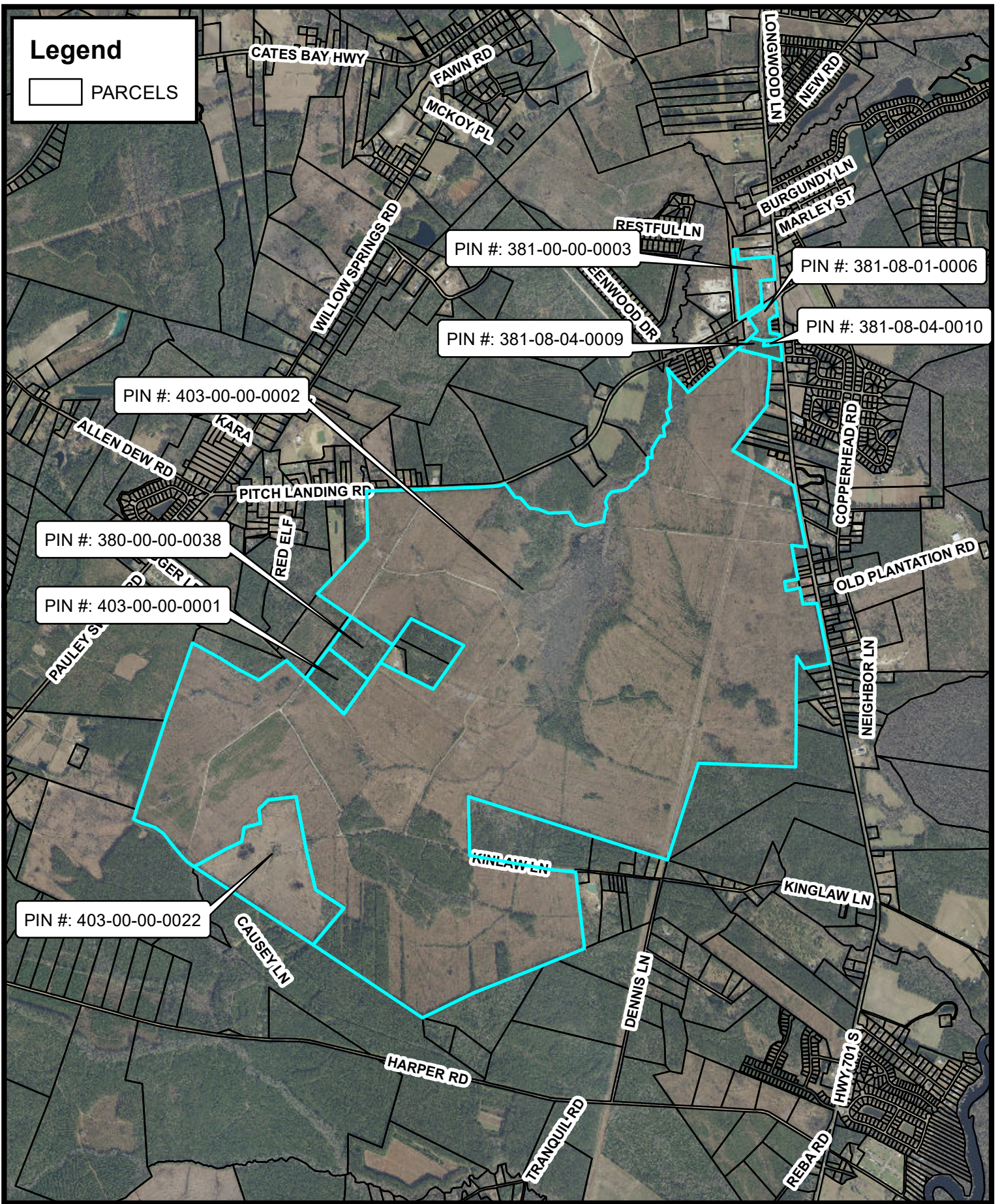
APPENDIX C

Reports and Addendums

Submitted by Separate Supplement

Legend

PARCELS



PIN #: 403-00-00-0002

PIN #: 381-00-00-0003

PIN #: 381-08-01-0006

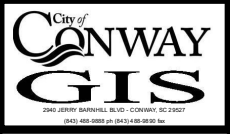
PIN #: 381-08-04-0009

PIN #: 381-08-04-0010

PIN #: 380-00-00-0038

PIN #: 403-00-00-0001

PIN #: 403-00-00-0022



Disclaimer: This map is a graphic representation only. It is NOT a survey. All efforts have been made to ensure its accuracy. However, the City of Conway disclaims all responsibility & liability for the use of this map.

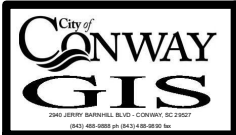
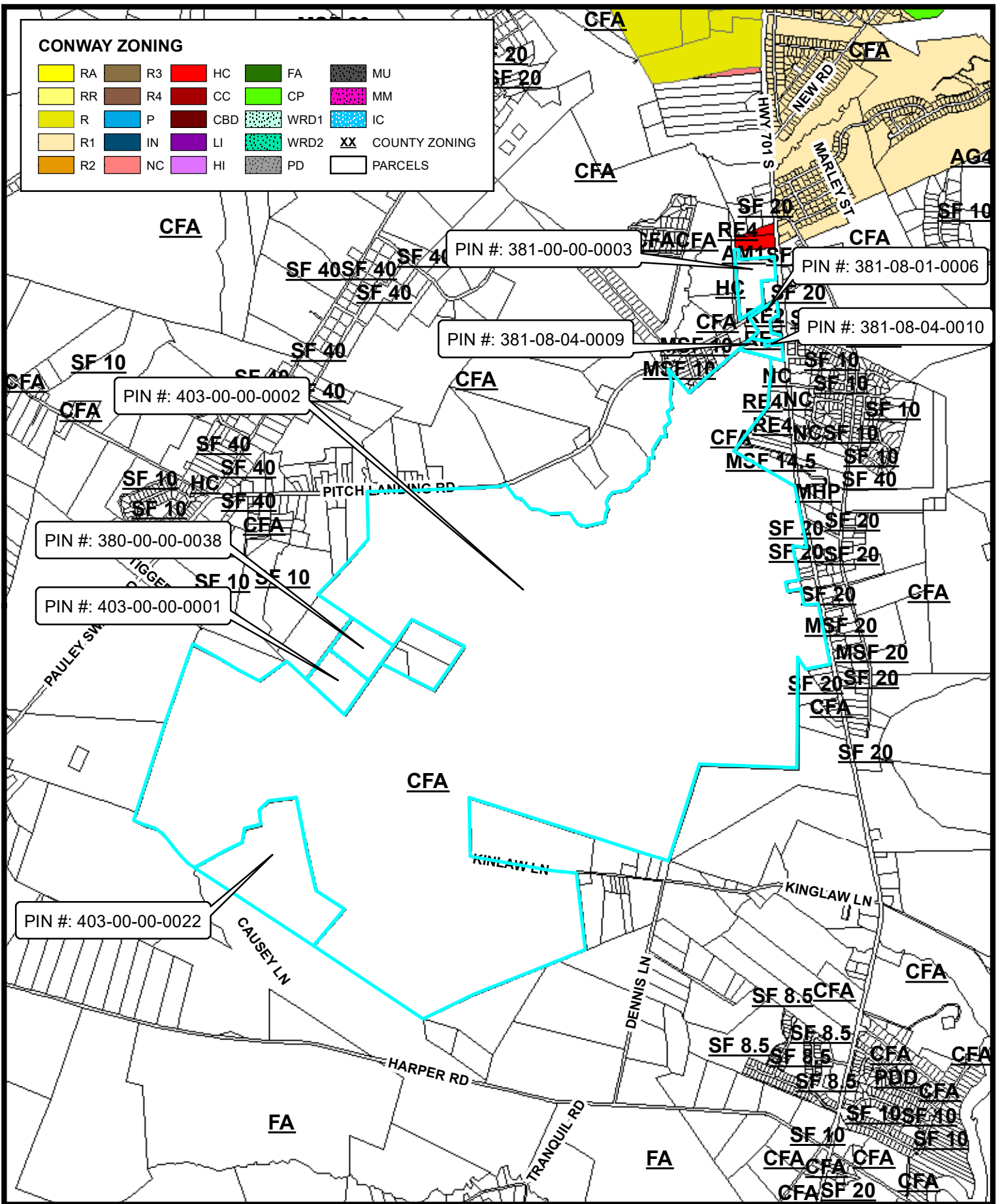


SEVERAL PARCELS WARDEN TRACT PROPERTIES



CONWAY ZONING

RA	R3	HC	FA	MU
RR	R4	CC	CP	MM
R	P	CBD	WRD1	IC
R1	IN	LI	WRD2	XX COUNTY ZONING
R2	NC	HI	PD	PARCELS

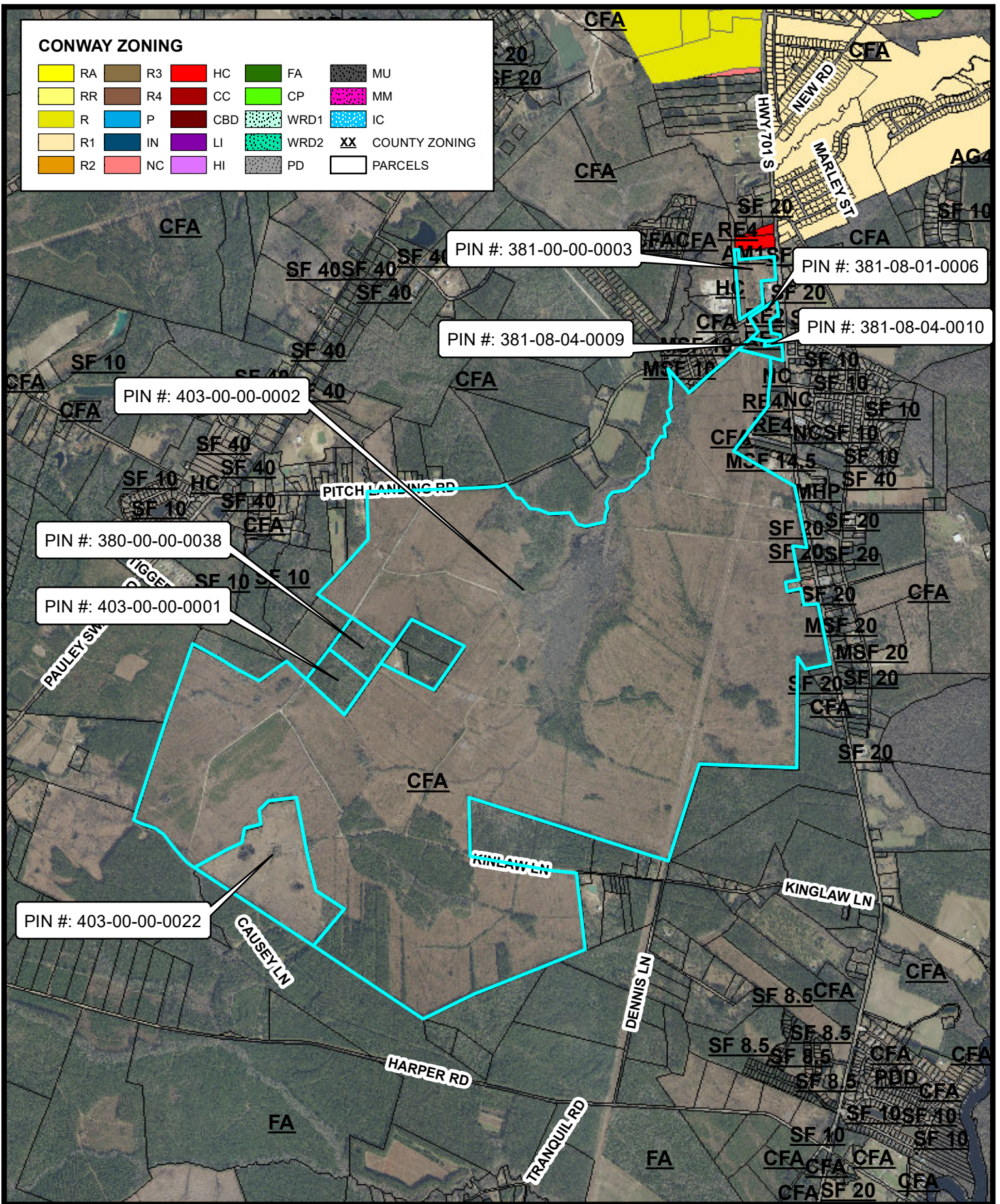


Disclaimer: This map is a graphic representation only. It is NOT a survey. All efforts have been made to ensure its accuracy. However, the City of Conway disclaims all responsibility & liability for the use of this map.



**SEVERAL PARCELS
WARDEN TRACT PROPERTIES**





Disclaimer: This map is a graphic representation only. It is NOT a survey. All efforts have been made to ensure its accuracy. However, the City of Conway disclaims all responsibility & liability for the use of this map.

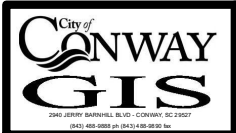
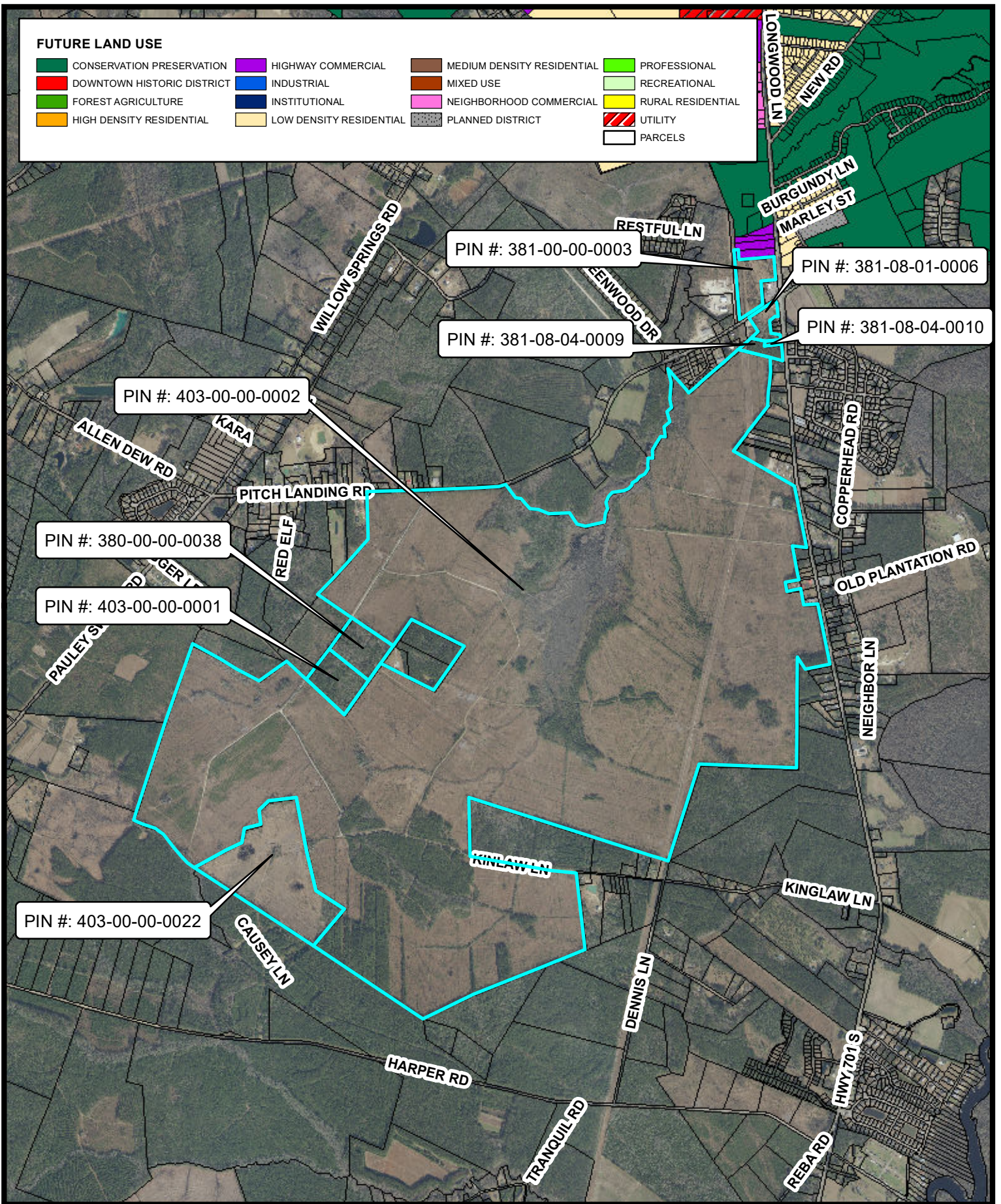


**SEVERAL PARCELS
WARDEN TRACT PROPERTIES**



FUTURE LAND USE

- | | | | |
|----------------------------|-------------------------|----------------------------|-------------------|
| CONSERVATION PRESERVATION | HIGHWAY COMMERCIAL | MEDIUM DENSITY RESIDENTIAL | PROFESSIONAL |
| DOWNTOWN HISTORIC DISTRICT | INDUSTRIAL | MIXED USE | RECREATIONAL |
| FOREST AGRICULTURE | INSTITUTIONAL | NEIGHBORHOOD COMMERCIAL | RURAL RESIDENTIAL |
| HIGH DENSITY RESIDENTIAL | LOW DENSITY RESIDENTIAL | PLANNED DISTRICT | UTILITY |
| | | | PARCELS |



Disclaimer: This map is a graphic representation only. It is NOT a survey. All efforts have been made to ensure its accuracy. However, the City of Conway disclaims all responsibility & liability for the use of this map.



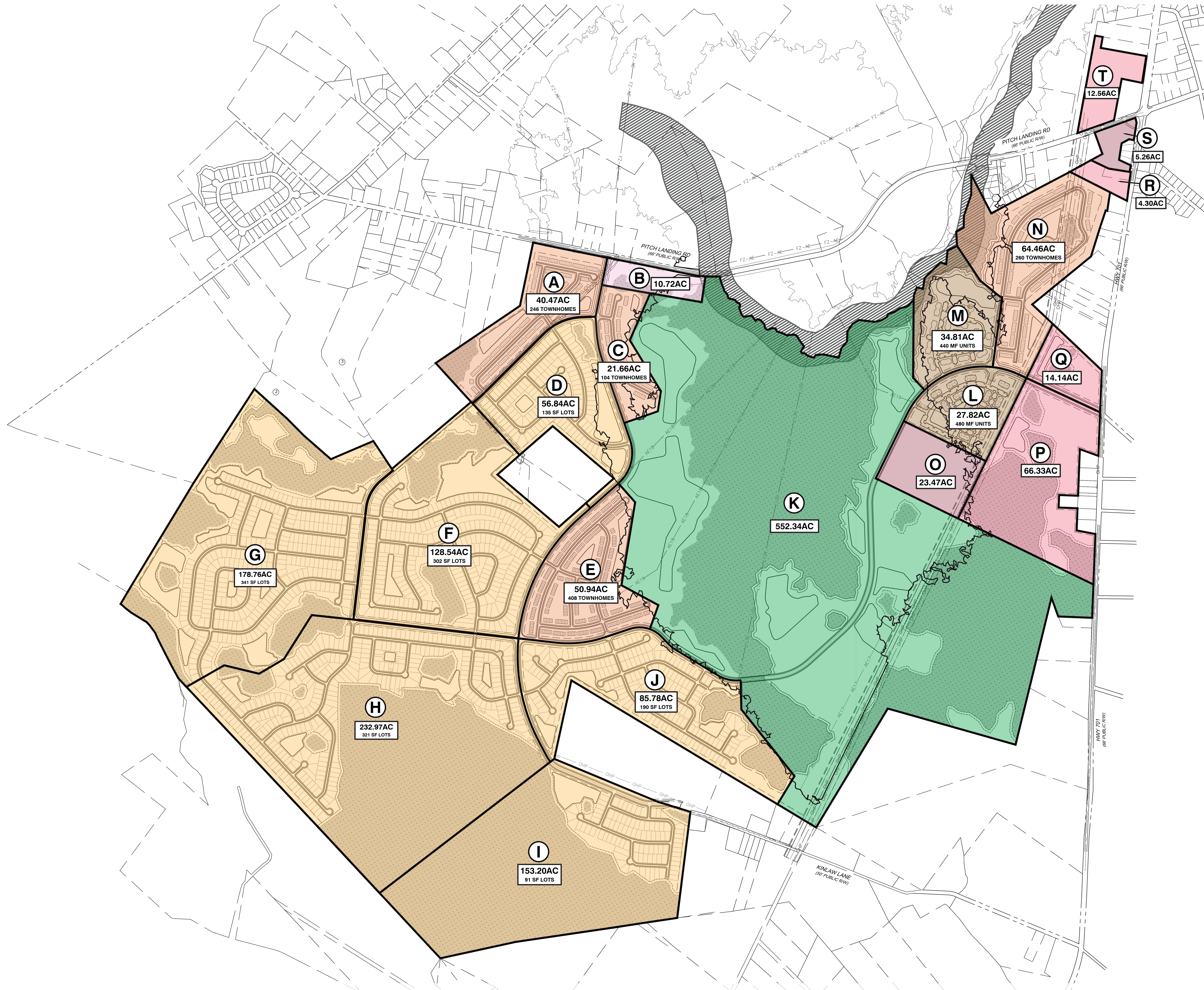
**SEVERAL PARCELS
WARDEN TRACT PROPERTIES**



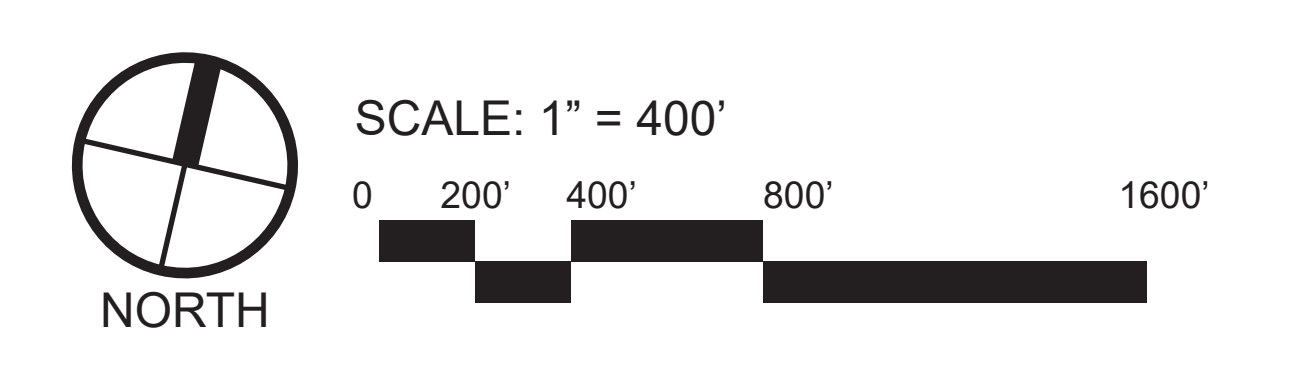


WARDEN STATION
 EXHIBIT II
 master site plan

LAND USE		
SYMBOL	NOTES	2023-07-11 13:4 ACRES
	Single Family	836.1
	Townhomes	177.52
	Multifamily	62.63
	Master Open Space	552.34
	Type 3 Commercial	10.72
	Type 2 Commercial	28.73
	Type 1 Commercial	98.41



WARDEN STATION
EXHIBIT III
phasing plan

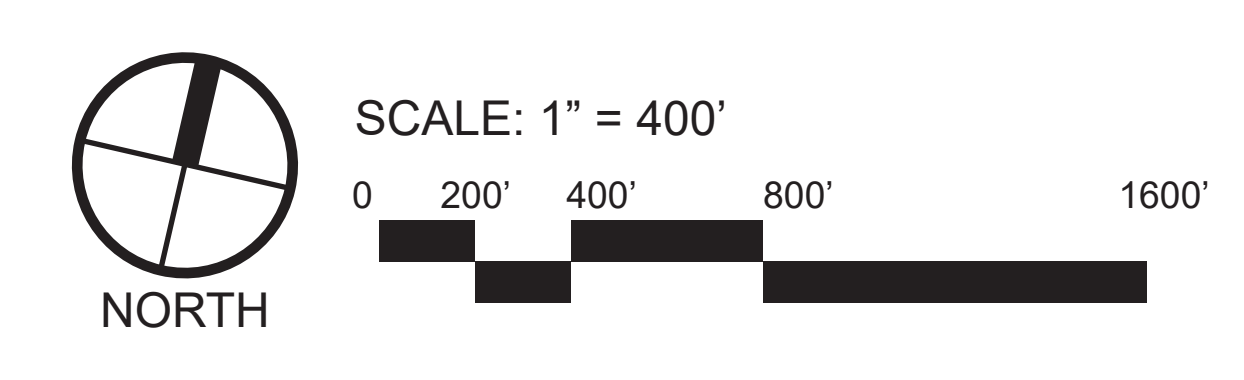




LEGEND

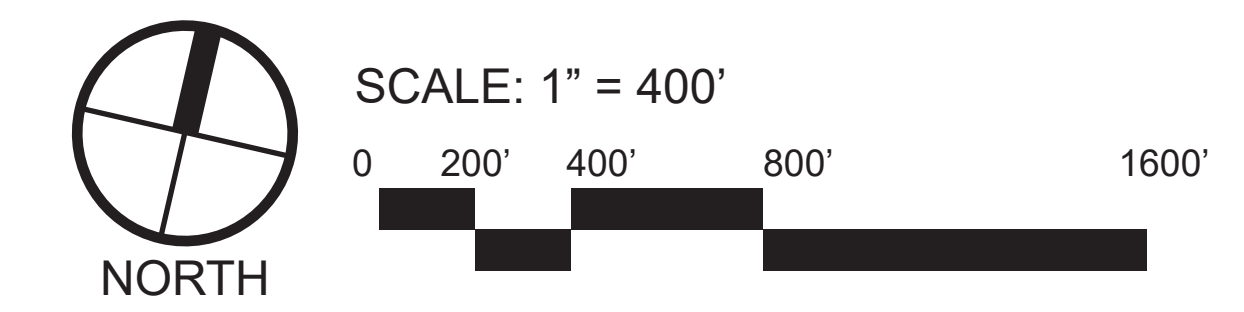
SYMBOL	NOTES	ACRES
	Wetland	723.82
	Buffers	119.41
	Open Space Master	150.79
	Open Space Common	75.39
	Pond Master	52.70
	Pond Common	73.49

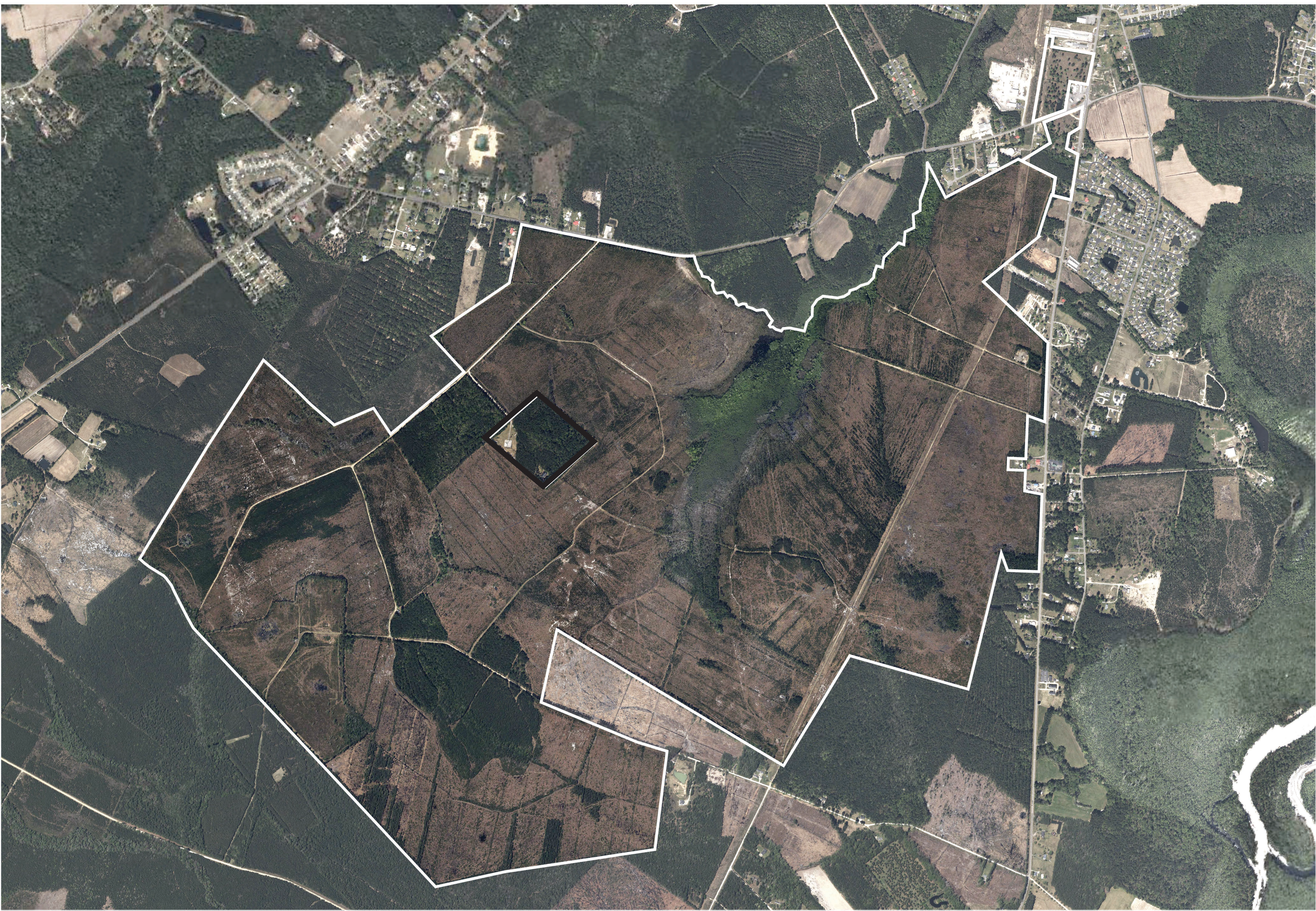
WARDEN STATION
EXHIBIT IV
open space plan



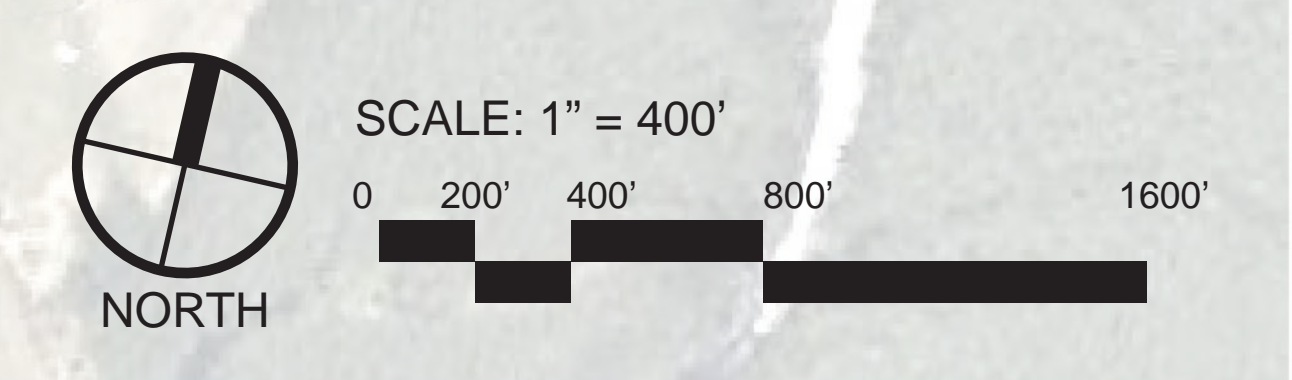


WARDEN STATION
EXHIBIT IX
flood zone overlay





WARDEN STATION
EXHIBIT I.d
aerial

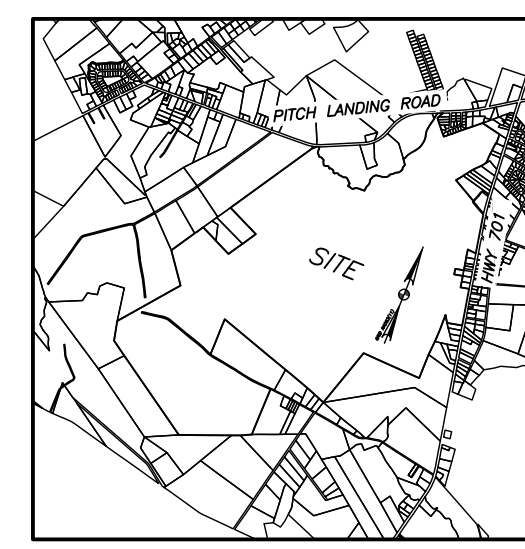
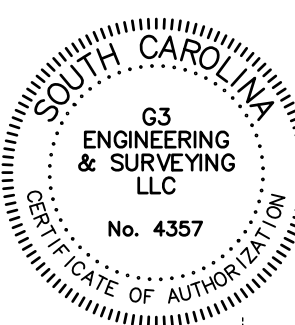




VICINITY MAP
(NOT TO SCALE)

I HEREBY STATE THAT TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, THE SURVEY SHOWN HEREON WAS MADE IN ACCORDANCE WITH THE REQUIREMENTS OF THE STANDARD MANUAL FOR THE PRACTICE OF LAND SURVEYING IN SOUTH CAROLINA, AND MEETS OR EXCEEDS THE REQUIREMENTS FOR A CLASS "A" SURVEY AS SPECIFIED THEREIN.

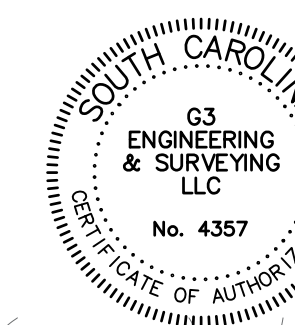
KENNETH R. CRAWFORD
SOUTH CAROLINA PROFESSIONAL LAND SURVEYOR
LICENSE NO. 21227



VICINITY MAP
(NOT TO SCALE)

I HEREBY STATE THAT TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, THE SURVEY SHOWN HEREON WAS MADE IN ACCORDANCE WITH THE REQUIREMENTS OF THE STANDARD MANUAL FOR THE PRACTICE OF LAND SURVEYING IN SOUTH CAROLINA, AND MEETS OR EXCEEDS THE REQUIREMENTS FOR A CLASS "A" SURVEY AS SPECIFIED THEREIN.

KENNETH R. CRAWFORD
SOUTH CAROLINA PROFESSIONAL LAND SURVEYOR
LICENSE NO. 21227



TOPOGRAPHIC SURVEY
OF
WARDEN TRACT
PREPARED FOR
**LANDBANK FUND XIV, LLC, C/O
SUGGS & COMPANY, P.A.**

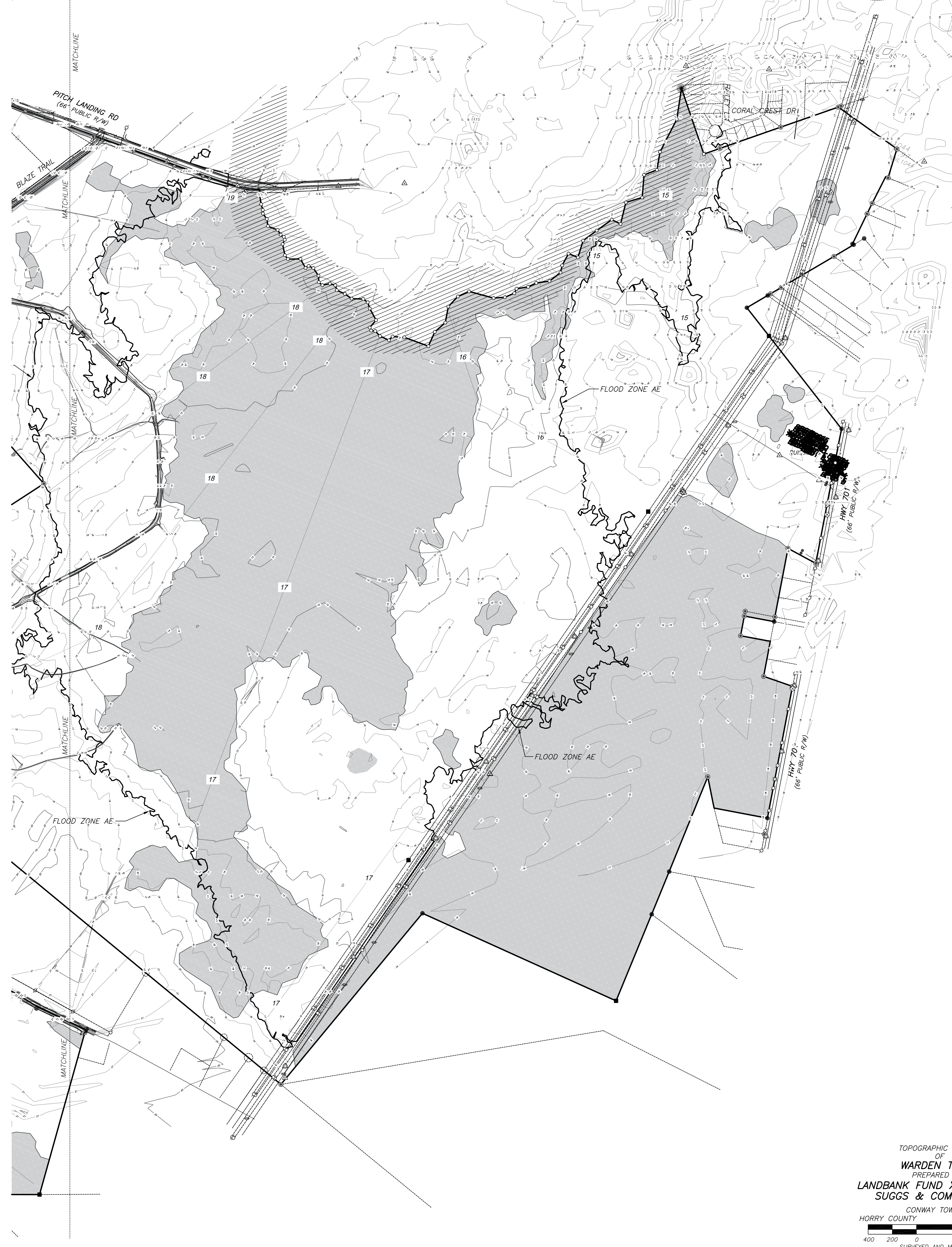
CONWAY TOWNSHIP
HORRY COUNTY, SOUTH CAROLINA



**ENGINEERING
& SURVEYING**
P.O. BOX 2686
PAWLEYS ISLAND, SC 29585
PHONE: 843.237.1001

SCALE 1" = 400' DRAWN BY JMW
FILE 22056 REVIEWED BY xxx
FIELD DATE 10/5/22 APPROVED BY HRC
PLAT DATE 10/5/22 PARTY CHIEF JLY

THIS PLAT AND ALL REPRODUCIBLE COPIES OF THIS PLAT ARE THE PROPERTY OF G3 ENGINEERING & SURVEYING, LLC. REPRODUCTION OF THIS PLAT IS NOT PERMITTED WITHOUT WRITTEN CONSENT OF G3 ENGINEERING & SURVEYING, LLC. UNLESS THIS PLAT IS A MATTER OF PUBLIC RECORD, ACCORDING TO THIS DOCUMENT ARE NOT PERMITTED.



TOPOGRAPHIC SURVEY
OF
WARDEN TRACT
PREPARED FOR
**LANDBANK FUND XIV, LLC, C/O
SUGGS & COMPANY, P.A.**

CONWAY TOWNSHIP
HORRY COUNTY, SOUTH CAROLINA



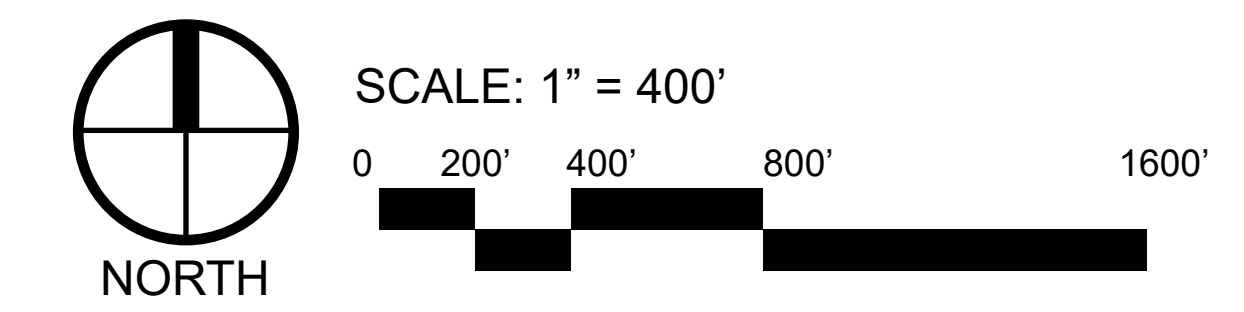
**ENGINEERING
& SURVEYING**
P.O. BOX 2686
PAWLEYS ISLAND, SC 29585
PHONE: 843.237.1001

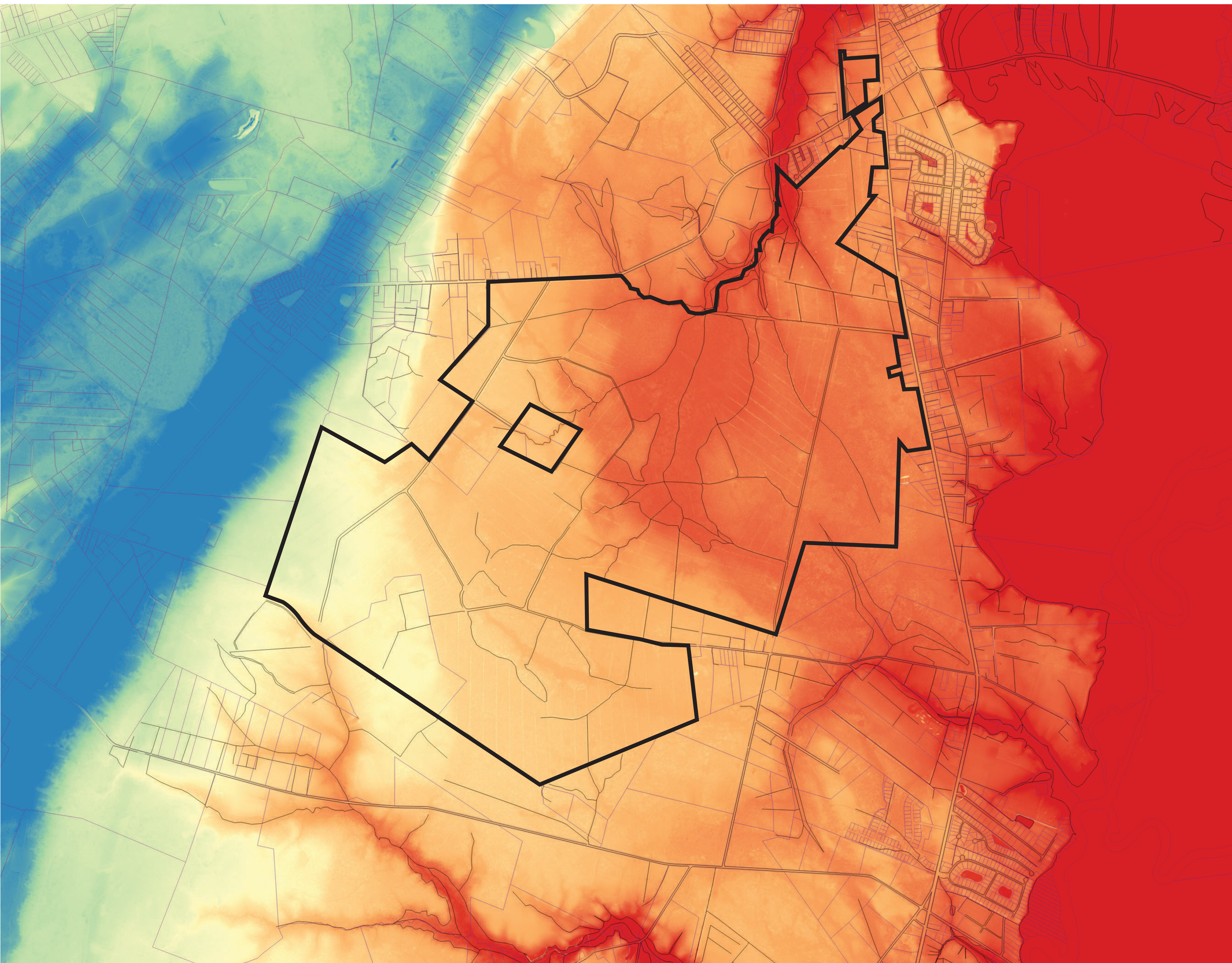
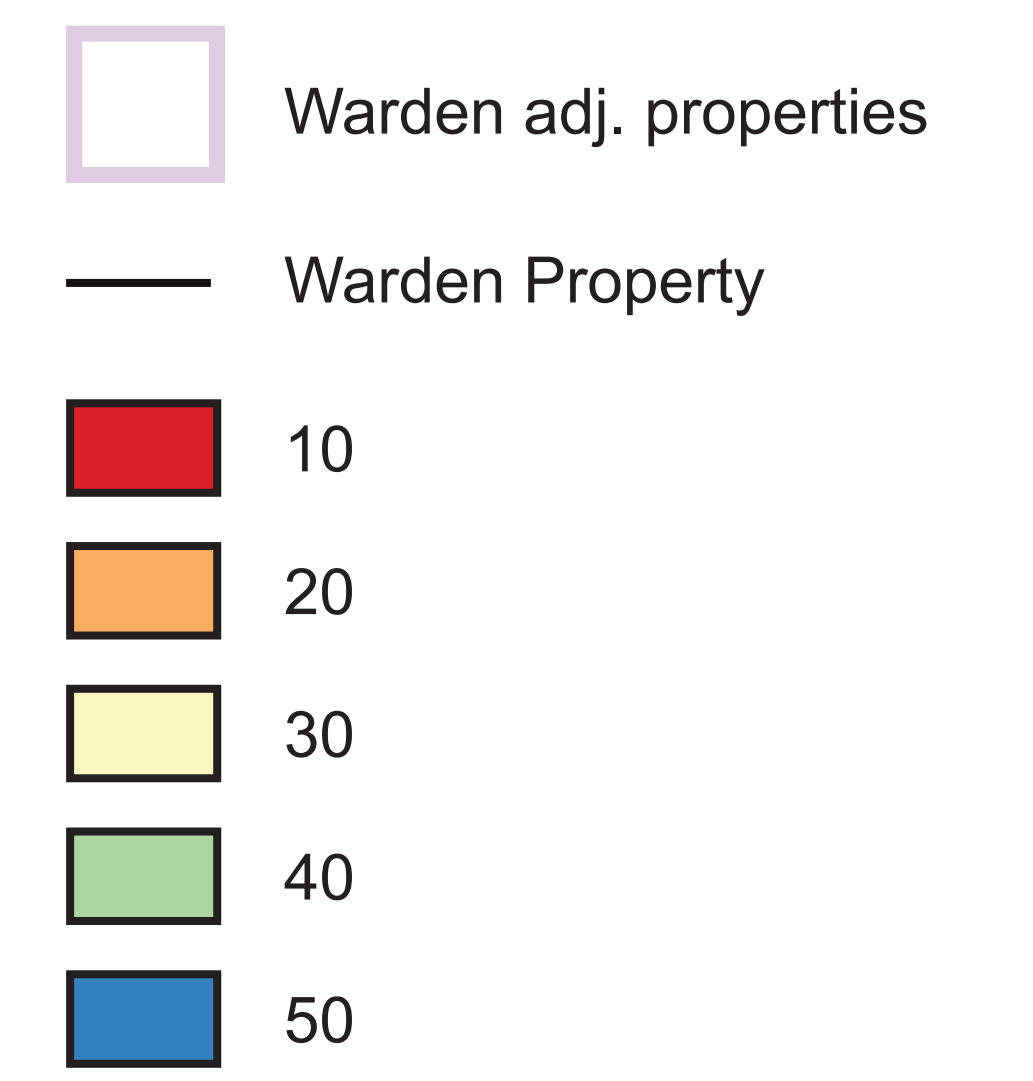
SCALE 1" = 400' DRAWN BY JMW
FILE 22056 REVIEWED BY xxx
FIELD DATE 10/5/22 APPROVED BY HRC
PLAT DATE 10/5/22 PARTY CHIEF JLY

THIS PLAT AND ALL REPRODUCIBLE COPIES OF THIS PLAT ARE THE PROPERTY OF G3 ENGINEERING & SURVEYING, LLC. REPRODUCTION OF THIS PLAT IS NOT PERMITTED WITHOUT WRITTEN CONSENT OF G3 ENGINEERING & SURVEYING, LLC. UNLESS THIS PLAT IS A MATTER OF PUBLIC RECORD, ACCORDING TO THIS DOCUMENT ARE NOT PERMITTED.

WARDEN STATION

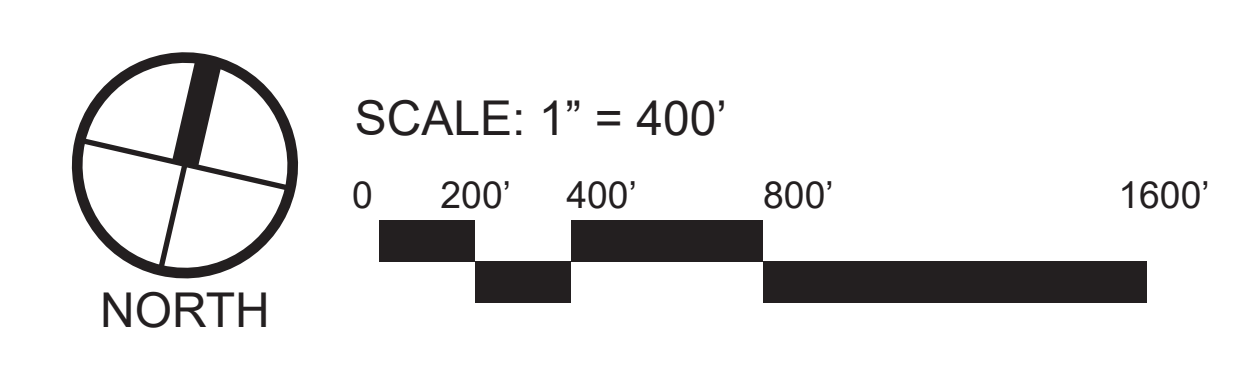
EXHIBIT B.1 wetlands + topography







WARDEN STATION
EXHIBIT V
 stormwater management plan

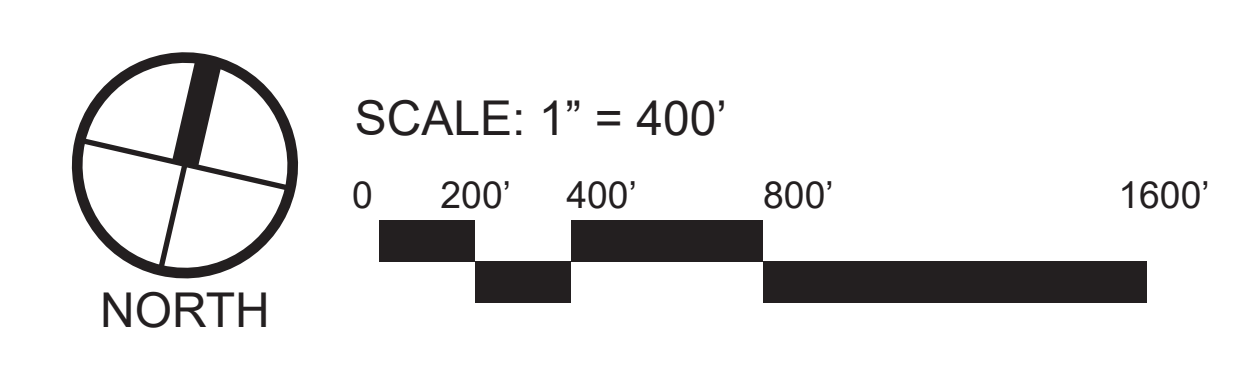


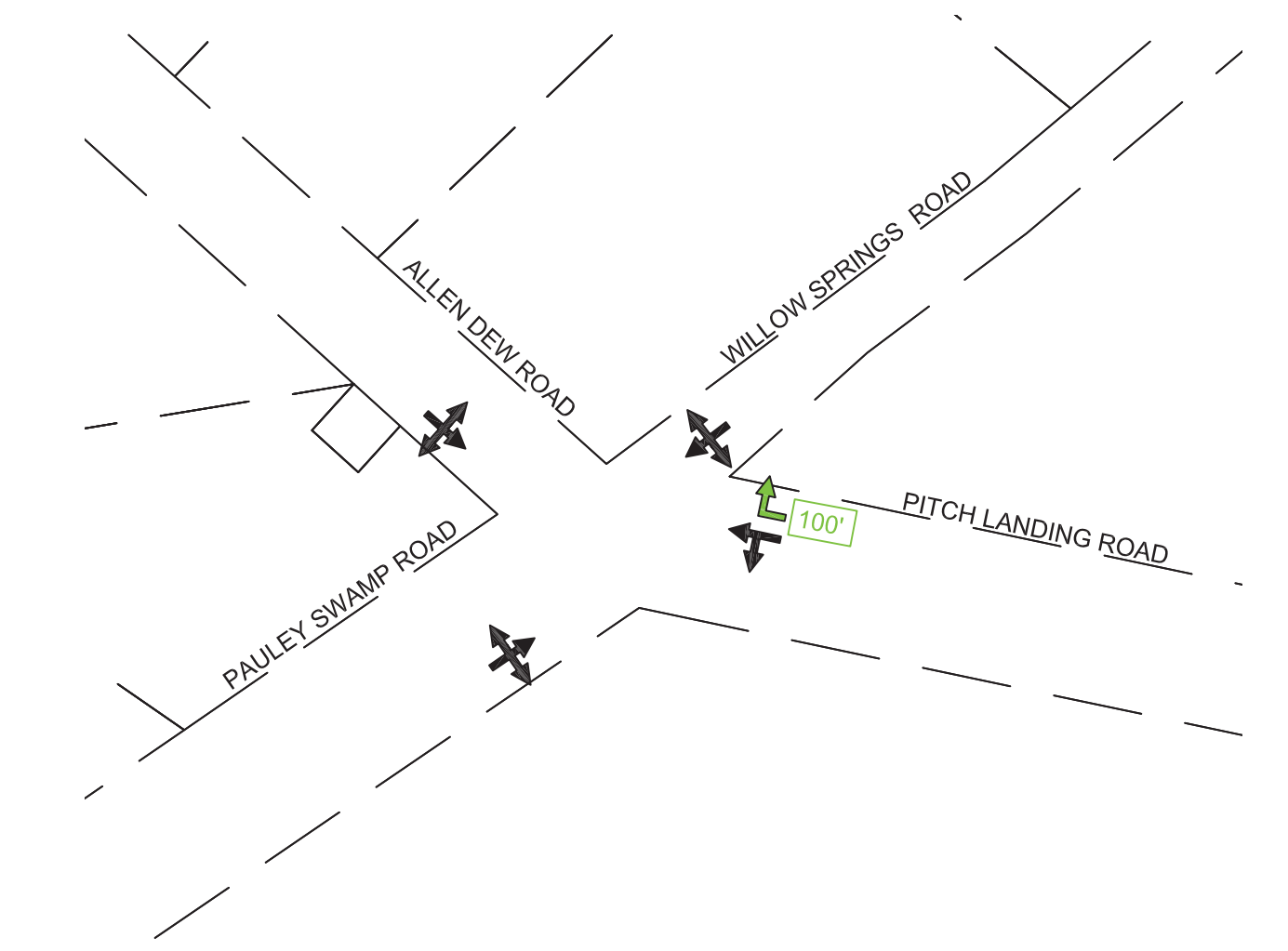
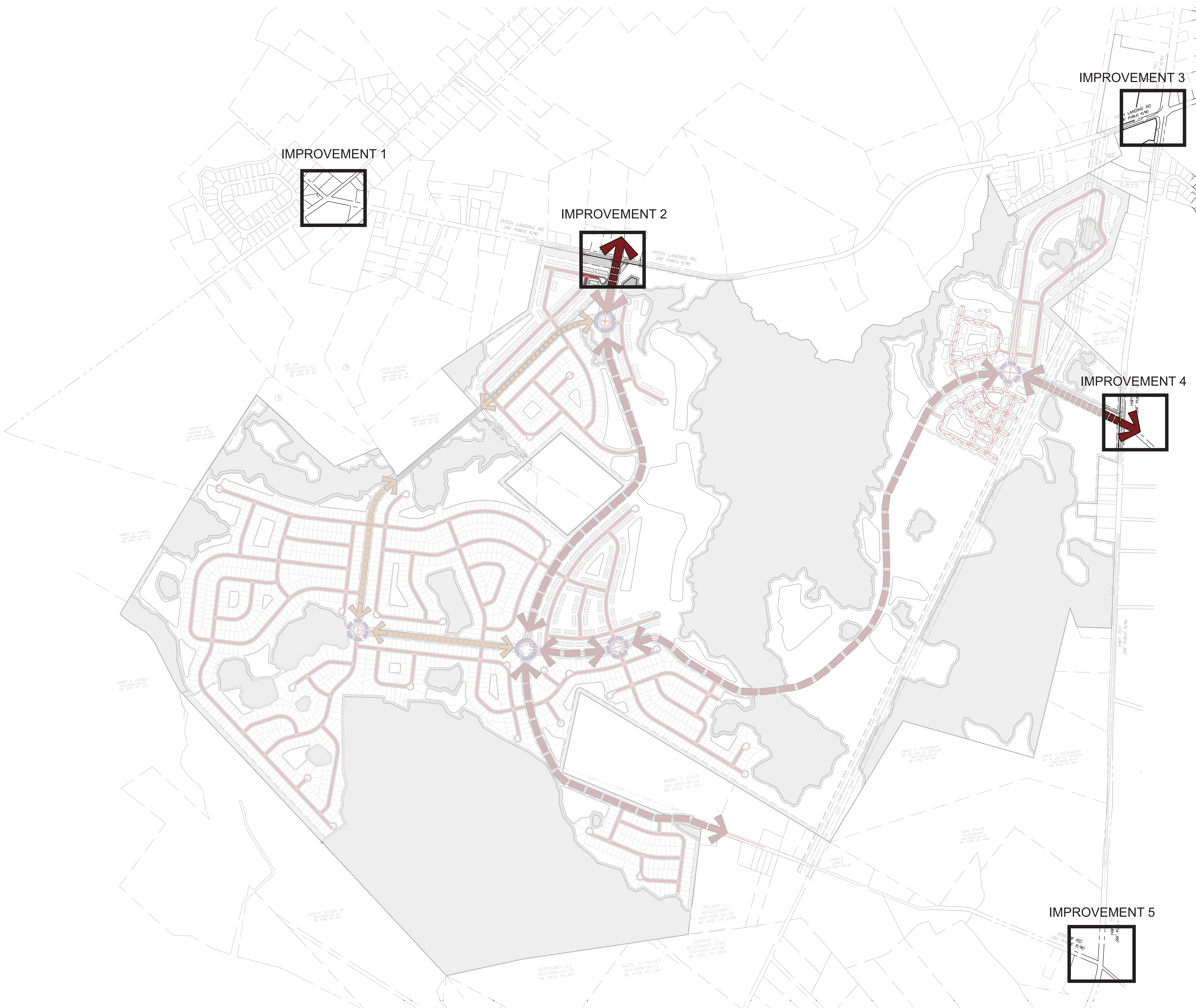


WARDEN STATION

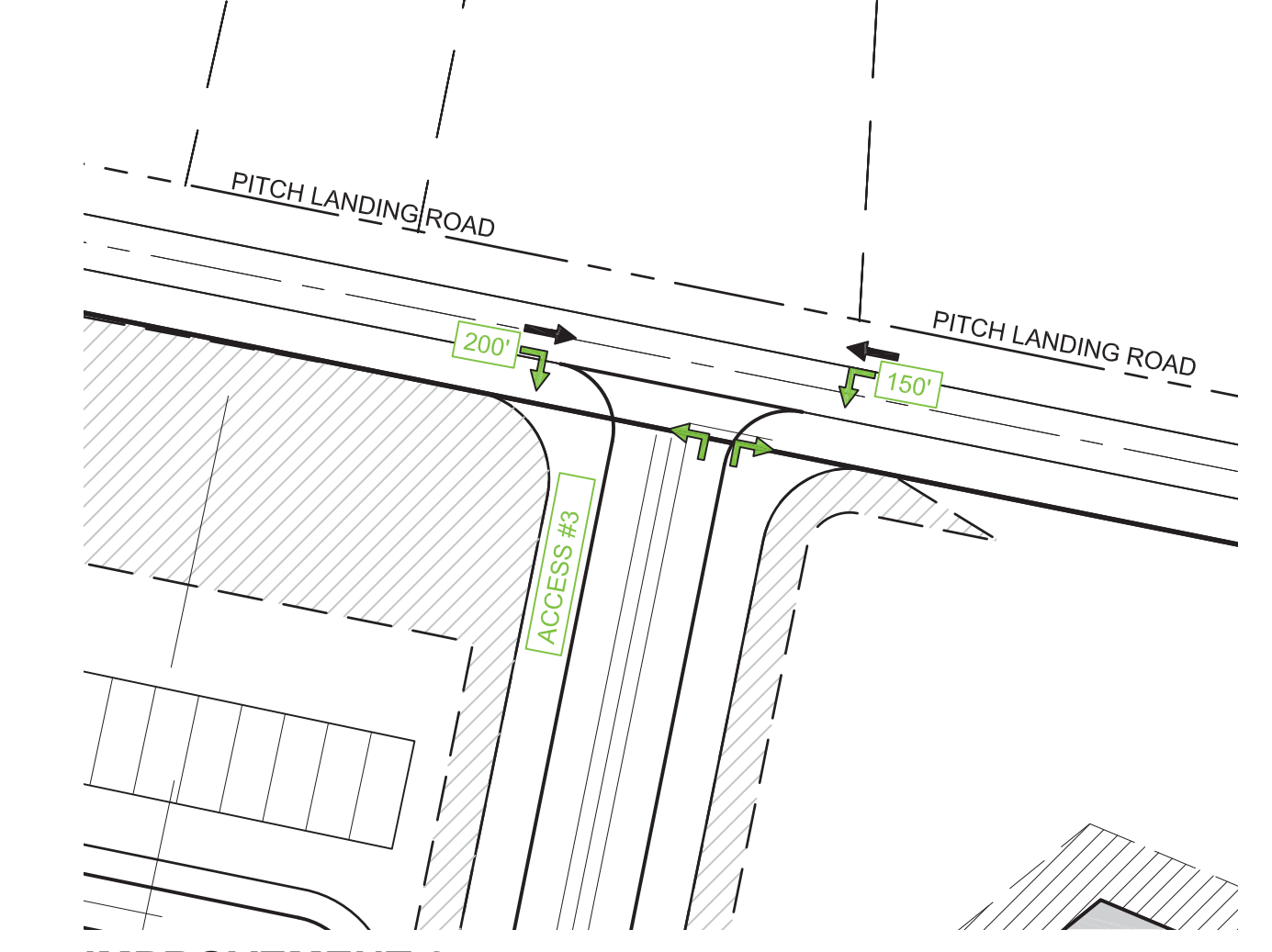
EXHIBIT VIII

utility plan

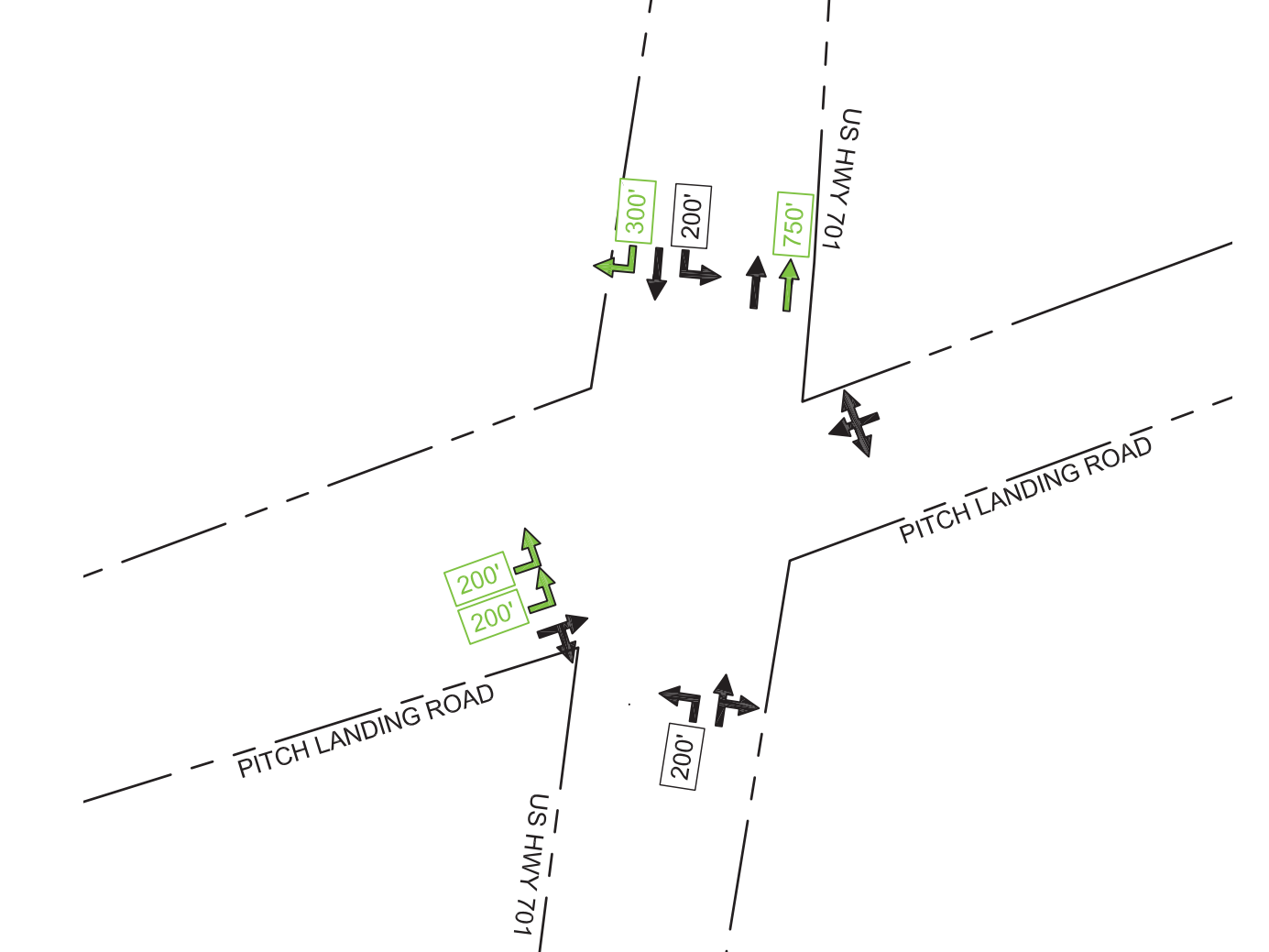




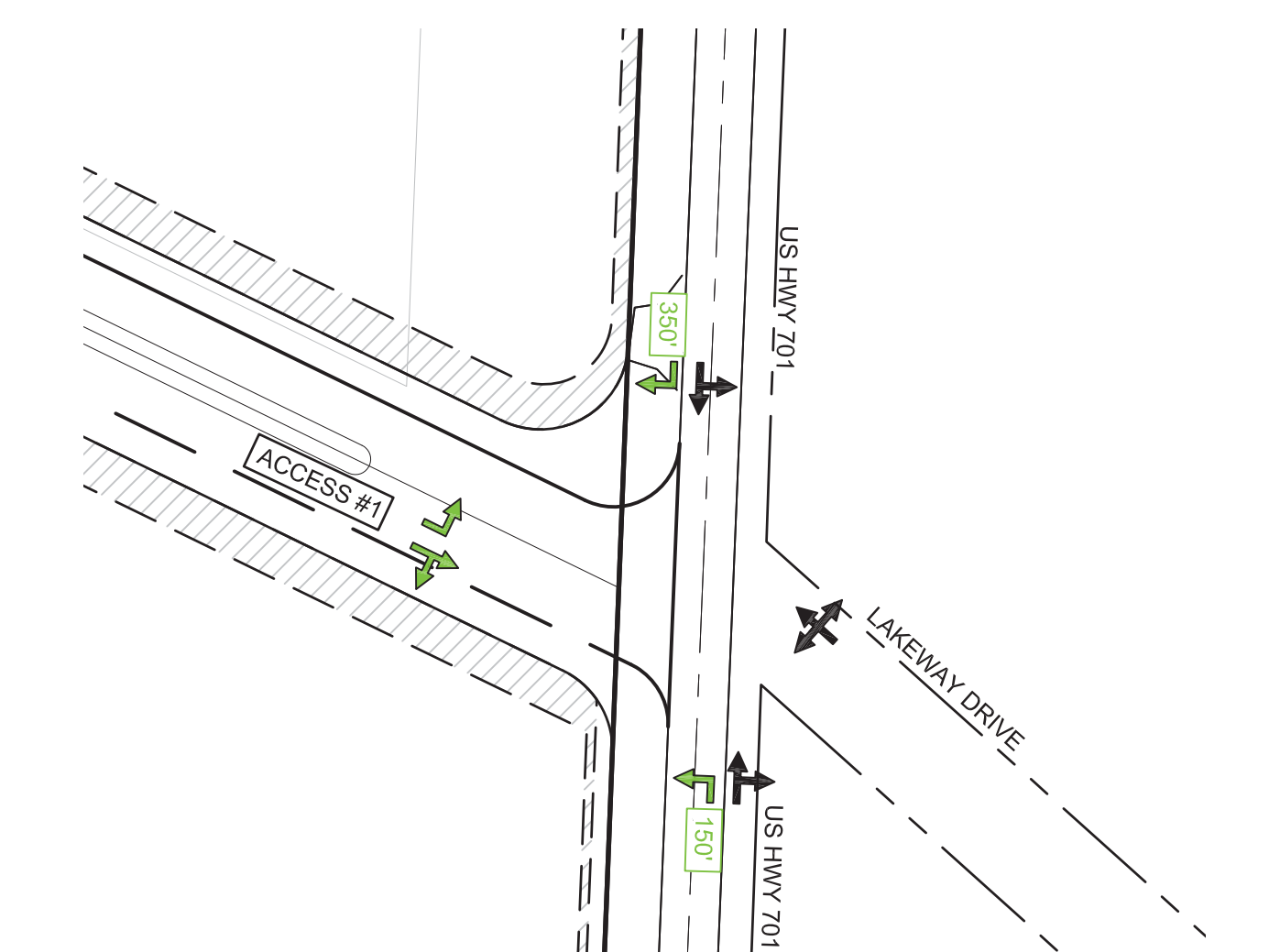
IMPROVEMENT 3
SCALE: 1"=80'



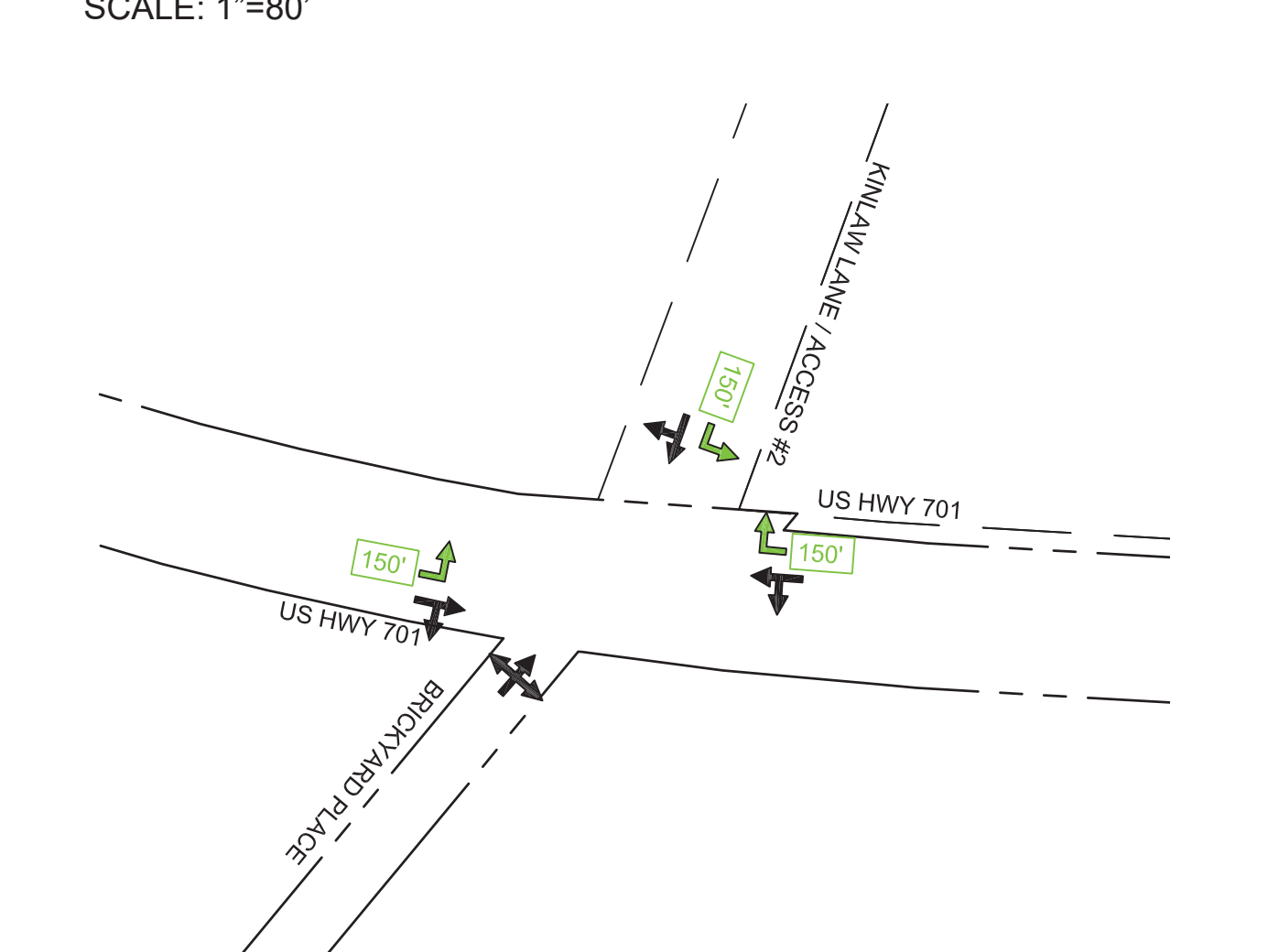
IMPROVEMENT 1
SCALE: 1"=80'



IMPROVEMENT 2
SCALE: 1"=80'



IMPROVEMENT 4
SCALE: 1"=80'

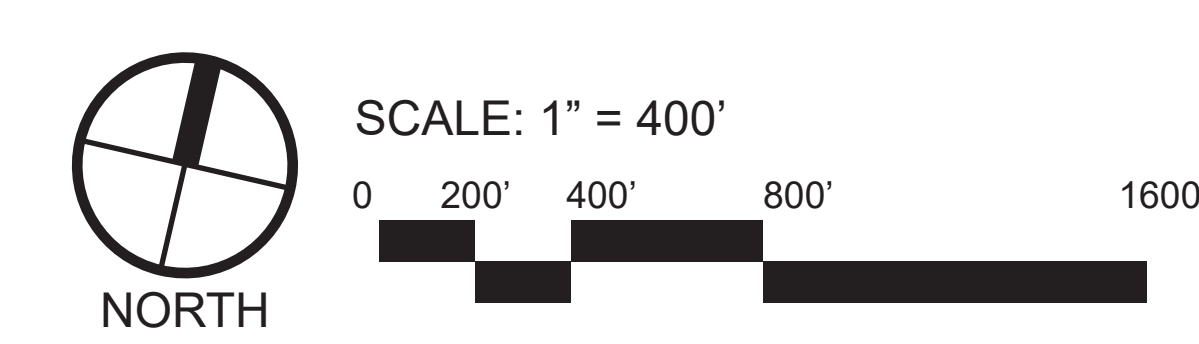


IMPROVEMENT 5
SCALE: 1"=10'

WARDEN STATION

EXHIBIT VI

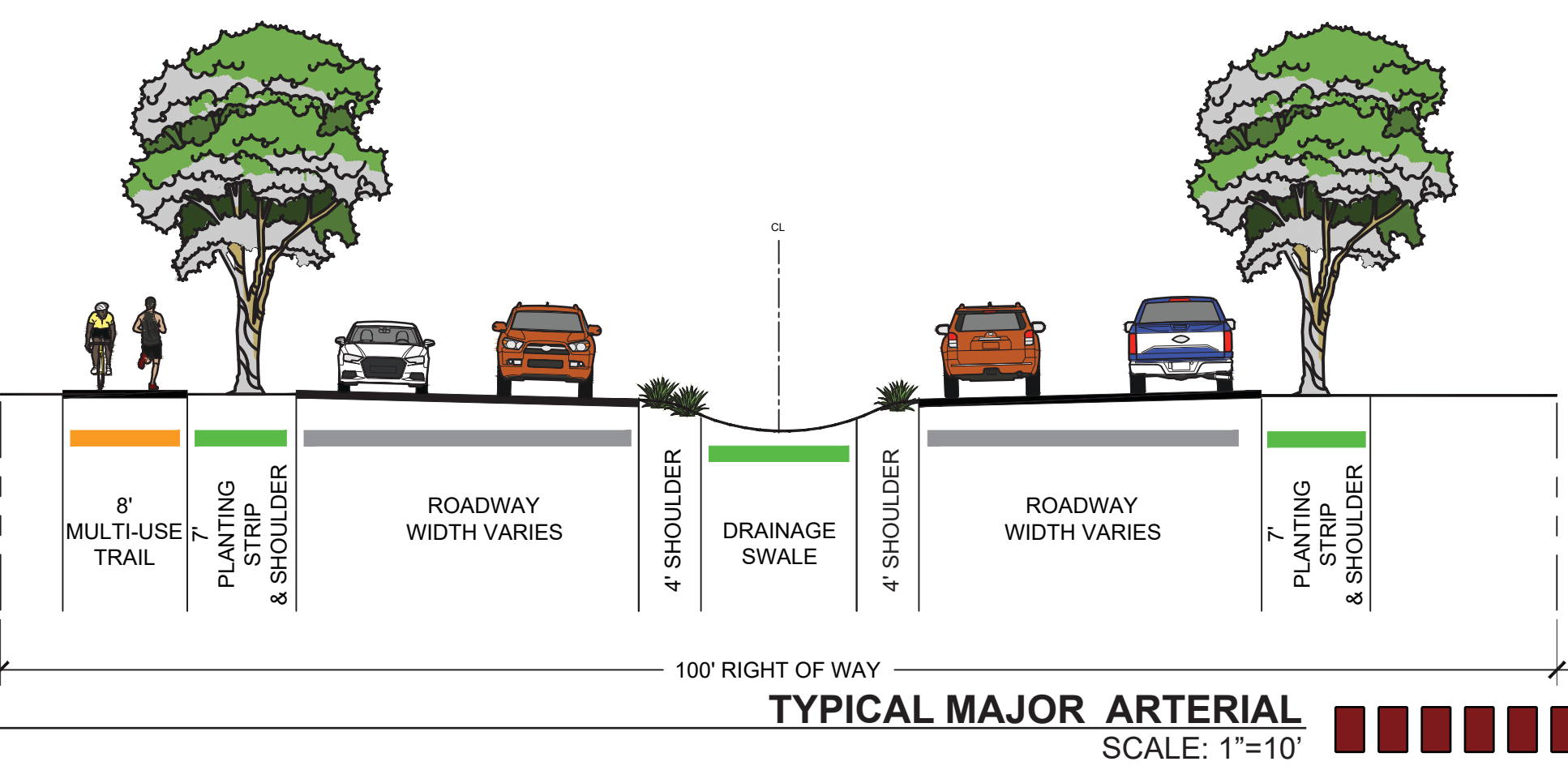
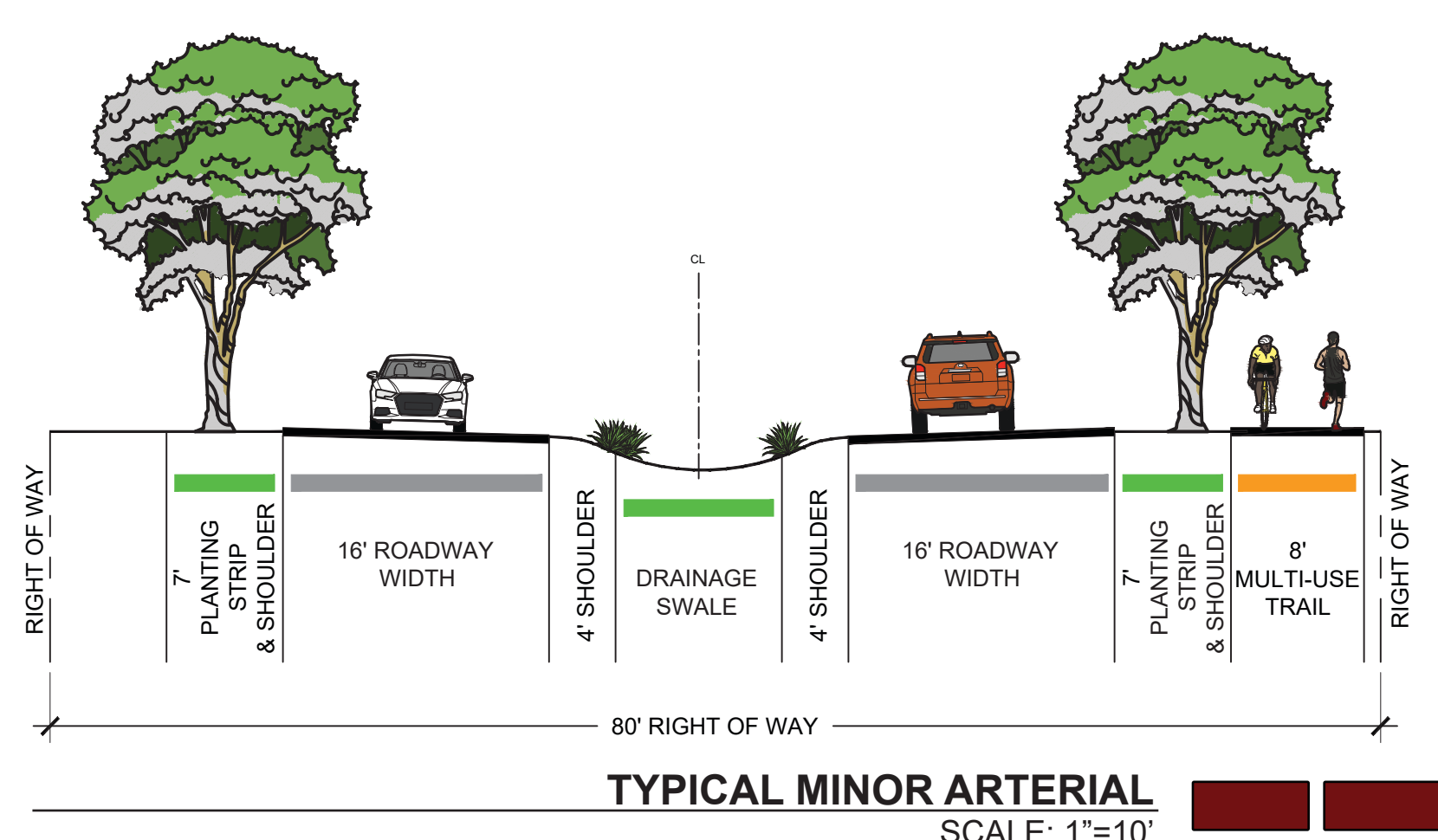
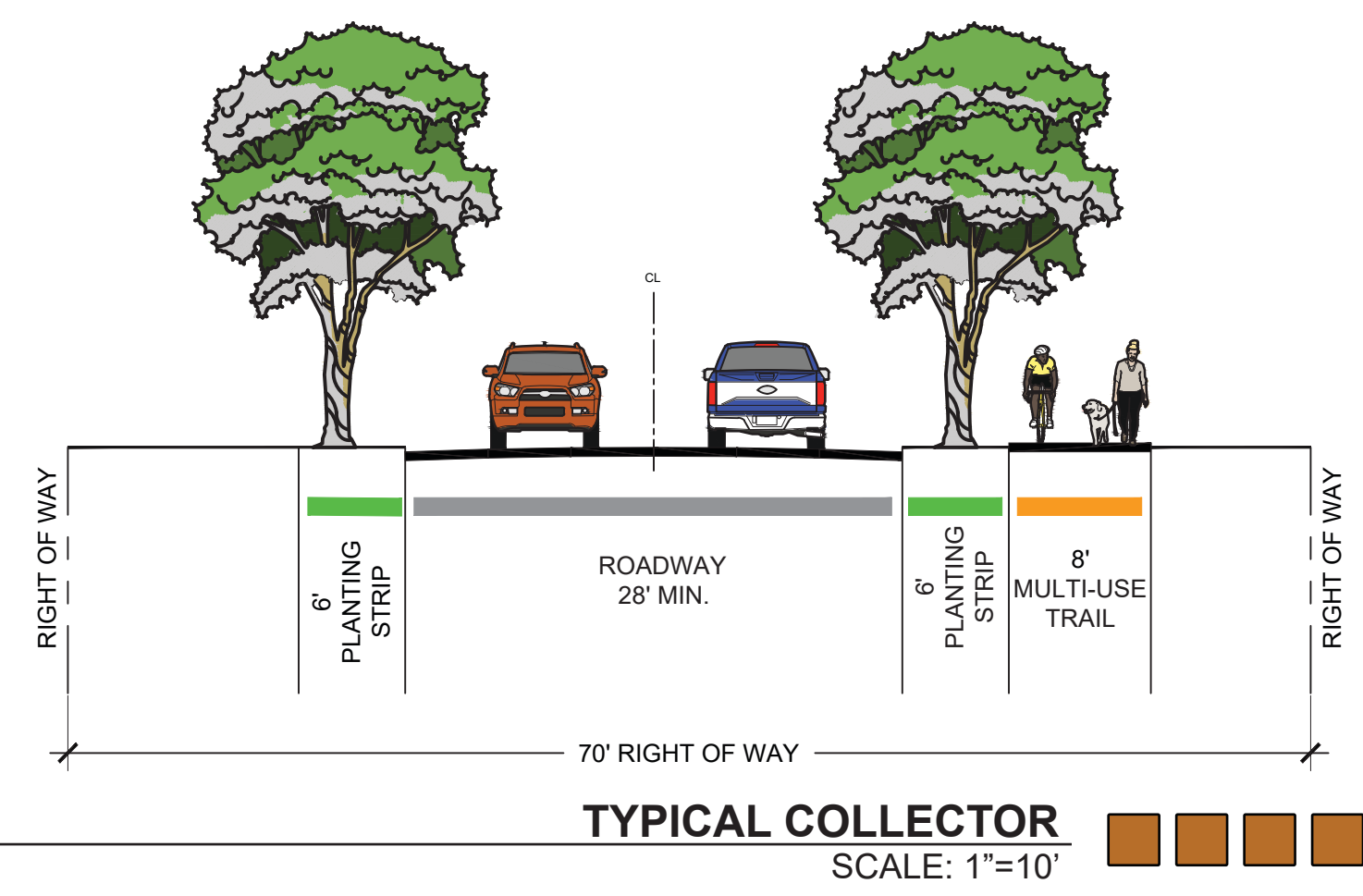
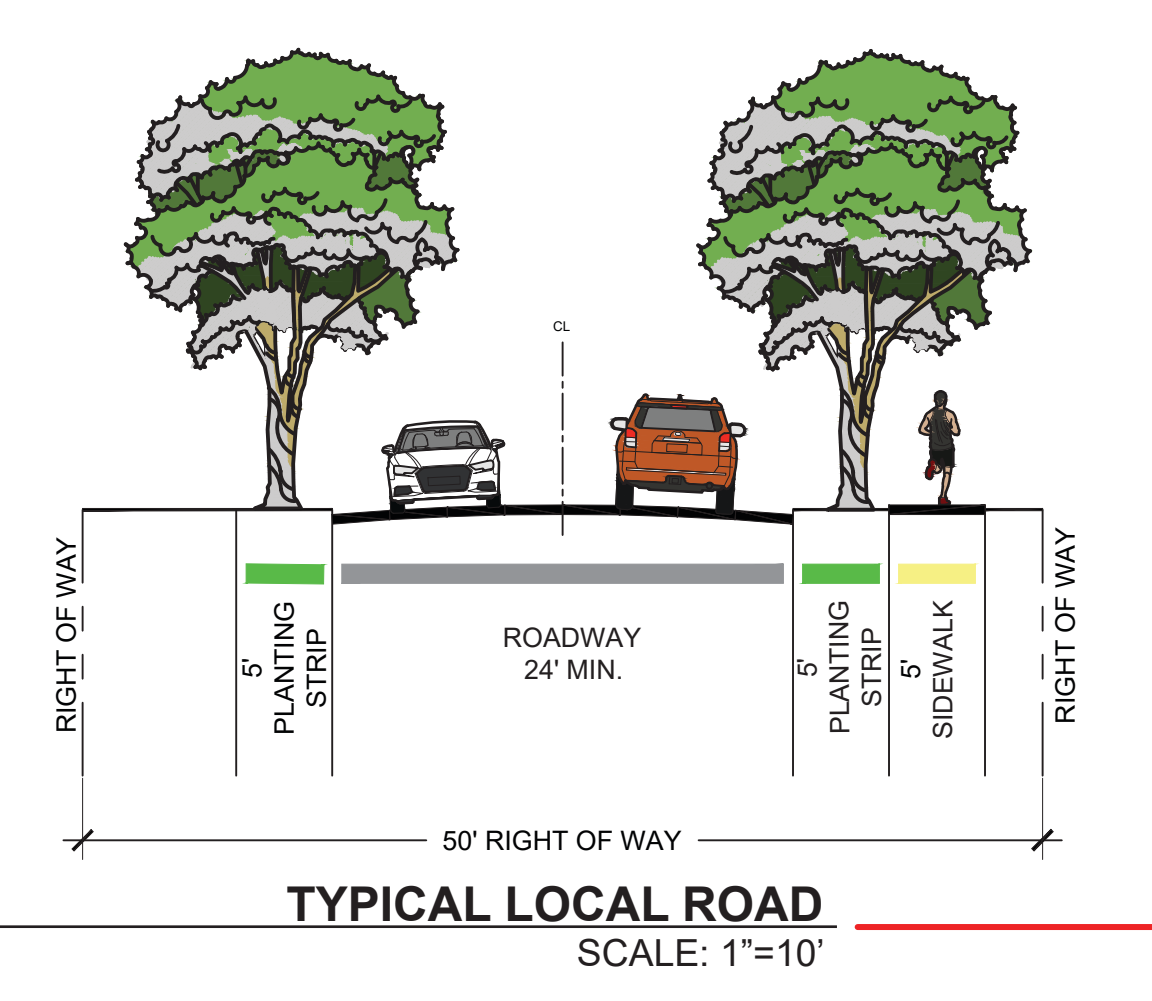
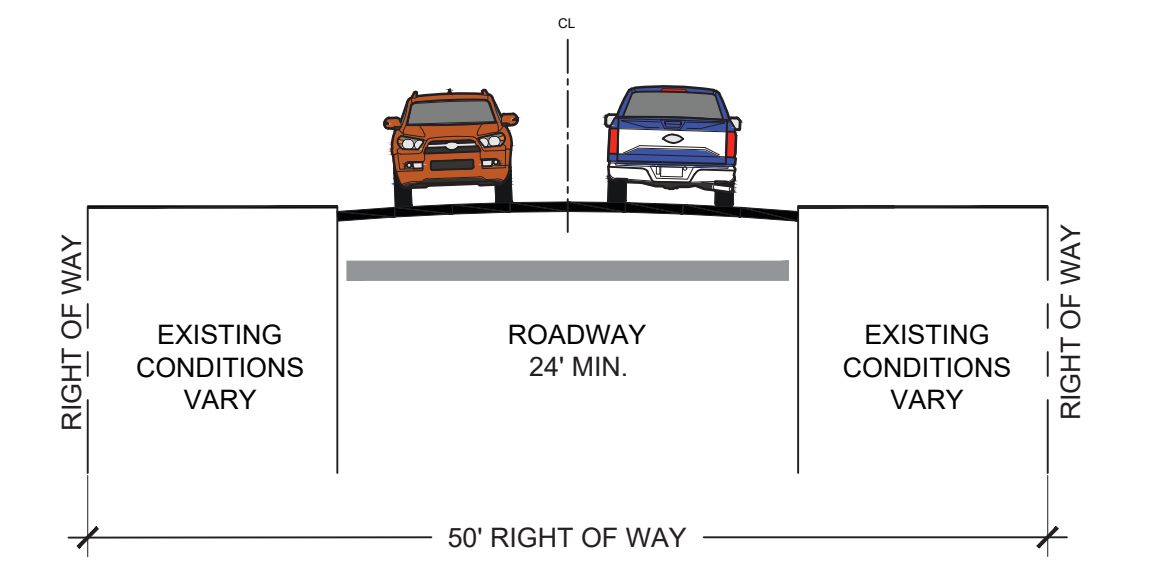
transportation plan





LEGEND

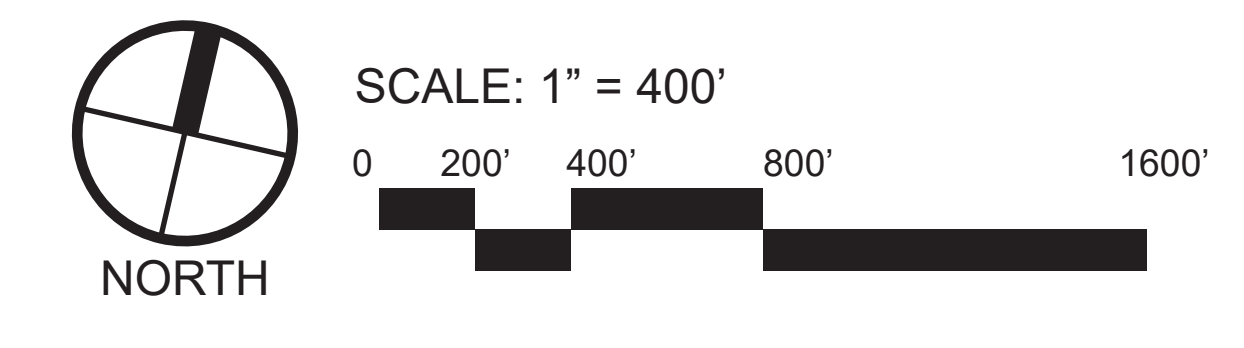
- Major Arterial 100' ROW
- Minor Arterial 80' ROW
- Collector 70' ROW
- Improved Existing Road
- Local ROAD



WARDEN STATION

EXHIBIT VII

traffic hierarchy plan



TRAFFIC IMPACT STUDY

for the

Warden Tract Mixed-Use Development

Located in
City of Conway, South Carolina

Prepared for
G3 Engineering, LLC

Prepared by
Ramey Kemp Associates.



May 2023
RKA Project #22438

TRAFFIC IMPACT STUDY

for the

Warden Tract Mixed-Use Development

Located in
City of Conway, South Carolina

Prepared for
G3 Engineering, LLC
PO Box 2666
Pawleys Island, SC 29585

Prepared by
Ramey Kemp Associates
1411 Gervais Street, Suite 150
Columbia, SC 29201

Moving forward.



RAMEY KEMP ASSOCIATES

May 2023
RKA Project #22438

DRAFT

Table of Contents

EXECUTIVE SUMMARY iii

1. INTRODUCTION 1

 1.1. Project Background..... 1

 1.2. Existing Roadway Conditions..... 5

 1.3. Existing Traffic Count 5

 1.4. Driveway Location 5

2. PROJECT TRAFFIC 9

 2.1. Proposed Land Uses..... 9

 2.2. Trip Generation Estimates 9

 2.3. Trip Distribution & Assignment 10

3. TRAFFIC VOLUME DEVELOPMENT 14

 3.1. Future No-Build Traffic Volumes..... 14

 3.2. Build Out Traffic Volumes..... 14

4. TRAFFIC IMPACT ANALYSIS..... 17

 4.1. Turn Lane Analysis..... 17

 4.2. Intersection LOS Analysis..... 17

 4.3. Improvement Timing 21

5. SUMMARY OF FINDINGS AND RECOMMENDATIONS..... 24

List of Tables

Table 1 – Street Inventory 5

Table 2 – Trip Generation Estimates 9

Table 3 – *HCM 6th Edition* LOS Criteria for Unsignalized and Signalized Intersections 18

Table 4 – Intersection Analysis Results 19

Table 5 – Build + Improvement Analysis Results 21

List of Figures

Figure 1 – Project Location Map 3

Figure 2 – Conceptual Site Plan 4

Figure 3 – Existing Lane Configuration 7

Figure 4 - Existing (2022) Peak-Hour Traffic Volumes 8

Figure 5 – Project Trip Distributions 11

Figure 6 – Project Trip Assignment 12

Figure 7 – Pass-By Trip Assignment 13

Figure 8 - No-Build (2035) Peak-Hour Traffic Volumes 15

Figure 9 - Build (2035) Peak-Hour Traffic Volumes 16

Figure 10 – Proposed Lane Configuration 23

List of Appendices

- A) Traffic Count Data
- B) Traffic Volume Development Worksheets
- C) Turn Lane Analysis Worksheets
- D) Capacity Analysis

EXECUTIVE SUMMARY

A traffic impact study was conducted for the proposed Warden Tract Mixed-Use development in accordance with SCDOT and City of Conway guidelines. The development is proposed to be located south of Pitch Landing Road and west of US 701 in Conway, South Carolina. The development is anticipated to be constructed in phases but is proposed to contain a total of 3,333 residential units and 418.8 ksf of retail at full buildout. Access is proposed via one (1) full site access on Pitch Landing Road and two (2) full accesses on US 701.

Based on the anticipated traffic volumes the following turn lanes are recommended:

- right -turn and left-turn lane on US 701 at Access #1 (once access provided)
- right -turn and left-turn lane on US 701 at Kinlaw Lane/ Access #2 (once access provided)
- right -turn and left-turn lane on Pitch Landing Road at Access #3 (once access provided)
- westbound right-turn lane on Pitch Landing Road at the Willow Springs Road intersection (once approximately 1,300 homes occupied)
- southbound right-turn on US 701 (with or without the Warden Tract Mixed-Use) at the Pitch Landing Road intersection (once US 701 & Pitch Landing Road improvements built)

The US 701 & Access #1 intersection is expected to experience significant delays in the 2035 build conditions along the project leg. To mitigate delays, signalization is recommended once warranted at Access #1. The intersection of Pitch Landing Road & Access #3 is expected to experience delays along the project approach. To mitigate delays, signalization is also recommended once warranted at Access #3. The US 701 & Access #2 intersection is expected to experience delays along the project leg, however traffic is likely to reroute to Access #1 and Access #3 once signalized; therefore there are no recommendations. The site accesses should be constructed with one ingress and two egress lanes and meet SCDOT and City of Conway design criteria.

With construction of the project, the study intersections of Cates Bay Highway & N Pawley Road/Allen Dew Road, Willow Springs Road/Pauley Swamp Road & Allen Dew Road/Pitch Landing Road, and Willow Springs Road & Cates Bay Highway should continue to function with very minor delays. The intersection of Cates Bay Highway & Highway 134 is expected to experience delays in AM peak of the build conditions. This operation is typical of minor approaches of two-way stop-controlled intersections; no improvements are recommended.

The signalized intersection of US 701 & Pitch Landing Road is expected to operate with delays in the 2035 build conditions. The eastbound approach of the intersection operates as an LOS E in the 2035 AM peak build conditions. Additional improvements such as eastbound dual lefts are likely to be needed for improved operation. The existing traffic on US 701 along with projected project traffic may require widening on US 701 north of Pitch Landing Road in the future. Widening of US 701 southern of Pitch Landing Road requires widening based on to the projected demand at the

signal. Removal of the east leg of Pitch Landing may provide additional improvement for signal operation.

The improvements at the US 701 & Pitch Landing Road intersection include a southbound right-turn lane on US 701, dual left-turns along the westbound approach of Pitch Landing, an additional northbound through lane, and an additional southbound through lane.

The existing 2022 ADT (Annual Daily Traffic) along the northern portion of US 701 to Pitch Landing Road is 16,600 vpd (SCDOT Station #26-0177). Historical SCDOT Hourly Count Data at this site shows this road segment experiences consistent demand throughout the day from 7 am to 5 pm. The projected ADT utilizing only the background growth rate, same as the analysis, results in a 2035 ADT of approximately 23,000 vpd. The existing ADT and the future ADT should likely earmark this segment as a candidate for widening. The addition of the proposed development would also contribute to the need for widening.

The analysis to determine improvement timing considered the background hourly volumes and the incremental phase 1 development trips. With the proposed development the improvements at the US 701 & Pitch Landing Road are expected to be warranted once 435 homes are occupied.

1. INTRODUCTION

The purpose of this report is to document a traffic impact study for the proposed Warden Tract Mixed-Use development in Conway, South Carolina in accordance with SCDOT and City of Conway guidelines. This report summarizes the procedures and findings of the traffic impact study.

1.1. Project Background

The development is proposed to be located south of Pitch Landing Road and west of US 701 in Conway, South Carolina. The development is anticipated to be constructed in phases but is proposed to contain a total of 3,333 residential units and 418.8 ksf of retail at full buildout with one (1) full site access on Pitch Landing Road and two (2) full access driveways on US 701.

The traffic impact study considers the weekday AM peak period (between 7:00 AM and 9:00 AM) and the weekday PM peak period (between 4:00 PM and 6:00 PM) as the study time frames. The following intersections are studied:

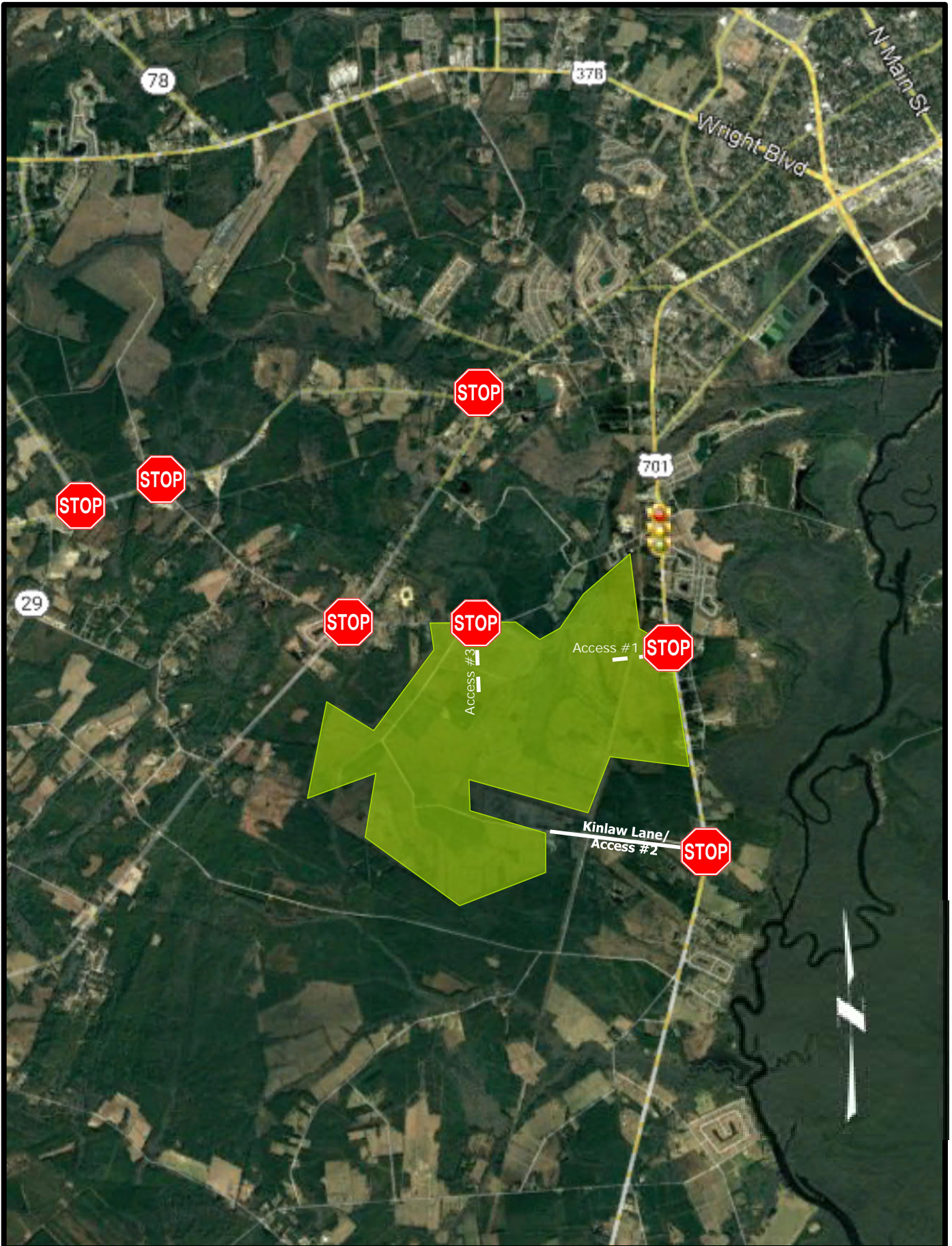
- US 701 & Access #1
- US 701 & Kinlaw Lane/Access #2
- Pitch Landing Road & Access #3
- Cates Bay Highway & Highway 134
- Cates Bay Highway & Allen Dew Road/N Pauley Road
- Cates Bay Highway & Willow Springs Road
- Willow Springs Road/Pauley Swamp Road & Allen Dew Road/Pitch Landing Road
- Highway 701 & Pitch Landing Road

Future-year analyses assume 2035 conditions as the full Buildout scenario. The construction is expected to occur in three phases. The construction phasing density is provided in the appendix. Phase 1 is expected in 2028, phase 2 in 2031 and the final buildout in 2035 Figure 1 shows the location of the project site and Figure 2 illustrates the conceptual site plan.

There are planned projects in the area, Perimeter Road and the Southern Evacuation Lifeline, however final traffic studies have not been completed for these projects at the time of this analysis. If these projects become funded and implemented, project traffic from the Warden Tract Mixed-Use development will not be significantly impacted or rerouted.

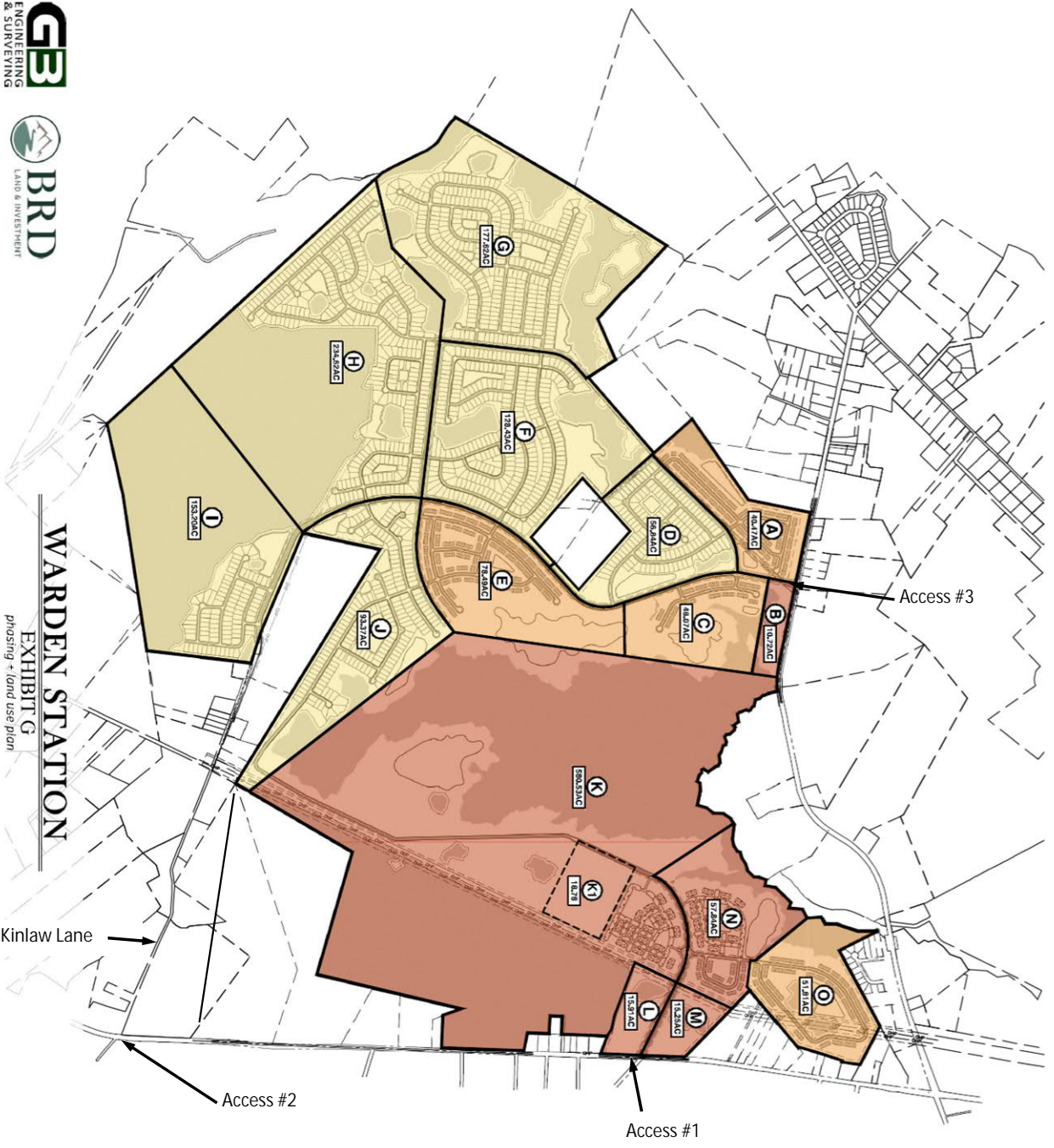
This study's analysis is based on a conservative, fast-paced build out completion in 2035. However, the full build out schedule could reach completion in 25 years, during the year 2050. The existing ADT on US 701 is 16,600 vpd north of Pitch Landing Road and 7,800 vpd south of Pitch Landing Road. The future 2035 No-Build ADT is projected to be approximately 23,000 vpd and 10,800 vpd

based on the analysis growth rate, respectively. Similarly, the 2050 ADT is projected to grow to approximately 30,500 vpd north of Pitch Landing Road and 14,300 vpd south of Pitch Landing Road. It should be noted the background growth in the area may require roadway and municipal facility improvements.



Moving forward.

WARDEN STATION
EXHIBIT G
phosting + land use plan



ZONING LEGEND

SYMBOL	NEIGH. AREA
[Light Yellow Box]	Tier III 600.25
[Light Orange Box]	Tier II 210.80
[Light Red Box]	Tier I 440.00



1.2. Existing Roadway Conditions

A review of the existing roadway conditions in the study area was conducted and is summarized in Table 1. Figure 3 illustrates the existing lane geometry.

Table 1 - Street Inventory

Facility Name	Route #	Typical Cross Section	Posted Speed Limit	Maintained By	2021 AADT
Pitch Landing Road	S-110	2-lane undivided	45 MPH	SCDOT	N/A
Allen Dew Road	N/A	2-lane undivided	35 MPH	Local	N/A
Willow Springs Road	N/A	2-lane undivided	35 MPH	Local	N/A
Pauley Swamp Road	S-109	2-lane undivided	55 MPH	SCDOT	N/A
Cates Bay Highway	S-29	2-lane undivided	45 MPH	SCDOT	3,500 ²
Highway 134	S-134	2-lane undivided	50 MPH	SCDOT	N/A
Highway 701	S-701	2-lane undivided	55 MPH	SCDOT	16,600 ¹
Kinlaw Lane	N/A	2-lane undivided	-	Local	N/A

¹SCDOT Count Station 26-0177, ²SCDOT Count Station 26-0372

1.3. Existing Traffic Count

Vehicle turning movement counts were collected by Short Counts, LLC in September 2022 for the AM peak period (7:00 AM to 9:00 AM) and PM peak period (4:00 PM to 6:00 PM) at the following intersections:

- Cates Bay Road & Hwy 134
- Willow Springs Road & Cates Bay Hwy
- Cates Bay Road & Allen Dew Road/N Pawley Road
- Willow Springs Road & Pitch Landing Road
- US 701 & Pitch Landing Road
- US 701 & Lake Way Drive
- US 701 & Kinlaw Lane

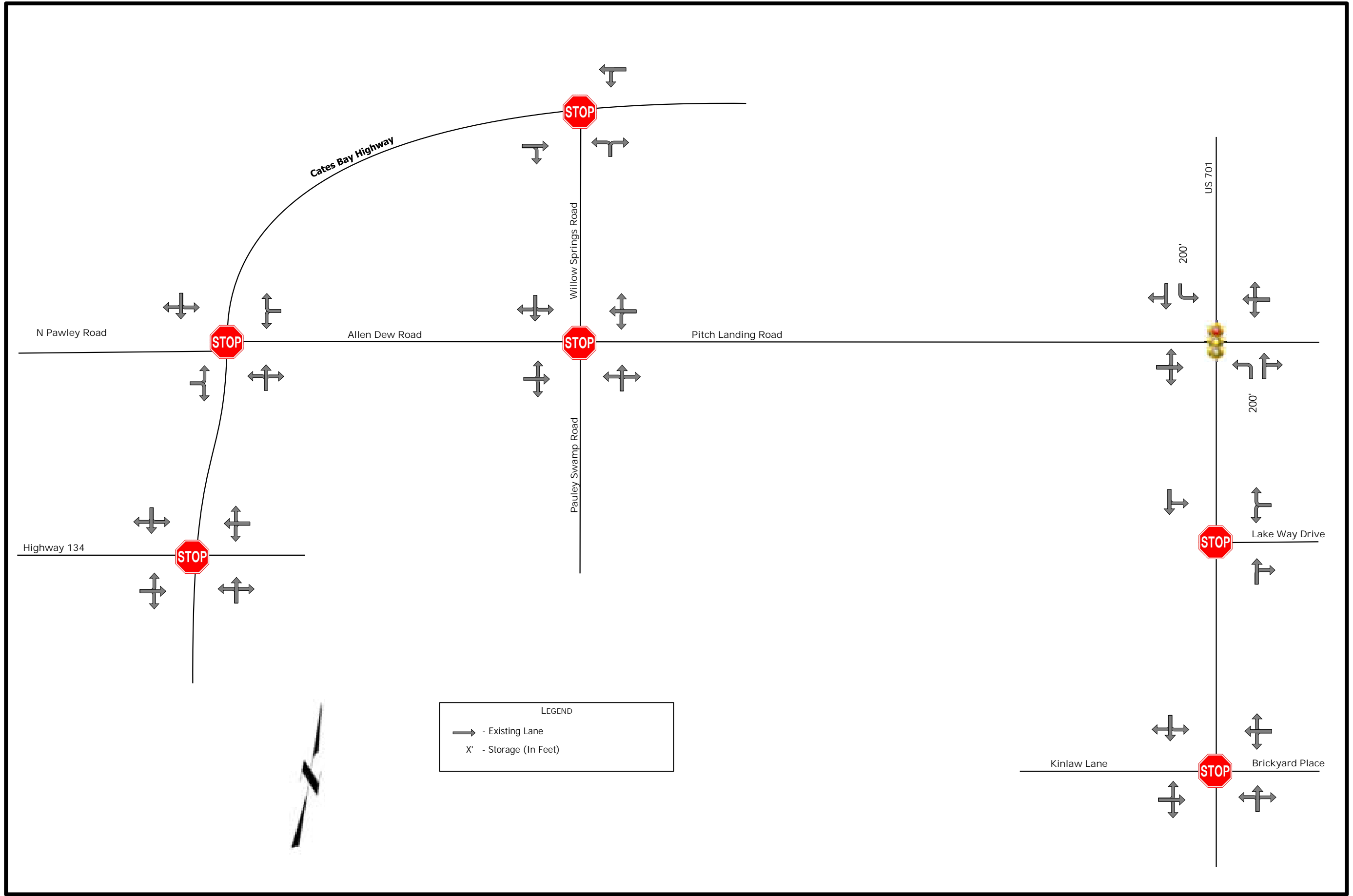
All counts were conducted while the local school district was in session. The 2022 raw traffic volumes are provided in Appendix A. Existing Traffic Volume are illustrated in Figure 4.

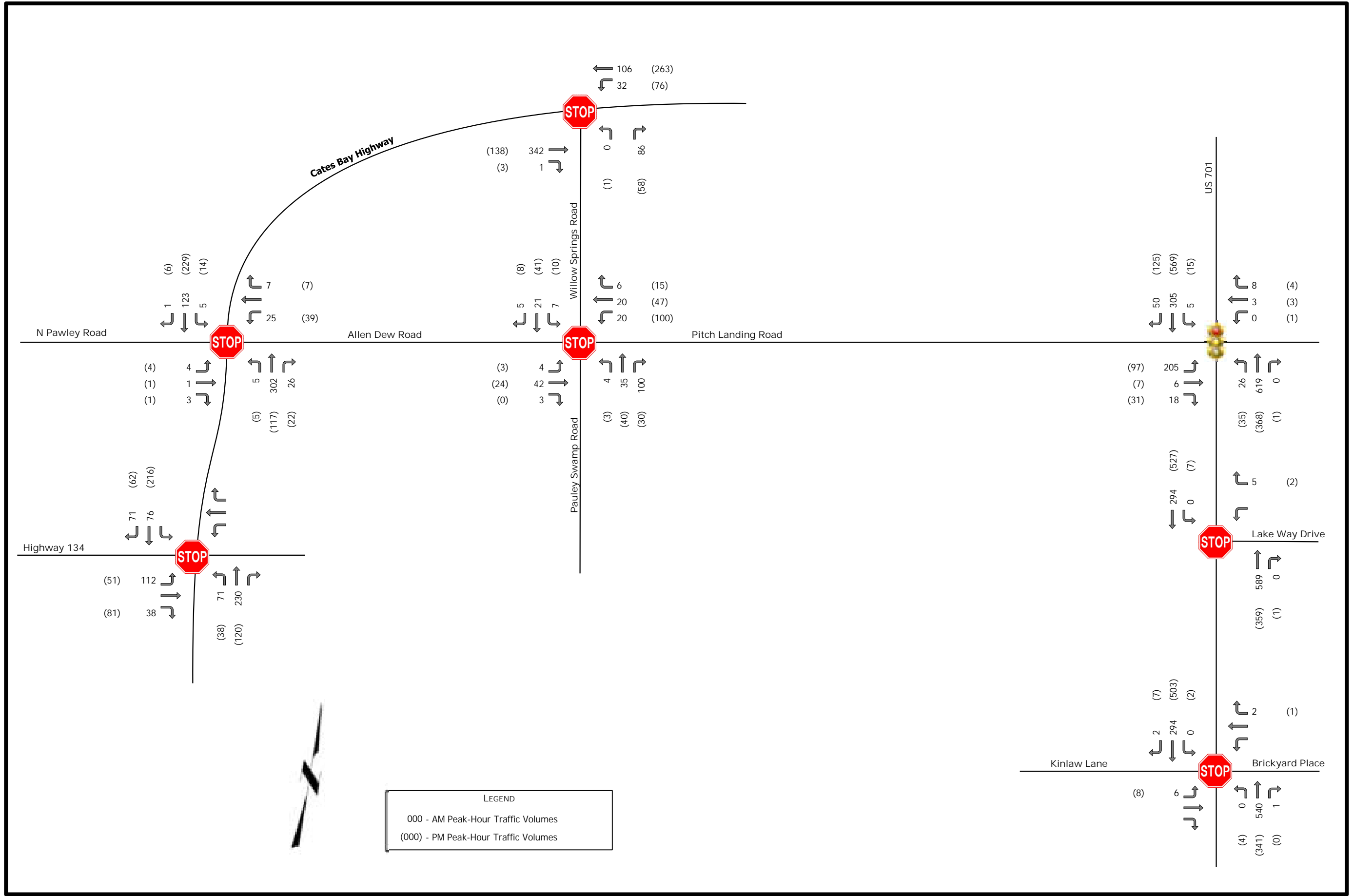
1.4. Driveway Location

The Warden Tract Mixed-Use development is expected to provide three full access driveways. One full access driveway is proposed on Pitch Landing Road located approximately 450 feet west of the

Station 46 Fire Station driveway. One full access on US 701 is proposed to align with Lake Way Drive and the other full access on US 701 is proposed to be along the existing Kinlaw Lane access to US 701.

The proposed driveways appear to meet the SCDOT ARMS spacing requirements.





2. PROJECT TRAFFIC

2.1. Proposed Land Uses

The Warden Tract Mixed-Use development is proposed to contain a total of 3,333 residential units and 418.8 ksf of retail at full buildout. The project site location is currently vacant.

2.2. Trip Generation Estimates

The trip generation potential was estimated using information contained in ITE’s *Trip Generation Manual*, 11th Edition (2021) for land use code (LUC) 210 – Single Family Detached Housing, LUC 215 – Single-Family Attached Housing, LUC 221 – Multifamily Housing (Mid-Rise), LUC 820 – Shopping Center, LUC 821 – Shopping Plaza, and LUC 151 – Mini-Warehouse. The weekday daily, the weekday AM peak-hour of the adjacent street, and the weekday PM peak-hour of the adjacent street time periods are shown in Table 2. Due to the nature of the development internal capture and pass-by trips were considered in the trip generation estimates.

Table 2 – Buildout Trip Generation Estimates

Land Use	ITE LUC	Size	Daily Traffic	AM Peak			PM Peak		
				Enter	Exit	Total	Enter	Exit	Total
Single Family Detached Housing	210	1,374 DU	11,242	202	607	809	735	432	1,167
Single Family Attached Housing	215	1,031 DU	7,806	133	397	530	363	252	615
Multifamily Housing (Mid-Rise)	221	928 DU	4,380	91	306	397	221	141	362
Shopping Center	820	311.6 ksf	14,000	197	120	317	614	665	1,279
Shopping Plaza	821	107.2 ksf	9,663	235	143	378	452	489	941
Mini-Warehouse	151	187.8 ksf	272	10	7	17	13	15	28
Internal Capture				-22	-22	-44	-407	-407	-814
Pass-by				--	--	--	-306	-305	-611
New, External Traffic				846	1,558	2,404	1,686	1,283	2,968
LUC 210 Daily Trips: $\text{Ln}(T) = 0.92\text{Ln}(X) + 2.68$ (50% In; 50% Out) AM Peak-Hour: $\text{Ln}(T) = 0.91\text{Ln}(X) + 0.12$ (25% In; 75% Out) PM Peak-Hour: $\text{Ln}(T) = 0.94\text{Ln}(X) + 0.27$ (63% In; 37% Out)									
LUC 215 Daily Trips: $T = 7.62(X) - 50.48$ (50% In; 50% Out) AM Peak-Hour: $T = 0.52(X) - 5.70$ (25% In; 75% Out)									

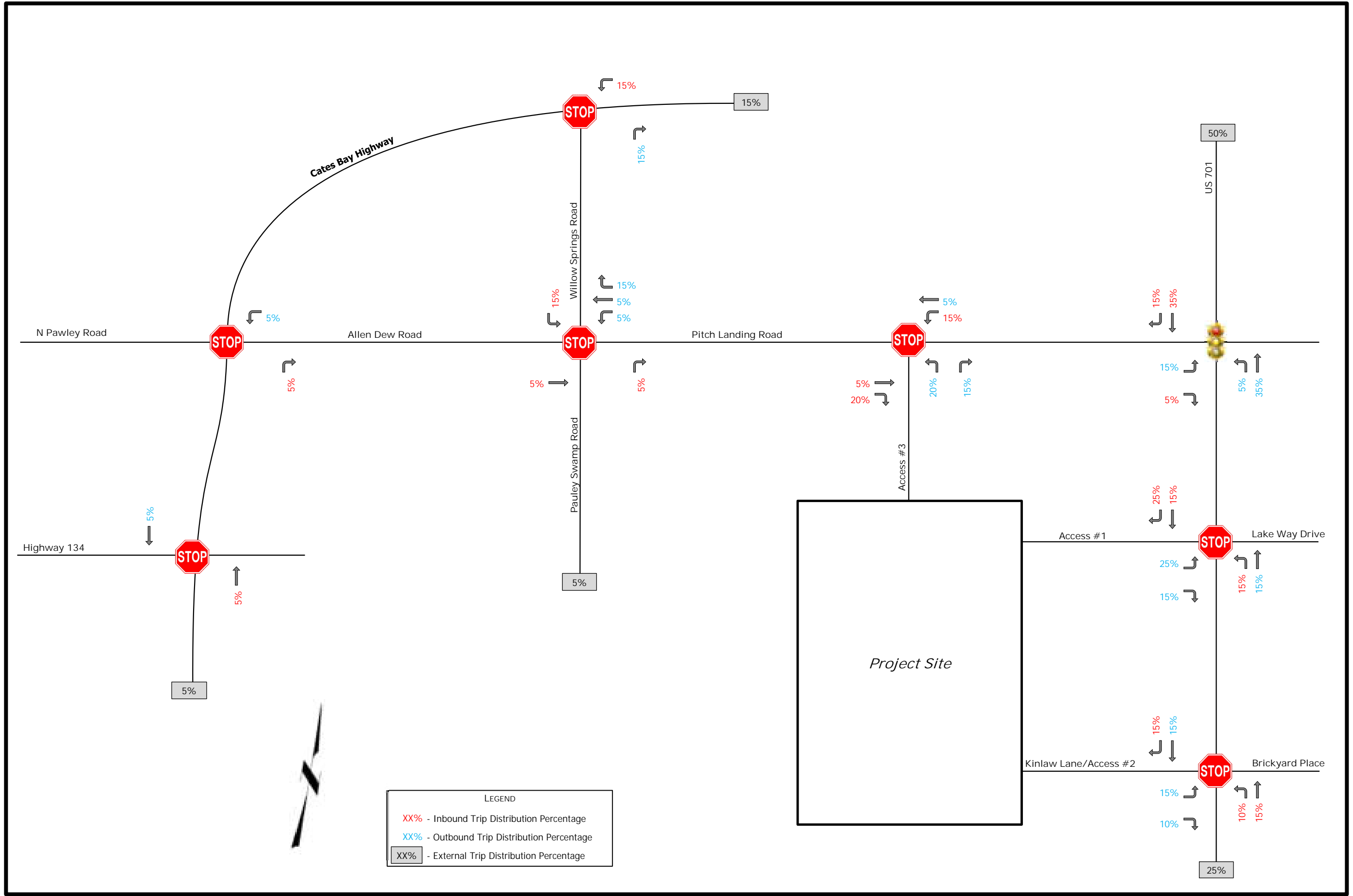
PM Peak-Hour: $T = 0.60(X) - 3.93$ (59% In; 41% Out)
LUC 221 Daily Trips: $T = 4.77(X) - 46.46$ (50% In; 50% Out) AM Peak-Hour: $T = 0.44(X) - 11.61$ (23% In; 77% Out) PM Peak-Hour: $T = 0.39(X) + 0.34$ (61% In; 39% Out)
LUC 820 Daily Trips: $T = 26.11(X) + 5863.73$ (50% In; 50% Out) AM Peak-Hour: $T = 0.59(X) + 133.55$ (62% In; 38% Out) PM Peak-Hour: $\ln(T) = 0.72\ln(X) + 3.02$ (48% In; 52% Out)
LUC 821 Daily Trips: $T = 76.96(X) + 1412.79$ (50% In; 50% Out) AM Peak-Hour: $T = 3.53(X)$ (62% In; 38% Out) PM Peak-Hour: $T = 9.03(X)$ (48% In; 52% Out)
LUC 151 Daily Trips: $T = 1.45(X)$ (50% In; 50% Out) AM Peak-Hour: $T = 0.09(X)$ (59% In; 41% Out) PM Peak-Hour: $T = 0.15(X)$ (47% In; 53% Out)

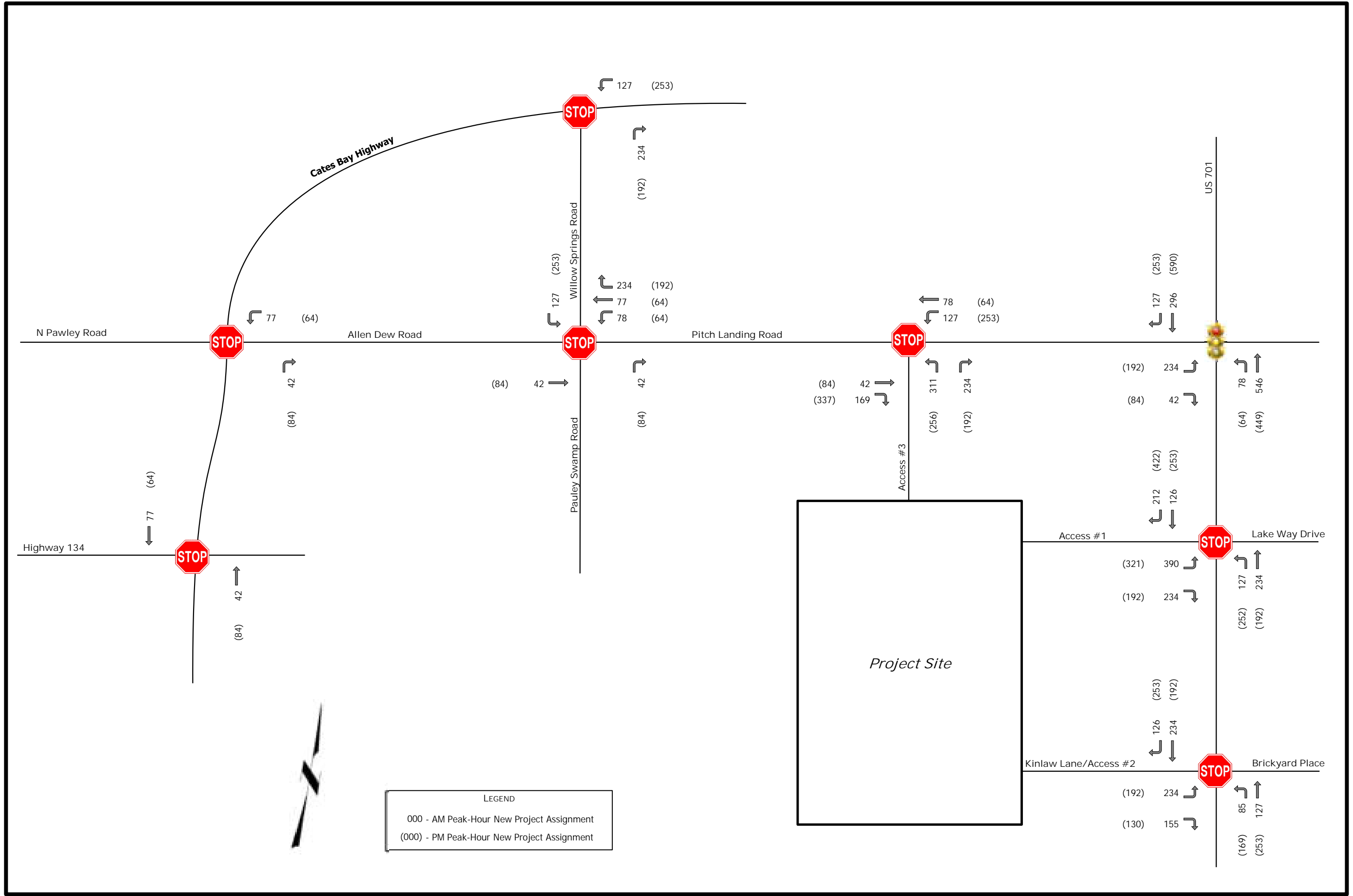
2.3. Trip Distribution & Assignment

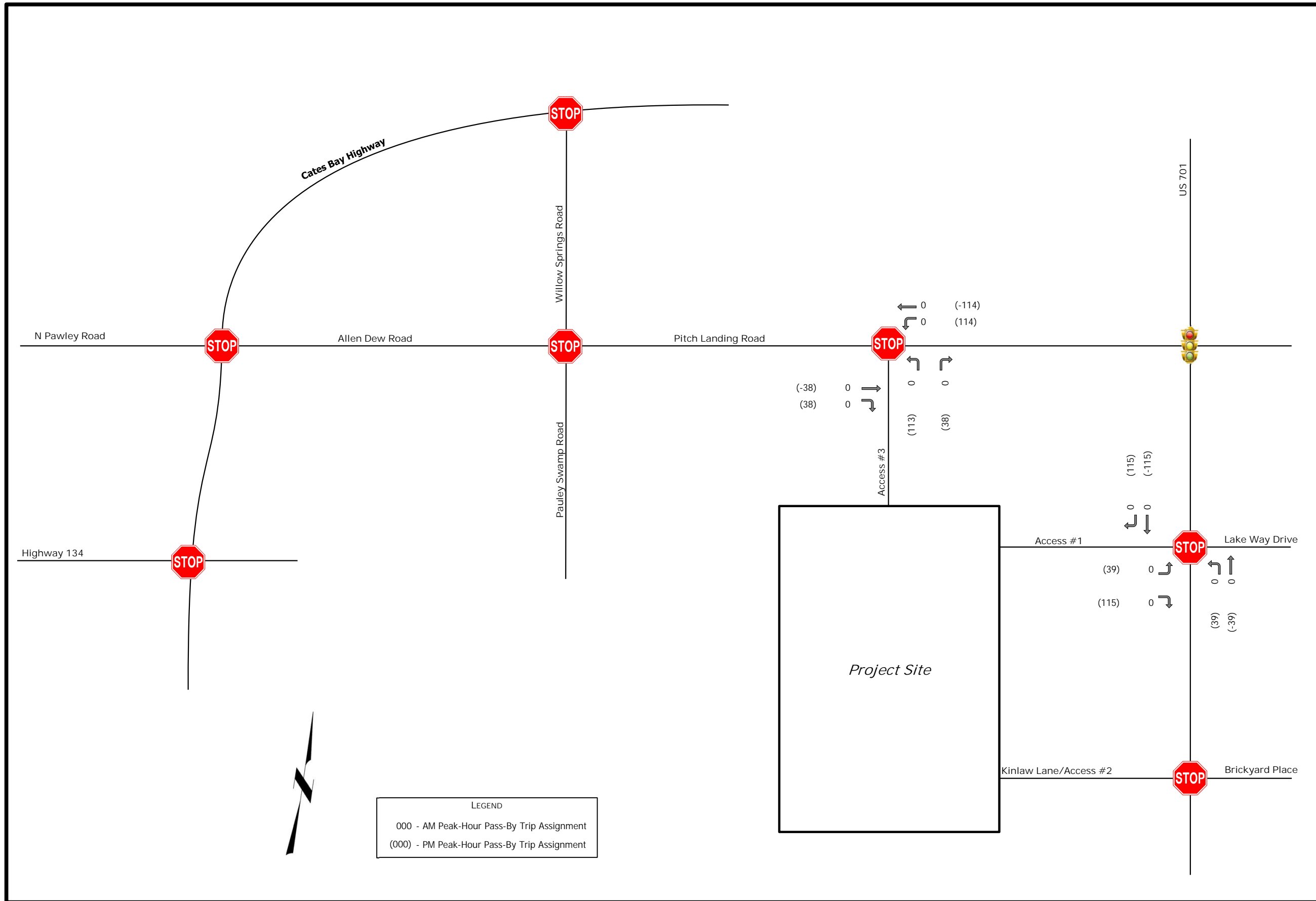
New external traffic expected to be generated was distributed and assigned to the roadway network based on the existing patterns and surrounding land uses. The general distribution of new external project trips was assumed to be:

- 50% to/from the north via Highway 701;
- 25% to/from the south via Highway 701;
- 15% to/from the east via Cates Bay Highway;
- 5% to/from the west via Cates Bay Highway; and
- 5% to/from the south via Pauley Swamp Road

The directional distribution assumptions are shown in Figure 5; the assignment of the total project traffic is shown in Figure 6; and the pass-by assignment is shown in Figure 7.







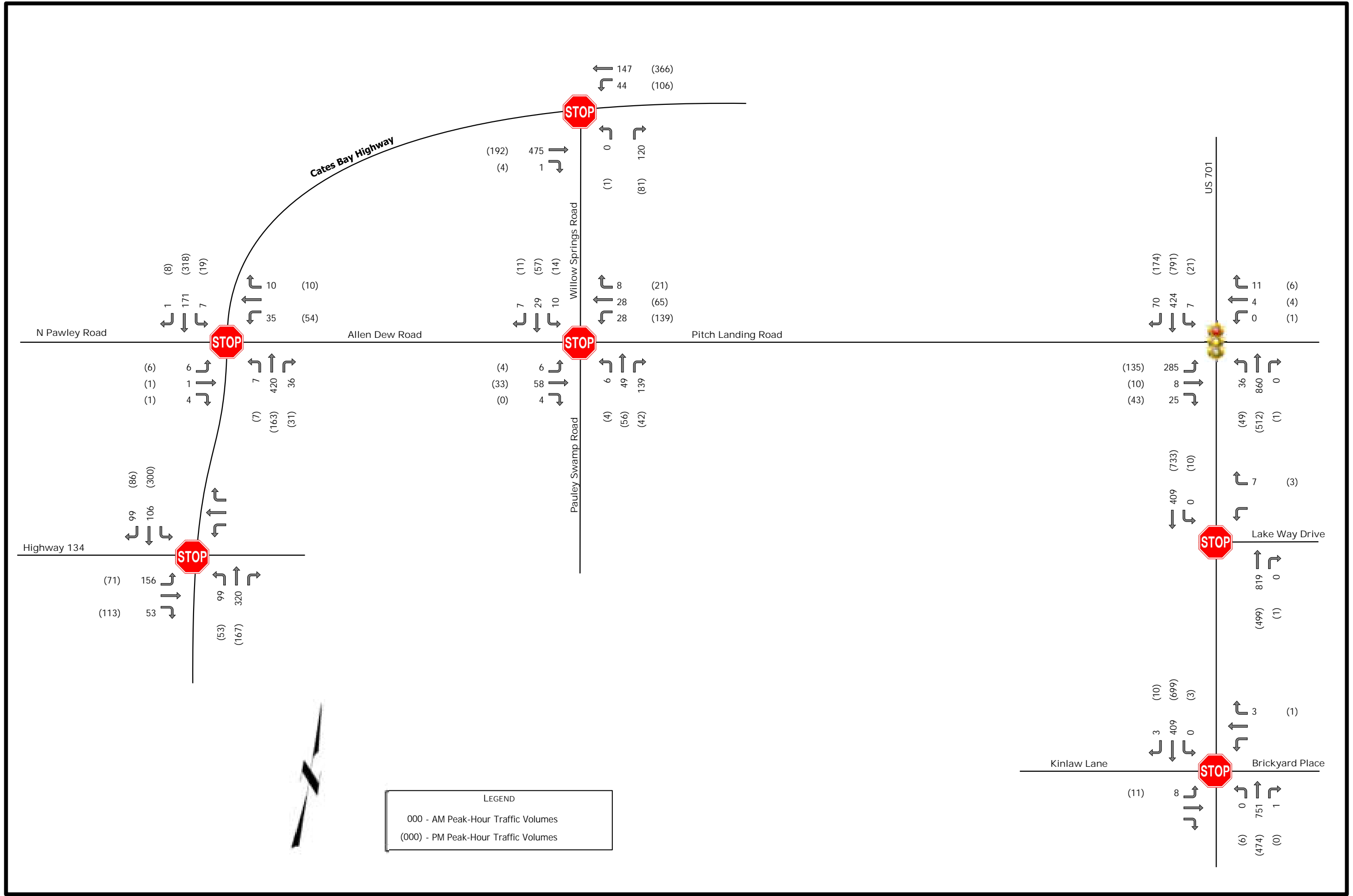
3. TRAFFIC VOLUME DEVELOPMENT

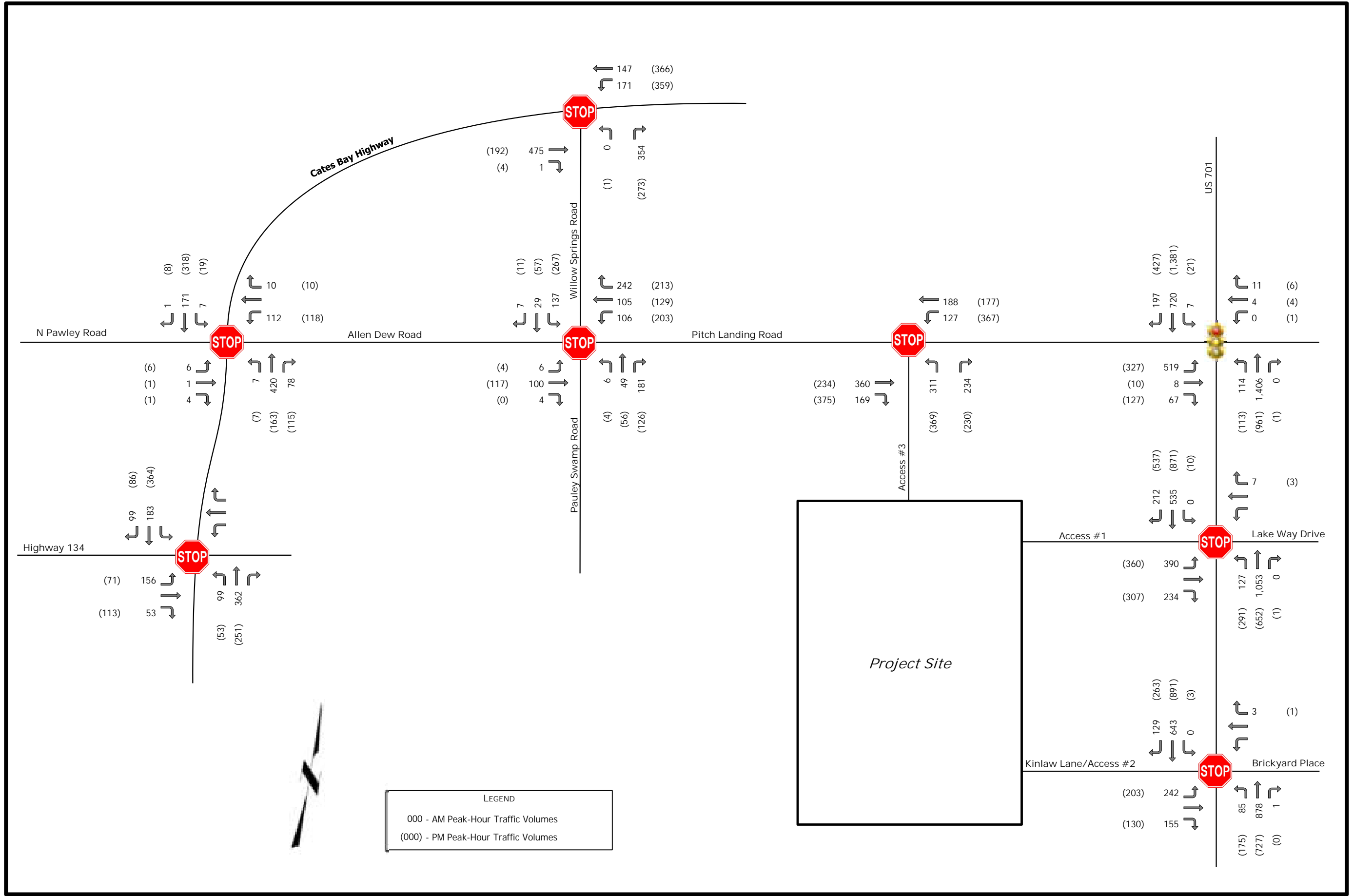
3.1. Future No-Build Traffic Volumes

To develop an annual background growth rate for use in the analysis, historical count data was reviewed and a 3.0% annual growth was utilized for this study. This annual growth rate was used to develop the future phasing years and the 2035 No-Build traffic volumes. The future No-Build volumes which are illustrated in Figure 8, and the volume development worksheets are included in Appendix B.

3.2. Build Out Traffic Volumes

The site generated traffic volumes were added to the future No-Build traffic volumes to determine the future phasing years and the 2035 Build volumes. The future Build volumes are illustrated in Figure 9. Volume development worksheets are included in Appendix B.





4. TRAFFIC IMPACT ANALYSIS

4.1. Turn Lane Analysis

Auxiliary turn-lane analyses were conducted using the 2035 future volumes. Turn lane analyses were considered based on the SCDOT Roadway Design Manual (RDM) section 9.5.1. Figures 9.5-2 and 9.5-9 were used for left-turn and right-turn lane warrant review.

Based on the anticipated future 2035 volumes, auxiliary turn-lanes are recommended:

- right -turn and left-turn lane on US 701 at Access #1
- right -turn and left-turn lane on US 701 at Kinlaw Lane/ Access #2
- right -turn and left-turn lane on Pitch Landing Road at Access #3
- westbound right-turn lane on Pitch Landing Road at the Willow Springs Road intersection
- southbound right-turn on US 701 (with or without the Warden Tract Mixed-Use) at the Pitch Landing Road intersection

Turn lane analyses are provided in Appendix C.

4.2. Intersection LOS Analysis

Using the existing and proposed traffic volumes, intersection analyses were conducted for the study intersections considering 2022 Existing conditions, 2035 No-Build conditions, and 2035 Build conditions. This analysis was conducted using the Transportation Research Board's *Highway Capacity Manual 6th Edition (HCM 6th Edition)* methodologies of the *Synchro*, Version 11 software.

Intersection level of service (LOS) grades range from LOS A to LOS F, which are directly related to the level of control delay at the intersection and characterize the operational conditions of the intersection traffic flow. LOS A operations typically represent ideal, free-flow conditions where vehicles experience little to no delays, and LOS F operations typically represent poor, forced-flow (bumper-to-bumper) conditions with high vehicular delays, and are generally considered undesirable. Table 3 summarizes the *HCM 6th Edition* control delay thresholds associated with each LOS grade for unsignalized and signalized intersections.

Table 3 - HCM 6th Edition LOS Criteria for Unsignalized and Signalized Intersections

Unsignalized Intersections		Signalized Intersections	
LOS	Control Delay per Vehicle (seconds)	LOS	Control Delay per Vehicle (seconds)
A	≤ 10	A	≤ 10
B	> 10 and ≤ 15	B	> 10 and ≤ 20
C	> 15 and ≤ 25	C	> 20 and ≤ 35
D	> 25 and ≤ 35	D	> 35 and ≤ 55
E	> 35 and ≤ 50	E	> 55 and ≤ 80
F	> 50	F	> 80

As part of the intersection analysis, SCDOT’s default *Synchro* parameters were utilized. A constant PHF of 0.92 was applied for future year analysis. Existing heavy vehicle percentages were utilized for all analysis scenarios, with a minimum percentage of 2% considered.

Using the *Synchro* software, intersection analyses were conducted for the weekday AM peak-hour and weekday PM peak-hour time periods. The recommended turn lanes were included in the build conditions. The results of the intersection analyses are summarized in Table 4.

Table 4 - Intersection Analysis Results

Intersection	Approach	LOS/Delay (seconds)					
		2022 Existing Conditions		2035 No-Build Conditions		2035 Build Conditions	
		AM	PM	AM	PM	AM	PM
Cates Bay Highway & Highway 134	EB ²	C/15.8	B/12.6	D/31.1	C/17.5	E/49.7	C/22.4
	NB ¹	A/7.7	A/8.0	A/7.9	A/8.4	A/8.2	A/8.6
Cates Bay Highway & N Pawley Road/Allen Dew Road	EB ²	B/11.5	B/11.8	B/13.6	B/14.0	B/13.9	B/14.7
	WB ²	B/12.8	B/12.3	C/16.1	C/15.2	C/22.4	C/20.2
	NB ¹	A/7.5	A/7.8	A/7.6	A/8.0	A/7.6	A/8.0
	SB ¹	A/8.0	A/7.6	A/8.4	A/7.7	A/8.6	A/7.9
Willow Springs Road & Cates Bay Highway	WB ¹	A/8.2	A/7.7	A/8.7	A/7.9	A/9.3	A/8.6
	NB ²	B/11.3	A/9.4	B/13.6	B/10.0	D/26.3	B/12.2
Willow Springs Road/Pauley Swamp Road & Allen Dew Road/Pitch Landing Road (AWSC)	EB	A/7.7	A/7.6	A/8.0	A/8.0	B/10.6	B/12.6
	WB	A/7.7	A/8.5	A/8.1	A/9.5	B/12.2	C/19.9
	NB	A/7.5	A/7.7	A/8.1	A/8.2	B/11.8	B/13.1
	SB	A/7.4	A/7.8	A/7.7	A/8.3	B/11.9	C/21.5
US-701 & Pitch Landing Road (Signalized)	EB	C/27.2	C/22.7	E/58.8	D/37.7	F/266.6	F/190.1
	WB	B/18.4	B/18.0	C/32.2	C/27.7	C/34.4	D/38.0
	NB	B/14.3	A/6.7	C/30.1	A/9.1	F/218.5	F/94.8
	SB	A/9.5	A/7.5	B/15.6	B/10.7	C/25.7	F/102.8
	Overall	B/15.3	A/9.0	C/31.2	B/13.2	F/168.6	F/112.0
US 701 & Lake Way Drive/Access #1	EB ²	-	-	-	-	F+	F+
	WB ²	B/12.8	B/10.6	C/16.1	B/11.8	C/20.8	B/13.0
	NB ¹	-	-	-	-	B/10.4	E/36.5
	SB ¹	A/0.0	A/8.1	A/0.0	A/8.6	A/0.0	A/9.2
US 701 & Kinlaw Lane/Access #2	EB ²	C/20.0	C/20.9	D/32.7	E/35.5	F+	F+
	WB ²	B/12.2	B/10.4	B/14.9	B/11.5	C/17.0	B/14.5
	NB ¹	A/0.0	A/8.6	A/0.0	A/9.4	B/10.2	C/15.3
	SB ¹	A/0.0	A/8.1	A/0.0	A/8.5	A/0.0	A/9.4
Pitch Landing Road & Access #3	WB ¹	--	--	--	--	A/9.3	B/12.1
	NB ²	--	--	--	--	F/116.3	F+

1. LOS for major street left turn movement 2. LOS for minor street approach

The US 701 & Access #1 intersection is expected to experience significant delays in the 2035 build conditions along the project leg. To mitigate delays, signalization is recommended once warranted

at Access #1. The intersection of Pitch Landing Road & Access #3 is expected to experience delays along the project approach. To mitigate delays, signalization is also recommended once warranted at Access #3. The US 701 & Access #2 intersection is expected to experience delays along the project leg, however traffic is likely to reroute to Access #1 and Access #3 once signalized; therefore there are no recommendations. The site accesses should be constructed with one ingress and two egress lanes and meet SCDOT and City of Conway design criteria.

With construction of the project, the study intersections of Cates Bay Highway & N Pawley Road/Allen Dew Road, Willow Springs Road/Pauley Swamp Road & Allen Dew Road/Pitch Landing Road, and Willow Springs Road & Cates Bay Highway should continue to function with very minor delays. The intersection of Cates Bay Highway & Highway 134 is expected to experience delays in AM peak of the build conditions. This operation is typical of minor approaches of two-way stop-controlled intersections; no improvements are recommended.

The signalized intersection of US 701 & Pitch Landing Road is expected to operate with delays in the 2035 build conditions. The eastbound approach of the intersection operates as an LOS E in the 2035 AM peak build conditions. Additional improvements such as eastbound dual lefts are likely to be needed for improved operation. The existing traffic on US 701 along with projected project traffic may require widening on US 701 north of Pitch Landing Road in the future. Widening of US 701 southern of Pitch Landing Road requires widening based on to the projected demand at the signal. Removal of the east leg of Pitch Landing may provide additional improvement for signal operation.

Table 5 presents the LOS operation with additional recommended improvements.

Table 5 - Build + Improvement Analysis Results

Intersection	Approach	LOS/Delay (seconds)	
		2035 Build + IMPS Conditions	
		AM	PM
US-701 & Pitch Landing Road (Signalized + Dual Lefts)	EB	D/50.2	D/44.7
	WB	D/44.3	D/37.4
	NB	B/13.6	C/24.0
	SB	C/25.2	C/23.3
	Overall	C/25.0	C/27.9
US 701 & Lake Way Drive/ Access #1 (Signalized)	EB	F/111.1	E/66.9
	WB	E/62.3	E/60.8
	NB	D/54.7	D/51.7
	SB	D/54.0	C/21.1
	Overall	E/66.8	D/46.5
Pitch Landing Road & Access #3 (Signalized)	EB	A/9.0	A/8.6
	WB	C/28.2	B/10.0
	NB	C/23.1	B/13.9
	Overall	B/19.8	B/11.0

Figure 10 shows the proposed lane configuration. The capacity analysis worksheets are provided in Appendix D.

4.3. Improvement Timing

The recommended improvements shown in Figure 10 were analyzed to determine timing for when the implementation would be required. The improvements at the access points should be implemented once the connection is provided. The right turn lane along Pitch Landing Road at the Willow Springs Road intersection is expected to be warranted once 1,300 homes are occupied.

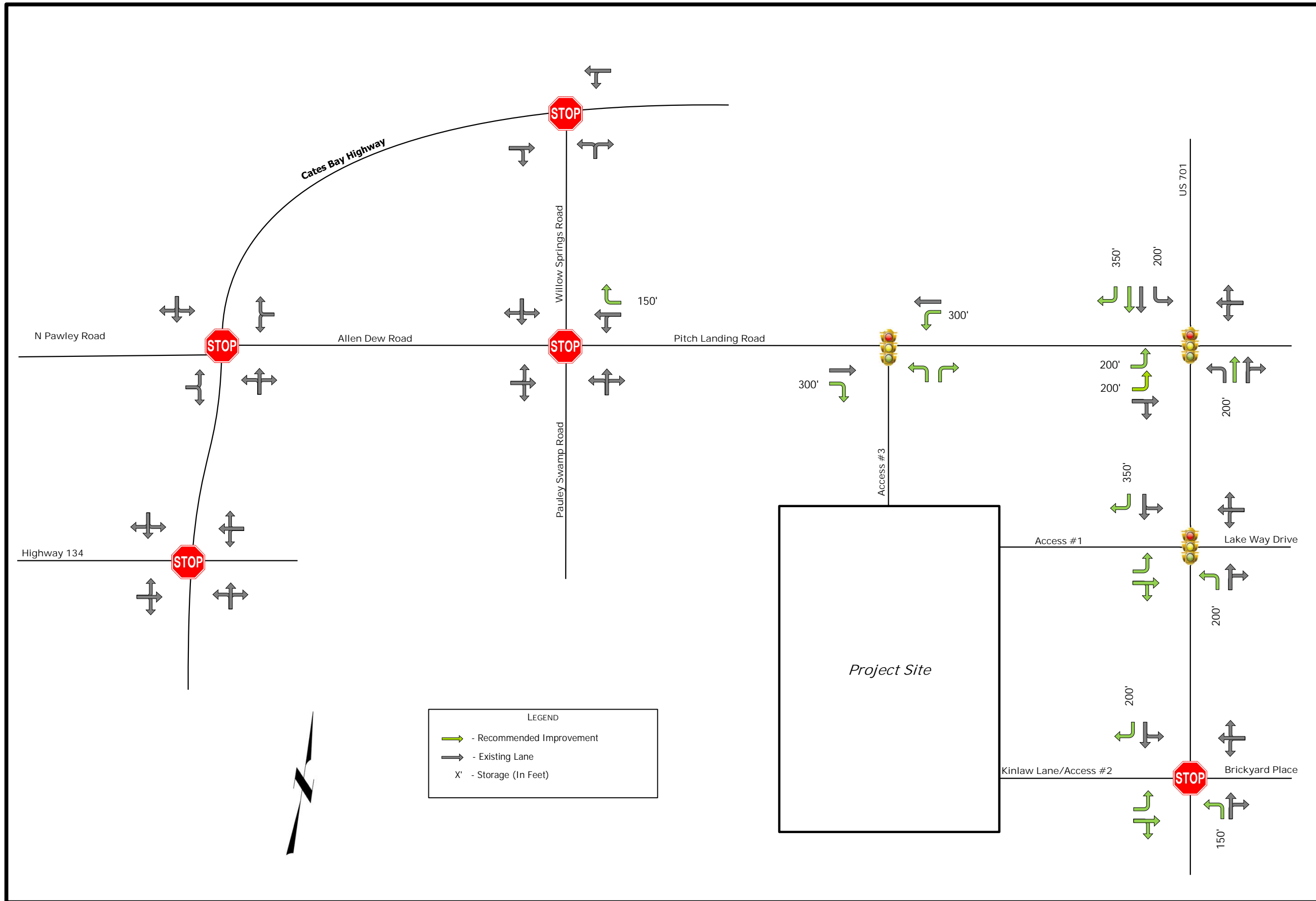
The improvements at the US 701 & Pitch Landing Road intersection include a southbound right-turn lane on US 701, dual left-turns along the westbound approach of Pitch Landing, an additional northbound through lane, and an additional southbound through lane.

The existing 2022 ADT (Annual Daily Traffic) along the northern portion of US 701 to Pitch Landing Road is 16,600 vpd (SCDOT Station #26-0177). Historical SCDOT Hourly Count Data at this site

shows this road segment experiences consistent demand throughout the day from 7 am to 5 pm. The projected ADT utilizing only the background growth rate same as the analysis results in a 2035 ADT of approximately 23,000 vpd. The existing ADT and the future ADT would earmark a segment as a candidate for widening. The addition of the proposed development would also contribute to the need for widening.

The analysis to determine improvement timing considered the background hourly counts and the expected development trips. With the proposed development the improvements at the US 701 & Pitch Landing Road are expected to be warranted once 435 homes are occupied.

The analysis worksheets are provided in Appendix D.



5. SUMMARY OF FINDINGS AND RECOMMENDATIONS

A traffic impact study was conducted for the proposed Warden Tract Mixed-Use development in accordance with SCDOT and City of Conway guidelines. The development is proposed to be located south of Pitch Landing Road and west of US 701 in Conway, South Carolina. The development is anticipated to be constructed in phases but is proposed to contain a total of 3,333 residential units and 418.8 ksf of retail at full buildout. Access is proposed via one (1) full site access on Pitch Landing Road and two (2) full accesses on US 701.

Based on the anticipated traffic volumes the following turn lanes are recommended:

- right -turn and left-turn lane on US 701 at Access #1 (once access provided)
- right -turn and left-turn lane on US 701 at Kinlaw Lane/ Access #2 (once access provided)
- right -turn and left-turn lane on Pitch Landing Road at Access #3 (once access provided)
- westbound right-turn lane on Pitch Landing Road at the Willow Springs Road intersection (once approximately 1,300 homes occupied)
- southbound right-turn on US 701 (with or without the Warden Tract Mixed-Use) at the Pitch Landing Road intersection (once US 701 & Pitch Landing Road improvements built)

The US 701 & Access #1 intersection is expected to experience significant delays in the 2035 build conditions along the project leg. To mitigate delays, signalization is recommended once warranted at Access #1. The intersection of Pitch Landing Road & Access #3 is expected to experience delays along the project approach. To mitigate delays, signalization is also recommended once warranted at Access #3. The US 701 & Access #2 intersection is expected to experience delays along the project leg, however traffic is likely to reroute to Access #1 and Access #3 once signalized; therefore there are no recommendations. The site accesses should be constructed with one ingress and two egress lanes and meet SCDOT and City of Conway design criteria.

With construction of the project, the study intersections of Cates Bay Highway & N Pawley Road/Allen Dew Road, Willow Springs Road/Pauley Swamp Road & Allen Dew Road/Pitch Landing Road, and Willow Springs Road & Cates Bay Highway should continue to function with very minor delays. The intersection of Cates Bay Highway & Highway 134 is expected to experience delays in AM peak of the build conditions. This operation is typical of minor approaches of two-way stop-controlled intersections; no improvements are recommended.

The signalized intersection of US 701 & Pitch Landing Road is expected to operate with delays in the 2035 build conditions. The eastbound approach of the intersection operates as an LOS E in the 2035 AM peak build conditions. Additional improvements such as eastbound dual lefts are likely to be needed for improved operation. The existing traffic on US 701 along with projected project traffic may require widening on US 701 north of Pitch Landing Road in the future. Widening of US 701 southern of Pitch Landing Road requires widening based on to the projected demand at the

signal. Removal of the east leg of Pitch Landing may provide additional improvement for signal operation.

The improvements at the US 701 & Pitch Landing Road intersection include a southbound right-turn lane on US 701, dual left-turns along the westbound approach of Pitch Landing, an additional northbound through lane, and an additional southbound through lane.

The existing 2022 ADT (Annual Daily Traffic) along the northern portion of US 701 to Pitch Landing Road is 16,600 vpd (SCDOT Station #26-0177). Historical SCDOT Hourly Count Data at this site shows this road segment experiences consistent demand throughout the day from 7 am to 5 pm. The projected ADT utilizing only the background growth rate, same as the analysis, results in a 2035 ADT approximately 23,000 vpd. The existing ADT and the future ADT should likely earmark this segment as a candidate for widening. The addition of the proposed development would also contribute to the need for widening.

The analysis to determine improvement timing considered the background hourly volumes and the incremental phase 1 development trips. With the proposed development the improvements at the US 701 & Pitch Landing Road are expected to be warranted once 435 homes are occupied.

APPENDIX A

Traffic Count Data

SHORT COUNTS, LLC

735 Maryland St
Columbia, SC 29201

We can't say we're the Best, but you Can!

File Name : Cates Bay Hwy @ Hwy 134

Site Code :

Start Date : 09/28/2022

Page No : 1

Groups Printed- Passenger Vehicles - Heavy Vehicles - Buses

Start Time	Hwy 134 Southbound				Cates Bay Hwy Westbound				Hwy 134 (Dirt) Northbound				Cates Bay Hwy Eastbound				Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
07:00	33	0	14	0	0	16	32	0	0	0	0	0	19	59	0	0	173
07:15	48	0	8	0	0	22	30	0	0	0	0	0	24	68	0	0	200
07:30	21	0	8	0	0	19	4	0	0	0	0	0	15	58	0	0	125
07:45	10	0	8	0	0	19	5	0	0	0	0	0	13	45	0	0	100
Total	112	0	38	0	0	76	71	0	0	0	0	0	71	230	0	0	598
08:00	6	0	8	0	0	20	4	0	0	0	0	0	4	36	0	0	78
08:15	8	0	11	0	0	20	5	0	0	0	0	0	3	37	0	0	84
08:30	3	0	9	0	0	16	4	0	0	0	0	0	9	32	0	0	73
08:45	7	0	5	0	0	22	4	0	0	0	0	0	7	38	0	0	83
Total	24	0	33	0	0	78	17	0	0	0	0	0	23	143	0	0	318
16:00	5	0	16	0	0	35	6	0	0	0	0	0	9	35	0	0	106
16:15	8	0	21	0	0	37	9	0	0	0	0	0	3	26	0	0	104
16:30	12	0	23	0	0	44	10	0	0	0	0	0	14	24	0	0	127
16:45	8	0	15	0	0	58	13	0	0	0	0	0	15	21	0	0	130
Total	33	0	75	0	0	174	38	0	0	0	0	0	41	106	0	0	467
17:00	12	0	12	0	0	52	16	0	0	0	0	0	9	35	0	0	136
17:15	16	0	25	0	0	55	22	0	0	0	0	0	6	28	0	0	152
17:30	17	0	21	0	0	54	11	0	0	0	0	0	11	30	0	0	144
17:45	6	0	23	0	0	55	13	0	0	0	0	0	12	27	0	0	136
Total	51	0	81	0	0	216	62	0	0	0	0	0	38	120	0	0	568
Grand Total	220	0	227	0	0	544	188	0	0	0	0	0	173	599	0	0	1951
Apprch %	49.2	0	50.8	0	0	74.3	25.7	0	0	0	0	0	22.4	77.6	0	0	
Total %	11.3	0	11.6	0	0	27.9	9.6	0	0	0	0	0	8.9	30.7	0	0	
Passenger Vehicles	214	0	221	0	0	536	183	0	0	0	0	0	169	583	0	0	1906
% Passenger Vehicles	97.3	0	97.4	0	0	98.5	97.3	0	0	0	0	0	97.7	97.3	0	0	97.7
Heavy Vehicles	4	0	4	0	0	7	4	0	0	0	0	0	3	10	0	0	32
% Heavy Vehicles	1.8	0	1.8	0	0	1.3	2.1	0	0	0	0	0	1.7	1.7	0	0	1.6
Buses	2	0	2	0	0	1	1	0	0	0	0	0	1	6	0	0	13
% Buses	0.9	0	0.9	0	0	0.2	0.5	0	0	0	0	0	0.6	1	0	0	0.7

SHORT COUNTS, LLC

735 Maryland St
Columbia, SC 29201

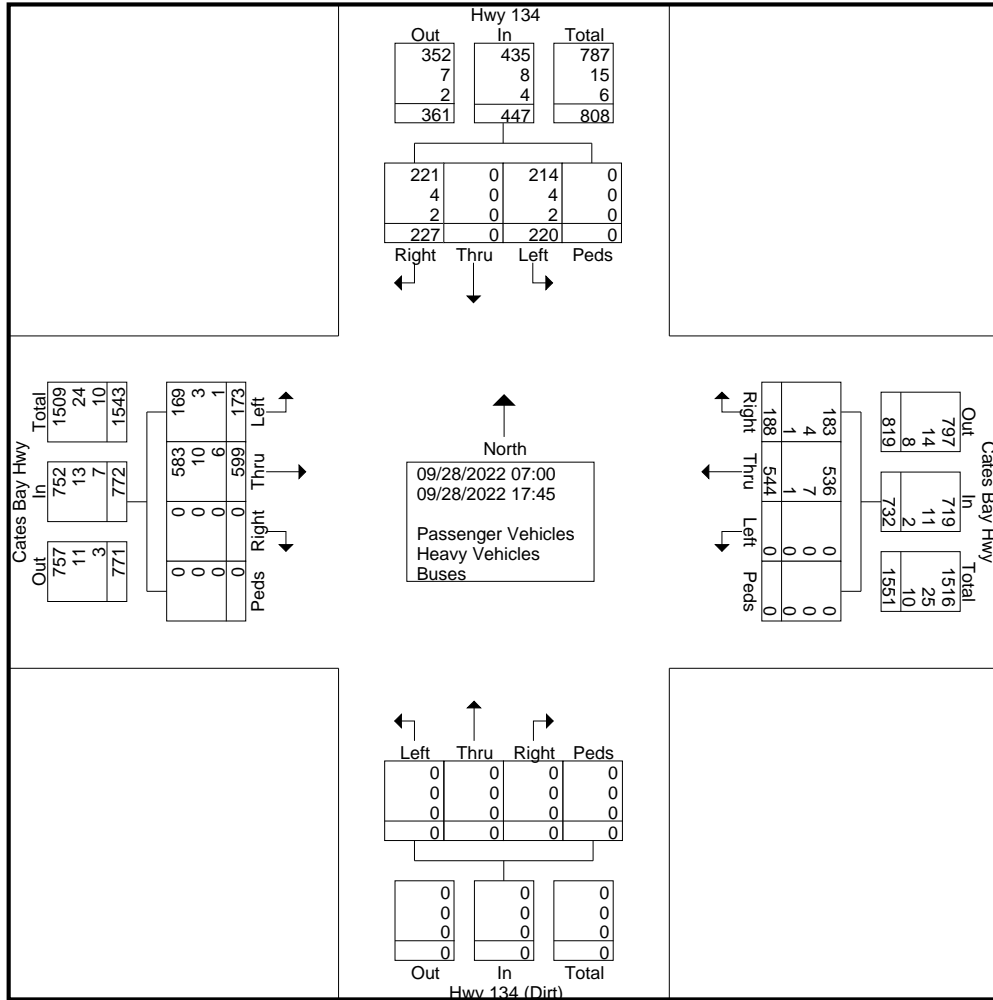
We can't say we're the Best, but you Can!

File Name : Cates Bay Hwy @ Hwy 134

Site Code :

Start Date : 09/28/2022

Page No : 2



SHORT COUNTS, LLC

735 Maryland St
Columbia, SC 29201

We can't say we're the Best, but you Can!

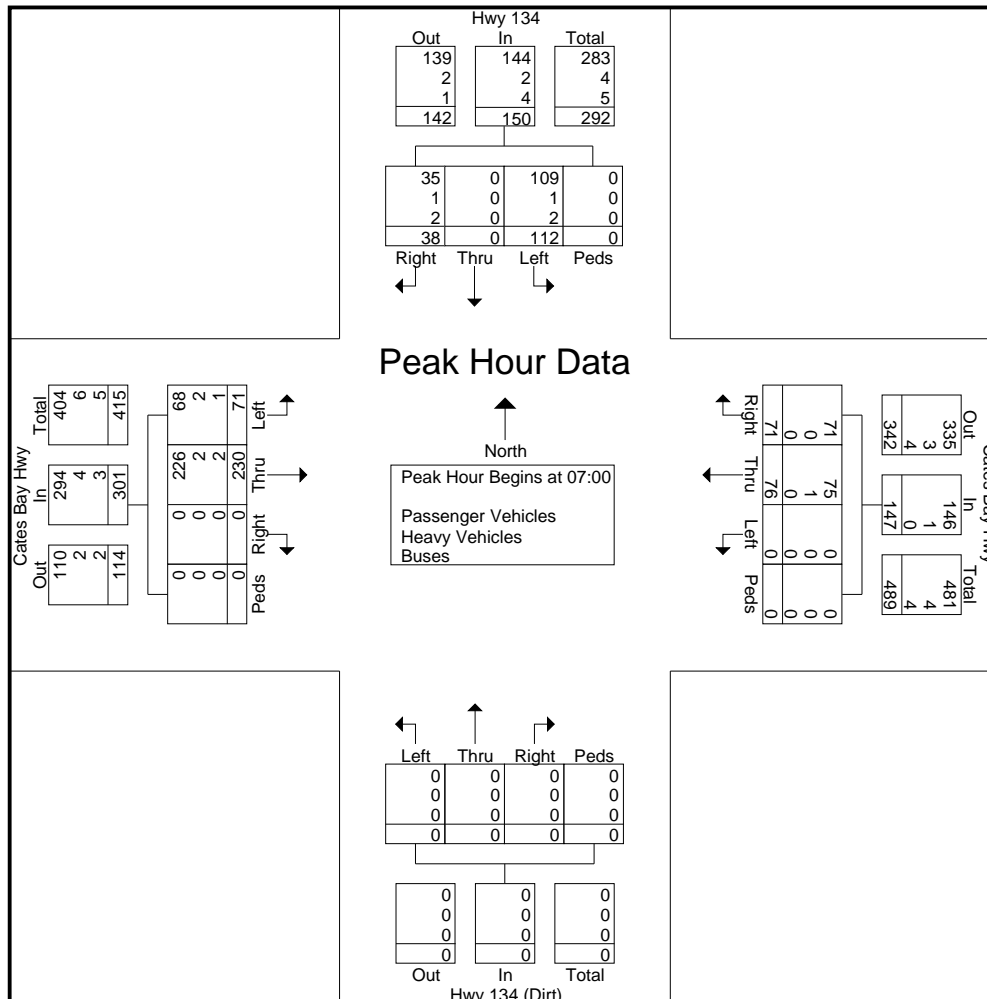
File Name : Cates Bay Hwy @ Hwy 134

Site Code :

Start Date : 09/28/2022

Page No : 3

Start Time	Hwy 134 Southbound					Cates Bay Hwy Westbound					Hwy 134 (Dirt) Northbound					Cates Bay Hwy Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00																					
07:00	33	0	14	0	47	0	16	32	0	48	0	0	0	0	0	19	59	0	0	78	173
07:15	48	0	8	0	56	0	22	30	0	52	0	0	0	0	0	24	68	0	0	92	200
07:30	21	0	8	0	29	0	19	4	0	23	0	0	0	0	0	15	58	0	0	73	125
07:45	10	0	8	0	18	0	19	5	0	24	0	0	0	0	0	13	45	0	0	58	100
Total Volume	112	0	38	0	150	0	76	71	0	147	0	0	0	0	0	71	230	0	0	301	598
% App. Total	74.7	0	25.3	0		0	51.7	48.3	0		0	0	0	0		23.6	76.4	0	0		
PHF	.583	.000	.679	.000	.670	.000	.864	.555	.000	.707	.000	.000	.000	.000	.000	.740	.846	.000	.000	.818	.748
Passenger Vehicles	109	0	35	0	144	0	75	71	0	146	0	0	0	0	0	68	226	0	0	294	584
% Passenger Vehicles																					
Heavy Vehicles	1	0	1	0	2	0	1	0	0	1	0	0	0	0	0	2	2	0	0	4	7
% Heavy Vehicles	0.9	0	2.6	0	1.3	0	1.3	0	0	0.7	0	0	0	0	0	2.8	0.9	0	0	1.3	1.2
Buses	2	0	2	0	4	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3	7
% Buses	1.8	0	5.3	0	2.7	0	0	0	0	0	0	0	0	0	0	1.4	0.9	0	0	1.0	1.2



SHORT COUNTS, LLC

735 Maryland St
Columbia, SC 29201

We can't say we're the Best, but you Can!

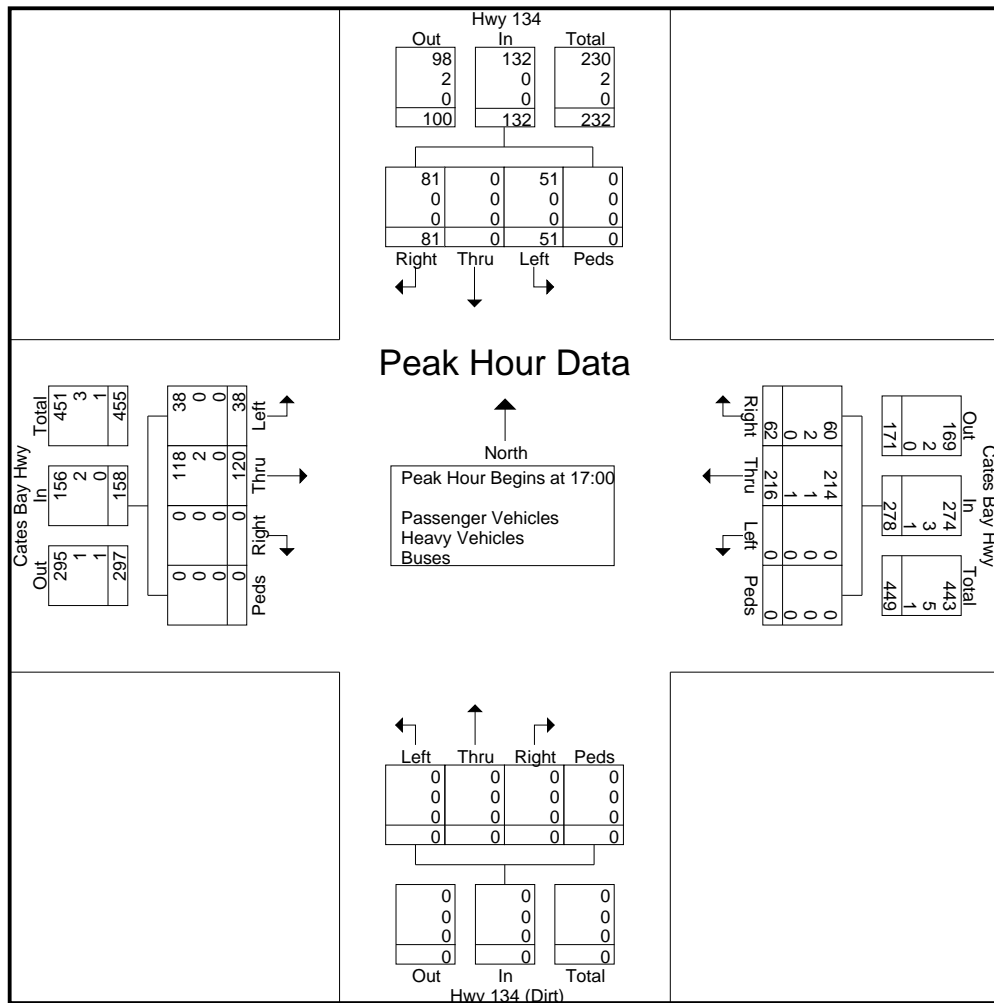
File Name : Cates Bay Hwy @ Hwy 134

Site Code :

Start Date : 09/28/2022

Page No : 4

Start Time	Hwy 134 Southbound					Cates Bay Hwy Westbound					Hwy 134 (Dirt) Northbound					Cates Bay Hwy Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 17:00																					
17:00	12	0	12	0	24	0	52	16	0	68	0	0	0	0	0	9	35	0	0	44	136
17:15	16	0	25	0	41	0	55	22	0	77	0	0	0	0	0	6	28	0	0	34	152
17:30	17	0	21	0	38	0	54	11	0	65	0	0	0	0	0	11	30	0	0	41	144
17:45	6	0	23	0	29	0	55	13	0	68	0	0	0	0	0	12	27	0	0	39	136
Total Volume	51	0	81	0	132	0	216	62	0	278	0	0	0	0	0	38	120	0	0	158	568
% App. Total	38.6	0	61.4	0		0	77.7	22.3	0		0	0	0	0	0	24.1	75.9	0	0		
PHF	.750	.000	.810	.000	.805	.000	.982	.705	.000	.903	.000	.000	.000	.000	.000	.792	.857	.000	.000	.898	.934
Passenger Vehicles	51	0	81	0	132	0	214	60	0	274	0	0	0	0	0	38	118	0	0	156	562
% Passenger Vehicles																					
Heavy Vehicles	0	0	0	0	0	0	1	2	0	3	0	0	0	0	0	0	2	0	0	2	5
% Heavy Vehicles							0.5	3.2	0	1.1							1.7	0	0	1.3	0.9
Buses	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
% Buses							0.5	0	0	0.4							0	0	0	0	0.2



SHORT COUNTS, LLC

735 Maryland St
Columbia, SC 29201

We can't say we're the Best, but you Can!

File Name : Cates Bay Hwy @ Pawley-Allen Dew Rd

Site Code :

Start Date : 09/28/2022

Page No : 1

Groups Printed- Passenger Vehicles - Heavy Vehicles - Buses

Start Time	N Pauley Rd Southbound				Cates Bay Hwy Westbound				Allen Dew Rd Northbound				Cates Bay Hwy Eastbound				Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
07:00	1	0	1	0	3	43	0	0	9	0	3	0	0	78	5	0	143
07:15	2	0	2	0	1	37	0	0	9	0	1	0	3	100	9	0	164
07:30	1	0	0	0	1	22	1	0	3	0	1	0	1	76	4	0	110
07:45	0	1	0	0	0	21	0	0	4	0	2	0	1	48	8	0	85
Total	4	1	3	0	5	123	1	0	25	0	7	0	5	302	26	0	502
08:00	0	0	0	0	2	21	0	0	4	0	0	0	0	37	2	0	66
08:15	1	0	1	0	0	17	0	0	5	0	3	0	4	36	3	0	70
08:30	5	0	2	0	0	16	0	0	5	0	1	0	1	32	3	0	65
08:45	0	0	1	0	0	21	0	0	3	0	1	0	0	40	4	0	70
Total	6	0	4	0	2	75	0	0	17	0	5	0	5	145	12	0	271
16:00	1	0	0	0	1	31	0	0	7	0	0	0	3	33	6	0	82
16:15	0	1	1	0	2	36	2	0	7	1	2	0	0	26	8	0	86
16:30	0	1	1	0	1	53	0	0	7	0	2	0	1	27	7	0	100
16:45	2	1	0	0	5	59	1	0	5	0	3	0	1	25	2	0	104
Total	3	3	2	0	9	179	3	0	26	1	7	0	5	111	23	0	372
17:00	1	0	0	0	2	55	3	0	10	0	1	0	0	39	1	0	112
17:15	1	0	1	0	5	62	0	0	13	0	2	0	1	26	11	0	122
17:30	0	0	0	0	2	53	2	0	11	0	1	0	3	27	8	0	107
17:45	2	0	1	0	2	53	1	0	9	0	2	0	2	22	7	0	101
Total	4	0	2	0	11	223	6	0	43	0	6	0	6	114	27	0	442
Grand Total	17	4	11	0	27	600	10	0	111	1	25	0	21	672	88	0	1587
Apprch %	53.1	12.5	34.4	0	4.2	94.2	1.6	0	81	0.7	18.2	0	2.7	86	11.3	0	
Total %	1.1	0.3	0.7	0	1.7	37.8	0.6	0	7	0.1	1.6	0	1.3	42.3	5.5	0	
Passenger Vehicles	17	4	11	0	27	590	10	0	107	1	25	0	21	655	85	0	1553
% Passenger Vehicles	100	100	100	0	100	98.3	100	0	96.4	100	100	0	100	97.5	96.6	0	97.9
Heavy Vehicles	0	0	0	0	0	5	0	0	3	0	0	0	0	11	2	0	21
% Heavy Vehicles	0	0	0	0	0	0.8	0	0	2.7	0	0	0	0	1.6	2.3	0	1.3
Buses	0	0	0	0	0	5	0	0	1	0	0	0	0	6	1	0	13
% Buses	0	0	0	0	0	0.8	0	0	0.9	0	0	0	0	0.9	1.1	0	0.8

SHORT COUNTS, LLC

735 Maryland St
Columbia, SC 29201

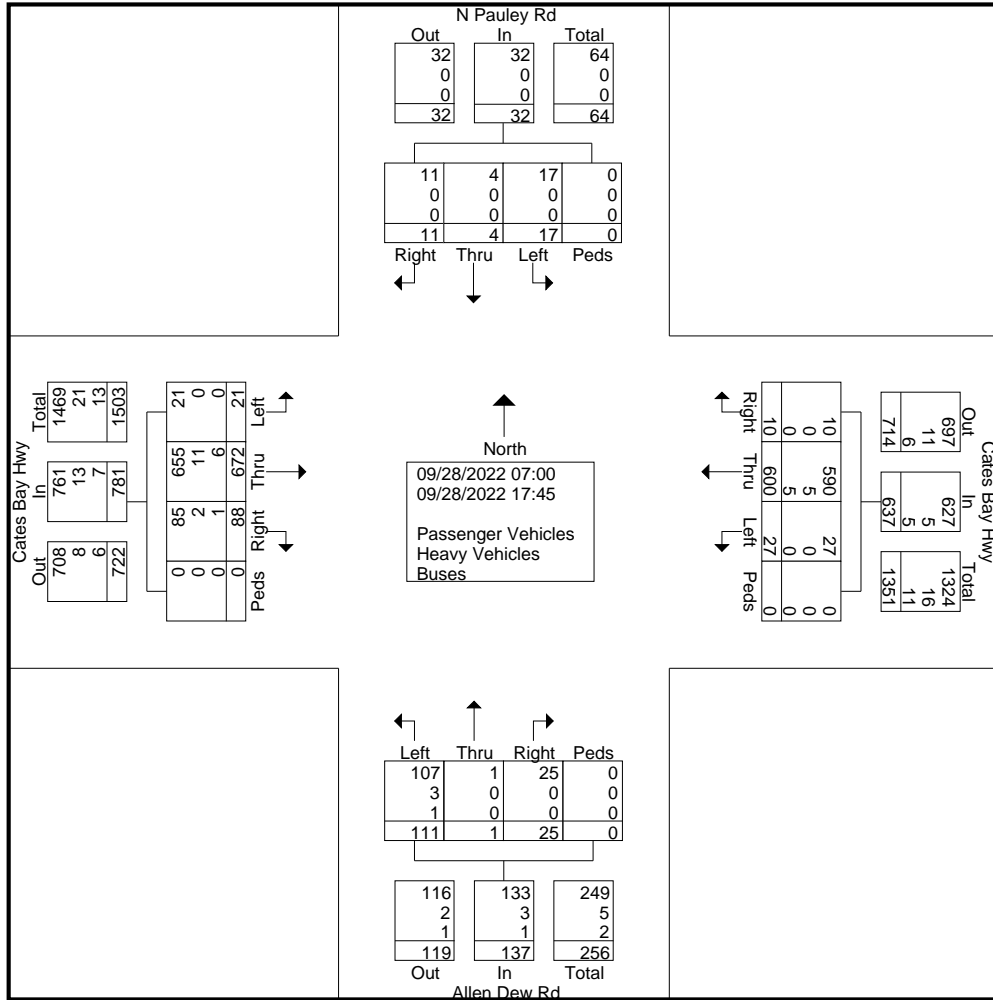
We can't say we're the Best, but you Can!

File Name : Cates Bay Hwy @ Pawley-Allen Dew Rd

Site Code :

Start Date : 09/28/2022

Page No : 2



SHORT COUNTS, LLC

735 Maryland St
Columbia, SC 29201

We can't say we're the Best, but you Can!

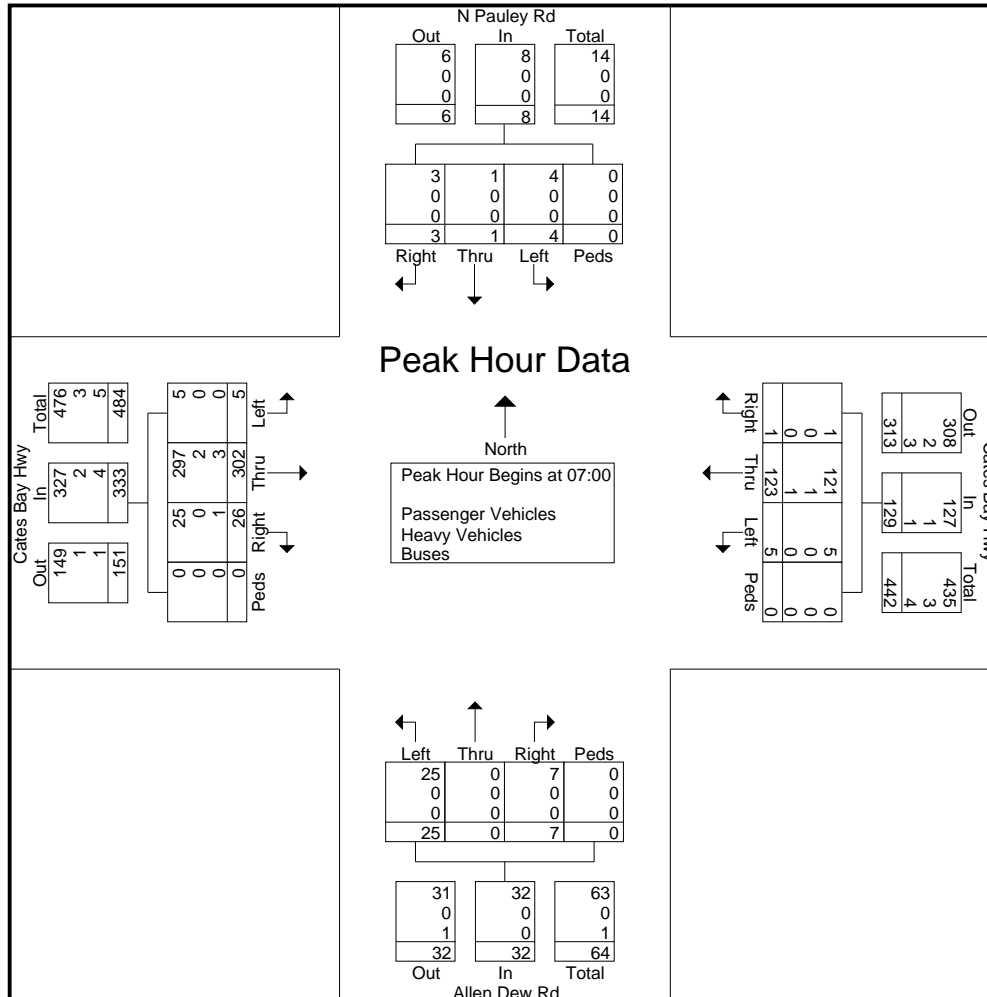
File Name : Cates Bay Hwy @ Pawley-Allen Dew Rd

Site Code :

Start Date : 09/28/2022

Page No : 3

Start Time	N Pauley Rd Southbound					Cates Bay Hwy Westbound					Allen Dew Rd Northbound					Cates Bay Hwy Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00																					
07:00	1	0	1	0	2	3	43	0	0	46	9	0	3	0	12	0	78	5	0	83	143
07:15	2	0	2	0	4	1	37	0	0	38	9	0	1	0	10	3	100	9	0	112	164
07:30	1	0	0	0	1	1	22	1	0	24	3	0	1	0	4	1	76	4	0	81	110
07:45	0	1	0	0	1	0	21	0	0	21	4	0	2	0	6	1	48	8	0	57	85
Total Volume	4	1	3	0	8	5	123	1	0	129	25	0	7	0	32	5	302	26	0	333	502
% App. Total	50	12.5	37.5	0		3.9	95.3	0.8	0		78.1	0	21.9	0		1.5	90.7	7.8	0		
PHF	.500	.250	.375	.000	.500	.417	.715	.250	.000	.701	.694	.000	.583	.000	.667	.417	.755	.722	.000	.743	.765
Passenger Vehicles	4	1	3	0	8	5	121	1	0	127	25	0	7	0	32	5	297	25	0	327	494
% Passenger Vehicles																					
Heavy Vehicles	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	3
% Heavy Vehicles	0	0	0	0	0	0	0.8	0	0	0.8	0	0	0	0	0	0	0.7	0	0	0.6	0.6
Buses	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	3	1	0	4	5
% Buses	0	0	0	0	0	0	0.8	0	0	0.8	0	0	0	0	0	0	1.0	3.8	0	1.2	1.0



SHORT COUNTS, LLC

735 Maryland St
Columbia, SC 29201

We can't say we're the Best, but you Can!

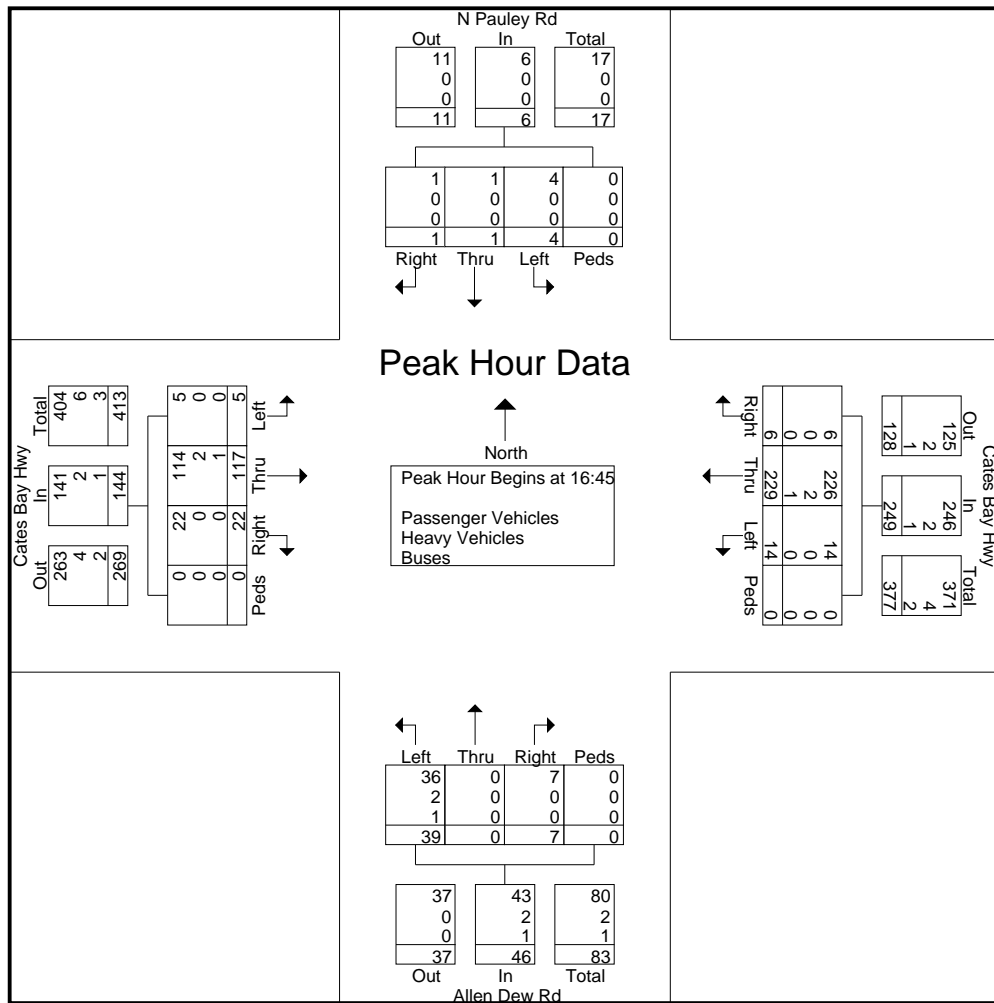
File Name : Cates Bay Hwy @ Pawley-Allen Dew Rd

Site Code :

Start Date : 09/28/2022

Page No : 4

Start Time	N Pauley Rd Southbound					Cates Bay Hwy Westbound					Allen Dew Rd Northbound					Cates Bay Hwy Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:45																					
16:45	2	1	0	0	3	5	59	1	0	65	5	0	3	0	8	1	25	2	0	28	104
17:00	1	0	0	0	1	2	55	3	0	60	10	0	1	0	11	0	39	1	0	40	112
17:15	1	0	1	0	2	5	62	0	0	67	13	0	2	0	15	1	26	11	0	38	122
17:30	0	0	0	0	0	2	53	2	0	57	11	0	1	0	12	3	27	8	0	38	107
Total Volume	4	1	1	0	6	14	229	6	0	249	39	0	7	0	46	5	117	22	0	144	445
% App. Total	66.7	16.7	16.7	0		5.6	92	2.4	0		84.8	0	15.2	0		3.5	81.2	15.3	0		
PHF	.500	.250	.250	.000	.500	.700	.923	.500	.000	.929	.750	.000	.583	.000	.767	.417	.750	.500	.000	.900	.912
Passenger Vehicles	4	1	1	0	6	14	226	6	0	246	36	0	7	0	43	5	114	22	0	141	436
% Passenger Vehicles																					
Heavy Vehicles	0	0	0	0	0	0	2	0	0	2	2	0	0	0	2	0	2	0	0	2	6
% Heavy Vehicles	0	0	0	0	0	0	0.9	0	0	0.8	5.1	0	0	0	4.3	0	1.7	0	0	1.4	1.3
Buses	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	0	1	0	0	1	3
% Buses	0	0	0	0	0	0	0.4	0	0	0.4	2.6	0	0	0	2.2	0	0.9	0	0	0.7	0.7



SHORT COUNTS, LLC

735 Maryland St
Columbia, SC 29201

We can't say we're the Best, but you Can!

File Name : Pauley Swamp-Willow Springs Rd @ Allen Dew-Pitch Landing Rd

Site Code :

Start Date : 09/28/2022

Page No : 1

Groups Printed- Passenger Vehicles - Heavy Vehicles - Buses

Start Time	Willow Springs Rd Southbound				Pitch Landing Rd Westbound				Pauley Swamp Rd Northbound				Allen Dew Rd Eastbound				Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
07:00	1	0	3	0	3	5	2	0	1	12	50	0	1	14	1	0	93
07:15	1	5	1	0	9	8	2	0	1	13	26	0	1	13	1	0	81
07:30	2	8	0	0	3	2	2	0	1	4	7	0	2	8	1	0	40
07:45	3	8	1	0	5	5	0	0	1	6	17	0	0	7	0	0	53
Total	7	21	5	0	20	20	6	0	4	35	100	0	4	42	3	0	267
08:00	2	2	0	0	6	1	1	0	1	7	16	0	2	5	0	0	43
08:15	1	1	0	0	10	3	3	0	1	6	9	0	1	3	0	0	38
08:30	2	7	2	0	2	1	1	0	2	6	17	0	0	3	0	0	43
08:45	3	2	0	0	7	1	1	0	0	3	12	0	1	2	1	0	33
Total	8	12	2	0	25	6	6	0	4	22	54	0	4	13	1	0	157
16:00	5	3	1	0	20	14	2	0	1	5	8	0	1	7	1	0	68
16:15	0	12	2	0	25	7	4	0	2	2	4	0	1	5	2	0	66
16:30	3	8	2	0	24	13	1	0	0	6	11	0	0	7	1	0	76
16:45	4	5	1	0	23	8	4	0	0	11	6	0	1	5	0	0	68
Total	12	28	6	0	92	42	11	0	3	24	29	0	3	24	4	0	278
17:00	0	10	4	0	23	14	6	0	0	6	10	0	1	3	0	0	77
17:15	3	14	1	0	28	17	3	0	1	15	5	0	1	10	0	0	98
17:30	3	12	2	0	26	8	2	0	2	8	9	0	0	6	0	0	78
17:45	2	8	2	0	18	7	1	0	1	4	7	0	2	3	2	0	57
Total	8	44	9	0	95	46	12	0	4	33	31	0	4	22	2	0	310
Grand Total	35	105	22	0	232	114	35	0	15	114	214	0	15	101	10	0	1012
Apprch %	21.6	64.8	13.6	0	60.9	29.9	9.2	0	4.4	33.2	62.4	0	11.9	80.2	7.9	0	
Total %	3.5	10.4	2.2	0	22.9	11.3	3.5	0	1.5	11.3	21.1	0	1.5	10	1	0	
Passenger Vehicles	35	102	22	0	226	111	33	0	15	112	214	0	15	98	10	0	993
% Passenger Vehicles	100	97.1	100	0	97.4	97.4	94.3	0	100	98.2	100	0	100	97	100	0	98.1
Heavy Vehicles	0	2	0	0	4	2	1	0	0	1	0	0	0	2	0	0	12
% Heavy Vehicles	0	1.9	0	0	1.7	1.8	2.9	0	0	0.9	0	0	0	2	0	0	1.2
Buses	0	1	0	0	2	1	1	0	0	1	0	0	0	1	0	0	7
% Buses	0	1	0	0	0.9	0.9	2.9	0	0	0.9	0	0	0	1	0	0	0.7

SHORT COUNTS, LLC

735 Maryland St
Columbia, SC 29201

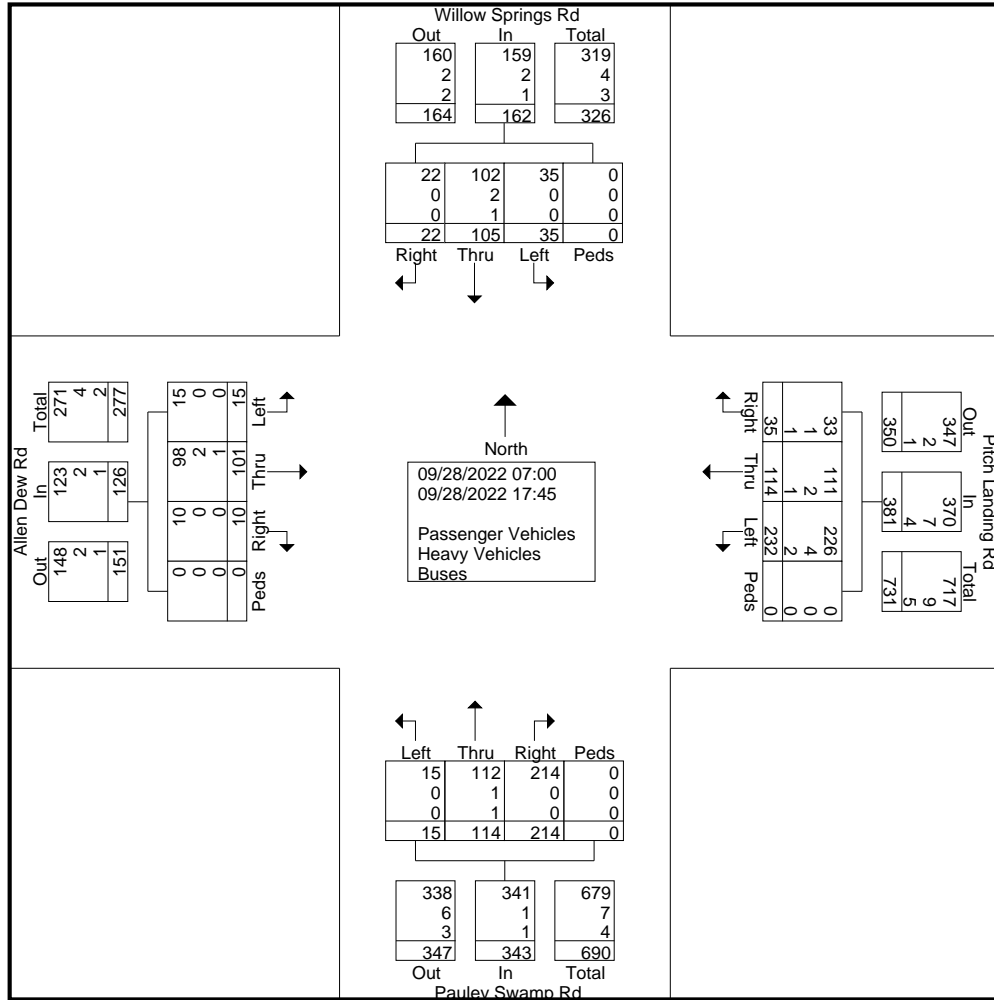
We can't say we're the Best, but you Can!

File Name : Pauley Swamp-Willow Springs Rd @ Allen Dew-Pitch Landing Rd

Site Code :

Start Date : 09/28/2022

Page No : 2



SHORT COUNTS, LLC

735 Maryland St
Columbia, SC 29201

We can't say we're the Best, but you Can!

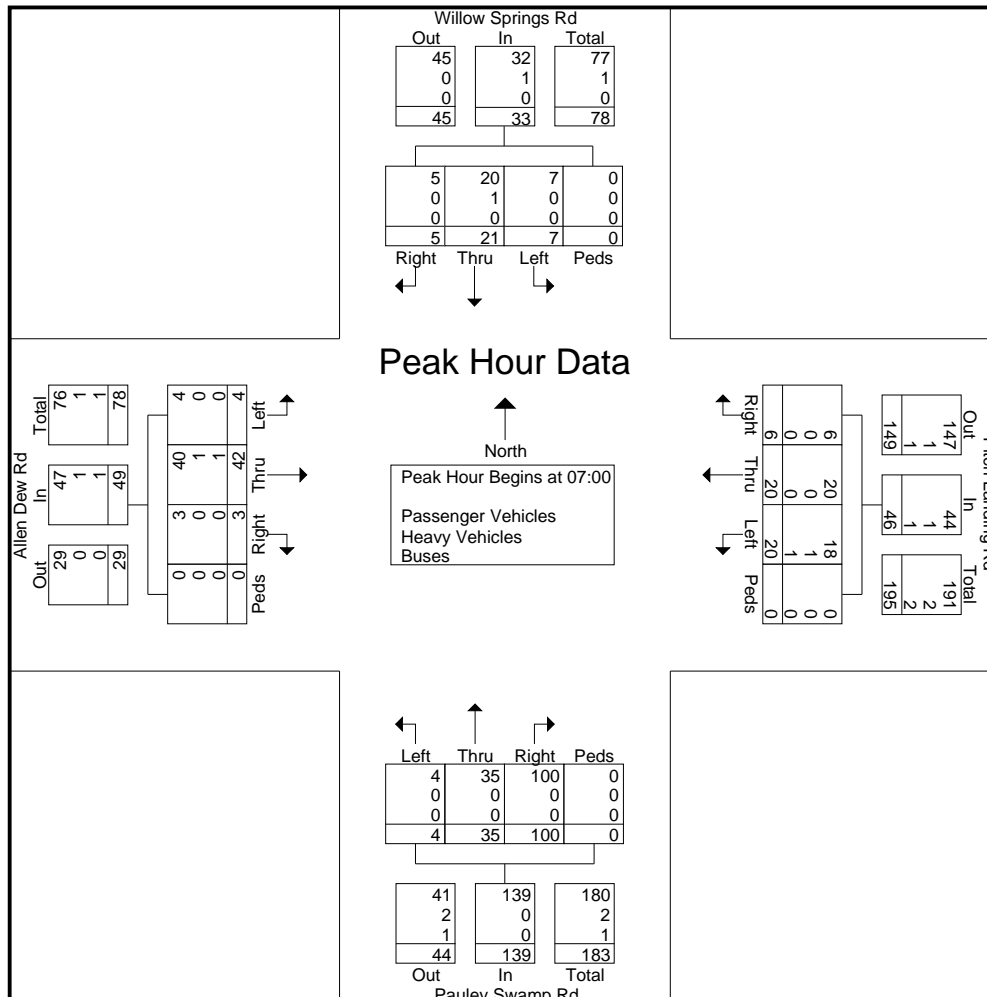
File Name : Pauley Swamp-Willow Springs Rd @ Allen Dew-Pitch Landing Rd

Site Code :

Start Date : 09/28/2022

Page No : 3

Start Time	Willow Springs Rd Southbound					Pitch Landing Rd Westbound					Pauley Swamp Rd Northbound					Allen Dew Rd Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00																					
07:00	1	0	3	0	4	3	5	2	0	10	1	12	50	0	63	1	14	1	0	16	93
07:15	1	5	1	0	7	9	8	2	0	19	1	13	26	0	40	1	13	1	0	15	81
07:30	2	8	0	0	10	3	2	2	0	7	1	4	7	0	12	2	8	1	0	11	40
07:45	3	8	1	0	12	5	5	0	0	10	1	6	17	0	24	0	7	0	0	7	53
Total Volume	7	21	5	0	33	20	20	6	0	46	4	35	100	0	139	4	42	3	0	49	267
% App. Total	21.2	63.6	15.2	0		43.5	43.5	13	0		2.9	25.2	71.9	0		8.2	85.7	6.1	0		
PHF	.583	.656	.417	.000	.688	.556	.625	.750	.000	.605	1.00	.673	.500	.000	.552	.500	.750	.750	.000	.766	.718
Passenger Vehicles	7	20	5	0	32	18	20	6	0	44	4	35	100	0	139	4	40	3	0	47	262
% Passenger Vehicles																					
Heavy Vehicles	0	1	0	0	1	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	3
% Heavy Vehicles	0	4.8	0	0	3.0	5.0	0	0	0	2.2	0	0	0	0	0	0	2.4	0	0	2.0	1.1
Buses	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	2
% Buses	0	0	0	0	0	5.0	0	0	0	2.2	0	0	0	0	0	0	2.4	0	0	2.0	0.7



SHORT COUNTS, LLC

735 Maryland St
Columbia, SC 29201

We can't say we're the Best, but you Can!

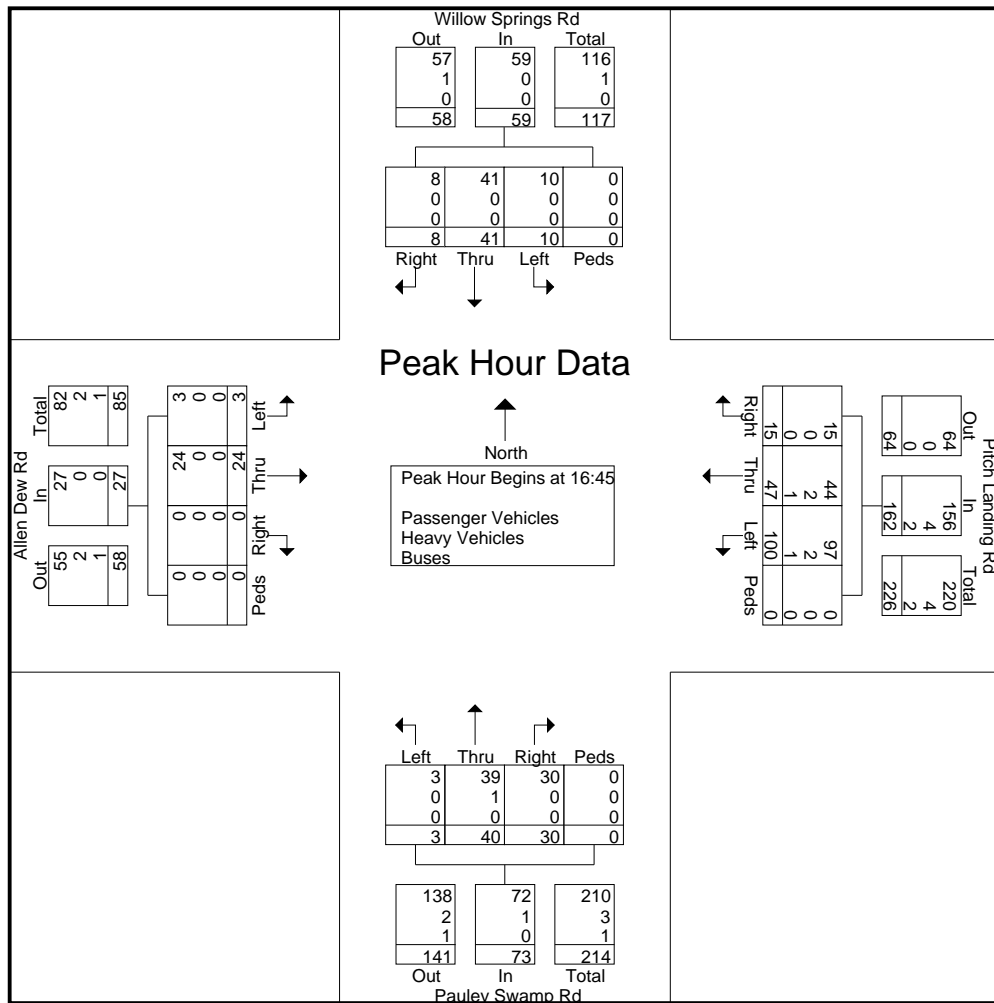
File Name : Pauley Swamp-Willow Springs Rd @ Allen Dew-Pitch Landing Rd

Site Code :

Start Date : 09/28/2022

Page No : 4

Start Time	Willow Springs Rd Southbound					Pitch Landing Rd Westbound					Pauley Swamp Rd Northbound					Allen Dew Rd Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:45																					
16:45	4	5	1	0	10	23	8	4	0	35	0	11	6	0	17	1	5	0	0	6	68
17:00	0	10	4	0	14	23	14	6	0	43	0	6	10	0	16	1	3	0	0	4	77
17:15	3	14	1	0	18	28	17	3	0	48	1	15	5	0	21	1	10	0	0	11	98
17:30	3	12	2	0	17	26	8	2	0	36	2	8	9	0	19	0	6	0	0	6	78
Total Volume	10	41	8	0	59	100	47	15	0	162	3	40	30	0	73	3	24	0	0	27	321
% App. Total	16.9	69.5	13.6	0		61.7	29	9.3	0		4.1	54.8	41.1	0		11.1	88.9	0	0		
PHF	.625	.732	.500	.000	.819	.893	.691	.625	.000	.844	.375	.667	.750	.000	.869	.750	.600	.000	.000	.614	.819
Passenger Vehicles	10	41	8	0	59	97	44	15	0	156	3	39	30	0	72	3	24	0	0	27	314
% Passenger Vehicles																					
Heavy Vehicles	0	0	0	0	0	2	2	0	0	4	0	1	0	0	1	0	0	0	0	0	5
% Heavy Vehicles	0	0	0	0	0	2.0	4.3	0	0	2.5	0	2.5	0	0	1.4	0	0	0	0	0	1.6
Buses	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	2
% Buses	0	0	0	0	0	1.0	2.1	0	0	1.2	0	0	0	0	0	0	0	0	0	0	0.6



SHORT COUNTS, LLC

735 Maryland St
Columbia, SC 29201

We can't say we're the Best, but you Can!

File Name : US 701 @ Kinlaw-Brickyard PI

Site Code :

Start Date : 09/28/2022

Page No : 1

Groups Printed- Passenger Vehicles - Heavy Vehicles - Buses

Start Time	US 701 Southbound				Brickyard PI Westbound				US 701 Northbound				Kinlaw Ln Eastbound				Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
07:00	0	68	0	0	0	0	0	0	0	173	0	0	4	0	0	0	245
07:15	0	78	0	0	0	0	0	0	0	129	1	0	0	0	0	0	208
07:30	0	72	1	0	0	0	2	0	0	137	0	0	1	0	0	0	213
07:45	0	76	1	0	0	0	0	0	0	101	0	0	1	0	0	0	179
Total	0	294	2	0	0	0	2	0	0	540	1	0	6	0	0	0	845
08:00	0	68	0	0	0	0	0	0	0	109	0	0	0	0	0	0	177
08:15	1	60	0	0	0	0	0	0	0	92	0	0	0	0	0	0	153
08:30	1	63	0	0	0	0	0	0	0	89	0	0	2	0	0	0	155
08:45	0	59	0	0	0	0	0	0	0	82	0	0	1	0	0	0	142
Total	2	250	0	0	0	0	0	0	0	372	0	0	3	0	0	0	627
16:00	0	109	0	0	0	0	1	0	0	113	0	0	2	0	0	0	225
16:15	0	104	1	0	0	0	0	0	0	99	0	0	1	0	0	0	205
16:30	0	80	2	0	0	0	0	0	0	78	0	0	2	0	0	0	162
16:45	1	116	0	0	0	0	0	0	3	89	0	0	3	0	0	0	212
Total	1	409	3	0	0	0	1	0	3	379	0	0	8	0	0	0	804
17:00	1	119	3	0	0	0	0	0	0	82	0	0	3	0	0	0	208
17:15	0	138	2	0	0	0	1	0	1	85	0	0	0	0	0	0	227
17:30	0	130	2	0	0	0	0	0	0	85	0	0	2	0	0	0	219
17:45	0	122	0	0	0	0	0	0	0	72	0	0	0	0	1	0	195
Total	1	509	7	0	0	0	1	0	1	324	0	0	5	0	1	0	849
Grand Total	4	1462	12	0	0	0	4	0	4	1615	1	0	22	0	1	0	3125
Apprch %	0.3	98.9	0.8	0	0	0	100	0	0.2	99.7	0.1	0	95.7	0	4.3	0	
Total %	0.1	46.8	0.4	0	0	0	0.1	0	0.1	51.7	0	0	0.7	0	0	0	
Passenger Vehicles	4	1373	12	0	0	0	3	0	2	1499	0	0	22	0	1	0	2916
% Passenger Vehicles	100	93.9	100	0	0	0	75	0	50	92.8	0	0	100	0	100	0	93.3
Heavy Vehicles	0	85	0	0	0	0	1	0	0	106	1	0	0	0	0	0	193
% Heavy Vehicles	0	5.8	0	0	0	0	25	0	0	6.6	100	0	0	0	0	0	6.2
Buses	0	4	0	0	0	0	0	0	2	10	0	0	0	0	0	0	16
% Buses	0	0.3	0	0	0	0	0	0	50	0.6	0	0	0	0	0	0	0.5

SHORT COUNTS, LLC

735 Maryland St
Columbia, SC 29201

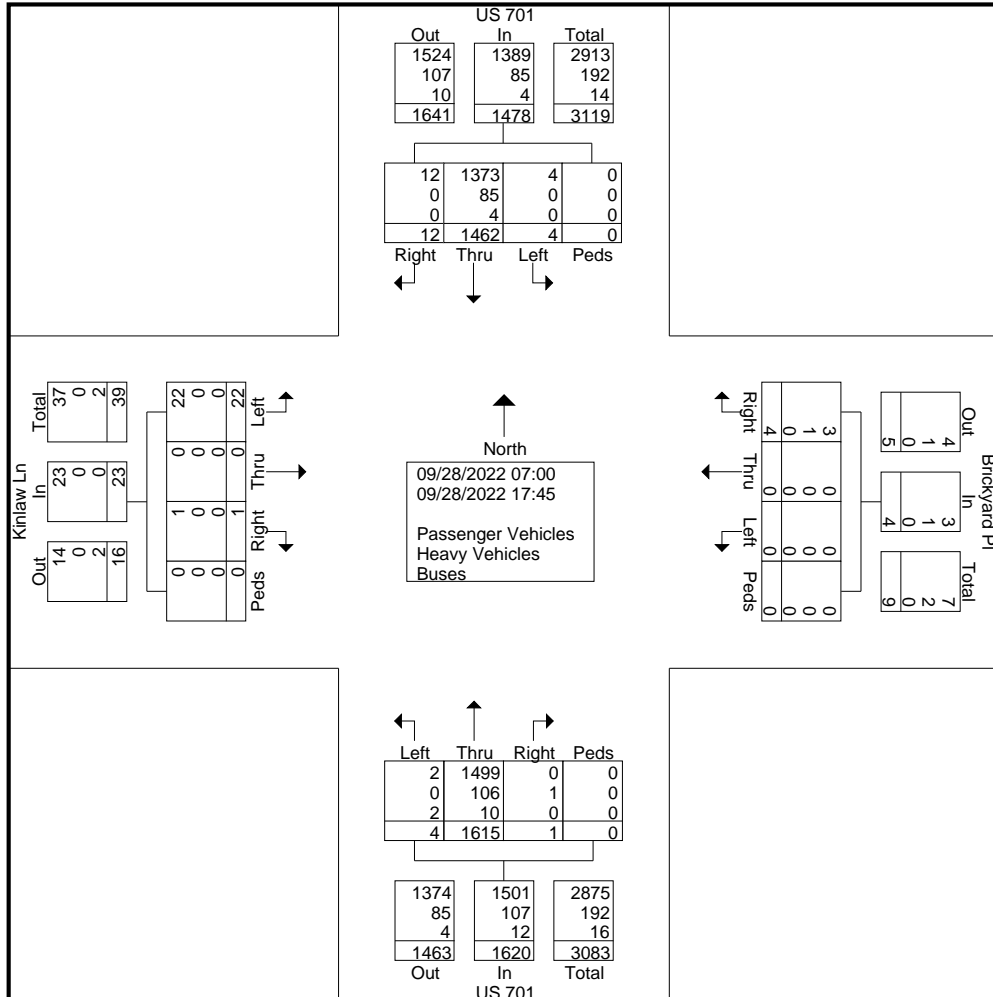
We can't say we're the Best, but you Can!

File Name : US 701 @ Kinlaw-Brickyard PI

Site Code :

Start Date : 09/28/2022

Page No : 2



SHORT COUNTS, LLC

735 Maryland St
Columbia, SC 29201

We can't say we're the Best, but you Can!

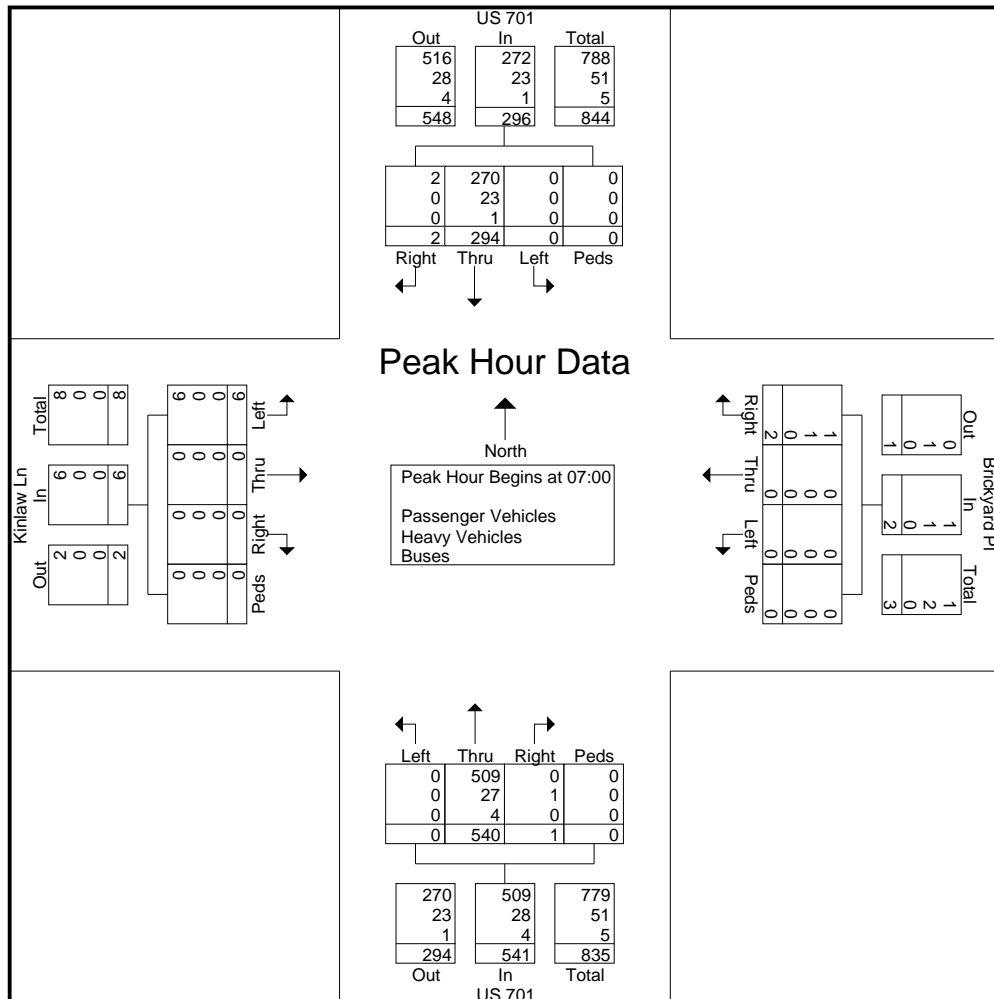
File Name : US 701 @ Kinlaw-Brickyard PI

Site Code :

Start Date : 09/28/2022

Page No : 3

Start Time	US 701 Southbound					Brickyard PI Westbound					US 701 Northbound					Kinlaw Ln Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00																					
07:00	0	68	0	0	68	0	0	0	0	0	0	173	0	0	173	4	0	0	0	4	245
07:15	0	78	0	0	78	0	0	0	0	0	0	129	1	0	130	0	0	0	0	0	208
07:30	0	72	1	0	73	0	0	2	0	2	0	137	0	0	137	1	0	0	0	1	213
07:45	0	76	1	0	77	0	0	0	0	0	0	101	0	0	101	1	0	0	0	1	179
Total Volume	0	294	2	0	296	0	0	2	0	2	0	540	1	0	541	6	0	0	0	6	845
% App. Total	0	99.3	0.7	0		0	0	100	0		0	99.8	0.2	0		100	0	0	0		
PHF	.000	.942	.500	.000	.949	.000	.000	.250	.000	.250	.000	.780	.250	.000	.782	.375	.000	.000	.000	.375	.862
Passenger Vehicles	0	270	2	0	272	0	0	1	0	1	0	509	0	0	509	6	0	0	0	6	788
% Passenger Vehicles																					
Heavy Vehicles	0	23	0	0	23	0	0	1	0	1	0	27	1	0	28	0	0	0	0	0	52
% Heavy Vehicles	0	7.8	0	0	7.8	0	0	50.0	0	50.0	0	5.0	100	0	5.2	0	0	0	0	0	6.2
Buses	0	1	0	0	1	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	5
% Buses	0	0.3	0	0	0.3	0	0	0	0	0	0	0.7	0	0	0.7	0	0	0	0	0	0.6



SHORT COUNTS, LLC

735 Maryland St
Columbia, SC 29201

We can't say we're the Best, but you Can!

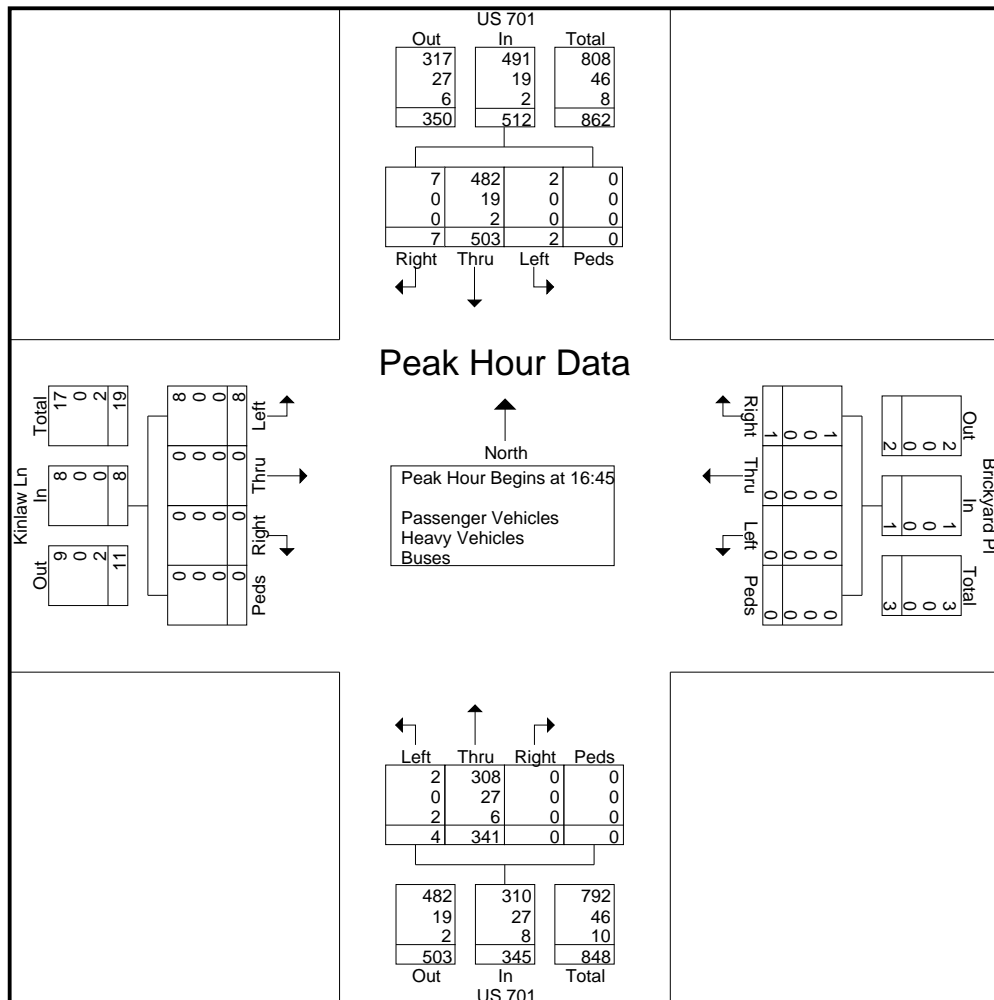
File Name : US 701 @ Kinlaw-Brickyard PI

Site Code :

Start Date : 09/28/2022

Page No : 4

Start Time	US 701 Southbound					Brickyard PI Westbound					US 701 Northbound					Kinlaw Ln Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:45																					
16:45	1	116	0	0	117	0	0	0	0	0	3	89	0	0	92	3	0	0	0	3	212
17:00	1	119	3	0	123	0	0	0	0	0	0	82	0	0	82	3	0	0	0	3	208
17:15	0	138	2	0	140	0	0	1	0	1	1	85	0	0	86	0	0	0	0	0	227
17:30	0	130	2	0	132	0	0	0	0	0	0	85	0	0	85	2	0	0	0	2	219
Total Volume	2	503	7	0	512	0	0	1	0	1	4	341	0	0	345	8	0	0	0	8	866
% App. Total	0.4	98.2	1.4	0		0	0	100	0		1.2	98.8	0	0		100	0	0	0		
PHF	.500	.911	.583	.000	.914	.000	.000	.250	.000	.250	.333	.958	.000	.000	.938	.667	.000	.000	.000	.667	.954
Passenger Vehicles	2	482	7	0	491	0	0	1	0	1	2	308	0	0	310	8	0	0	0	8	810
% Passenger Vehicles																					
Heavy Vehicles	0	19	0	0	19	0	0	0	0	0	0	27	0	0	27	0	0	0	0	0	46
% Heavy Vehicles	0	3.8	0	0	3.7	0	0	0	0	0	0	7.9	0	0	7.8	0	0	0	0	0	5.3
Buses	0	2	0	0	2	0	0	0	0	0	2	6	0	0	8	0	0	0	0	0	10
% Buses	0	0.4	0	0	0.4	0	0	0	0	0	50.0	1.8	0	0	2.3	0	0	0	0	0	1.2



SHORT COUNTS, LLC

735 Maryland St
Columbia, SC 29201

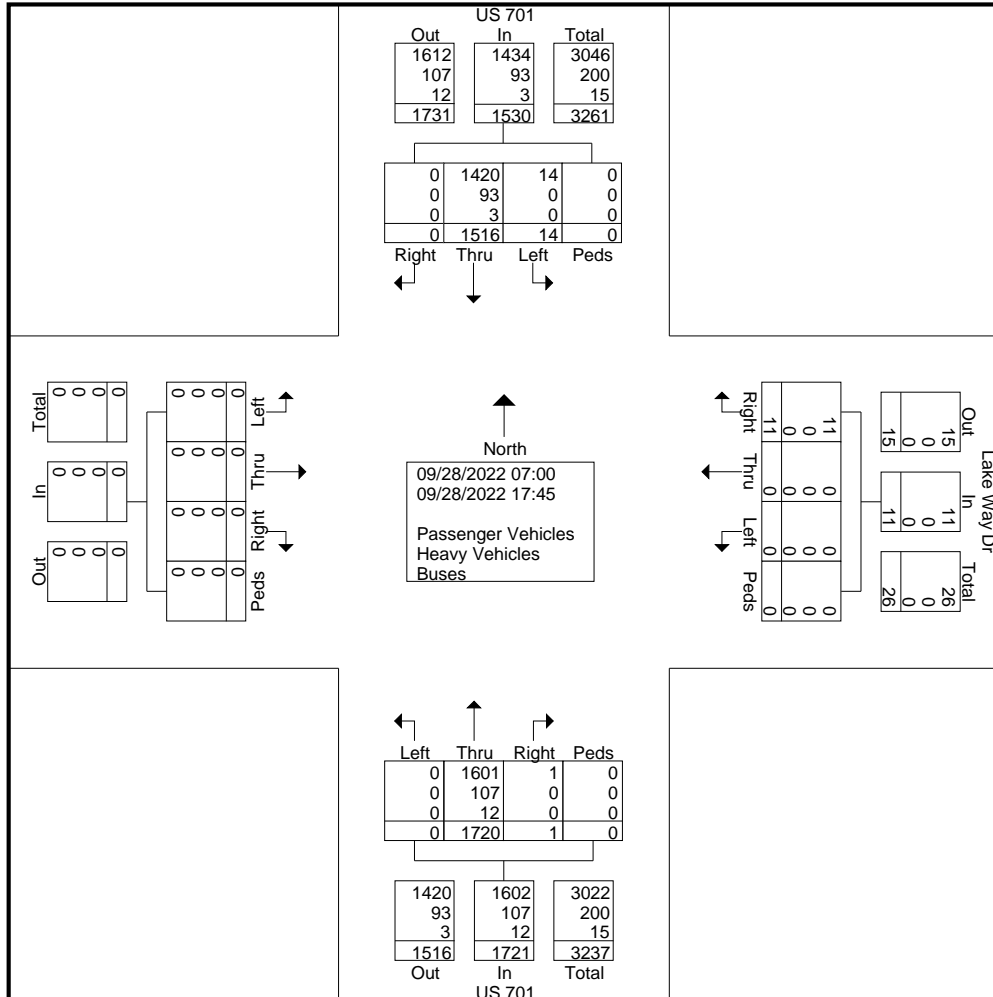
We can't say we're the Best, but you Can!

File Name : US 701 @ Lake Way Dr

Site Code :

Start Date : 09/28/2022

Page No : 2



SHORT COUNTS, LLC

735 Maryland St
Columbia, SC 29201

We can't say we're the Best, but you Can!

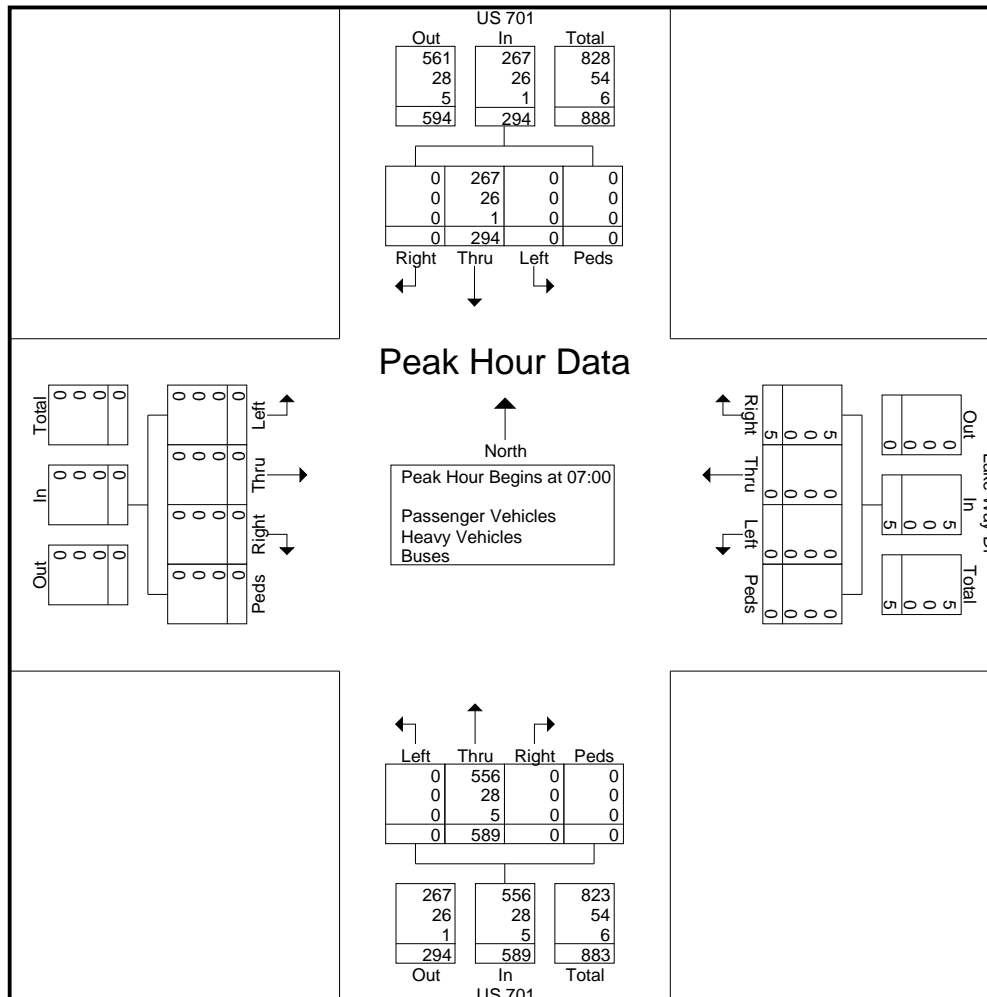
File Name : US 701 @ Lake Way Dr

Site Code :

Start Date : 09/28/2022

Page No : 3

Start Time	US 701 Southbound					Lake Way Dr Westbound					US 701 Northbound					Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00																					
07:00	0	65	0	0	65	0	0	4	0	4	0	194	0	0	194	0	0	0	0	0	263
07:15	0	80	0	0	80	0	0	0	0	0	0	152	0	0	152	0	0	0	0	0	232
07:30	0	71	0	0	71	0	0	1	0	1	0	130	0	0	130	0	0	0	0	0	202
07:45	0	78	0	0	78	0	0	0	0	0	0	113	0	0	113	0	0	0	0	0	191
Total Volume	0	294	0	0	294	0	0	5	0	5	0	589	0	0	589	0	0	0	0	0	888
% App. Total	0	100	0	0		0	0	100	0		0	100	0	0		0	0	0	0	0	
PHF	.000	.919	.000	.000	.919	.000	.000	.313	.000	.313	.000	.759	.000	.000	.759	.000	.000	.000	.000	.000	.844
Passenger Vehicles	0	267	0	0	267	0	0	5	0	5	0	556	0	0	556	0	0	0	0	0	828
% Passenger Vehicles																					
Heavy Vehicles	0	26	0	0	26	0	0	0	0	0	0	28	0	0	28	0	0	0	0	0	54
% Heavy Vehicles	0	8.8	0	0	8.8	0	0	0	0	0	0	4.8	0	0	4.8	0	0	0	0	0	6.1
Buses	0	1	0	0	1	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	6
% Buses	0	0.3	0	0	0.3	0	0	0	0	0	0	0.8	0	0	0.8	0	0	0	0	0	0.7



SHORT COUNTS, LLC

735 Maryland St
Columbia, SC 29201

We can't say we're the Best, but you Can!

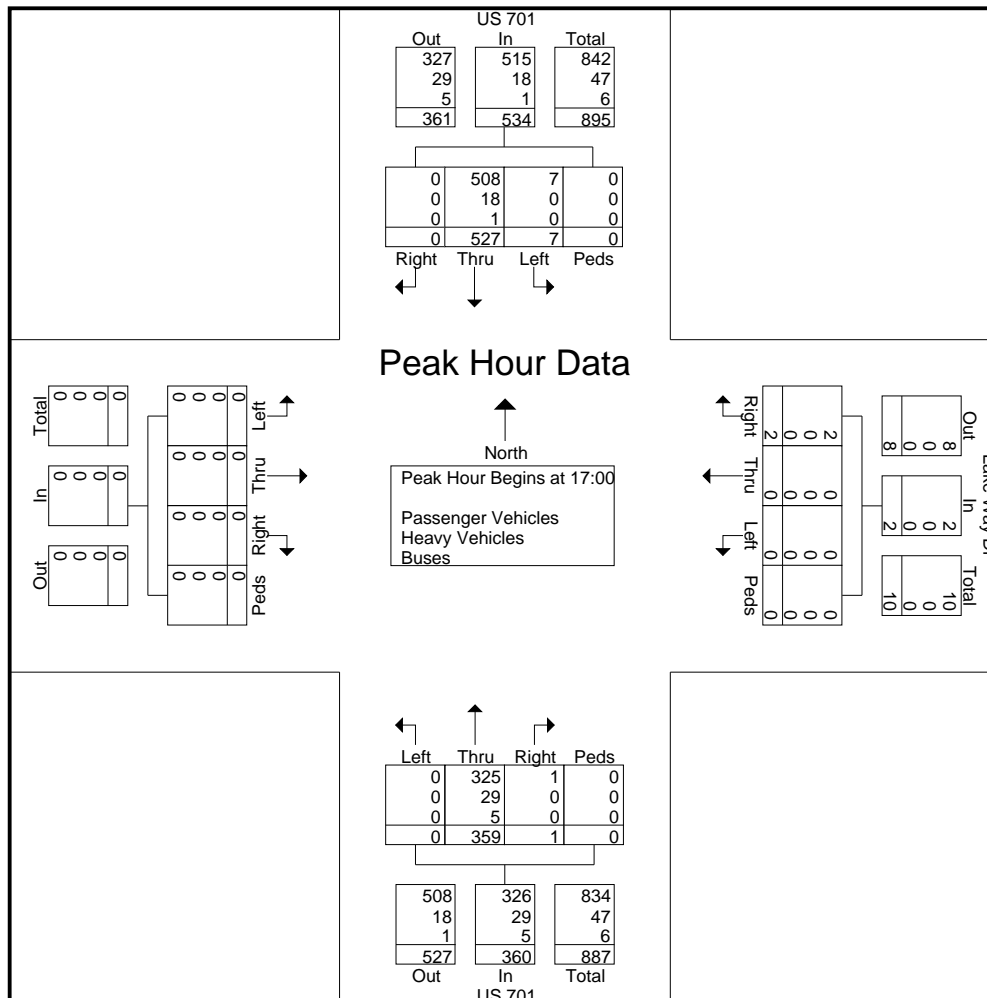
File Name : US 701 @ Lake Way Dr

Site Code :

Start Date : 09/28/2022

Page No : 4

Start Time	US 701 Southbound					Lake Way Dr Westbound					US 701 Northbound					Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 17:00																					
17:00	2	127	0	0	129	0	0	0	0	0	0	96	1	0	97	0	0	0	0	0	226
17:15	2	139	0	0	141	0	0	0	0	0	0	92	0	0	92	0	0	0	0	0	233
17:30	1	138	0	0	139	0	0	1	0	1	0	89	0	0	89	0	0	0	0	0	229
17:45	2	123	0	0	125	0	0	1	0	1	0	82	0	0	82	0	0	0	0	0	208
Total Volume	7	527	0	0	534	0	0	2	0	2	0	359	1	0	360	0	0	0	0	0	896
% App. Total	1.3	98.7	0	0		0	0	100	0		0	99.7	0.3	0		0	0	0	0	0	
PHF	.875	.948	.000	.000	.947	.000	.000	.500	.000	.500	.000	.935	.250	.000	.928	.000	.000	.000	.000	.000	.961
Passenger Vehicles	7	508	0	0	515	0	0	2	0	2	0	325	1	0	326	0	0	0	0	0	843
% Passenger Vehicles																					
Heavy Vehicles	0	18	0	0	18	0	0	0	0	0	0	29	0	0	29	0	0	0	0	0	47
% Heavy Vehicles	0	3.4	0	0	3.4	0	0	0	0	0	0	8.1	0	0	8.1	0	0	0	0	0	5.2
Buses	0	1	0	0	1	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	6
% Buses	0	0.2	0	0	0.2	0	0	0	0	0	0	1.4	0	0	1.4	0	0	0	0	0	0.7



SHORT COUNTS, LLC

735 Maryland St
Columbia, SC 29201

We can't say we're the Best, but you Can!

File Name : US 701 @ Pitch Landing Rd

Site Code :

Start Date : 09/28/2022

Page No : 1

Groups Printed- Passenger Vehicles - Heavy Vehicles - Buses

Start Time	US 701 Southbound				Pitch Landing Rd Westbound				US 701 Northbound				Pitch Landing Rd Eastbound				Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
07:00	2	78	10	0	0	3	4	0	9	180	0	0	77	2	3	0	368
07:15	0	77	11	0	0	0	0	0	4	164	0	0	52	1	7	0	316
07:30	2	72	10	0	0	0	2	0	11	154	0	0	45	0	4	0	300
07:45	1	78	19	0	0	0	2	0	2	121	0	0	31	3	4	0	261
Total	5	305	50	0	0	3	8	0	26	619	0	0	205	6	18	0	1245
08:00	4	74	19	0	1	4	1	0	5	108	0	0	26	0	2	0	244
08:15	3	65	14	0	0	1	4	0	10	97	0	0	29	1	2	0	226
08:30	1	64	9	0	1	0	0	1	5	91	0	0	29	1	7	0	209
08:45	2	67	11	0	0	0	1	0	3	91	0	0	25	1	1	0	202
Total	10	270	53	0	2	5	6	1	23	387	0	0	109	3	12	0	881
16:00	2	121	35	0	0	4	1	0	3	114	1	0	22	0	7	0	310
16:15	4	107	30	0	0	2	2	0	4	98	0	0	16	2	3	0	268
16:30	2	108	33	0	0	0	1	0	7	90	0	0	24	2	7	0	274
16:45	1	144	30	0	0	1	1	0	3	88	1	0	35	1	4	0	309
Total	9	480	128	0	0	7	5	0	17	390	2	0	97	5	21	0	1161
17:00	5	135	32	0	0	1	3	0	7	94	0	4	21	0	9	0	311
17:15	6	149	33	0	0	0	0	0	12	97	0	0	19	4	10	0	330
17:30	3	141	30	0	1	1	0	0	13	89	0	0	22	2	8	0	310
17:45	0	121	35	0	0	0	2	0	6	73	0	0	20	1	4	0	262
Total	14	546	130	0	1	2	5	0	38	353	0	4	82	7	31	0	1213
Grand Total	38	1601	361	0	3	17	24	1	104	1749	2	4	493	21	82	0	4500
Apprch %	1.9	80.1	18	0	6.7	37.8	53.3	2.2	5.6	94.1	0.1	0.2	82.7	3.5	13.8	0	
Total %	0.8	35.6	8	0	0.1	0.4	0.5	0	2.3	38.9	0	0.1	11	0.5	1.8	0	
Passenger Vehicles	38	1509	352	0	3	17	23	1	100	1636	1	4	481	20	82	0	4267
% Passenger Vehicles	100	94.3	97.5	0	100	100	95.8	100	96.2	93.5	50	100	97.6	95.2	100	0	94.8
Heavy Vehicles	0	88	7	0	0	0	1	0	2	103	0	0	11	1	0	0	213
% Heavy Vehicles	0	5.5	1.9	0	0	0	4.2	0	1.9	5.9	0	0	2.2	4.8	0	0	4.7
Buses	0	4	2	0	0	0	0	0	2	10	1	0	1	0	0	0	20
% Buses	0	0.2	0.6	0	0	0	0	0	1.9	0.6	50	0	0.2	0	0	0	0.4

SHORT COUNTS, LLC

735 Maryland St
Columbia, SC 29201

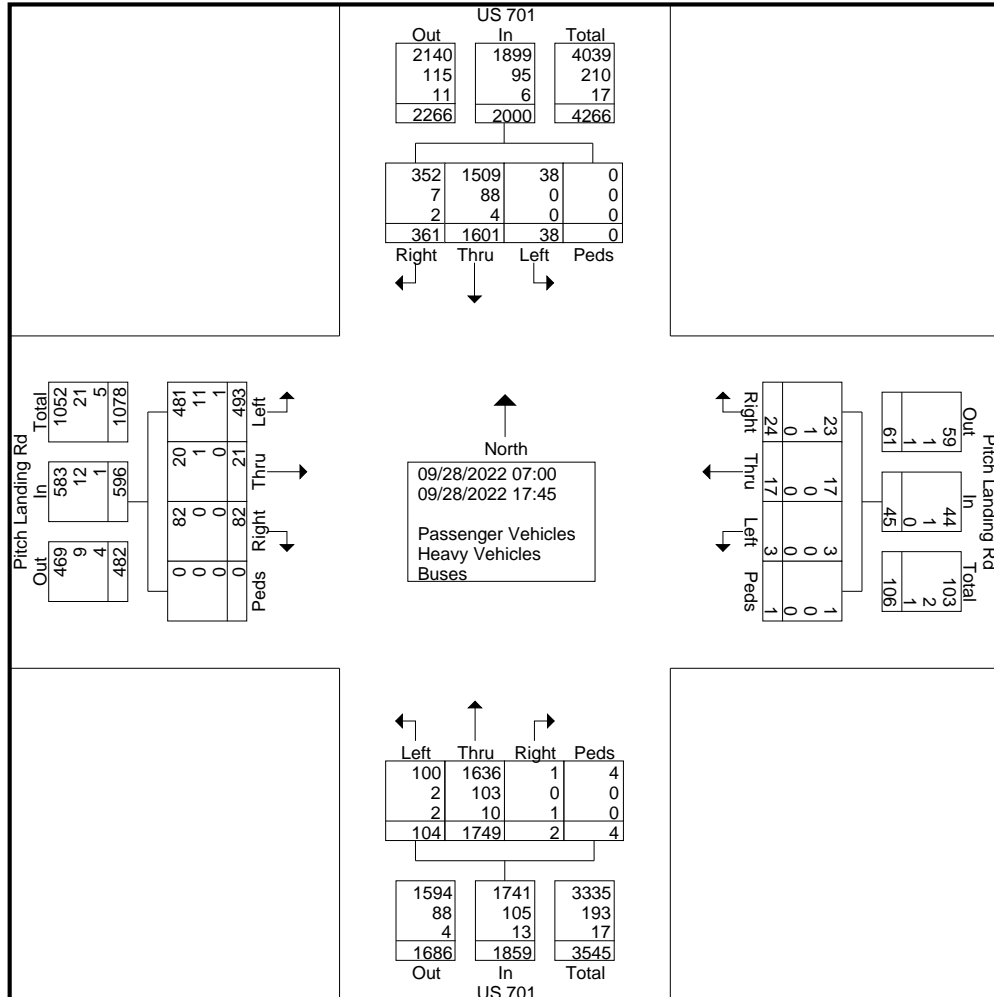
We can't say we're the Best, but you Can!

File Name : US 701 @ Pitch Landing Rd

Site Code :

Start Date : 09/28/2022

Page No : 2



SHORT COUNTS, LLC

735 Maryland St
Columbia, SC 29201

We can't say we're the Best, but you Can!

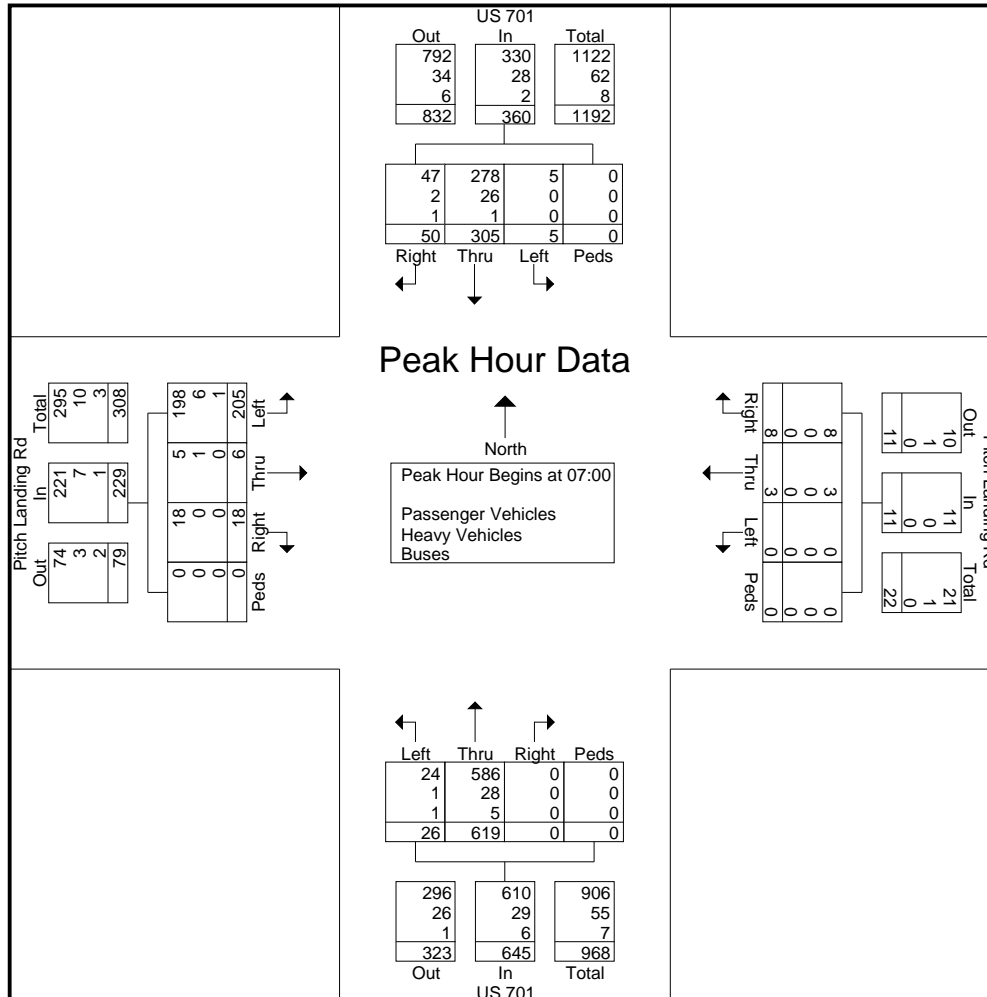
File Name : US 701 @ Pitch Landing Rd

Site Code :

Start Date : 09/28/2022

Page No : 3

Start Time	US 701 Southbound					Pitch Landing Rd Westbound					US 701 Northbound					Pitch Landing Rd Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00																					
07:00	2	78	10	0	90	0	3	4	0	7	9	180	0	0	189	77	2	3	0	82	368
07:15	0	77	11	0	88	0	0	0	0	0	4	164	0	0	168	52	1	7	0	60	316
07:30	2	72	10	0	84	0	0	2	0	2	11	154	0	0	165	45	0	4	0	49	300
07:45	1	78	19	0	98	0	0	2	0	2	2	121	0	0	123	31	3	4	0	38	261
Total Volume	5	305	50	0	360	0	3	8	0	11	26	619	0	0	645	205	6	18	0	229	1245
% App. Total	1.4	84.7	13.9	0		0	27.3	72.7	0		4	96	0	0		89.5	2.6	7.9	0		
PHF	.625	.978	.658	.000	.918	.000	.250	.500	.000	.393	.591	.860	.000	.000	.853	.666	.500	.643	.000	.698	.846
Passenger Vehicles	5	278	47	0	330	0	3	8	0	11	24	586	0	0	610	198	5	18	0	221	1172
% Passenger Vehicles																					
Heavy Vehicles	0	26	2	0	28	0	0	0	0	0	1	28	0	0	29	6	1	0	0	7	64
% Heavy Vehicles	0	8.5	4.0	0	7.8	0	0	0	0	0	3.8	4.5	0	0	4.5	2.9	16.7	0	0	3.1	5.1
Buses	0	1	1	0	2	0	0	0	0	0	1	5	0	0	6	1	0	0	0	1	9
% Buses	0	0.3	2.0	0	0.6	0	0	0	0	0	3.8	0.8	0	0	0.9	0.5	0	0	0	0.4	0.7



SHORT COUNTS, LLC

735 Maryland St
Columbia, SC 29201

We can't say we're the Best, but you Can!

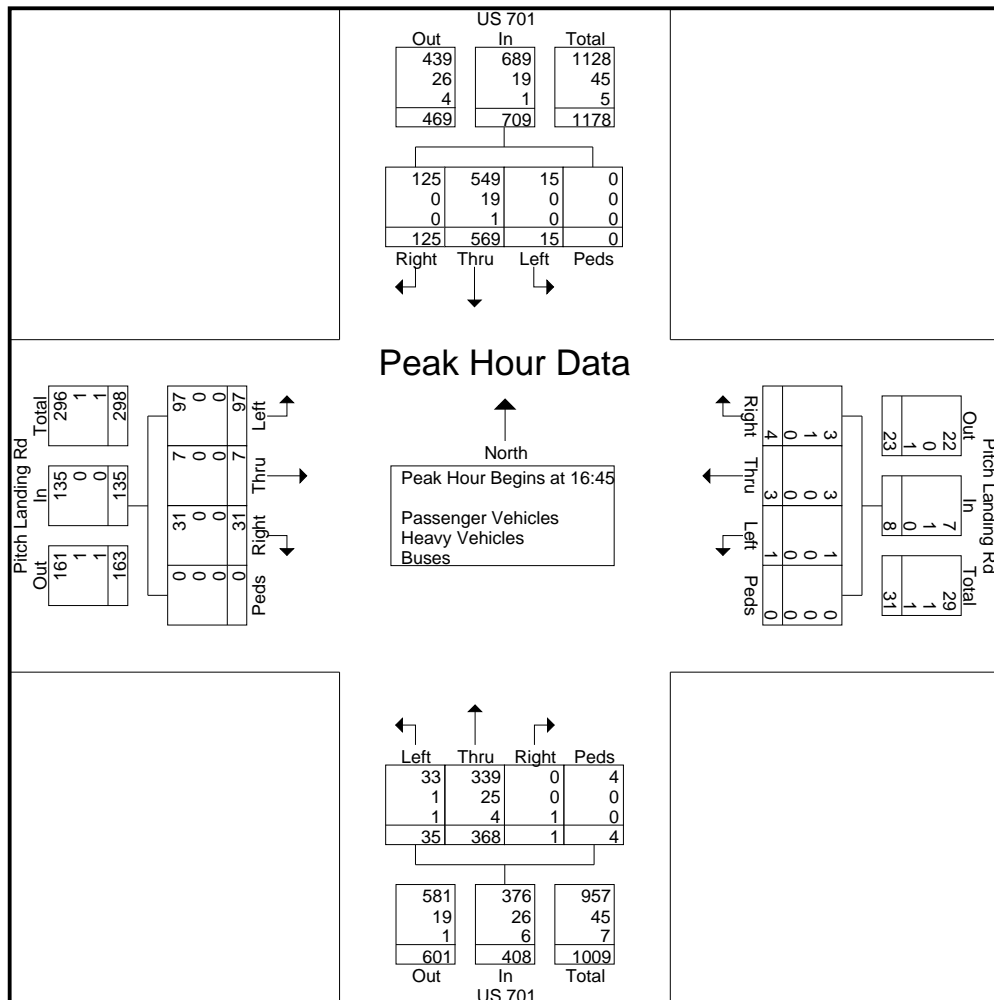
File Name : US 701 @ Pitch Landing Rd

Site Code :

Start Date : 09/28/2022

Page No : 4

Start Time	US 701 Southbound					Pitch Landing Rd Westbound					US 701 Northbound					Pitch Landing Rd Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:45																					
16:45	1	144	30	0	175	0	1	1	0	2	3	88	1	0	92	35	1	4	0	40	309
17:00	5	135	32	0	172	0	1	3	0	4	7	94	0	4	105	21	0	9	0	30	311
17:15	6	149	33	0	188	0	0	0	0	0	12	97	0	0	109	19	4	10	0	33	330
17:30	3	141	30	0	174	1	1	0	0	2	13	89	0	0	102	22	2	8	0	32	310
Total Volume	15	569	125	0	709	1	3	4	0	8	35	368	1	4	408	97	7	31	0	135	1260
% App. Total	2.1	80.3	17.6	0		12.5	37.5	50	0		8.6	90.2	0.2	1		71.9	5.2	23	0		
PHF	.625	.955	.947	.000	.943	.250	.750	.333	.000	.500	.673	.948	.250	.250	.936	.693	.438	.775	.000	.844	.955
Passenger Vehicles	15	549	125	0	689	1	3	3	0	7	33	339	0	4	376	97	7	31	0	135	1207
% Passenger Vehicles																					
Heavy Vehicles	0	19	0	0	19	0	0	1	0	1	1	25	0	0	26	0	0	0	0	0	46
% Heavy Vehicles	0	3.3	0	0	2.7	0	0	25.0	0	12.5	2.9	6.8	0	0	6.4	0	0	0	0	0	3.7
Buses	0	1	0	0	1	0	0	0	0	0	1	4	1	0	6	0	0	0	0	0	7
% Buses	0	0.2	0	0	0.1	0	0	0	0	0	2.9	1.1	100	0	1.5	0	0	0	0	0	0.6



SHORT COUNTS, LLC

735 Maryland St
Columbia, SC 29201

We can't say we're the Best, but you Can!

File Name : Willow Springs Rd @ Cates Bay Hwy

Site Code :

Start Date : 09/28/2022

Page No : 1

Groups Printed- Passenger Vehicles - Heavy Vehicles - Buses

Start Time	Southbound				Cates Bay Hwy Westbound				Willow Springs Rd Northbound				Cates Bay Hwy Eastbound				Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
07:00	0	0	0	0	2	37	0	0	0	0	25	0	0	93	1	0	158
07:15	0	0	0	0	10	29	0	0	0	0	27	0	0	100	0	0	166
07:30	0	0	0	0	11	21	0	0	0	0	18	0	0	93	0	0	143
07:45	0	0	0	0	9	19	0	0	0	0	16	0	0	56	0	0	100
Total	0	0	0	0	32	106	0	0	0	0	86	0	0	342	1	0	567
08:00	0	0	0	0	5	21	0	0	0	0	12	0	0	44	0	0	82
08:15	0	0	0	0	4	17	0	0	0	0	9	0	0	42	0	0	72
08:30	0	0	0	0	7	18	0	0	0	0	8	0	0	35	0	0	68
08:45	0	0	0	0	5	24	0	0	0	0	12	0	0	46	0	0	87
Total	0	0	0	0	21	80	0	0	0	0	41	0	0	167	0	0	309
16:00	0	0	0	0	5	40	0	0	0	0	7	0	0	36	2	0	90
16:15	0	0	0	0	20	46	0	0	0	0	5	0	0	34	0	0	105
16:30	0	0	0	0	18	66	0	0	1	0	11	0	0	26	0	0	122
16:45	0	0	0	0	15	64	0	0	1	0	17	0	0	39	1	0	137
Total	0	0	0	0	58	216	0	0	2	0	40	0	0	135	3	0	454
17:00	0	0	0	0	23	65	0	0	0	0	13	0	0	36	1	0	138
17:15	0	0	0	0	19	69	0	0	0	0	17	0	0	34	1	0	140
17:30	0	0	0	0	19	65	0	0	0	0	11	0	0	29	0	0	124
17:45	0	0	0	0	16	60	0	0	0	0	9	0	0	27	1	0	113
Total	0	0	0	0	77	259	0	0	0	0	50	0	0	126	3	0	515
Grand Total	0	0	0	0	188	661	0	0	2	0	217	0	0	770	7	0	1845
Apprch %	0	0	0	0	22.1	77.9	0	0	0.9	0	99.1	0	0	99.1	0.9	0	
Total %	0	0	0	0	10.2	35.8	0	0	0.1	0	11.8	0	0	41.7	0.4	0	
Passenger Vehicles	0	0	0	0	182	650	0	0	2	0	212	0	0	751	7	0	1804
% Passenger Vehicles	0	0	0	0	96.8	98.3	0	0	100	0	97.7	0	0	97.5	100	0	97.8
Heavy Vehicles	0	0	0	0	6	9	0	0	0	0	2	0	0	12	0	0	29
% Heavy Vehicles	0	0	0	0	3.2	1.4	0	0	0	0	0.9	0	0	1.6	0	0	1.6
Buses	0	0	0	0	0	2	0	0	0	0	3	0	0	7	0	0	12
% Buses	0	0	0	0	0	0.3	0	0	0	0	1.4	0	0	0.9	0	0	0.7

SHORT COUNTS, LLC

735 Maryland St
Columbia, SC 29201

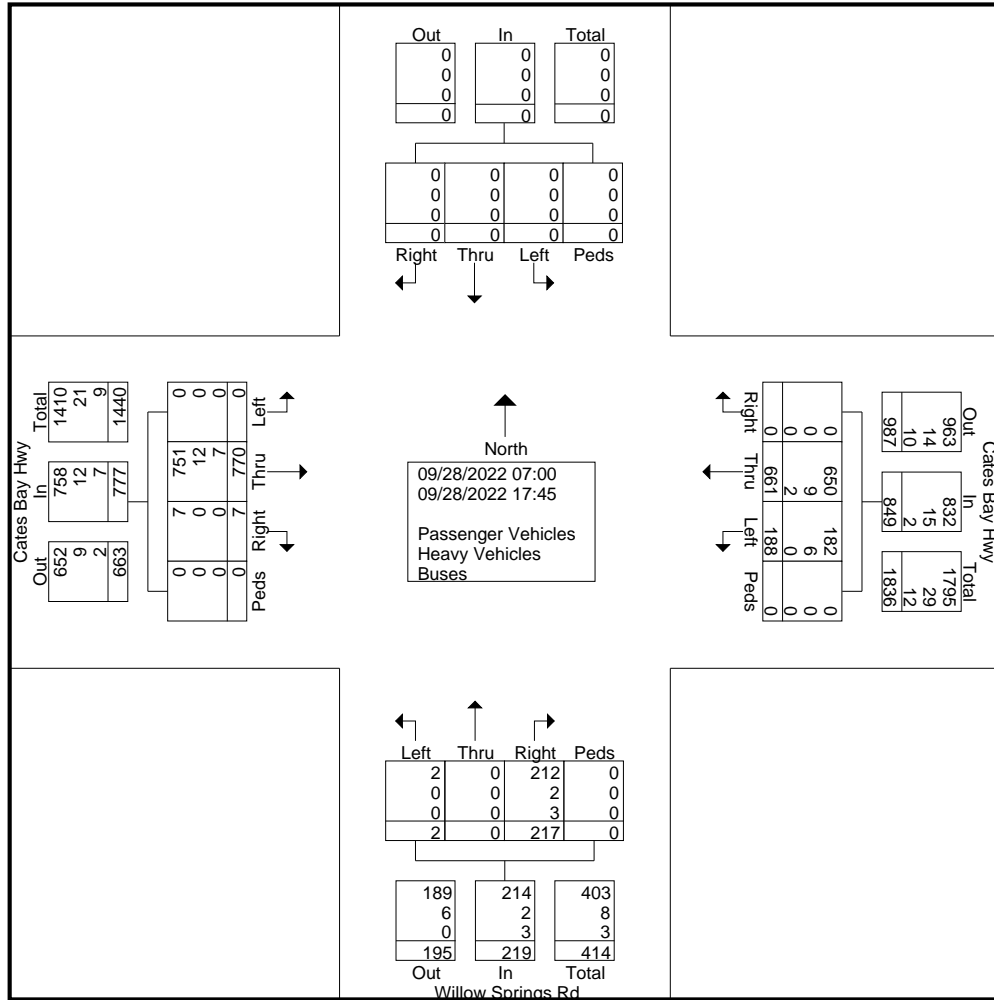
We can't say we're the Best, but you Can!

File Name : Willow Springs Rd @ Cates Bay Hwy

Site Code :

Start Date : 09/28/2022

Page No : 2



SHORT COUNTS, LLC

735 Maryland St
Columbia, SC 29201

We can't say we're the Best, but you Can!

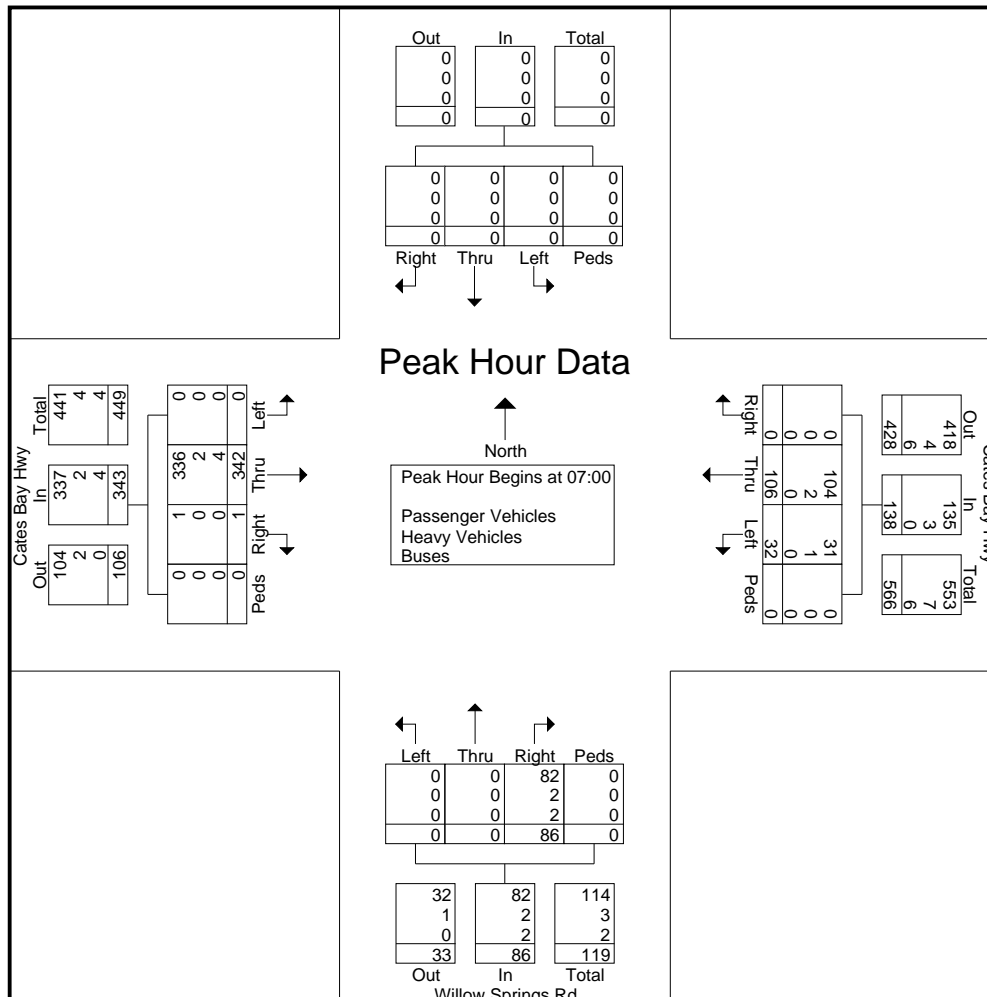
File Name : Willow Springs Rd @ Cates Bay Hwy

Site Code :

Start Date : 09/28/2022

Page No : 3

Start Time	Southbound					Cates Bay Hwy Westbound					Willow Springs Rd Northbound					Cates Bay Hwy Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00																					
07:00	0	0	0	0	0	2	37	0	0	39	0	0	25	0	25	0	93	1	0	94	158
07:15	0	0	0	0	0	10	29	0	0	39	0	0	27	0	27	0	100	0	0	100	166
07:30	0	0	0	0	0	11	21	0	0	32	0	0	18	0	18	0	93	0	0	93	143
07:45	0	0	0	0	0	9	19	0	0	28	0	0	16	0	16	0	56	0	0	56	100
Total Volume	0	0	0	0	0	32	106	0	0	138	0	0	86	0	86	0	342	1	0	343	567
% App. Total	0	0	0	0	0	23.2	76.8	0	0	0	0	0	100	0	0	0	99.7	0.3	0	0	0
PHF	.000	.000	.000	.000	.000	.727	.716	.000	.000	.885	.000	.000	.796	.000	.796	.000	.855	.250	.000	.858	.854
Passenger Vehicles	0	0	0	0	0	31	104	0	0	135	0	0	82	0	82	0	336	1	0	337	554
% Passenger Vehicles																					
Heavy Vehicles	0	0	0	0	0	1	2	0	0	3	0	0	2	0	2	0	2	0	0	2	7
% Heavy Vehicles	0	0	0	0	0	3.1	1.9	0	0	2.2	0	0	2.3	0	2.3	0	0.6	0	0	0.6	1.2
Buses	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	4	0	0	4	6
% Buses	0	0	0	0	0	0	0	0	0	0	0	0	2.3	0	2.3	0	1.2	0	0	1.2	1.1



SHORT COUNTS, LLC

735 Maryland St
Columbia, SC 29201

We can't say we're the Best, but you Can!

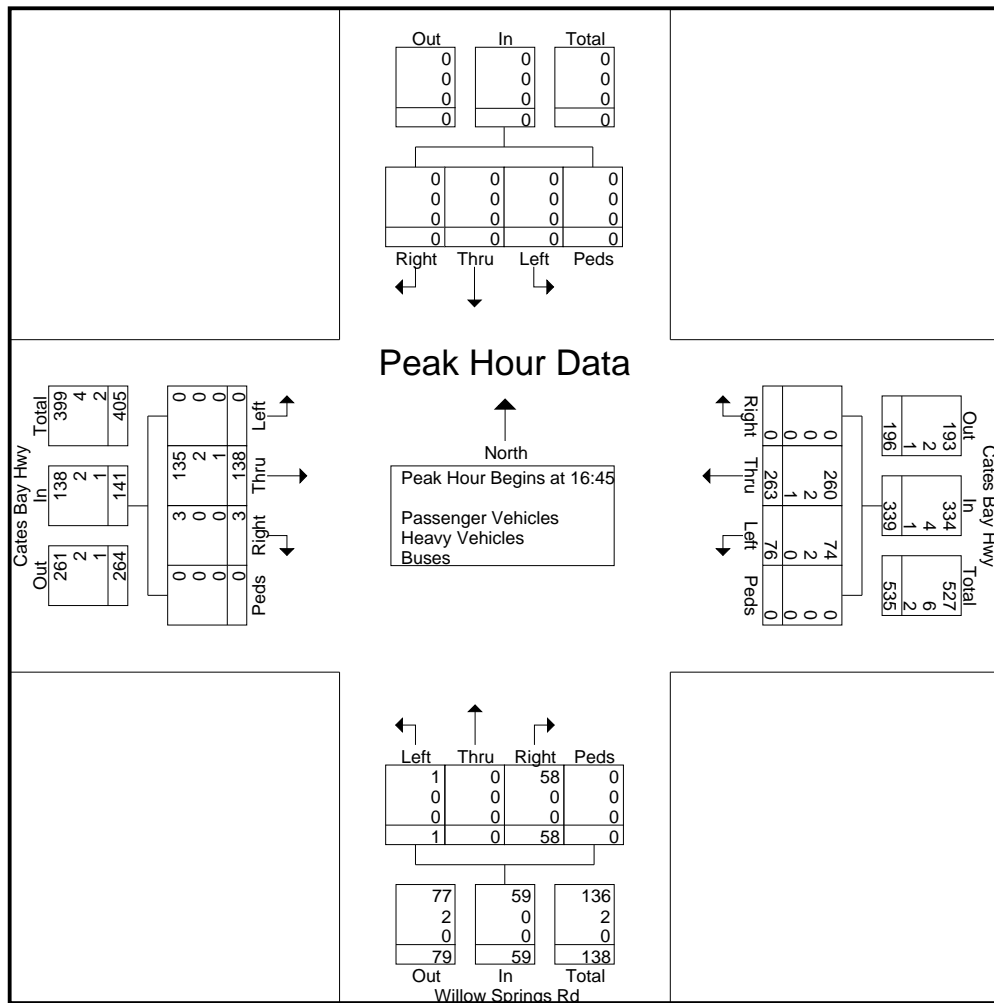
File Name : Willow Springs Rd @ Cates Bay Hwy

Site Code :

Start Date : 09/28/2022

Page No : 4

Start Time	Southbound					Cates Bay Hwy Westbound					Willow Springs Rd Northbound					Cates Bay Hwy Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:45																					
16:45	0	0	0	0	0	15	64	0	0	79	1	0	17	0	18	0	39	1	0	40	137
17:00	0	0	0	0	0	23	65	0	0	88	0	0	13	0	13	0	36	1	0	37	138
17:15	0	0	0	0	0	19	69	0	0	88	0	0	17	0	17	0	34	1	0	35	140
17:30	0	0	0	0	0	19	65	0	0	84	0	0	11	0	11	0	29	0	0	29	124
Total Volume	0	0	0	0	0	76	263	0	0	339	1	0	58	0	59	0	138	3	0	141	539
% App. Total	0	0	0	0	0	22.4	77.6	0	0		1.7	0	98.3	0		0	97.9	2.1	0		
PHF	.000	.000	.000	.000	.000	.826	.953	.000	.000	.963	.250	.000	.853	.000	.819	.000	.885	.750	.000	.881	.963
Passenger Vehicles	0	0	0	0	0	74	260	0	0	334	1	0	58	0	59	0	135	3	0	138	531
% Passenger Vehicles																					
Heavy Vehicles	0	0	0	0	0	2	2	0	0	4	0	0	0	0	0	0	2	0	0	2	6
% Heavy Vehicles	0	0	0	0	0	2.6	0.8	0	0	1.2	0	0	0	0	0	0	1.4	0	0	1.4	1.1
Buses	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
% Buses	0	0	0	0	0	0	0.4	0	0	0.3	0	0	0	0	0	0	0.7	0	0	0.7	0.4



APPENDIX B

Traffic Volume Development Worksheets

INTERSECTION TRAFFIC VOLUME DEVELOPMENT

Cates Bay Highway & Highway 134

TRAFFIC CONTROL: Unsignalized

DATE COUNTED:

AM PEAK HOUR (7:00-8:00 AM)	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2022 TRAFFIC VOLUMES	112		38				71	230			76	71
Heavy Vehicle Percentage	2%		3%				3%	2%			2%	2%
Years To Phase 2 Buildout (2035)	13		13				13	13			13	13
Yearly Growth Rate	3.0%		3.0%				3.0%	3.0%			3.0%	3.0%
Background Traffic Growth	44		15				28	90			30	28
2035 NO-BUILD TRAFFIC VOLUMES	156		53				99	320			106	99
Inbound Trip Distribution Percentage								5%				
Outbound Trip Distribution Percentage											5%	
Inbound New Project Traffic								42				
Outbound New Project Traffic											77	
Pass-By Project Traffic												
Total Buildout Project Traffic								42			77	
2035 BUILD TRAFFIC VOLUMES	156		53				99	362			183	99

PM PEAK HOUR (5:00-6:00 PM)	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2022 TRAFFIC VOLUMES	51		81				38	120			216	62
Heavy Vehicle Percentage	2%		2%				2%	2%			2%	3%
Years To Phase 2 Buildout (2035)	13		13				13	13			13	13
Yearly Growth Rate	3.0%		3.0%				3.0%	3.0%			3.0%	3.0%
Background Traffic Growth	20		32				15	47			84	24
2035 NO-BUILD TRAFFIC VOLUMES	71		113				53	167			300	86
Inbound Trip Distribution Percentage								5%				
Outbound Trip Distribution Percentage											5%	
Inbound New Project Traffic								84				
Outbound New Project Traffic											64	
Pass-By Project Traffic												
Total Buildout Project Traffic								84			64	
2035 BUILD TRAFFIC VOLUMES	71		113				53	251			364	86

INTERSECTION TRAFFIC VOLUME DEVELOPMENT

Cates Bay Highway & Allen Dew Road/N Pauley Road

TRAFFIC CONTROL: Unsignalized

DATE COUNTED:

AM PEAK HOUR (7:00-8:00 AM)	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2022 TRAFFIC VOLUMES	4	1	3	25	0	7	5	302	26	5	123	1
Heavy Vehicle Percentage	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Years To Phase 2 Buildout (2035)	13	13	13	13	13	13	13	13	13	13	13	13
Yearly Growth Rate	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Background Traffic Growth	2	0	1	10	0	3	2	118	10	2	48	0
2035 NO-BUILD TRAFFIC VOLUMES	6	1	4	35	0	10	7	420	36	7	171	1
Inbound Trip Distribution Percentage									5%			
Outbound Trip Distribution Percentage				5%								
Inbound New Project Traffic									42			
Outbound New Project Traffic				77								
Pass-By Project Traffic												
Total Buildout Project Traffic				77					42			
2035 BUILD TRAFFIC VOLUMES	6	1	4	112	0	10	7	420	78	7	171	1

PM PEAK HOUR (4:45-5:45 PM)	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2022 TRAFFIC VOLUMES	4	1	1	39	0	7	5	117	22	14	229	6
Heavy Vehicle Percentage	2%	2%	2%	5%	2%	2%	2%	2%	2%	2%	2%	2%
Years To Phase 2 Buildout (2035)	13	13	13	13	13	13	13	13	13	13	13	13
Yearly Growth Rate	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Background Traffic Growth	2	0	0	15	0	3	2	46	9	5	89	2
2035 NO-BUILD TRAFFIC VOLUMES	6	1	1	54	0	10	7	163	31	19	318	8
Inbound Trip Distribution Percentage									5%			
Outbound Trip Distribution Percentage				5%								
Inbound New Project Traffic									84			
Outbound New Project Traffic				64								
Pass-By Project Traffic												
Total Buildout Project Traffic				64					84			
2035 BUILD TRAFFIC VOLUMES	6	1	1	118	0	10	7	163	115	19	318	8

INTERSECTION TRAFFIC VOLUME DEVELOPMENT

Cates Bay Highway & Willow Springs Road

TRAFFIC CONTROL: Unsignalized

DATE COUNTED:

AM PEAK HOUR (7:00-8:00 AM)	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2022 TRAFFIC VOLUMES		342	1	32	106		0		86			
Heavy Vehicle Percentage		2%	2%	3%	2%		2%		2%			
Years To Phase 2 Buildout (2035)		13	13	13	13		13		13			
Yearly Growth Rate		3.0%	3.0%	3.0%	3.0%		3.0%		3.0%			
Background Traffic Growth		133	0	12	41		0		34			
2035 NO-BUILD TRAFFIC VOLUMES		475	1	44	147		0		120			
Inbound Trip Distribution Percentage				15%								
Outbound Trip Distribution Percentage									15%			
Inbound New Project Traffic				127								
Outbound New Project Traffic									234			
Pass-By Project Traffic												
Total Buildout Project Traffic				127					234			
2035 BUILD TRAFFIC VOLUMES		475	1	171	147		0		354			

PM PEAK HOUR (4:45-5:45 PM)	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2022 TRAFFIC VOLUMES		138	3	76	263		1		58			
Heavy Vehicle Percentage		2%	2%	3%	2%		2%		2%			
Years To Phase 2 Buildout (2035)		13	13	13	13		13		13			
Yearly Growth Rate		3.0%	3.0%	3.0%	3.0%		3.0%		3.0%			
Background Traffic Growth		54	1	30	103		0		23			
2035 NO-BUILD TRAFFIC VOLUMES		192	4	106	366		1		81			
Inbound Trip Distribution Percentage				15%								
Outbound Trip Distribution Percentage									15%			
Inbound New Project Traffic				253								
Outbound New Project Traffic									192			
Pass-By Project Traffic												
Total Buildout Project Traffic				253					192			
2035 BUILD TRAFFIC VOLUMES		192	4	359	366		1		273			

INTERSECTION TRAFFIC VOLUME DEVELOPMENT

Willow Springs Road/Pauley Swamp Road & Pitch Landing Road/Allen Dew Road

TRAFFIC CONTROL: Unsignalized

DATE COUNTED:

AM PEAK HOUR (7:00-8:00 AM)	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2022 TRAFFIC VOLUMES	4	42	3	20	20	6	4	35	100	7	21	5
Heavy Vehicle Percentage	2%	2%	2%	5%	2%	2%	2%	2%	2%	2%	5%	2%
Years To Phase 2 Buildout (2035)	13	13	13	13	13	13	13	13	13	13	13	13
Yearly Growth Rate	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Background Traffic Growth	2	16	1	8	8	2	2	14	39	3	8	2
2035 NO-BUILD TRAFFIC VOLUMES	6	58	4	28	28	8	6	49	139	10	29	7
Inbound Trip Distribution Percentage		5%							5%	15%		
Outbound Trip Distribution Percentage				5%	5%	15%						
Inbound New Project Traffic		42							42	127		
Outbound New Project Traffic				78	77	234						
Pass-By Project Traffic												
Total Buildout Project Traffic		42		78	77	234			42	127		
2035 BUILD TRAFFIC VOLUMES	6	100	4	106	105	242	6	49	181	137	29	7

PM PEAK HOUR (4:45-5:45 PM)	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2022 TRAFFIC VOLUMES	3	24	0	100	47	15	3	40	30	10	41	8
Heavy Vehicle Percentage	2%	2%	2%	2%	4%	2%	2%	3%	2%	2%	2%	2%
Years To Phase 2 Buildout (2035)	13	13	13	13	13	13	13	13	13	13	13	13
Yearly Growth Rate	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Background Traffic Growth	1	9	0	39	18	6	1	16	12	4	16	3
2035 NO-BUILD TRAFFIC VOLUMES	4	33	0	139	65	21	4	56	42	14	57	11
Inbound Trip Distribution Percentage		5%							5%	15%		
Outbound Trip Distribution Percentage				5%	5%	15%						
Inbound New Project Traffic		84							84	253		
Outbound New Project Traffic				64	64	192						
Pass-By Project Traffic												
Total Buildout Project Traffic		84		64	64	192			84	253		
2035 BUILD TRAFFIC VOLUMES	4	117	0	203	129	213	4	56	126	267	57	11

INTERSECTION TRAFFIC VOLUME DEVELOPMENT

US 701 & Pitch Landing Road

TRAFFIC CONTROL: Signalized

DATE COUNTED:

AM PEAK HOUR (7:00-8:00 AM)	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2022 TRAFFIC VOLUMES	205	6	18	0	3	8	26	619	0	5	305	50
Heavy Vehicle Percentage	3%	17%	2%	2%	2%	2%	4%	5%	2%	2%	9%	4%
Years To Phase 2 Buildout (2035)	13	13	13	13	13	13	13	13	13	13	13	13
Yearly Growth Rate	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Background Traffic Growth	80	2	7	0	1	3	10	241	0	2	119	20
2035 NO-BUILD TRAFFIC VOLUMES	285	8	25	0	4	11	36	860	0	7	424	70
Inbound Trip Distribution Percentage			5%								35%	15%
Outbound Trip Distribution Percentage	15%						5%	35%				
Inbound New Project Traffic			42								296	127
Outbound New Project Traffic	234						78	546				
Pass-By Project Traffic												
Total Buildout Project Traffic	234		42				78	546			296	127
2035 BUILD TRAFFIC VOLUMES	519	8	67	0	4	11	114	1,406	0	7	720	197

PM PEAK HOUR (4:45-5:45 PM)	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2022 TRAFFIC VOLUMES	97	7	31	1	3	4	35	368	1	15	569	125
Heavy Vehicle Percentage	2%	2%	2%	2%	2%	25%	3%	7%	2%	2%	3%	2%
Years To Phase 2 Buildout (2035)	13	13	13	13	13	13	13	13	13	13	13	13
Yearly Growth Rate	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Background Traffic Growth	38	3	12	0	1	2	14	144	0	6	222	49
2035 NO-BUILD TRAFFIC VOLUMES	135	10	43	1	4	6	49	512	1	21	791	174
Inbound Trip Distribution Percentage			5%								35%	15%
Outbound Trip Distribution Percentage	15%						5%	35%				
Inbound New Project Traffic			84								590	253
Outbound New Project Traffic	192						64	449				
Pass-By Project Traffic												
Total Buildout Project Traffic	192		84				64	449			590	253
2035 BUILD TRAFFIC VOLUMES	327	10	127	1	4	6	113	961	1	21	1,381	427

INTERSECTION TRAFFIC VOLUME DEVELOPMENT

US 701 & Lake Way Drive/Access #1

TRAFFIC CONTROL: Unsignalized

DATE COUNTED:

AM PEAK HOUR (7:00-8:00 AM)	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2022 TRAFFIC VOLUMES	0	0	0	0	0	5	0	589	0	0	294	0
Heavy Vehicle Percentage	2%	2%	2%	2%	2%	2%	2%	5%	2%	2%	9%	2%
Years To Phase 2 Buildout (2035)	13	13	13	13	13	13	13	13	13	13	13	13
Yearly Growth Rate	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Background Traffic Growth	0	0	0	0	0	2	0	230	0	0	115	0
2035 NO-BUILD TRAFFIC VOLUMES	0	0	0	0	0	7	0	819	0	0	409	0
Inbound Trip Distribution Percentage							15%				15%	25%
Outbound Trip Distribution Percentage	25%		15%					15%				
Inbound New Project Traffic							127				126	212
Outbound New Project Traffic	390		234					234				
Pass-By Project Traffic												
Total Buildout Project Traffic	390		234				127	234			126	212
2035 BUILD TRAFFIC VOLUMES	390	0	234	0	0	7	127	1,053	0	0	535	212

PM PEAK HOUR (5:00-6:00 PM)	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2022 TRAFFIC VOLUMES	0	0	0	0	0	2	0	359	1	7	527	0
Heavy Vehicle Percentage	2%	2%	2%	2%	2%	2%	2%	8%	2%	2%	3%	2%
Years To Phase 2 Buildout (2035)	13	13	13	13	13	13	13	13	13	13	13	13
Yearly Growth Rate	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Background Traffic Growth	0	0	0	0	0	1	0	140	0	3	206	0
2035 NO-BUILD TRAFFIC VOLUMES	0	0	0	0	0	3	0	499	1	10	733	0
Inbound Trip Distribution Percentage							15%				15%	25%
Outbound Trip Distribution Percentage	25%		15%					15%				
Inbound New Project Traffic							252				253	422
Outbound New Project Traffic	321		192					192				
Pass-By Project Traffic	39		115				39	-39			-115	115
Total Buildout Project Traffic	321		192				252	192			253	422
2035 BUILD TRAFFIC VOLUMES	360	0	307	0	0	3	291	652	1	10	871	537

INTERSECTION TRAFFIC VOLUME DEVELOPMENT

US 701 & Kinlaw Lane/Access #2/Brickyard Place

TRAFFIC CONTROL: Unsignalized

DATE COUNTED:

AM PEAK HOUR (7:00-8:00 AM)	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2022 TRAFFIC VOLUMES	6	0	0	0	0	2	0	540	1	0	294	2
Heavy Vehicle Percentage	2%	2%	2%	2%	2%	2%	2%	5%	100%	2%	8%	2%
Years To Phase 2 Buildout (2035)	13	13	13	13	13	13	13	13	13	13	13	13
Yearly Growth Rate	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Background Traffic Growth	2	0	0	0	0	1	0	211	0	0	115	1
2035 NO-BUILD TRAFFIC VOLUMES	8	0	0	0	0	3	0	751	1	0	409	3
Inbound Trip Distribution Percentage							10%	15%				15%
Outbound Trip Distribution Percentage	15%		10%								15%	
Inbound New Project Traffic							85	127				126
Outbound New Project Traffic	234		155								234	
Pass-By Project Traffic												
Total Buildout Project Traffic	234		155				85	127			234	126
2035 BUILD TRAFFIC VOLUMES	242	0	155	0	0	3	85	878	1	0	643	129

PM PEAK HOUR (4:45-5:45 PM)	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2022 TRAFFIC VOLUMES	8	0	0	0	0	1	4	341	0	2	503	7
Heavy Vehicle Percentage	2%	2%	2%	2%	2%	2%	2%	8%	2%	2%	4%	2%
Years To Phase 2 Buildout (2035)	13	13	13	13	13	13	13	13	13	13	13	13
Yearly Growth Rate	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Background Traffic Growth	3	0	0	0	0	0	2	133	0	1	196	3
2035 NO-BUILD TRAFFIC VOLUMES	11	0	0	0	0	1	6	474	0	3	699	10
Inbound Trip Distribution Percentage							10%	15%				15%
Outbound Trip Distribution Percentage	15%		10%								15%	
Inbound New Project Traffic							169	253				253
Outbound New Project Traffic	192		130								192	
Pass-By Project Traffic												
Total Buildout Project Traffic	192		130				169	253			192	253
2035 BUILD TRAFFIC VOLUMES	203	0	130	0	0	1	175	727	0	3	891	263

INTERSECTION TRAFFIC VOLUME DEVELOPMENT

Pitch Landing & Access #3

TRAFFIC CONTROL: Unsignalized

DATE COUNTED:

AM PEAK HOUR (7:30-8:30 AM)	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2022 TRAFFIC VOLUMES		229	0	0	79		0		0			
Heavy Vehicle Percentage		3%	2%	2%	4%		2%		2%			
Years To Phase 2 Buildout (2035)		13	13	13	13		13		13			
Yearly Growth Rate		3.0%	3.0%	3.0%	3.0%		3.0%		3.0%			
Background Traffic Growth		89	0	0	31		0		0			
2035 NO-BUILD TRAFFIC VOLUMES		318	0	0	110		0		0			
Inbound Trip Distribution Percentage		5%	20%	15%								
Outbound Trip Distribution Percentage					5%		20%		15%			
Inbound New Project Traffic		42	169	127								
Outbound New Project Traffic					78		311		234			
Pass-By Project Traffic												
Total Buildout Project Traffic		42	169	127	78		311		234			
2035 BUILD TRAFFIC VOLUMES		360	169	127	188		311		234			

PM PEAK HOUR (5:00-6:00 PM)	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2022 TRAFFIC VOLUMES		135	0	0	163		0		0			
Heavy Vehicle Percentage		2%	2%	2%	2%							
Years To Phase 2 Buildout (2035)		13	13	13	13		13		13			
Yearly Growth Rate		3.0%	3.0%	3.0%	3.0%		3.0%		3.0%			
Background Traffic Growth		53	0	0	64		0		0			
2035 NO-BUILD TRAFFIC VOLUMES		188	0	0	227		0		0			
Inbound Trip Distribution Percentage		5%	20%	15%								
Outbound Trip Distribution Percentage					5%		20%		15%			
Inbound New Project Traffic		84	337	253								
Outbound New Project Traffic					64		256		192			
Pass-By Project Traffic		-38	38	114	-114		113		38			
Total Buildout Project Traffic		84	337	253	64		256		192			
2035 BUILD TRAFFIC VOLUMES		234	375	367	177		369		230			

APPENDIX C

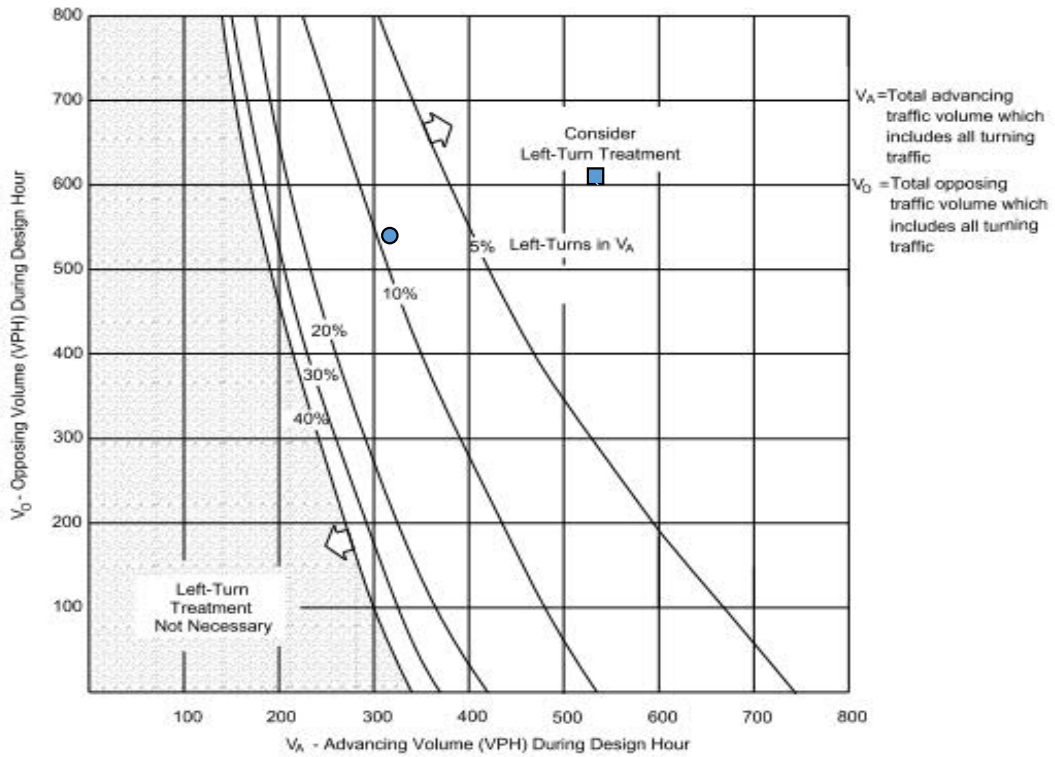
Turn Lane Analysis Worksheets

Warden Tract
LEFT-TURN LANE WARRANT REVIEW

9.5-8

INTERSECTIONS

March 2017



VOLUME GUIDELINES FOR LEFT-TURN LANES AT UNSIGNALIZED INTERSECTIONS ON TWO-LANE HIGHWAYS (45 mph)

Figure 9.5-F

INTERSECTION: Pitch Landing Road & Access #2

MOVEMENT: Eastbound Left Turn

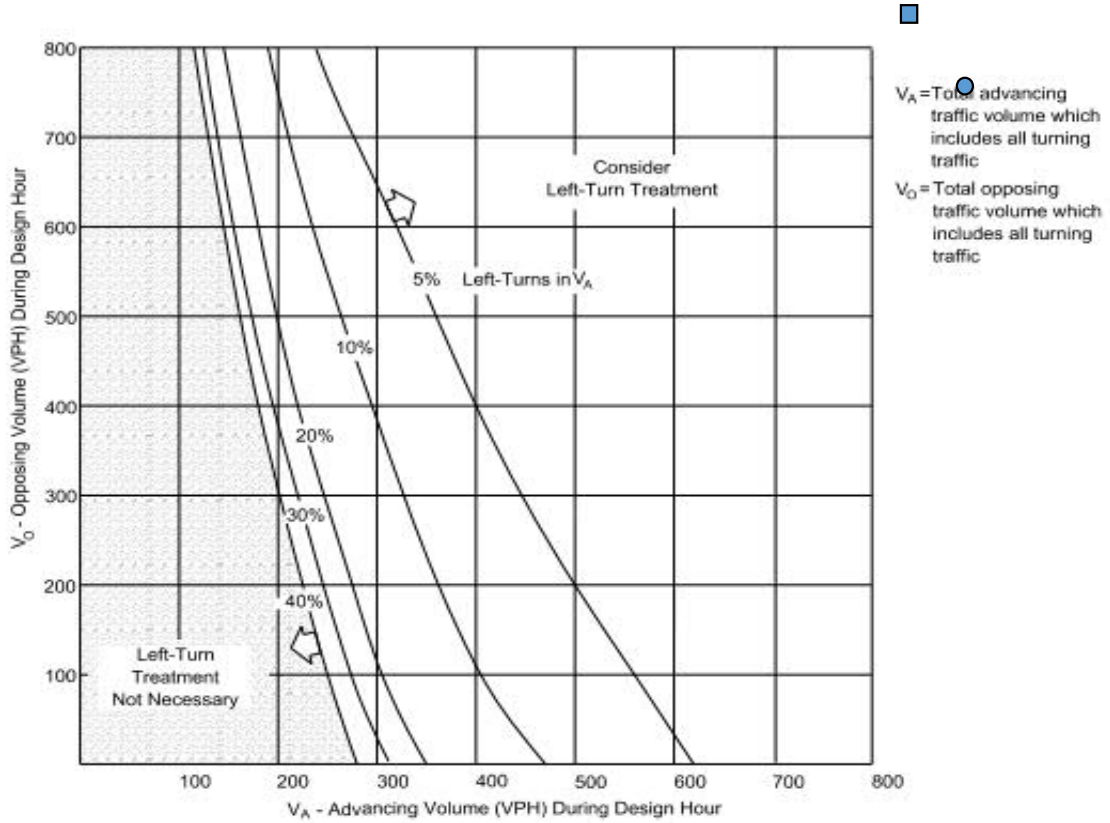
SCENARIO	Advancing Volume (V_a)	Eastbound Left Turn	Opposing Volume (V_o)	Left Turn % of V_a	Symbol
AM Build	315	127	529	40.3%	●
PM Build	544	367	609	67.5%	■

Warden Tract
LEFT-TURN LANE WARRANT REVIEW

9.5-6

INTERSECTIONS

March 2017



VOLUME GUIDELINES FOR LEFT-TURN LANES AT UNSIGNALIZED INTERSECTIONS ON TWO-LANE HIGHWAYS (55 mph)
Figure 9.5-D

INTERSECTION: US 701 & Access #1
MOVEMENT: Northbound Left-Turn

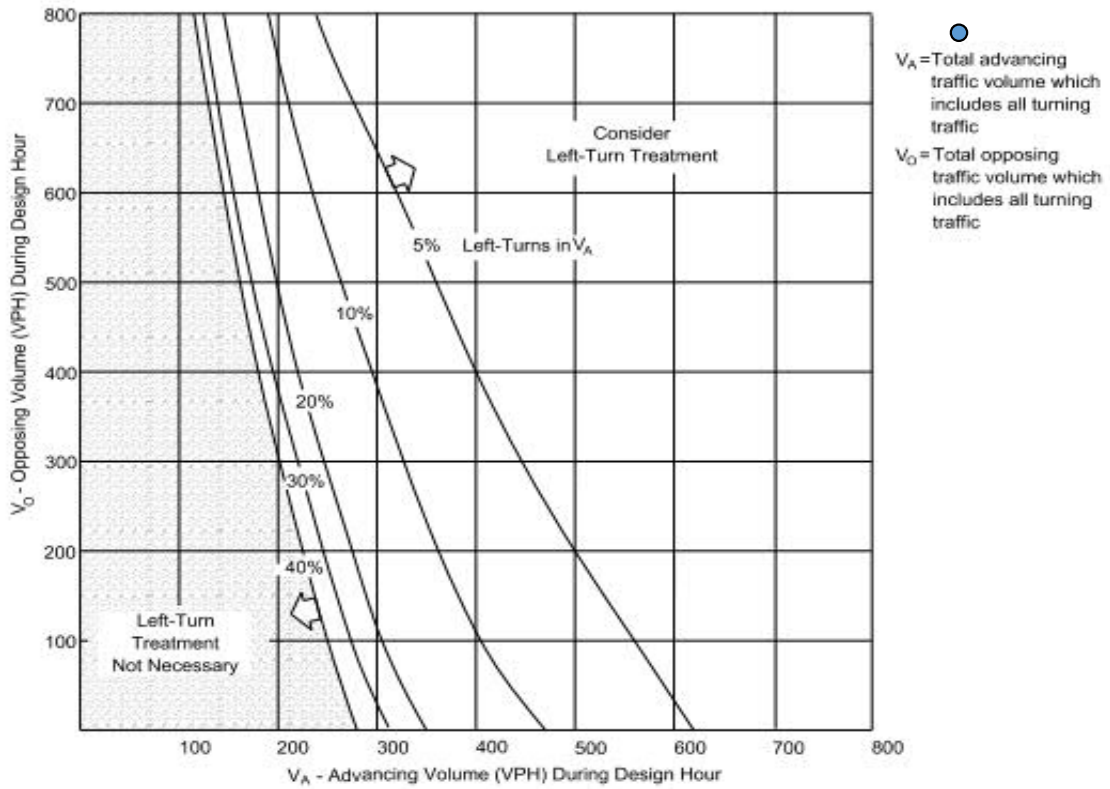
SCENARIO	Advancing Volume (V_a)	Northbound Left-Turn	Opposing Volume (V_o)	Left Turn % of V_a	Symbol
AM Build	1180	127	747	10.8%	●
PM Build	944	291	1418	30.8%	■

Warden Tract
LEFT-TURN LANE WARRANT REVIEW

9.5-6

INTERSECTIONS

March 2017



VOLUME GUIDELINES FOR LEFT-TURN LANES AT UNSIGNALIZED INTERSECTIONS ON TWO-LANE HIGHWAYS (55 mph)
Figure 9.5-D

INTERSECTION: US 701 & Kinlaw Lane
MOVEMENT: Northbound Left-Turn

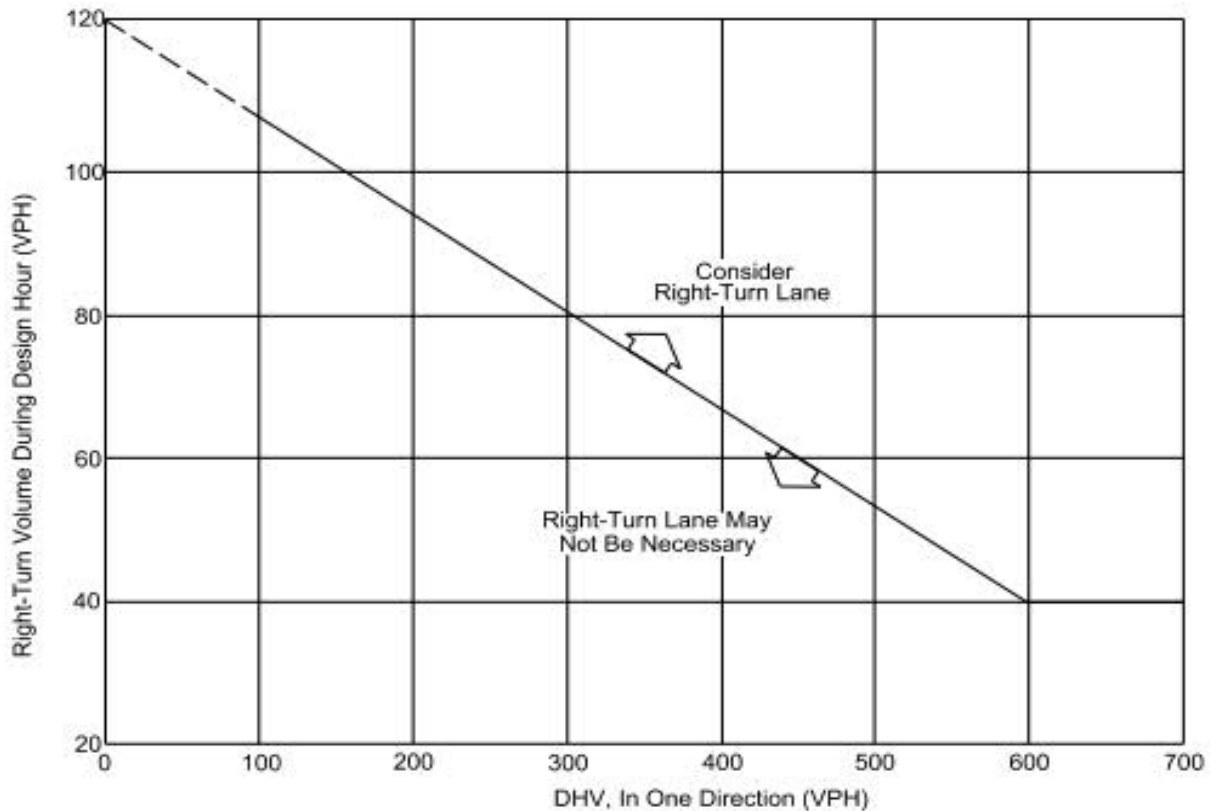
SCENARIO	Advancing Volume (V_a)	Northbound Left-Turn	Opposing Volume (V_o)	Left Turn % of V_a	Symbol
AM Build	964	85	772	8.8%	●
PM Build	902	175	1157	19.4%	■

Warden Tract
RIGHT-TURN LANE WARRANT REVIEW

9.5-2

INTERSECTIONS

March 2017



Note: For highways with a design speed below 50 miles per hour with a DHV < 300 and where right turns > 40, an adjustment should be used. To read the vertical axis of the chart, subtract 20 from the actual number of right turns.

**GUIDELINES FOR RIGHT-TURN LANES AT UNSIGNALIZED INTERSECTIONS
ON TWO-LANE HIGHWAYS**

Figure 9.5-A

INTERSECTION: Pitch Landing Road & Willow Springs Road

MOVEMENT: Westbound Right Turn

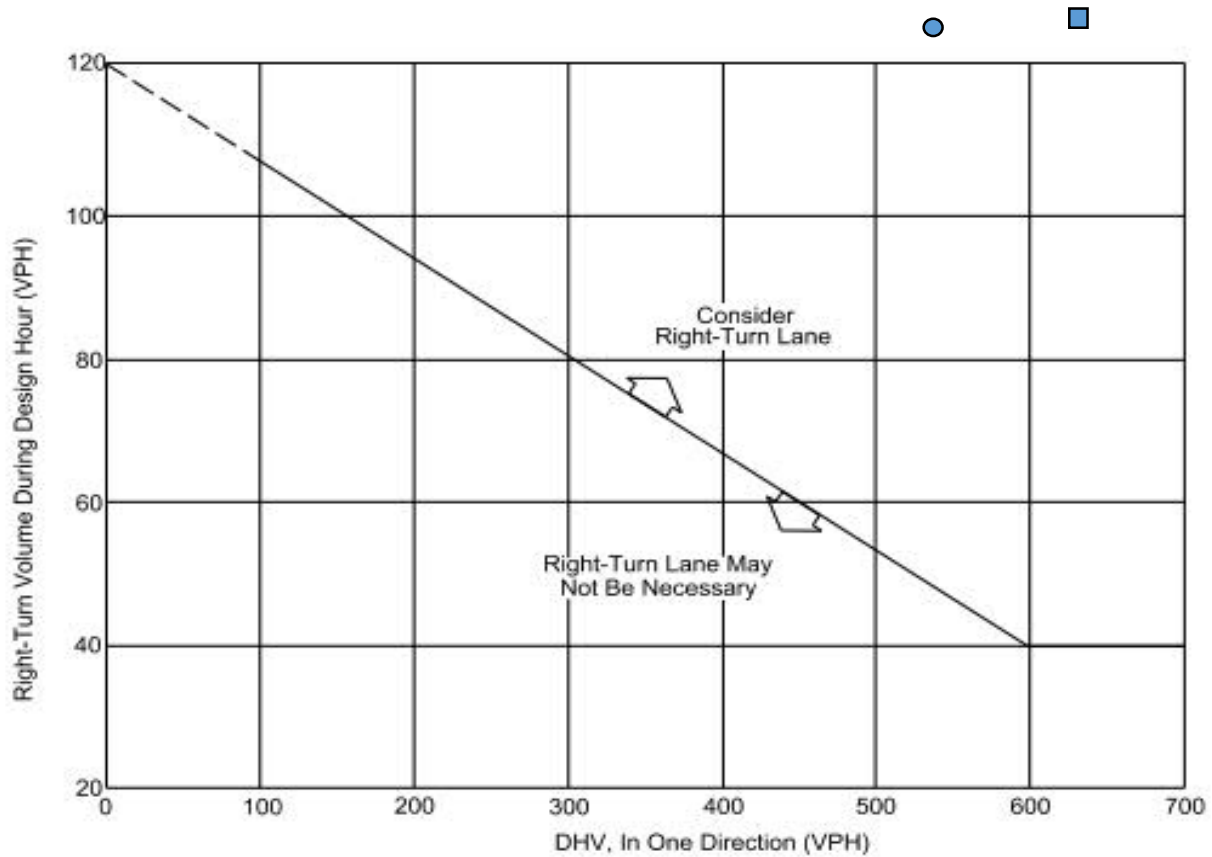
SCENARIO	Design Hour Volume	Right Turn Volume	Symbol
AM Build	453	242	●
PM Build	545	213	■

Warden Tract
RIGHT-TURN LANE WARRANT REVIEW

9.5-2

INTERSECTIONS

March 2017



Note: For highways with a design speed below 50 miles per hour with a DHV < 300 and where right turns > 40, an adjustment should be used. To read the vertical axis of the chart, subtract 20 from the actual number of right turns.

**GUIDELINES FOR RIGHT-TURN LANES AT UNSIGNALIZED INTERSECTIONS
ON TWO-LANE HIGHWAYS**

Figure 9.5-A

INTERSECTION: Pitch Landing Road & Access #2

MOVEMENT: Westbound Right Turn

SCENARIO	Design Hour Volume	Right Turn Volume	Symbol
AM Build	529	169	●
PM Build	609	375	■

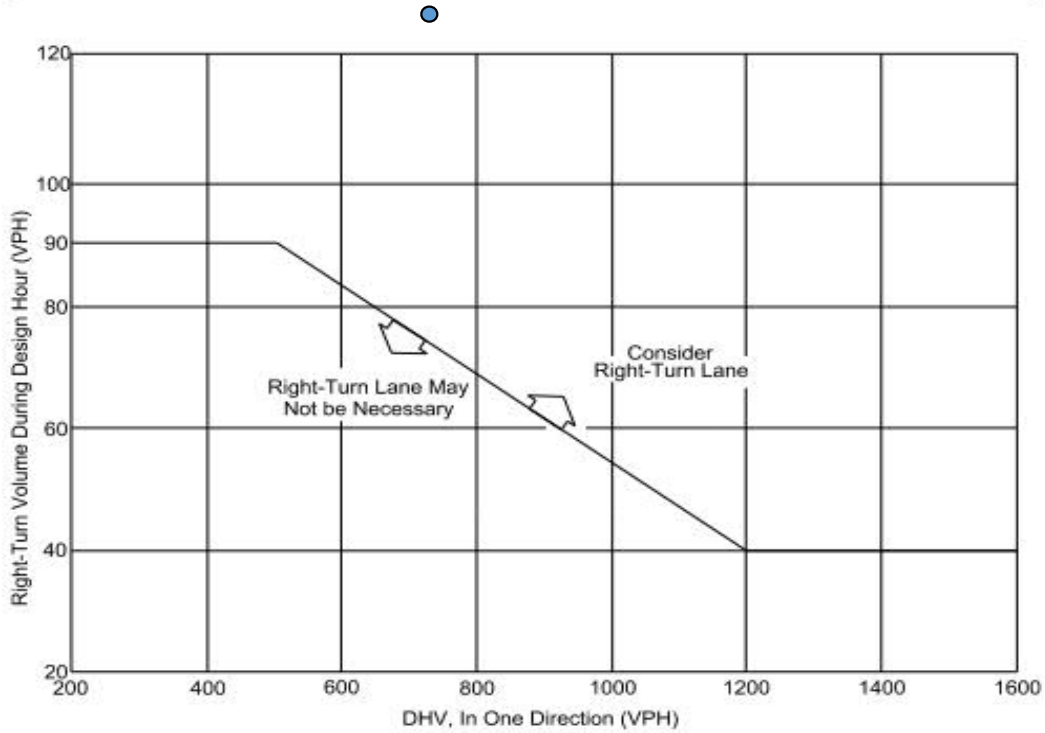
Warden Tract
 RIGHT-TURN LANE WARRANT REVIEW

March 2017

INTERSECTIONS



9.5-3



Note: Figure is only applicable on highways with a design speed of 50 miles per hour or greater.

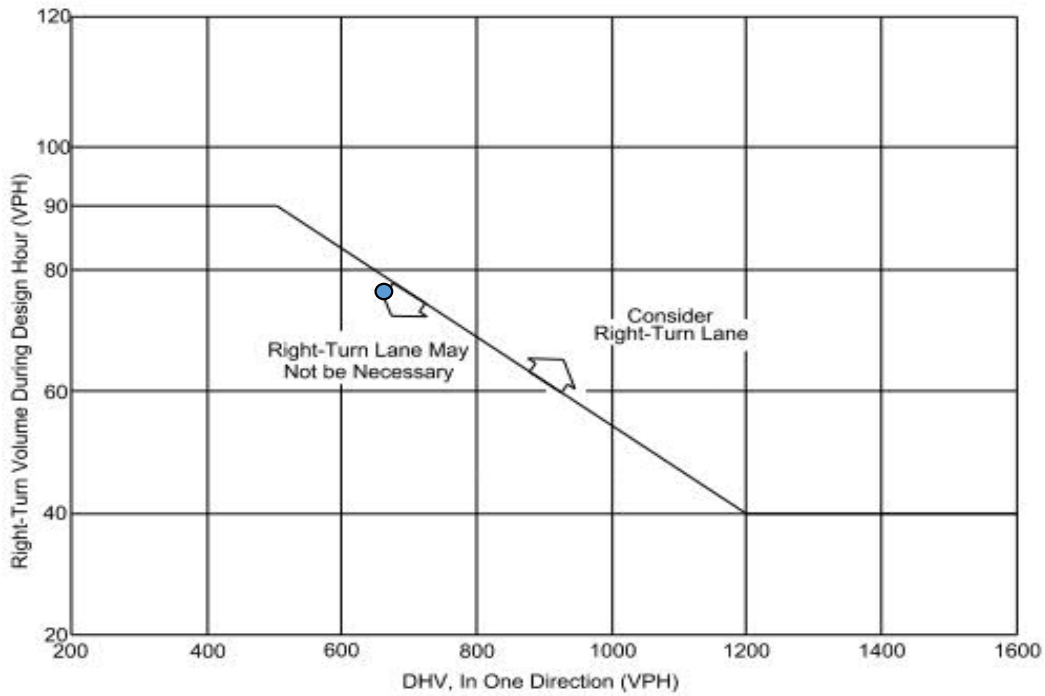
**GUIDELINES FOR RIGHT-TURN LANES AT UNSIGNALIZED INTERSECTIONS
 ON FOUR-LANE HIGHWAYS**

Figure 9.5-B

INTERSECTION: US 701 & Access #1
 MOVEMENT: Southbound Right-turn

SCENARIO	Design Hour Volume	Right Turn Volume	Symbol
AM Build	747	212	●
PM Build	1418	537	■

Warden Tract
 RIGHT-TURN LANE WARRANT REVIEW



Note: Figure is only applicable on highways with a design speed of 50 miles per hour or greater.

GUIDELINES FOR RIGHT-TURN LANES AT UNSIGNALIZED INTERSECTIONS ON FOUR-LANE HIGHWAYS

Figure 9.5-B

INTERSECTION: US 701 & Access #1
 MOVEMENT: Southbound Right-turn

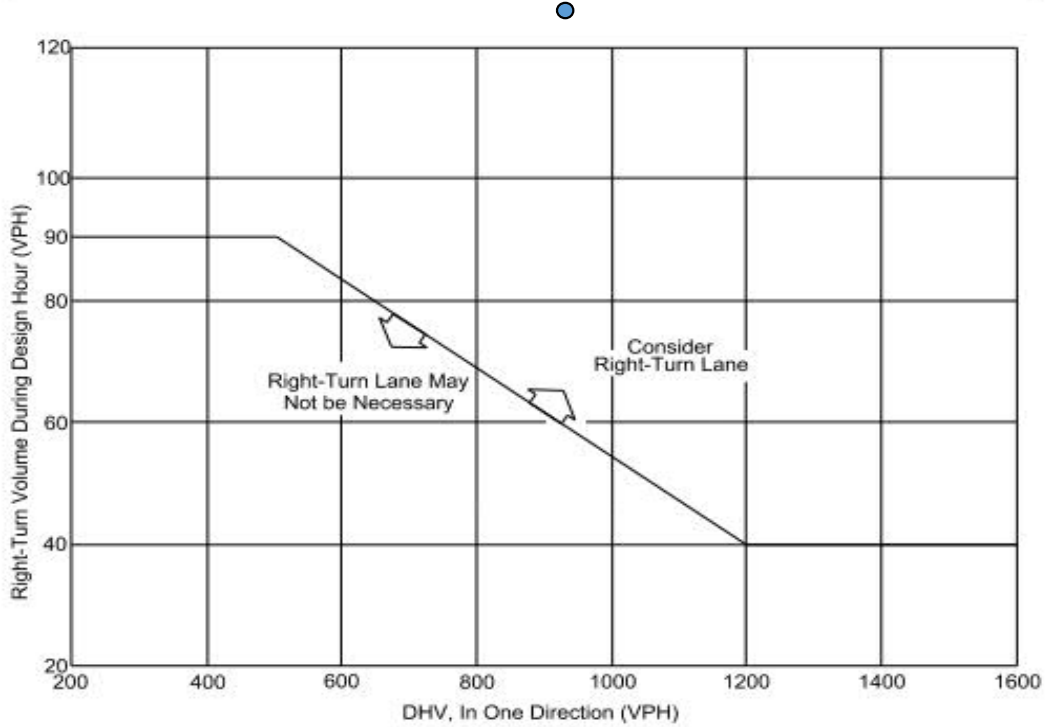
SCENARIO	Design Hour Volume	Right Turn Volume	Symbol
AM Build	658	76	●
PM Build	1063	223	■

Warden Tract
 RIGHT-TURN LANE WARRANT REVIEW

March 2017

INTERSECTIONS

9.5-3



Note: Figure is only applicable on highways with a design speed of 50 miles per hour or greater.

GUIDELINES FOR RIGHT-TURN LANES AT UNSIGNALIZED INTERSECTIONS ON FOUR-LANE HIGHWAYS

Figure 9.5-B

INTERSECTION: US 701 & Access #1
 MOVEMENT: Southbound Right-turn

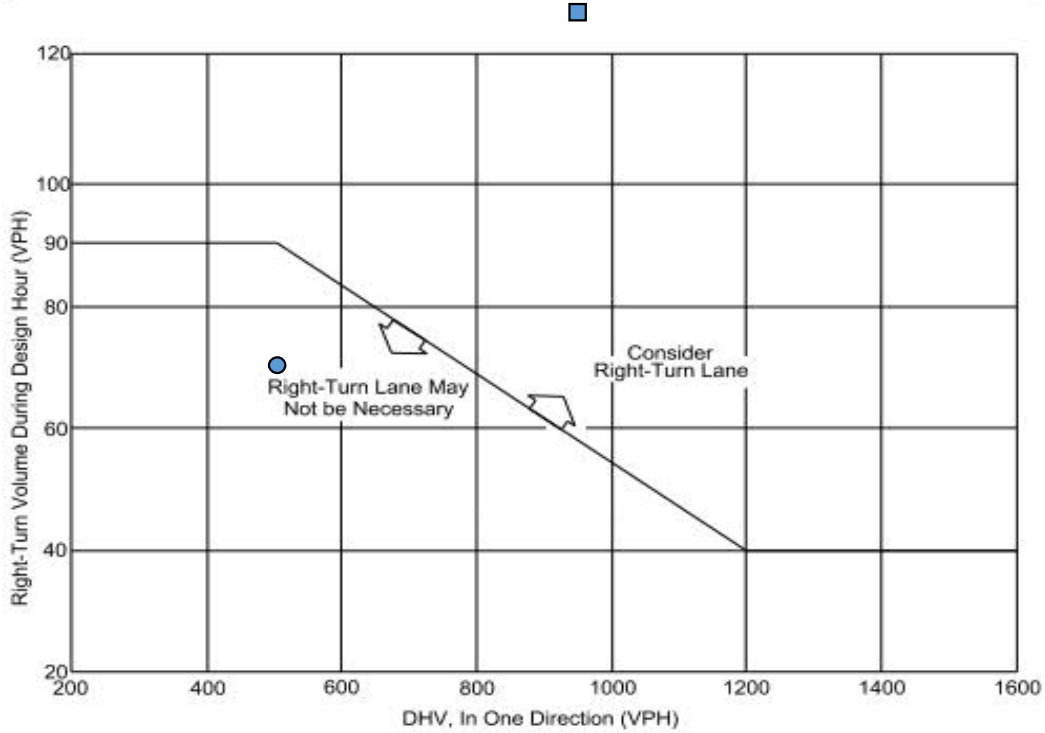
SCENARIO	Design Hour Volume	Right Turn Volume	Symbol
AM Build	924	197	●
PM Build	1829	427	■

Warden Tract
 RIGHT-TURN LANE WARRANT REVIEW

March 2017

INTERSECTIONS

9.5-3



Note: Figure is only applicable on highways with a design speed of 50 miles per hour or greater.

**GUIDELINES FOR RIGHT-TURN LANES AT UNSIGNALIZED INTERSECTIONS
 ON FOUR-LANE HIGHWAYS**

Figure 9.5-B

INTERSECTION: US 701 & Access #1
 MOVEMENT: Southbound Right-turn

SCENARIO	Design Hour Volume	Right Turn Volume	Symbol
AM No-Build	501	70	●
PM No-Build	986	174	■

APPENDIX D

Capacity Analysis

2022 – Existing Conditions

HCM 6th TWSC
1: Cates Bay Highway & Highway 134

2022 Existing Conditions
AM Peak Hour

Intersection												
Int Delay, s/veh	4.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	112	0	38	0	0	0	71	230	0	0	76	71
Future Vol, veh/h	112	0	38	0	0	0	71	230	0	0	76	71
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	3	2	2	2	3	2	2	2	2	2
Mvmt Flow	124	0	42	0	0	0	79	256	0	0	84	79

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	538	538	124	559	577	256	163	0	0	256	0	0
Stage 1	124	124	-	414	414	-	-	-	-	-	-	-
Stage 2	414	414	-	145	163	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.23	7.12	6.52	6.22	4.13	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.327	3.518	4.018	3.318	2.227	-	-	2.218	-	-
Pot Cap-1 Maneuver	454	450	924	440	427	783	1410	-	-	1309	-	-
Stage 1	880	793	-	616	593	-	-	-	-	-	-	-
Stage 2	616	593	-	858	763	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	431	421	924	399	399	783	1410	-	-	1309	-	-
Mov Cap-2 Maneuver	431	421	-	399	399	-	-	-	-	-	-	-
Stage 1	823	793	-	576	554	-	-	-	-	-	-	-
Stage 2	576	554	-	819	763	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	15.8		0		1.8		0	
HCM LOS	C		A					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1410	-	-	498	-	1309	-	-
HCM Lane V/C Ratio	0.056	-	-	0.335	-	-	-	-
HCM Control Delay (s)	7.7	0	-	15.8	0	0	-	-
HCM Lane LOS	A	A	-	C	A	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	1.5	-	0	-	-

HCM 6th TWSC
2: Cates Bay Highway & N Pauley Road/Allen Dew Road

2022 Existing Conditions
AM Peak Hour

Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	1	3	25	0	7	5	302	26	5	123	1
Future Vol, veh/h	4	1	3	25	0	7	5	302	26	5	123	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	1	3	28	0	8	6	336	29	6	137	1

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	517	527	138	515	513	351	138	0	0	365	0	0
Stage 1	150	150	-	363	363	-	-	-	-	-	-	-
Stage 2	367	377	-	152	150	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	469	456	910	470	465	692	1446	-	-	1194	-	-
Stage 1	853	773	-	656	625	-	-	-	-	-	-	-
Stage 2	653	616	-	850	773	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	460	451	910	464	460	692	1446	-	-	1194	-	-
Mov Cap-2 Maneuver	460	451	-	464	460	-	-	-	-	-	-	-
Stage 1	849	769	-	653	622	-	-	-	-	-	-	-
Stage 2	642	613	-	841	769	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	11.5		12.8		0.1		0.3	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1446	-	-	563	500	1194	-	-
HCM Lane V/C Ratio	0.004	-	-	0.016	0.071	0.005	-	-
HCM Control Delay (s)	7.5	0	-	11.5	12.8	8	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.2	0	-	-

HCM 6th TWSC
3: Willow Springs Road & Cates Bay Highway

2022 Existing Conditions
AM Peak Hour

Intersection						
Int Delay, s/veh	2.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	342	1	32	106	0	86
Future Vol, veh/h	342	1	32	106	0	86
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	3	2	2	2
Mvmt Flow	380	1	36	118	0	96

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	381	0	571
Stage 1	-	-	-	-	381
Stage 2	-	-	-	-	190
Critical Hdwy	-	-	4.13	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.227	-	3.518
Pot Cap-1 Maneuver	-	-	1172	-	482
Stage 1	-	-	-	-	691
Stage 2	-	-	-	-	842
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1172	-	466
Mov Cap-2 Maneuver	-	-	-	-	466
Stage 1	-	-	-	-	691
Stage 2	-	-	-	-	814

Approach	EB	WB	NB
HCM Control Delay, s	0	1.9	11.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	666	-	-	1172	-
HCM Lane V/C Ratio	0.143	-	-	0.03	-
HCM Control Delay (s)	11.3	-	-	8.2	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.5	-	-	0.1	-

4: Pauley Swamp Road/Willow Springs Road & Allen Dew Road/Pitch Landing Road AM Peak Hour

Intersection	
Intersection Delay, s/veh	7.6
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	42	2	20	20	6	4	35	100	7	21	5
Future Vol, veh/h	4	42	2	20	20	6	4	35	100	7	21	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	5	2	2	2	2	2	2	5	2
Mvmt Flow	4	46	2	22	22	7	4	38	109	8	23	5
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.7	7.7	7.5	7.4
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	3%	8%	43%	21%
Vol Thru, %	25%	88%	43%	64%
Vol Right, %	72%	4%	13%	15%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	139	48	46	33
LT Vol	4	4	20	7
Through Vol	35	42	20	21
RT Vol	100	2	6	5
Lane Flow Rate	151	52	50	36
Geometry Grp	1	1	1	1
Degree of Util (X)	0.156	0.062	0.061	0.042
Departure Headway (Hd)	3.71	4.288	4.358	4.178
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	953	825	813	845
Service Time	1.783	2.366	2.435	2.263
HCM Lane V/C Ratio	0.158	0.063	0.062	0.043
HCM Control Delay	7.5	7.7	7.7	7.4
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.6	0.2	0.2	0.1

HCM 6th Signalized Intersection Summary
5: US-701 & Pitch Landing Road

2022 Existing Conditions
AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	↕
Traffic Volume (veh/h)	205	6	18	0	3	8	26	619	0	5	305	50
Future Volume (veh/h)	205	6	18	0	3	8	26	619	0	5	305	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1648	1870	1870	1870	1870	1841	1826	1870	1870	1767	1841
Adj Flow Rate, veh/h	223	7	20	0	3	9	28	673	0	5	332	54
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	17	2	2	2	2	4	5	2	2	9	4
Cap, veh/h	393	13	26	0	110	329	531	983	0	313	951	840
Arrive On Green	0.27	0.27	0.27	0.00	0.27	0.27	0.54	0.54	0.00	0.54	0.54	0.54
Sat Flow, veh/h	1098	48	100	0	412	1236	982	1826	0	765	1767	1560
Grp Volume(v), veh/h	250	0	0	0	0	12	28	673	0	5	332	54
Grp Sat Flow(s),veh/h/ln	1245	0	0	0	0	1648	982	1826	0	765	1767	1560
Q Serve(g_s), s	12.1	0.0	0.0	0.0	0.0	0.4	1.1	18.2	0.0	0.3	7.2	1.1
Cycle Q Clear(g_c), s	12.5	0.0	0.0	0.0	0.0	0.4	8.3	18.2	0.0	18.5	7.2	1.1
Prop In Lane	0.89		0.08	0.00		0.75	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	432	0	0	0	0	438	531	983	0	313	951	840
V/C Ratio(X)	0.58	0.00	0.00	0.00	0.00	0.03	0.05	0.68	0.00	0.02	0.35	0.06
Avail Cap(c_a), veh/h	937	0	0	0	0	1101	1335	2480	0	940	2399	2118
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.8	0.0	0.0	0.0	0.0	18.3	11.2	11.4	0.0	18.1	8.9	7.4
Incr Delay (d2), s/veh	4.4	0.0	0.0	0.0	0.0	0.1	0.1	3.1	0.0	0.1	0.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/lr	3.7	0.0	0.0	0.0	0.0	0.1	0.2	6.3	0.0	0.1	2.3	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.2	0.0	0.0	0.0	0.0	18.4	11.4	14.4	0.0	18.2	9.6	7.6
LnGrp LOS	C	A	A	A	A	B	B	B	A	B	A	A
Approach Vol, veh/h		250			12			701			391	
Approach Delay, s/veh		27.2			18.4			14.3			9.5	
Approach LOS		C			B			B			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		42.7		24.9		42.7		24.9				
Change Period (Y+Rc), s		* 6.3		6.9		* 6.3		6.9				
Max Green Setting (Gmax), s		* 92		45.1		* 92		45.1				
Max Q Clear Time (g_c+I1), s		20.5		14.5		20.2		2.4				
Green Ext Time (p_c), s		6.5		3.6		16.2		0.1				

Intersection Summary

HCM 6th Ctrl Delay	15.3
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	5	589	0	0	294
Future Vol, veh/h	0	5	589	0	0	294
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	5	2	2	9
Mvmt Flow	0	6	654	0	0	327

Major/Minor	Minor1	Major1	Major2	Major2	Major2
Conflicting Flow All	981	654	0	0	654
Stage 1	654	-	-	-	-
Stage 2	327	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	277	467	-	-	933
Stage 1	517	-	-	-	-
Stage 2	731	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	277	467	-	-	933
Mov Cap-2 Maneuver	277	-	-	-	-
Stage 1	517	-	-	-	-
Stage 2	731	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.8	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	467	933
HCM Lane V/C Ratio	-	-	0.012	-
HCM Control Delay (s)	-	-	12.8	0
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0	0

Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	0	0	0	0	2	0	540	1	0	294	2
Future Vol, veh/h	6	0	0	0	0	2	0	540	1	0	294	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	5	2	2	9	2
Mvmt Flow	7	0	0	0	0	2	0	600	1	0	327	2

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	930	929	328	929	930	601	329	0	0	601	0	0
Stage 1	328	328	-	601	601	-	-	-	-	-	-	-
Stage 2	602	601	-	328	329	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	248	268	713	248	267	500	1231	-	-	976	-	-
Stage 1	685	647	-	487	489	-	-	-	-	-	-	-
Stage 2	486	489	-	685	646	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	247	268	713	248	267	500	1231	-	-	976	-	-
Mov Cap-2 Maneuver	247	268	-	248	267	-	-	-	-	-	-	-
Stage 1	685	647	-	487	489	-	-	-	-	-	-	-
Stage 2	484	489	-	685	646	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	20		12.2		0		0	
HCM LOS	C		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1231	-	-	247	500	976	-	-
HCM Lane V/C Ratio	-	-	-	0.027	0.004	-	-	-
HCM Control Delay (s)	0	-	-	20	12.2	0	-	-
HCM Lane LOS	A	-	-	C	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-	-

HCM 6th TWSC
1: Cates Bay Highway & Highway 134

2022 Existing Conditions
PM Peak Hour

Intersection												
Int Delay, s/veh	3.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	51	0	81	0	0	0	38	120	0	0	216	62
Future Vol, veh/h	51	0	81	0	0	0	38	120	0	0	216	62
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	3
Mvmt Flow	57	0	90	0	0	0	42	133	0	0	240	69

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	492	492	275	537	526	133	309	0	0	133	0	0
Stage 1	275	275	-	217	217	-	-	-	-	-	-	-
Stage 2	217	217	-	320	309	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	487	478	764	455	457	916	1252	-	-	1452	-	-
Stage 1	731	683	-	785	723	-	-	-	-	-	-	-
Stage 2	785	723	-	692	660	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	474	461	764	390	441	916	1252	-	-	1452	-	-
Mov Cap-2 Maneuver	474	461	-	390	441	-	-	-	-	-	-	-
Stage 1	705	683	-	757	697	-	-	-	-	-	-	-
Stage 2	757	697	-	610	660	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	12.6		0		1.9		0	
HCM LOS	B		A					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1252	-	-	618	-	1452	-	-
HCM Lane V/C Ratio	0.034	-	-	0.237	-	-	-	-
HCM Control Delay (s)	8	0	-	12.6	0	0	-	-
HCM Lane LOS	A	A	-	B	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.9	-	0	-	-

HCM 6th TWSC
 2: Cates Bay Highway & N Pauley Road/Allen Dew Road

2022 Existing Conditions
 PM Peak Hour

Intersection												
Int Delay, s/veh	1.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	1	1	39	0	7	5	117	22	14	229	6
Future Vol, veh/h	4	1	1	39	0	7	5	117	22	14	229	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	5	2	2	2	2	2	2	2	2
Mvmt Flow	4	1	1	43	0	8	6	130	24	16	254	7

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	448	456	258	445	447	142	261	0	0	154	0	0
Stage 1	290	290	-	154	154	-	-	-	-	-	-	-
Stage 2	158	166	-	291	293	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.15	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.15	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.15	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.545	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	521	501	781	518	506	906	1303	-	-	1426	-	-
Stage 1	718	672	-	841	770	-	-	-	-	-	-	-
Stage 2	844	761	-	710	670	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	510	492	781	509	497	906	1303	-	-	1426	-	-
Mov Cap-2 Maneuver	510	492	-	509	497	-	-	-	-	-	-	-
Stage 1	714	663	-	837	766	-	-	-	-	-	-	-
Stage 2	833	757	-	699	661	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	11.8		12.3		0.3		0.4	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1303	-	-	538	545	1426	-	-
HCM Lane V/C Ratio	0.004	-	-	0.012	0.094	0.011	-	-
HCM Control Delay (s)	7.8	0	-	11.8	12.3	7.6	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.3	0	-	-

Intersection						
Int Delay, s/veh	2.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	138	3	76	263	1	58
Future Vol, veh/h	138	3	76	263	1	58
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	3	2	2	2
Mvmt Flow	153	3	84	292	1	64

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	156	0	615
Stage 1	-	-	-	-	155
Stage 2	-	-	-	-	460
Critical Hdwy	-	-	4.13	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.227	-	3.518
Pot Cap-1 Maneuver	-	-	1418	-	455
Stage 1	-	-	-	-	873
Stage 2	-	-	-	-	636
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1418	-	423
Mov Cap-2 Maneuver	-	-	-	-	423
Stage 1	-	-	-	-	873
Stage 2	-	-	-	-	591

Approach	EB	WB	NB
HCM Control Delay, s	0	1.7	9.4
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	875	-	-	1418	-
HCM Lane V/C Ratio	0.075	-	-	0.06	-
HCM Control Delay (s)	9.4	-	-	7.7	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.2	-

4: Pauley Swamp Road/Willow Springs Road & Allen Dew Road/Pitch Landing Road PM Peak Hour

Intersection	
Intersection Delay, s/veh	8.1
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	24	0	100	47	15	3	40	30	10	41	8
Future Vol, veh/h	3	24	0	100	47	15	3	40	30	10	41	8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	4	2	2	3	2	2	2	2
Mvmt Flow	3	26	0	109	51	16	3	43	33	11	45	9
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.6	8.5	7.7	7.8
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	11%	62%	17%
Vol Thru, %	55%	89%	29%	69%
Vol Right, %	41%	0%	9%	14%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	73	27	162	59
LT Vol	3	3	100	10
Through Vol	40	24	47	41
RT Vol	30	0	15	8
Lane Flow Rate	79	29	176	64
Geometry Grp	1	1	1	1
Degree of Util (X)	0.093	0.036	0.209	0.079
Departure Headway (Hd)	4.241	4.47	4.273	4.445
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	850	804	828	810
Service Time	2.244	2.48	2.367	2.449
HCM Lane V/C Ratio	0.093	0.036	0.213	0.079
HCM Control Delay	7.7	7.6	8.5	7.8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.3	0.1	0.8	0.3

HCM 6th Signalized Intersection Summary
5: US-701 & Pitch Landing Road

2022 Existing Conditions
PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	↕
Traffic Volume (veh/h)	97	7	31	1	3	4	35	368	1	15	569	125
Future Volume (veh/h)	97	7	31	1	3	4	35	368	1	15	569	125
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1530	1856	1796	1870	1870	1856	1870
Adj Flow Rate, veh/h	105	8	34	1	3	4	38	400	1	16	618	136
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	25	3	7	2	2	3	2
Cap, veh/h	271	24	51	93	115	125	410	1044	3	602	1082	924
Arrive On Green	0.15	0.15	0.15	0.15	0.15	0.15	0.58	0.58	0.58	0.58	0.58	0.58
Sat Flow, veh/h	979	165	344	68	778	846	704	1791	4	984	1856	1585
Grp Volume(v), veh/h	147	0	0	8	0	0	38	0	401	16	618	136
Grp Sat Flow(s),veh/h/ln1488	0	0	1693	0	0	704	0	1795	984	1856	1585	
Q Serve(g_s), s	4.1	0.0	0.0	0.0	0.0	0.0	1.8	0.0	5.9	0.4	10.2	1.9
Cycle Q Clear(g_c), s	4.5	0.0	0.0	0.2	0.0	0.0	12.0	0.0	5.9	6.3	10.2	1.9
Prop In Lane	0.71		0.23	0.12		0.50	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	346	0	0	333	0	0	410	0	1047	602	1082	924
V/C Ratio(X)	0.42	0.00	0.00	0.02	0.00	0.00	0.09	0.00	0.38	0.03	0.57	0.15
Avail Cap(c_a), veh/h	1058	0	0	1132	0	0	1229	0	3135	1747	3240	2768
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.7	0.0	0.0	17.9	0.0	0.0	10.1	0.0	5.5	7.2	6.4	4.7
Incr Delay (d2), s/veh	3.0	0.0	0.0	0.1	0.0	0.0	0.4	0.0	0.8	0.1	1.7	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln1.6	0.0	0.0	0.0	0.1	0.0	0.0	0.2	0.0	1.3	0.1	2.5	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.7	0.0	0.0	18.0	0.0	0.0	10.5	0.0	6.3	7.3	8.1	4.9
LnGrp LOS	C	A	A	B	A	A	B	A	A	A	A	A
Approach Vol, veh/h		147			8			439			770	
Approach Delay, s/veh		22.7			18.0			6.7			7.5	
Approach LOS		C			B			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		34.9		14.2		34.9		14.2				
Change Period (Y+Rc), s		* 6.3		6.9		* 6.3		6.9				
Max Green Setting (Gmax), s		* 86		31.1		* 86		31.1				
Max Q Clear Time (g_c+I1), s		12.2		6.5		14.0		2.2				
Green Ext Time (p_c), s		16.4		1.7		8.2		0.0				

Intersection Summary

HCM 6th Ctrl Delay	9.0
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	2	359	1	7	527
Future Vol, veh/h	0	2	359	1	7	527
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	8	2	2	3
Mvmt Flow	0	2	399	1	8	586

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1002	400	0	0	400
Stage 1	400	-	-	-	-
Stage 2	602	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	269	650	-	-	1159
Stage 1	677	-	-	-	-
Stage 2	547	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	266	650	-	-	1159
Mov Cap-2 Maneuver	266	-	-	-	-
Stage 1	677	-	-	-	-
Stage 2	542	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.6	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	650	1159
HCM Lane V/C Ratio	-	-	0.003	0.007
HCM Control Delay (s)	-	-	10.6	8.1
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0	0

Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	8	0	0	0	0	1	4	341	0	2	503	7
Future Vol, veh/h	8	0	0	0	0	1	4	341	0	2	503	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	8	2	2	4	2
Mvmt Flow	9	0	0	0	0	1	4	379	0	2	559	8

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	955	954	563	954	958	379	567	0	0	379	0	0
Stage 1	567	567	-	387	387	-	-	-	-	-	-	-
Stage 2	388	387	-	567	571	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	238	259	526	238	257	668	1005	-	-	1179	-	-
Stage 1	508	507	-	637	610	-	-	-	-	-	-	-
Stage 2	636	610	-	508	505	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	236	257	526	237	255	668	1005	-	-	1179	-	-
Mov Cap-2 Maneuver	236	257	-	237	255	-	-	-	-	-	-	-
Stage 1	505	506	-	634	607	-	-	-	-	-	-	-
Stage 2	632	607	-	507	504	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	20.9		10.4		0.1		0	
HCM LOS	C		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1005	-	-	236	668	1179	-	-
HCM Lane V/C Ratio	0.004	-	-	0.038	0.002	0.002	-	-
HCM Control Delay (s)	8.6	0	-	20.9	10.4	8.1	0	-
HCM Lane LOS	A	A	-	C	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-	-

2035 No-Build Conditions

Intersection												
Int Delay, s/veh	8.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	156	0	53	0	0	0	99	320	0	0	106	99
Future Vol, veh/h	156	0	53	0	0	0	99	320	0	0	106	99
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	3	2	2	2	3	2	2	2	2	2
Mvmt Flow	173	0	59	0	0	0	110	356	0	0	118	110

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	749	749	173	779	804	356	228	0	0	356	0	0
Stage 1	173	173	-	576	576	-	-	-	-	-	-	-
Stage 2	576	576	-	203	228	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.23	7.12	6.52	6.22	4.13	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.327	3.518	4.018	3.318	2.227	-	-	2.218	-	-
Pot Cap-1 Maneuver	328	341	868	313	316	688	1334	-	-	1203	-	-
Stage 1	829	756	-	503	502	-	-	-	-	-	-	-
Stage 2	503	502	-	799	715	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	302	306	868	269	283	688	1334	-	-	1203	-	-
Mov Cap-2 Maneuver	302	306	-	269	283	-	-	-	-	-	-	-
Stage 1	744	756	-	451	450	-	-	-	-	-	-	-
Stage 2	451	450	-	745	715	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	31.1		0		1.9		0	
HCM LOS	D		A					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1334	-	-	362	-	1203	-	-
HCM Lane V/C Ratio	0.082	-	-	0.641	-	-	-	-
HCM Control Delay (s)	7.9	0	-	31.1	0	0	-	-
HCM Lane LOS	A	A	-	D	A	A	-	-
HCM 95th %tile Q(veh)	0.3	-	-	4.3	-	0	-	-

Intersection												
Int Delay, s/veh	1.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	1	4	35	0	10	7	420	36	7	171	1
Future Vol, veh/h	6	1	4	35	0	10	7	420	36	7	171	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	1	4	39	0	11	8	467	40	8	190	1

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	716	730	191	712	710	487	191	0	0	507	0	0
Stage 1	207	207	-	503	503	-	-	-	-	-	-	-
Stage 2	509	523	-	209	207	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	345	349	851	347	359	581	1383	-	-	1058	-	-
Stage 1	795	731	-	551	541	-	-	-	-	-	-	-
Stage 2	547	530	-	793	731	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	334	343	851	340	353	581	1383	-	-	1058	-	-
Mov Cap-2 Maneuver	334	343	-	340	353	-	-	-	-	-	-	-
Stage 1	789	725	-	547	537	-	-	-	-	-	-	-
Stage 2	532	526	-	781	725	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	13.6		16.1		0.1		0.3	
HCM LOS	B		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1383	-	-	430	375	1058	-	-
HCM Lane V/C Ratio	0.006	-	-	0.028	0.133	0.007	-	-
HCM Control Delay (s)	7.6	0	-	13.6	16.1	8.4	0	-
HCM Lane LOS	A	A	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.5	0	-	-

Intersection						
Int Delay, s/veh	2.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	475	1	44	147	0	120
Future Vol, veh/h	475	1	44	147	0	120
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	3	2	2	2
Mvmt Flow	528	1	49	163	0	133

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	0	0	529	790
Stage 1	-	-	-	529
Stage 2	-	-	-	261
Critical Hdwy	-	-	4.13	6.42
Critical Hdwy Stg 1	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	5.42
Follow-up Hdwy	-	-	2.227	3.518
Pot Cap-1 Maneuver	-	-	1033	359
Stage 1	-	-	-	591
Stage 2	-	-	-	783
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	-	-	1033	340
Mov Cap-2 Maneuver	-	-	-	340
Stage 1	-	-	-	591
Stage 2	-	-	-	742

Approach	EB	WB	NB
HCM Control Delay, s	0	2	13.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	550	-	-	1033	-
HCM Lane V/C Ratio	0.242	-	-	0.047	-
HCM Control Delay (s)	13.6	-	-	8.7	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.9	-	-	0.1	-

4: Pauley Swamp Road/Willow Springs Road & Allen Dew Road/Pitch Landing Road AM Peak Hour

Intersection	
Intersection Delay, s/veh	8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	58	4	28	28	8	6	49	139	10	29	7
Future Vol, veh/h	6	58	4	28	28	8	6	49	139	10	29	7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	5	2	2	2	2	2	2	5	2
Mvmt Flow	7	63	4	30	30	9	7	53	151	11	32	8
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8	8.1	8.1	7.7
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	3%	9%	44%	22%
Vol Thru, %	25%	85%	44%	63%
Vol Right, %	72%	6%	12%	15%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	194	68	64	46
LT Vol	6	6	28	10
Through Vol	49	58	28	29
RT Vol	139	4	8	7
Lane Flow Rate	211	74	70	50
Geometry Grp	1	1	1	1
Degree of Util (X)	0.229	0.093	0.089	0.062
Departure Headway (Hd)	3.907	4.544	4.63	4.433
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	921	790	776	810
Service Time	1.917	2.564	2.649	2.448
HCM Lane V/C Ratio	0.229	0.094	0.09	0.062
HCM Control Delay	8.1	8	8.1	7.7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.9	0.3	0.3	0.2

HCM 6th Signalized Intersection Summary
5: US-701 & Pitch Landing Road

2035 No-Build Conditions
AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↘		↗	↘	↗
Traffic Volume (veh/h)	285	8	25	0	4	11	36	860	0	7	424	70
Future Volume (veh/h)	285	8	25	0	4	11	36	860	0	7	424	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1648	1870	1870	1870	1870	1841	1826	1870	1870	1767	1841
Adj Flow Rate, veh/h	310	9	27	0	4	12	39	935	0	8	461	76
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	17	2	2	2	2	4	5	2	2	9	4
Cap, veh/h	387	10	29	0	126	378	440	1085	0	155	1050	927
Arrive On Green	0.31	0.31	0.31	0.00	0.31	0.31	0.59	0.59	0.00	0.59	0.59	0.59
Sat Flow, veh/h	1096	32	95	0	412	1236	854	1826	0	599	1767	1560
Grp Volume(v), veh/h	346	0	0	0	0	16	39	935	0	8	461	76
Grp Sat Flow(s),veh/h/ln	1223	0	0	0	0	1648	854	1826	0	599	1767	1560
Q Serve(g_s), s	35.4	0.0	0.0	0.0	0.0	0.9	3.5	56.3	0.0	1.5	18.9	2.7
Cycle Q Clear(g_c), s	36.3	0.0	0.0	0.0	0.0	0.9	22.4	56.3	0.0	57.8	18.9	2.7
Prop In Lane	0.90		0.08	0.00		0.75	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	426	0	0	0	0	504	440	1085	0	155	1050	927
V/C Ratio(X)	0.81	0.00	0.00	0.00	0.00	0.03	0.09	0.86	0.00	0.05	0.44	0.08
Avail Cap(c_a), veh/h	470	0	0	0	0	562	525	1267	0	215	1226	1083
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.9	0.0	0.0	0.0	0.0	32.1	20.9	22.3	0.0	46.3	14.7	11.4
Incr Delay (d2), s/veh	13.9	0.0	0.0	0.0	0.0	0.1	0.3	8.1	0.0	0.5	1.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ft	2.3	0.0	0.0	0.0	0.0	0.4	0.7	24.2	0.0	0.2	7.4	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.8	0.0	0.0	0.0	0.0	32.2	21.2	30.4	0.0	46.8	15.8	11.6
LnGrp LOS	E	A	A	A	A	C	C	C	A	D	B	B
Approach Vol, veh/h		346			16			974			545	
Approach Delay, s/veh		58.8			32.2			30.1			15.6	
Approach LOS		E			C			C			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		84.8		47.3		84.8		47.3				
Change Period (Y+Rc), s		* 6.3		6.9		* 6.3		6.9				
Max Green Setting (Gmax), s		* 92		45.1		* 92		45.1				
Max Q Clear Time (g_c+I1), s		59.8		38.3		58.3		2.9				
Green Ext Time (p_c), s		8.6		2.1		20.2		0.1				

Intersection Summary

HCM 6th Ctrl Delay	31.2
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	7	819	0	0	409
Future Vol, veh/h	0	7	819	0	0	409
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	5	2	2	9
Mvmt Flow	0	8	910	0	0	454

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1364	910	0	0	910
Stage 1	910	-	-	-	-
Stage 2	454	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218
Pot Cap-1 Maneuver	163	333	-	-	748
Stage 1	393	-	-	-	-
Stage 2	640	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	163	333	-	-	748
Mov Cap-2 Maneuver	163	-	-	-	-
Stage 1	393	-	-	-	-
Stage 2	640	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	16.1	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	333	748
HCM Lane V/C Ratio	-	-	0.023	-
HCM Control Delay (s)	-	-	16.1	0
HCM Lane LOS	-	-	C	A
HCM 95th %tile Q(veh)	-	-	0.1	0

Intersection												
Int Delay, s/veh	0.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	8	0	0	0	0	3	0	751	1	0	409	3
Future Vol, veh/h	8	0	0	0	0	3	0	751	1	0	409	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	5	2	2	9	2
Mvmt Flow	9	0	0	0	0	3	0	834	1	0	454	3

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1292	1291	456	1291	1292	835	457	0	0	835	0	0
Stage 1	456	456	-	835	835	-	-	-	-	-	-	-
Stage 2	836	835	-	456	457	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	140	163	604	140	163	368	1104	-	-	798	-	-
Stage 1	584	568	-	362	383	-	-	-	-	-	-	-
Stage 2	362	383	-	584	568	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	139	163	604	140	163	368	1104	-	-	798	-	-
Mov Cap-2 Maneuver	139	163	-	140	163	-	-	-	-	-	-	-
Stage 1	584	568	-	362	383	-	-	-	-	-	-	-
Stage 2	359	383	-	584	568	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	32.7		14.9		0		0	
HCM LOS	D		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1104	-	-	139	368	798	-	-
HCM Lane V/C Ratio	-	-	-	0.064	0.009	-	-	-
HCM Control Delay (s)	0	-	-	32.7	14.9	0	-	-
HCM Lane LOS	A	-	-	D	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0	0	-	-

Intersection												
Int Delay, s/veh	4.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	71	0	113	0	0	0	53	167	0	0	300	86
Future Vol, veh/h	71	0	113	0	0	0	53	167	0	0	300	86
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	3
Mvmt Flow	79	0	126	0	0	0	59	186	0	0	333	96

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	685	685	381	748	733	186	429	0	0	186	0	0
Stage 1	381	381	-	304	304	-	-	-	-	-	-	-
Stage 2	304	304	-	444	429	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	362	371	666	329	348	856	1130	-	-	1388	-	-
Stage 1	641	613	-	705	663	-	-	-	-	-	-	-
Stage 2	705	663	-	593	584	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	346	349	666	255	328	856	1130	-	-	1388	-	-
Mov Cap-2 Maneuver	346	349	-	255	328	-	-	-	-	-	-	-
Stage 1	604	613	-	664	625	-	-	-	-	-	-	-
Stage 2	664	625	-	481	584	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	17.5	0	2	0
HCM LOS	C	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1130	-	-	491	-	1388	-
HCM Lane V/C Ratio	0.052	-	-	0.416	-	-	-
HCM Control Delay (s)	8.4	0	-	17.5	0	0	-
HCM Lane LOS	A	A	-	C	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	2	-	0	-

Intersection												
Int Delay, s/veh	2.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	1	1	54	0	10	7	163	31	19	318	8
Future Vol, veh/h	6	1	1	54	0	10	7	163	31	19	318	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	5	2	2	2	2	2	2	2	2
Mvmt Flow	7	1	1	60	0	11	8	181	34	21	353	9

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	620	631	358	615	618	198	362	0	0	215	0	0
Stage 1	400	400	-	214	214	-	-	-	-	-	-	-
Stage 2	220	231	-	401	404	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.15	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.15	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.15	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.545	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	400	398	686	399	405	843	1197	-	-	1355	-	-
Stage 1	626	602	-	781	725	-	-	-	-	-	-	-
Stage 2	782	713	-	620	599	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	387	387	686	389	394	843	1197	-	-	1355	-	-
Mov Cap-2 Maneuver	387	387	-	389	394	-	-	-	-	-	-	-
Stage 1	621	591	-	775	719	-	-	-	-	-	-	-
Stage 2	766	707	-	606	588	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14	15.2	0.3	0.4
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1197	-	-	409	425	1355	-	-
HCM Lane V/C Ratio	0.006	-	-	0.022	0.167	0.016	-	-
HCM Control Delay (s)	8	0	-	14	15.2	7.7	0	-
HCM Lane LOS	A	A	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.6	0	-	-

Intersection						
Int Delay, s/veh	2.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	192	4	106	366	1	81
Future Vol, veh/h	192	4	106	366	1	81
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	3	2	2	2
Mvmt Flow	213	4	118	407	1	90

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	217	0	858
Stage 1	-	-	-	-	215
Stage 2	-	-	-	-	643
Critical Hdwy	-	-	4.13	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.227	-	3.518
Pot Cap-1 Maneuver	-	-	1347	-	327
Stage 1	-	-	-	-	821
Stage 2	-	-	-	-	523
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1347	-	290
Mov Cap-2 Maneuver	-	-	-	-	290
Stage 1	-	-	-	-	821
Stage 2	-	-	-	-	464

Approach	EB	WB	NB
HCM Control Delay, s	0	1.8	10
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	807	-	-	1347	-
HCM Lane V/C Ratio	0.113	-	-	0.087	-
HCM Control Delay (s)	10	-	-	7.9	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.4	-	-	0.3	-

4: Pauley Swamp Road/Willow Springs Road & Allen Dew Road/Pitch Landing Road PM Peak Hour

Intersection	
Intersection Delay, s/veh	8.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	33	0	139	65	21	4	56	42	14	57	11
Future Vol, veh/h	4	33	0	139	65	21	4	56	42	14	57	11
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	4	2	2	3	2	2	2	2
Mvmt Flow	4	36	0	151	71	23	4	61	46	15	62	12
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8	9.5	8.2	8.3
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	11%	62%	17%
Vol Thru, %	55%	89%	29%	70%
Vol Right, %	41%	0%	9%	13%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	102	37	225	82
LT Vol	4	4	139	14
Through Vol	56	33	65	57
RT Vol	42	0	21	11
Lane Flow Rate	111	40	245	89
Geometry Grp	1	1	1	1
Degree of Util (X)	0.138	0.053	0.307	0.116
Departure Headway (Hd)	4.474	4.703	4.514	4.688
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	800	761	797	764
Service Time	2.504	2.737	2.54	2.721
HCM Lane V/C Ratio	0.139	0.053	0.307	0.116
HCM Control Delay	8.2	8	9.5	8.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.5	0.2	1.3	0.4

HCM 6th Signalized Intersection Summary
5: US-701 & Pitch Landing Road

2035 No-Build Conditions
PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	↕
Traffic Volume (veh/h)	135	10	43	1	4	6	49	512	1	21	791	174
Future Volume (veh/h)	135	10	43	1	4	6	49	512	1	21	791	174
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1530	1856	1796	1870	1870	1856	1870
Adj Flow Rate, veh/h	147	11	47	1	4	7	53	557	1	23	860	189
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	25	3	7	2	2	3	2
Cap, veh/h	262	20	62	55	120	179	280	1177	2	515	1218	1041
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.66	0.66	0.66	0.66	0.66	0.66
Sat Flow, veh/h	1023	111	338	41	660	981	534	1792	3	851	1856	1585
Grp Volume(v), veh/h	205	0	0	12	0	0	53	0	558	23	860	189
Grp Sat Flow(s),veh/h/ln	1472	0	0	1683	0	0	534	0	1796	851	1856	1585
Q Serve(g_s), s	10.3	0.0	0.0	0.0	0.0	0.0	5.8	0.0	12.7	1.1	24.3	3.8
Cycle Q Clear(g_c), s	10.8	0.0	0.0	0.5	0.0	0.0	30.1	0.0	12.7	13.8	24.3	3.8
Prop In Lane	0.72		0.23	0.08		0.58	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	344	0	0	354	0	0	280	0	1179	515	1218	1041
V/C Ratio(X)	0.60	0.00	0.00	0.03	0.00	0.00	0.19	0.00	0.47	0.04	0.71	0.18
Avail Cap(c_a), veh/h	632	0	0	678	0	0	488	0	1878	846	1940	1657
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.8	0.0	0.0	27.6	0.0	0.0	18.6	0.0	7.0	10.5	9.0	5.5
Incr Delay (d2), s/veh	5.9	0.0	0.0	0.1	0.0	0.0	1.2	0.0	1.1	0.1	2.7	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	0.0	0.0	0.2	0.0	0.0	0.7	0.0	3.8	0.2	7.8	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.7	0.0	0.0	27.7	0.0	0.0	19.8	0.0	8.1	10.6	11.7	5.8
LnGrp LOS	D	A	A	C	A	A	B	A	A	B	B	A
Approach Vol, veh/h		205			12			611			1072	
Approach Delay, s/veh		37.7			27.7			9.1			10.7	
Approach LOS		D			C			A			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		60.1		21.8		60.1		21.8				
Change Period (Y+Rc), s		* 6.3		6.9		* 6.3		6.9				
Max Green Setting (Gmax), s		* 86		31.1		* 86		31.1				
Max Q Clear Time (g_c+I1), s		26.3		12.8		32.1		2.5				
Green Ext Time (p_c), s		27.5		2.2		12.9		0.1				

Intersection Summary

HCM 6th Ctrl Delay	13.2
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	3	499	1	10	733
Future Vol, veh/h	0	3	499	1	10	733
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	8	2	2	3
Mvmt Flow	0	3	554	1	11	814

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1391	555	0	0	555	0
Stage 1	555	-	-	-	-	-
Stage 2	836	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	157	531	-	-	1015	-
Stage 1	575	-	-	-	-	-
Stage 2	425	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	154	531	-	-	1015	-
Mov Cap-2 Maneuver	154	-	-	-	-	-
Stage 1	575	-	-	-	-	-
Stage 2	417	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.8	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	531	1015
HCM Lane V/C Ratio	-	-	0.006	0.011
HCM Control Delay (s)	-	-	11.8	8.6
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0	0

Intersection												
Int Delay, s/veh	0.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	11	0	0	0	0	1	6	474	0	3	699	10
Future Vol, veh/h	11	0	0	0	0	1	6	474	0	3	699	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	8	2	2	4	2
Mvmt Flow	12	0	0	0	0	1	7	527	0	3	777	11

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	1331	1330	783	1330	1335	527	788	0	0	527	0	0
Stage 1	789	789	-	541	541	-	-	-	-	-	-	-
Stage 2	542	541	-	789	794	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	132	155	394	132	154	551	831	-	-	1040	-	-
Stage 1	384	402	-	525	521	-	-	-	-	-	-	-
Stage 2	525	521	-	384	400	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	130	152	394	130	151	551	831	-	-	1040	-	-
Mov Cap-2 Maneuver	130	152	-	130	151	-	-	-	-	-	-	-
Stage 1	379	400	-	519	515	-	-	-	-	-	-	-
Stage 2	518	515	-	382	398	-	-	-	-	-	-	-

Approach	EB		WB		NB			SB		
HCM Control Delay, s	35.5		11.5		0.1			0		
HCM LOS	E		B							

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	831	-	-	130	551	1040	-	-
HCM Lane V/C Ratio	0.008	-	-	0.094	0.002	0.003	-	-
HCM Control Delay (s)	9.4	0	-	35.5	11.5	8.5	0	-
HCM Lane LOS	A	A	-	E	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0	0	-	-

2035 Build Conditions

HCM 6th TWSC
 1: Cates Bay Highway & Highway 134

2035 Build Conditions
 AM Peak Hour

Intersection												
Int Delay, s/veh	11.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	156	0	53	0	0	0	99	362	0	0	183	99
Future Vol, veh/h	156	0	53	0	0	0	99	362	0	0	183	99
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	3	2	2	2	3	2	2	2	2	2
Mvmt Flow	173	0	59	0	0	0	110	402	0	0	203	110

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	880	880	258	910	935	402	313	0	0	402	0	0
Stage 1	258	258	-	622	622	-	-	-	-	-	-	-
Stage 2	622	622	-	288	313	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.23	7.12	6.52	6.22	4.13	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.327	3.518	4.018	3.318	2.227	-	-	2.218	-	-
Pot Cap-1 Maneuver	268	286	778	255	265	648	1242	-	-	1157	-	-
Stage 1	747	694	-	474	479	-	-	-	-	-	-	-
Stage 2	474	479	-	720	657	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	245	253	778	215	235	648	1242	-	-	1157	-	-
Mov Cap-2 Maneuver	245	253	-	215	235	-	-	-	-	-	-	-
Stage 1	662	694	-	420	424	-	-	-	-	-	-	-
Stage 2	420	424	-	666	657	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	49.7		0		1.8		0	
HCM LOS	E		A					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1242	-	-	297	-	1157	-
HCM Lane V/C Ratio	0.089	-	-	0.782	-	-	-
HCM Control Delay (s)	8.2	0	-	49.7	0	0	-
HCM Lane LOS	A	A	-	E	A	A	-
HCM 95th %tile Q(veh)	0.3	-	-	6.1	-	0	-

HCM 6th TWSC
 2: Cates Bay Highway & N Pauley Road/Allen Dew Road

2035 Build Conditions
 AM Peak Hour

Intersection												
Int Delay, s/veh	3.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	1	4	112	0	10	7	420	78	7	171	1
Future Vol, veh/h	6	1	4	112	0	10	7	420	78	7	171	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	1	4	124	0	11	8	467	87	8	190	1

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	739	777	191	736	734	511	191	0	0	554	0	0
Stage 1	207	207	-	527	527	-	-	-	-	-	-	-
Stage 2	532	570	-	209	207	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	333	328	851	335	347	563	1383	-	-	1016	-	-
Stage 1	795	731	-	535	528	-	-	-	-	-	-	-
Stage 2	531	505	-	793	731	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	322	322	851	328	341	563	1383	-	-	1016	-	-
Mov Cap-2 Maneuver	322	322	-	328	341	-	-	-	-	-	-	-
Stage 1	789	724	-	531	524	-	-	-	-	-	-	-
Stage 2	516	501	-	781	724	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	13.9		22.4		0.1		0.3	
HCM LOS	B		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1383	-	-	416	340	1016	-
HCM Lane V/C Ratio	0.006	-	-	0.029	0.399	0.008	-
HCM Control Delay (s)	7.6	0	-	13.9	22.4	8.6	0
HCM Lane LOS	A	A	-	B	C	A	A
HCM 95th %tile Q(veh)	0	-	-	0.1	1.9	0	-

Intersection						
Int Delay, s/veh	9.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	475	1	171	147	0	354
Future Vol, veh/h	475	1	171	147	0	354
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	3	2	2	2
Mvmt Flow	528	1	190	163	0	393

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	529	0	1072
Stage 1	-	-	-	-	529
Stage 2	-	-	-	-	543
Critical Hdwy	-	-	4.13	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.227	-	3.518
Pot Cap-1 Maneuver	-	-	1033	-	244
Stage 1	-	-	-	-	591
Stage 2	-	-	-	-	582
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1033	-	195
Mov Cap-2 Maneuver	-	-	-	-	195
Stage 1	-	-	-	-	591
Stage 2	-	-	-	-	464

Approach	EB	WB	NB
HCM Control Delay, s	0	5	26.3
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	550	-	-	1033	-
HCM Lane V/C Ratio	0.715	-	-	0.184	-
HCM Control Delay (s)	26.3	-	-	9.3	0
HCM Lane LOS	D	-	-	A	A
HCM 95th %tile Q(veh)	5.8	-	-	0.7	-

4: Pauley Swamp Road/Willow Springs Road & Allen Dew Road/Pitch Landing Road AM Peak Hour

Intersection	
Intersection Delay, s/veh	11.9
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕		↕			↕	
Traffic Vol, veh/h	6	100	4	106	105	242	6	49	181	137	29	7
Future Vol, veh/h	6	100	4	106	105	242	6	49	181	137	29	7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	5	2	2	2	2	2	2	5	2
Mvmt Flow	7	109	4	115	114	263	7	53	197	149	32	8
Number of Lanes	0	1	0	0	1	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	1
HCM Control Delay	10.6	12.2	11.8	11.9
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	3%	5%	50%	0%	79%
Vol Thru, %	21%	91%	50%	0%	17%
Vol Right, %	77%	4%	0%	100%	4%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	236	110	211	242	173
LT Vol	6	6	106	0	137
Through Vol	49	100	105	0	29
RT Vol	181	4	0	242	7
Lane Flow Rate	257	120	229	263	188
Geometry Grp	2	5	7	7	2
Degree of Util (X)	0.383	0.201	0.402	0.386	0.316
Departure Headway (Hd)	5.372	6.048	6.303	5.287	6.055
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	667	591	571	679	592
Service Time	3.425	4.112	4.05	3.034	4.113
HCM Lane V/C Ratio	0.385	0.203	0.401	0.387	0.318
HCM Control Delay	11.8	10.6	13.3	11.3	11.9
HCM Lane LOS	B	B	B	B	B
HCM 95th-tile Q	1.8	0.7	1.9	1.8	1.3

HCM 6th Signalized Intersection Summary
5: US-701 & Pitch Landing Road

2035 Build Conditions
AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↘		↗	↘	↗
Traffic Volume (veh/h)	519	8	67	0	4	11	114	1406	0	7	720	197
Future Volume (veh/h)	519	8	67	0	4	11	114	1406	0	7	720	197
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1648	1870	1870	1870	1870	1841	1826	1870	1870	1767	1841
Adj Flow Rate, veh/h	564	9	73	0	4	12	124	1528	0	8	783	214
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	17	2	2	2	2	4	5	2	2	9	4
Cap, veh/h	396	6	45	0	135	405	189	1068	0	48	1033	912
Arrive On Green	0.33	0.33	0.33	0.00	0.33	0.33	0.58	0.58	0.00	0.58	0.58	0.58
Sat Flow, veh/h	1071	17	139	0	412	1236	556	1826	0	341	1767	1560
Grp Volume(v), veh/h	646	0	0	0	0	16	124	1528	0	8	783	214
Grp Sat Flow(s),veh/h/ln	227	0	0	0	0	1648	556	1826	0	341	1767	1560
Q Serve(g_s), s	48.1	0.0	0.0	0.0	0.0	1.0	32.1	87.7	0.0	0.0	49.6	9.9
Cycle Q Clear(g_c), s	49.1	0.0	0.0	0.0	0.0	1.0	81.7	87.7	0.0	87.7	49.6	9.9
Prop In Lane	0.87		0.11	0.00		0.75	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	447	0	0	0	0	539	189	1068	0	48	1033	912
V/C Ratio(X)	1.45	0.00	0.00	0.00	0.00	0.03	0.66	1.43	0.00	0.17	0.76	0.23
Avail Cap(c_a), veh/h	447	0	0	0	0	539	189	1068	0	48	1033	912
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.4	0.0	0.0	0.0	0.0	34.3	53.7	31.1	0.0	75.0	23.2	15.0
Incr Delay (d2), s/veh	213.2	0.0	0.0	0.0	0.0	0.1	14.1	199.5	0.0	5.8	4.7	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh	43.5	0.0	0.0	0.0	0.0	0.4	5.1	94.6	0.0	0.4	20.7	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	266.6	0.0	0.0	0.0	0.0	34.4	67.8	230.7	0.0	80.8	27.9	15.5
LnGrp LOS	F	A	A	A	A	C	E	F	A	F	C	B
Approach Vol, veh/h		646			16			1652			1005	
Approach Delay, s/veh		266.6			34.4			218.5			25.7	
Approach LOS		F			C			F			C	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		94.0		56.0		94.0		56.0				
Change Period (Y+Rc), s		* 6.3		6.9		* 6.3		6.9				
Max Green Setting (Gmax), s		* 88		49.1		* 88		49.1				
Max Q Clear Time (g_c+I1), s		89.7		51.1		89.7		3.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.1				

Intersection Summary

HCM 6th Ctrl Delay	168.6
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection												
Int Delay, s/veh	842.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↕		↖	↗			↖	↗
Traffic Vol, veh/h	390	0	234	0	0	7	127	1053	0	0	535	212
Future Vol, veh/h	390	0	234	0	0	7	127	1053	0	0	535	212
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	-	-	-	150	-	-	-	-	350
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	5	2	2	9	2
Mvmt Flow	433	0	260	0	0	8	141	1170	0	0	594	236

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2050	2046	594	2294	2282	1170	830	0	0	1170	0	0
Stage 1	594	594	-	1452	1452	-	-	-	-	-	-	-
Stage 2	1456	1452	-	842	830	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	~ 41	56	505	27	40	235	802	-	-	597	-	-
Stage 1	491	493	-	162	195	-	-	-	-	-	-	-
Stage 2	~ 161	195	-	359	385	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 34	46	505	11	33	235	802	-	-	597	-	-
Mov Cap-2 Maneuver	~ 34	46	-	11	33	-	-	-	-	-	-	-
Stage 1	~ 405	493	-	133	161	-	-	-	-	-	-	-
Stage 2	~ 128	161	-	174	385	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	3450.2		20.8		1.1		0	
HCM LOS	F		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	802	-	-	34	505	235	597	-	-
HCM Lane V/C Ratio	0.176	-	-	12.745	0.515	0.033	-	-	-
HCM Control Delay (s)	10.4	-	-	\$ 5508.7	19.4	20.8	0	-	-
HCM Lane LOS	B	-	-	F	C	C	A	-	-
HCM 95th %tile Q(veh)	0.6	-	-	53	2.9	0.1	0	-	-

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection												
Int Delay, s/veh	255.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↕		↖	↗		↖	↗	
Traffic Vol, veh/h	242	0	155	0	0	3	85	878	1	0	643	129
Future Vol, veh/h	242	0	155	0	0	3	85	878	1	0	643	129
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	-	-	-	150	-	-	-	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	5	2	2	9	2
Mvmt Flow	269	0	172	0	0	3	94	976	1	0	714	143

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1880	1879	714	2037	2022	977	857	0	0	977	0	0
Stage 1	714	714	-	1165	1165	-	-	-	-	-	-	-
Stage 2	1166	1165	-	872	857	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	~ 54	71	431	42	58	304	783	-	-	706	-	-
Stage 1	422	435	-	237	268	-	-	-	-	-	-	-
Stage 2	~ 236	268	-	345	374	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 48	62	431	23	51	304	783	-	-	706	-	-
Mov Cap-2 Maneuver	~ 48	62	-	23	51	-	-	-	-	-	-	-
Stage 1	371	435	-	209	236	-	-	-	-	-	-	-
Stage 2	~ 205	236	-	207	374	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, \$1371.8		17	0.9	0
HCM LOS	F	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	783	-	-	48	431	304	706	-	-
HCM Lane V/C Ratio	0.121	-	-	5.602	0.4	0.011	-	-	-
HCM Control Delay (s)	10.2	-	-	\$ 2238.4	18.8	17	0	-	-
HCM Lane LOS	B	-	-	F	C	C	A	-	-
HCM 95th %tile Q(veh)	0.4	-	-	30.9	1.9	0	0	-	-

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection						
Int Delay, s/veh	46.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↖	↑	↗	↖
Traffic Vol, veh/h	360	169	127	188	311	234
Future Vol, veh/h	360	169	127	188	311	234
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	200	150	-	150	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	3	2	4	2	2	2
Mvmt Flow	400	188	141	209	346	260

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	588	0	891
Stage 1	-	-	-	-	400
Stage 2	-	-	-	-	491
Critical Hdwy	-	-	4.14	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.236	-	3.518
Pot Cap-1 Maneuver	-	-	977	-	~ 313
Stage 1	-	-	-	-	677
Stage 2	-	-	-	-	615
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	977	-	~ 268
Mov Cap-2 Maneuver	-	-	-	-	~ 268
Stage 1	-	-	-	-	677
Stage 2	-	-	-	-	526

Approach	EB	WB	NB
HCM Control Delay, s	0	3.8	116.3
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	268	650	-	-	977	-
HCM Lane V/C Ratio	1.289	0.4	-	-	0.144	-
HCM Control Delay (s)	193.2	14.2	-	-	9.3	-
HCM Lane LOS	F	B	-	-	A	-
HCM 95th %tile Q(veh)	17.2	1.9	-	-	0.5	-

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 6th Signalized Intersection Summary

5: US-701 & Pitch Landing Road

2035 Build + IMPS
AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↔			↔		↔	↔↔		↔	↔↔	↔
Traffic Volume (veh/h)	519	8	67	0	4	11	114	1406	0	7	720	197
Future Volume (veh/h)	519	8	67	0	4	11	114	1406	0	7	720	197
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1648	1870	1870	1870	1870	1841	1826	1870	1870	1767	1841
Adj Flow Rate, veh/h	564	9	73	0	4	12	124	1528	0	8	783	214
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	17	2	2	2	2	4	5	2	2	9	4
Cap, veh/h	634	53	430	0	35	105	295	1753	0	124	1252	582
Arrive On Green	0.18	0.34	0.34	0.00	0.08	0.08	0.06	0.51	0.00	0.37	0.37	0.37
Sat Flow, veh/h	3428	156	1265	0	412	1236	1753	3561	0	341	3357	1560
Grp Volume(v), veh/h	564	0	82	0	0	16	124	1528	0	8	783	214
Grp Sat Flow(s),veh/h/ln	714	0	1420	0	0	1648	1753	1735	0	341	1678	1560
Q Serve(g_s), s	13.7	0.0	3.5	0.0	0.0	0.8	3.5	33.2	0.0	1.8	16.3	8.5
Cycle Q Clear(g_c), s	13.7	0.0	3.5	0.0	0.0	0.8	3.5	33.2	0.0	23.7	16.3	8.5
Prop In Lane	1.00		0.89	0.00		0.75	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	634	0	483	0	0	139	295	1753	0	124	1252	582
V/C Ratio(X)	0.89	0.00	0.17	0.00	0.00	0.11	0.42	0.87	0.00	0.06	0.63	0.37
Avail Cap(c_a), veh/h	643	0	799	0	0	502	371	1781	0	124	1252	582
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.9	0.0	19.7	0.0	0.0	36.1	16.0	18.6	0.0	34.1	21.9	19.4
Incr Delay (d2), s/veh	14.3	0.0	0.6	0.0	0.0	1.3	1.0	5.9	0.0	0.8	2.0	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.6	0.0	1.1	0.0	0.0	0.3	1.3	12.6	0.0	0.2	6.1	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.3	0.0	20.3	0.0	0.0	37.4	16.9	24.6	0.0	34.9	23.9	20.8
LnGrp LOS	D	A	C	A	A	D	B	C	A	C	C	C
Approach Vol, veh/h		646			16			1652			1005	
Approach Delay, s/veh		44.7			37.4			24.0			23.3	
Approach LOS		D			D			C			C	
Timer - Assigned Phs	1	2		4		6	7	8				
Phs Duration (G+Y+Rc), s	1.3	38.1		35.9		49.4	21.8	14.1				
Change Period (Y+Rc), s	6.0	* 6.3		6.9		* 6.3	6.0	6.9				
Max Green Setting (Gmax), s	9.0	* 29		48.0		* 44	16.0	26.0				
Max Q Clear Time (g_c+I),s	11.5	25.7		5.5		35.2	15.7	2.8				
Green Ext Time (p_c), s	0.1	2.4		1.1		7.9	0.1	0.1				

Intersection Summary

HCM 6th Ctrl Delay	27.9
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
6: US-701 & Access #1/Lake Way Drive

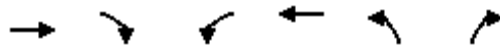
2035 Build + IMPS
AM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	390	0	234	0	0	7	127	1053	0	0	535	212
Future Volume (veh/h)	390	0	234	0	0	7	127	1053	0	0	535	212
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1826	1870	1870	1767	1870
Adj Flow Rate, veh/h	433	0	260	0	0	8	141	1170	0	0	594	236
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	5	2	2	9	2
Cap, veh/h	449	0	442	0	0	61	340	1146	0	0	938	842
Arrive On Green	0.19	0.00	0.28	0.00	0.00	0.04	0.05	0.63	0.00	0.00	0.53	0.53
Sat Flow, veh/h	1781	0	1585	0	0	1585	1781	1826	0	0	1767	1585
Grp Volume(v), veh/h	433	0	260	0	0	8	141	1170	0	0	594	236
Grp Sat Flow(s),veh/h/ln	1781	0	1585	0	0	1585	1781	1826	0	0	1767	1585
Q Serve(g_s), s	25.0	0.0	18.2	0.0	0.0	0.6	4.5	81.0	0.0	0.0	30.6	10.6
Cycle Q Clear(g_c), s	25.0	0.0	18.2	0.0	0.0	0.6	4.5	81.0	0.0	0.0	30.6	10.6
Prop In Lane	1.00		1.00	0.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	449	0	442	0	0	61	340	1146	0	0	938	842
V/C Ratio(X)	0.96	0.00	0.59	0.00	0.00	0.13	0.42	1.02	0.00	0.00	0.63	0.28
Avail Cap(c_a), veh/h	449	0	578	0	0	197	374	1146	0	0	938	842
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	48.7	0.0	40.1	0.0	0.0	59.9	16.6	24.0	0.0	0.0	21.4	16.7
Incr Delay (d2), s/veh	33.5	0.0	1.2	0.0	0.0	0.9	0.8	31.9	0.0	0.0	1.4	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	7.3	0.0	0.0	0.3	1.7	40.2	0.0	0.0	12.8	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	82.2	0.0	41.3	0.0	0.0	60.8	17.4	55.9	0.0	0.0	22.8	16.9
LnGrp LOS	F	A	D	A	A	E	B	F	A	A	C	B
Approach Vol, veh/h		693			8			1311			830	
Approach Delay, s/veh		66.9			60.8			51.7			21.1	
Approach LOS		E			E			D			C	
Timer - Assigned Phs		2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s		87.0		42.0	12.5	74.5	31.0	11.0				
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s		81.0		47.0	9.0	66.0	25.0	16.0				
Max Q Clear Time (g_c+l1), s		83.0		20.2	6.5	32.6	27.0	2.6				
Green Ext Time (p_c), s		0.0		1.8	0.1	5.5	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			46.5									
HCM 6th LOS			D									

HCM 6th Signalized Intersection Summary
8: Access #3 & Pitch Landing Road

2035 Build + IMPS
AM Peak Hour



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↖	↑	↖	↗
Traffic Volume (veh/h)	360	169	127	188	311	234
Future Volume (veh/h)	360	169	127	188	311	234
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1870	1841	1870	1870	1870
Adj Flow Rate, veh/h	400	188	141	209	346	260
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	3	2	4	2	2	2
Cap, veh/h	760	649	391	766	489	435
Arrive On Green	0.41	0.41	0.41	0.41	0.27	0.27
Sat Flow, veh/h	1856	1585	815	1870	1781	1585
Grp Volume(v), veh/h	400	188	141	209	346	260
Grp Sat Flow(s),veh/h/ln	1856	1585	815	1870	1781	1585
Q Serve(g_s), s	6.2	3.0	6.0	2.8	6.6	5.4
Cycle Q Clear(g_c), s	6.2	3.0	12.2	2.8	6.6	5.4
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	760	649	391	766	489	435
V/C Ratio(X)	0.53	0.29	0.36	0.27	0.71	0.60
Avail Cap(c_a), veh/h	1221	1043	593	1231	1078	959
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.4	7.5	13.0	7.5	12.4	12.0
Incr Delay (d2), s/veh	0.6	0.2	0.6	0.2	1.9	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.8	0.8	0.7	2.3	1.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	9.0	7.8	13.6	7.6	14.3	13.3
LnGrp LOS	A	A	B	A	B	B
Approach Vol, veh/h	588			350	606	
Approach Delay, s/veh	8.6			10.0	13.9	
Approach LOS	A			B	B	
Timer - Assigned Phs		2		4		8
Phs Duration (G+Y+Rc), s		16.4		21.6		21.6
Change Period (Y+Rc), s		6.0		6.0		6.0
Max Green Setting (Gmax), s		23.0		25.0		25.0
Max Q Clear Time (g_c+l1), s		8.6		8.2		14.2
Green Ext Time (p_c), s		1.8		2.9		1.4
Intersection Summary						
HCM 6th Ctrl Delay			11.0			
HCM 6th LOS			B			

Intersection												
Int Delay, s/veh	4.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	71	0	113	0	0	0	53	251	0	0	364	86
Future Vol, veh/h	71	0	113	0	0	0	53	251	0	0	364	86
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	3
Mvmt Flow	79	0	126	0	0	0	59	279	0	0	404	96

Major/Minor	Minor2		Minor1			Major1		Major2				
Conflicting Flow All	849	849	452	912	897	279	500	0	0	279	0	0
Stage 1	452	452	-	397	397	-	-	-	-	-	-	-
Stage 2	397	397	-	515	500	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	281	298	608	255	279	760	1064	-	-	1284	-	-
Stage 1	587	570	-	629	603	-	-	-	-	-	-	-
Stage 2	629	603	-	543	543	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	267	278	608	192	261	760	1064	-	-	1284	-	-
Mov Cap-2 Maneuver	267	278	-	192	261	-	-	-	-	-	-	-
Stage 1	548	570	-	587	563	-	-	-	-	-	-	-
Stage 2	587	563	-	431	543	-	-	-	-	-	-	-

Approach	EB		WB			NB		SB		
HCM Control Delay, s	22.4		0			1.5		0		
HCM LOS	C		A							

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1064	-	-	407	-	1284	-
HCM Lane V/C Ratio	0.055	-	-	0.502	-	-	-
HCM Control Delay (s)	8.6	0	-	22.4	0	0	-
HCM Lane LOS	A	A	-	C	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	2.7	-	0	-

Intersection												
Int Delay, s/veh	3.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	1	1	118	0	10	7	163	115	19	318	8
Future Vol, veh/h	6	1	1	118	0	10	7	163	115	19	318	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	5	2	2	2	2	2	2	2	2
Mvmt Flow	7	1	1	131	0	11	8	181	128	21	353	9

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	667	725	358	662	665	245	362	0	0	309	0	0
Stage 1	400	400	-	261	261	-	-	-	-	-	-	-
Stage 2	267	325	-	401	404	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.15	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.15	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.15	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.545	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	372	352	686	371	381	794	1197	-	-	1252	-	-
Stage 1	626	602	-	737	692	-	-	-	-	-	-	-
Stage 2	738	649	-	620	599	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	359	342	686	361	370	794	1197	-	-	1252	-	-
Mov Cap-2 Maneuver	359	342	-	361	370	-	-	-	-	-	-	-
Stage 1	621	589	-	731	686	-	-	-	-	-	-	-
Stage 2	722	644	-	605	586	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	14.7		20.2		0.2		0.4	
HCM LOS	B		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1197	-	-	379	377	1252	-
HCM Lane V/C Ratio	0.006	-	-	0.023	0.377	0.017	-
HCM Control Delay (s)	8	0	-	14.7	20.2	7.9	0
HCM Lane LOS	A	A	-	B	C	A	A
HCM 95th %tile Q(veh)	0	-	-	0.1	1.7	0.1	-

Intersection						
Int Delay, s/veh	5.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	192	4	359	366	1	273
Future Vol, veh/h	192	4	359	366	1	273
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	3	2	2	2
Mvmt Flow	213	4	399	407	1	303

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	217	0	1420 215
Stage 1	-	-	-	-	215 -
Stage 2	-	-	-	-	1205 -
Critical Hdwy	-	-	4.13	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	-	-	2.227	-	3.518 3.318
Pot Cap-1 Maneuver	-	-	1347	-	150 825
Stage 1	-	-	-	-	821 -
Stage 2	-	-	-	-	284 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1347	-	93 825
Mov Cap-2 Maneuver	-	-	-	-	93 -
Stage 1	-	-	-	-	821 -
Stage 2	-	-	-	-	175 -

Approach	EB	WB	NB
HCM Control Delay, s	0	4.4	12.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	802	-	-	1347	-
HCM Lane V/C Ratio	0.38	-	-	0.296	-
HCM Control Delay (s)	12.2	-	-	8.8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	1.8	-	-	1.2	-

4: Pauley Swamp Road/Willow Springs Road & Allen Dew Road/Pitch Landing Road^{PM Peak Hour}

Intersection	
Intersection Delay, s/veh	18.5
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕		↕			↕	
Traffic Vol, veh/h	4	117	0	203	129	213	4	56	126	267	57	11
Future Vol, veh/h	4	117	0	203	129	213	4	56	126	267	57	11
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	4	2	2	3	2	2	2	2
Mvmt Flow	4	127	0	221	140	232	4	61	137	290	62	12
Number of Lanes	0	1	0	0	1	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	1
HCM Control Delay	12.6	19.9	13.1	21.5
HCM LOS	B	C	B	C

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	2%	3%	61%	0%	80%
Vol Thru, %	30%	97%	39%	0%	17%
Vol Right, %	68%	0%	0%	100%	3%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	186	121	332	213	335
LT Vol	4	4	203	0	267
Through Vol	56	117	129	0	57
RT Vol	126	0	0	213	11
Lane Flow Rate	202	132	361	232	364
Geometry Grp	2	5	7	7	2
Degree of Util (X)	0.361	0.258	0.701	0.386	0.661
Departure Headway (Hd)	6.426	7.073	6.998	6.007	6.534
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	560	508	516	600	553
Service Time	4.471	5.128	4.739	3.747	4.57
HCM Lane V/C Ratio	0.361	0.26	0.7	0.387	0.658
HCM Control Delay	13.1	12.6	24.6	12.5	21.5
HCM Lane LOS	B	B	C	B	C
HCM 95th-tile Q	1.6	1	5.5	1.8	4.8

HCM 6th Signalized Intersection Summary
5: US-701 & Pitch Landing Road

2035 Build Conditions
PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↙	↘		↙	↘	↙
Traffic Volume (veh/h)	327	10	127	1	4	6	113	961	1	21	1381	427
Future Volume (veh/h)	327	10	127	1	4	6	113	961	1	21	1381	427
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1530	1856	1796	1870	1870	1856	1870
Adj Flow Rate, veh/h	355	11	138	1	4	7	123	1045	1	23	1501	464
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	25	3	7	2	2	3	2
Cap, veh/h	294	8	96	47	157	244	55	1183	1	155	1223	1045
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.66	0.66	0.66	0.66	0.66	0.66
Sat Flow, veh/h	1032	32	401	72	657	1020	221	1794	2	539	1856	1585
Grp Volume(v), veh/h	504	0	0	12	0	0	123	0	1046	23	1501	464
Grp Sat Flow(s),veh/h/ln	465	0	0	1748	0	0	221	0	1796	539	1856	1585
Q Serve(g_s), s	30.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	61.8	4.7	85.7	18.3
Cycle Q Clear(g_c), s	31.1	0.0	0.0	0.7	0.0	0.0	85.7	0.0	61.8	66.5	85.7	18.3
Prop In Lane	0.70		0.27	0.08		0.58	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	398	0	0	448	0	0	55	0	1184	155	1223	1045
V/C Ratio(X)	1.27	0.00	0.00	0.03	0.00	0.00	2.22	0.00	0.88	0.15	1.23	0.44
Avail Cap(c_a), veh/h	398	0	0	448	0	0	55	0	1184	155	1223	1045
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.2	0.0	0.0	37.9	0.0	0.0	65.0	0.0	18.1	45.2	22.1	10.7
Incr Delay (d2), s/veh	138.9	0.0	0.0	0.1	0.0	0.0	603.2	0.0	9.3	1.6	109.6	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh	28.3	0.0	0.0	0.3	0.0	0.0	11.1	0.0	25.0	0.7	68.7	6.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	190.1	0.0	0.0	38.0	0.0	0.0	668.2	0.0	27.4	46.8	131.7	11.7
LnGrp LOS	F	A	A	D	A	A	F	A	C	D	F	B
Approach Vol, veh/h		504			12			1169			1988	
Approach Delay, s/veh		190.1			38.0			94.8			102.8	
Approach LOS		F			D			F			F	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		92.0		38.0		92.0		38.0				
Change Period (Y+Rc), s		* 6.3		6.9		* 6.3		6.9				
Max Green Setting (Gmax), s		* 86		31.1		* 86		31.1				
Max Q Clear Time (g_c+l1), s		87.7		33.1		87.7		2.7				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.1				

Intersection Summary

HCM 6th Ctrl Delay	112.0
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection

Int Delay, s/veh 2741.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↕		↖	↗			↖	↗
Traffic Vol, veh/h	360	0	307	0	0	3	291	652	1	10	871	537
Future Vol, veh/h	360	0	307	0	0	3	291	652	1	10	871	537
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	-	-	-	150	-	-	-	-	350
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	8	2	2	3	2
Mvmt Flow	400	0	341	0	0	3	323	724	1	11	968	597

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2362	2361	968	2830	2958	725	1565	0	0	725	0	0
Stage 1	990	990	-	1371	1371	-	-	-	-	-	-	-
Stage 2	1372	1371	-	1459	1587	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	~ 25	35	~ 308	11	14	425	422	-	-	878	-	-
Stage 1	~ 297	324	-	181	214	-	-	-	-	-	-	-
Stage 2	~ 180	214	-	161	168	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 8	7	~ 308	-	3	425	422	-	-	878	-	-
Mov Cap-2 Maneuver	~ 8	7	-	-	3	-	-	-	-	-	-	-
Stage 1	~ 70	261	-	43	50	-	-	-	-	-	-	-
Stage 2	~ 42	50	-	-	135	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2445.2		11.2	0.1
HCM LOS	F	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	422	-	-	8	308	-	878	-	-
HCM Lane V/C Ratio	0.766	-	-	50	1.108	-	0.013	-	-
HCM Control Delay (s)	36.5	-	-	\$ 22955	120.9	-	9.2	0	-
HCM Lane LOS	E	-	-	F	F	-	A	A	-
HCM 95th %tile Q(veh)	6.5	-	-	51.9	13.6	-	0	-	-

Notes

-: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection												
Int Delay, s/veh	366.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↕		↖	↗			↖	↗
Traffic Vol, veh/h	203	0	130	0	0	1	175	727	0	3	891	263
Future Vol, veh/h	203	0	130	0	0	1	175	727	0	3	891	263
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	150	-	-	-	-	-	150	-	-	-	-	150
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	8	2	2	4	2
Mvmt Flow	226	0	144	0	0	1	194	808	0	3	990	292

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2193	2192	990	2410	2484	808	1282	0	0	808	0	0
Stage 1	996	996	-	1196	1196	-	-	-	-	-	-	-
Stage 2	1197	1196	-	1214	1288	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	~ 32	45	299	23	29	381	541	-	-	817	-	-
Stage 1	294	322	-	227	259	-	-	-	-	-	-	-
Stage 2	227	259	-	222	234	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 23	28	299	8	18	381	541	-	-	817	-	-
Mov Cap-2 Maneuver	~ 23	28	-	8	18	-	-	-	-	-	-	-
Stage 1	~ 188	317	-	146	166	-	-	-	-	-	-	-
Stage 2	~ 145	166	-	113	231	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, \$	2627.2		14.5		3		0	
HCM LOS	F		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	541	-	-	23	299	381	817	-	-
HCM Lane V/C Ratio	0.359	-	-	9.807	0.483	0.003	0.004	-	-
HCM Control Delay (s)	15.3	-	-	\$ 4291.8	27.8	14.5	9.4	0	-
HCM Lane LOS	C	-	-	F	D	B	A	A	-
HCM 95th %tile Q(veh)	1.6	-	-	28.3	2.5	0	0	-	-

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection						
Int Delay, s/veh	308.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↘	↑	↘	↗
Traffic Vol, veh/h	234	375	367	177	369	230
Future Vol, veh/h	234	375	367	177	369	230
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	200	150	-	150	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	260	417	408	197	410	256

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	677	0	1273
Stage 1	-	-	-	-	260
Stage 2	-	-	-	-	1013
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	915	-	~ 185
Stage 1	-	-	-	-	783
Stage 2	-	-	-	-	~ 351
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	915	-	~ 102
Mov Cap-2 Maneuver	-	-	-	-	~ 102
Stage 1	-	-	-	-	783
Stage 2	-	-	-	-	~ 194

Approach	EB	WB	NB
HCM Control Delay, s	0	8.1	\$ 894.5
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	102	779	-	-	915	-
HCM Lane V/C Ratio	4.02	0.328	-	-	0.446	-
HCM Control Delay (s)	\$ 1444.6	11.9	-	-	12.1	-
HCM Lane LOS	F	B	-	-	B	-
HCM 95th %tile Q(veh)	42.1	1.4	-	-	2.3	-

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 6th Signalized Intersection Summary
5: US-701 & Pitch Landing Road

2035 Build + IMPS
PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↗			↕		↖	↕↗		↖	↕↗	↗
Traffic Volume (veh/h)	327	10	127	1	4	6	113	961	1	21	1381	427
Future Volume (veh/h)	327	10	127	1	4	6	113	961	1	21	1381	427
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1530	1856	1796	1870	1870	1856	1870
Adj Flow Rate, veh/h	355	11	138	1	4	7	123	1045	1	23	1501	464
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	25	3	7	2	2	3	2
Cap, veh/h	419	31	383	42	51	76	190	2143	2	312	1772	797
Arrive On Green	0.12	0.26	0.26	0.08	0.08	0.08	0.05	0.61	0.61	0.50	0.50	0.50
Sat Flow, veh/h	3456	118	1485	46	650	975	1767	3499	3	539	3526	1585
Grp Volume(v), veh/h	355	0	149	12	0	0	123	510	536	23	1501	464
Grp Sat Flow(s),veh/h/ln	728	0	1603	1671	0	0	1767	1706	1796	539	1763	1585
Q Serve(g_s), s	10.2	0.0	7.7	0.0	0.0	0.0	3.3	16.8	16.8	2.5	37.5	21.0
Cycle Q Clear(g_c), s	10.2	0.0	7.7	0.7	0.0	0.0	3.3	16.8	16.8	8.1	37.5	21.0
Prop In Lane	1.00		0.93	0.08		0.58	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	419	0	414	168	0	0	190	1045	1100	312	1772	797
V/C Ratio(X)	0.85	0.00	0.36	0.07	0.00	0.00	0.65	0.49	0.49	0.07	0.85	0.58
Avail Cap(c_a), veh/h	441	0	708	458	0	0	257	1119	1178	315	1793	806
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.8	0.0	30.9	43.6	0.0	0.0	22.2	10.9	10.9	16.2	21.9	17.8
Incr Delay (d2), s/veh	13.7	0.0	1.9	0.6	0.0	0.0	3.7	1.3	1.2	0.4	4.9	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	3.1	0.3	0.0	0.0	1.6	5.7	6.0	0.3	14.9	7.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.6	0.0	32.8	44.3	0.0	0.0	25.9	12.2	12.1	16.6	26.8	20.3
LnGrp LOS	E	A	C	D	A	A	C	B	B	B	C	C
Approach Vol, veh/h		504			12			1169			1988	
Approach Delay, s/veh		50.2			44.3			13.6			25.2	
Approach LOS		D			D			B			C	
Timer - Assigned Phs	1	2		4		6	7	8				
Phs Duration (G+Y+Rc), s	12	57.5		33.2		68.7	18.4	14.8				
Change Period (Y+Rc), s	6.0	* 6.3		6.9		* 6.3	6.0	6.9				
Max Green Setting (Gmax), s	52	* 52		45.0		* 67	13.0	26.0				
Max Q Clear Time (g_c+I_b), s	39.5			9.7		18.8	12.2	2.7				
Green Ext Time (p_c), s	0.1	11.7		2.2		22.3	0.1	0.0				

Intersection Summary

HCM 6th Ctrl Delay	25.0
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
6: US-701 & Access #1/Lake Way Drive







2035 Build + IMPS
PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	360	0	307	0	0	3	291	652	1	10	871	537
Future Volume (veh/h)	360	0	307	0	0	3	291	652	1	10	871	537
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No		No		No		No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1781	1870	1870	1856	1870
Adj Flow Rate, veh/h	400	0	341	0	0	3	323	724	1	11	968	597
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	8	2	2	3	2
Cap, veh/h	360	0	368	0	0	116	284	1218	2	30	938	811
Arrive On Green	0.12	0.00	0.23	0.00	0.00	0.07	0.13	0.68	0.68	0.51	0.51	0.51
Sat Flow, veh/h	1781	0	1585	0	0	1585	1781	1779	2	9	1834	1585
Grp Volume(v), veh/h	400	0	341	0	0	3	323	0	725	979	0	597
Grp Sat Flow(s),veh/h/ln	1781	0	1585	0	0	1585	1781	0	1781	1842	0	1585
Q Serve(g_s), s	17.0	0.0	30.4	0.0	0.0	0.3	19.0	0.0	31.3	30.7	0.0	42.7
Cycle Q Clear(g_c), s	17.0	0.0	30.4	0.0	0.0	0.3	19.0	0.0	31.3	74.0	0.0	42.7
Prop In Lane	1.00		1.00	0.00		1.00	1.00		0.00	0.01		1.00
Lane Grp Cap(c), veh/h	360	0	368	0	0	116	284	0	1219	968	0	811
V/C Ratio(X)	1.11	0.00	0.93	0.00	0.00	0.03	1.14	0.00	0.59	1.01	0.00	0.74
Avail Cap(c_a), veh/h	360	0	427	0	0	175	284	0	1219	968	0	811
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.6	0.0	54.3	0.0	0.0	62.2	52.4	0.0	12.1	36.1	0.0	27.7
Incr Delay (d2), s/veh	80.4	0.0	24.1	0.0	0.0	0.1	95.9	0.0	0.8	31.8	0.0	3.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.1	0.0	14.6	0.0	0.0	0.1	17.4	0.0	11.4	42.6	0.0	16.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	139.0	0.0	78.4	0.0	0.0	62.3	148.4	0.0	12.9	67.9	0.0	31.2
LnGrp LOS	F	A	E	A	A	E	F	A	B	F	A	C
Approach Vol, veh/h	741		3		1048		1576					
Approach Delay, s/veh	111.1		62.3		54.7		54.0					
Approach LOS	F		E		D		D					
Timer - Assigned Phs	2		4		5		6		7		8	
Phs Duration (G+Y+Rc), s	105.0		39.6		25.0		80.0		23.0		16.6	
Change Period (Y+Rc), s	6.0		6.0		6.0		6.0		6.0		6.0	
Max Green Setting (Gmax), s	99.0		39.0		19.0		74.0		17.0		16.0	
Max Q Clear Time (g_c+l1), s	33.3		32.4		21.0		76.0		19.0		2.3	
Green Ext Time (p_c), s	5.4		1.2		0.0		0.0		0.0		0.0	
Intersection Summary												
HCM 6th Ctrl Delay			66.8									
HCM 6th LOS			E									

HCM 6th Signalized Intersection Summary
8: Access #3 & Pitch Landing Road

2035 Build + IMPS
PM Peak Hour

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Volume (veh/h)	234	375	367	177	369	230
Future Volume (veh/h)	234	375	367	177	369	230
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	260	417	408	197	410	256
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	948	803	456	948	492	438
Arrive On Green	0.51	0.51	0.51	0.51	0.28	0.28
Sat Flow, veh/h	1870	1585	762	1870	1781	1585
Grp Volume(v), veh/h	260	417	408	197	410	256
Grp Sat Flow(s),veh/h/ln	1870	1585	762	1870	1781	1585
Q Serve(g_s), s	4.4	9.7	23.6	3.2	12.0	7.7
Cycle Q Clear(g_c), s	4.4	9.7	28.0	3.2	12.0	7.7
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	948	803	456	948	492	438
V/C Ratio(X)	0.27	0.52	0.90	0.21	0.83	0.58
Avail Cap(c_a), veh/h	948	803	456	948	645	574
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.8	9.1	18.2	7.5	18.8	17.3
Incr Delay (d2), s/veh	0.2	0.6	19.9	0.1	7.2	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	2.8	7.1	0.9	5.4	2.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	8.0	9.7	38.1	7.6	26.0	18.5
LnGrp LOS	A	A	D	A	C	B
Approach Vol, veh/h	677			605	666	
Approach Delay, s/veh	9.0			28.2	23.1	
Approach LOS	A			C	C	
Timer - Assigned Phs		2		4		8
Phs Duration (G+Y+Rc), s		21.3		34.0		34.0
Change Period (Y+Rc), s		6.0		6.0		6.0
Max Green Setting (Gmax), s		20.0		28.0		28.0
Max Q Clear Time (g_c+l1), s		14.0		11.7		30.0
Green Ext Time (p_c), s		1.3		2.9		0.0
Intersection Summary						
HCM 6th Ctrl Delay			19.8			
HCM 6th LOS			B			

Improvement Timings

The following maximum total gross units are proposed for this PDD. Reference the following table:

Tract	Parent Tract		Aprox. Area [Acres]	Proposed Land Use	Proposed Dwelling Units		
	Parent Tract Designation	Sub-tract Designation			Single Family	Townhome	Multifamily
TIER I							
	Tract D		56.84	Single Family	135	--	--
	Tract F		128.43	Single Family	302	--	--
	Tract G		177.62	Single Family	339	--	--
	Tract H		234.62	Single Family	319	--	--
	Track I		153.2	Single Family	91	--	--
	Tract J		93.37	Single Family	188	--	--
TIER II							
	Tract A		40.47	Townhome	--	246	--
	Tract C		48.07	Townhome	--	104	--
	Tract E		78.49	Townhome	--	398	--
	Tract O		51.81	Townhome	--	204	--
TIER III							
	Tract B		10.72	Commercial	--	--	--
	Tract K	K	561.75	Multifamily	--	--	480
		K.1	18.78	Outdoor Storage	--	--	--
	Tract L ^[1]		15.91	Commercial	--	--	--
	Tract M ^[1]		15.25	Commercial	--	--	--
	Tract N		57.84	Multifamily / Townhome	--	79	448
TOTAL APPROXIMATE ACREAGE [AC.]			1743.17	TOTAL PROPOSED UNITS	1374	1031	928
					3333		
[1]	No dwelling units shall be allowed on Tracts L and M, or any future subdivisions of tracts L and M.						

Density not utilized in one parcel may be transferred to other parcels within the PDD, so long as the total density of the PDD is not exceeded, and no Dwelling Units are located within flood zones.

INTERSECTION TRAFFIC VOLUME DEVELOPMENT

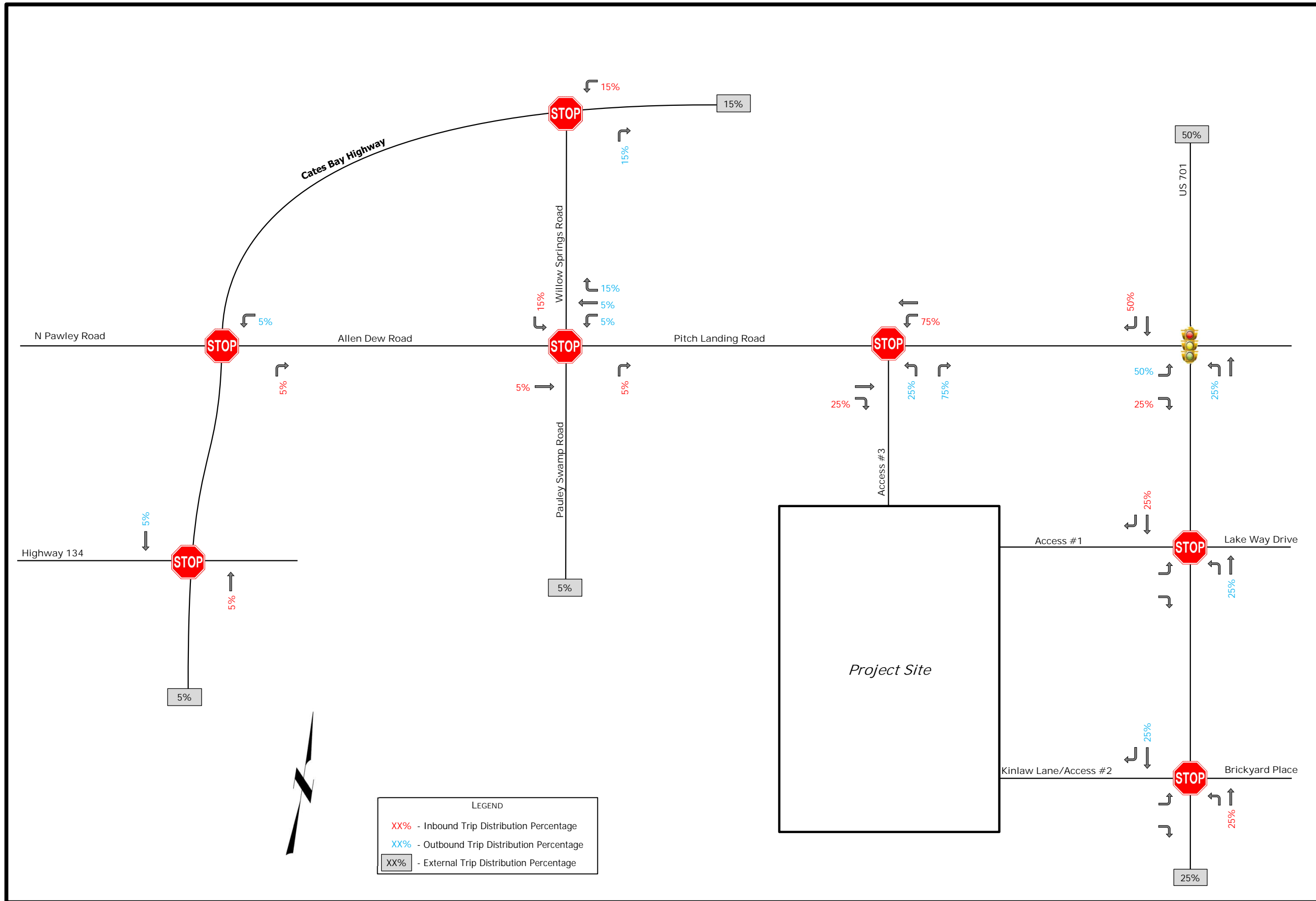
Willow Springs Road/Pauley Swamp Road & Pitch Landing Road/Allen Dew Road

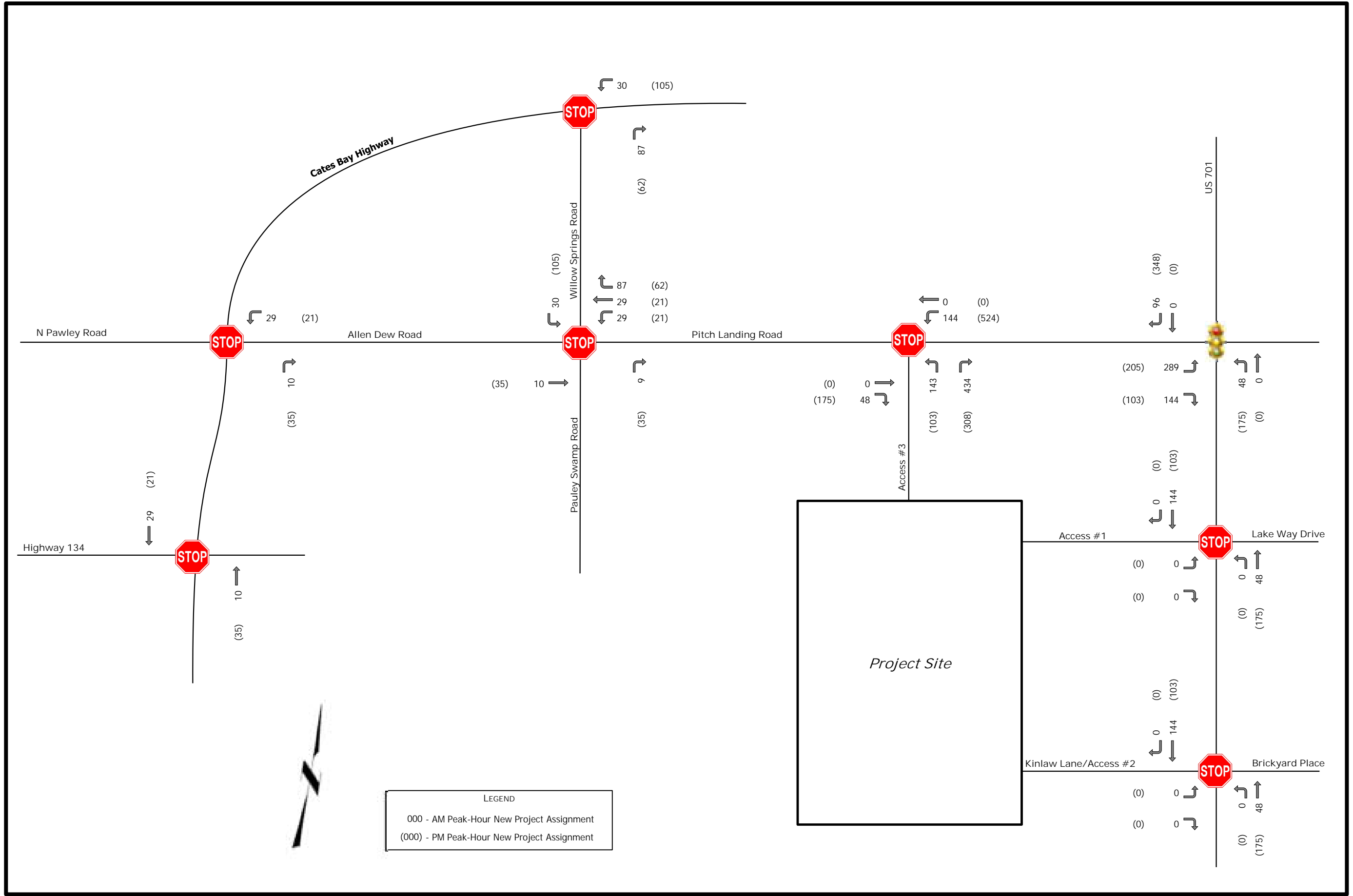
TRAFFIC CONTROL: Unsignalized

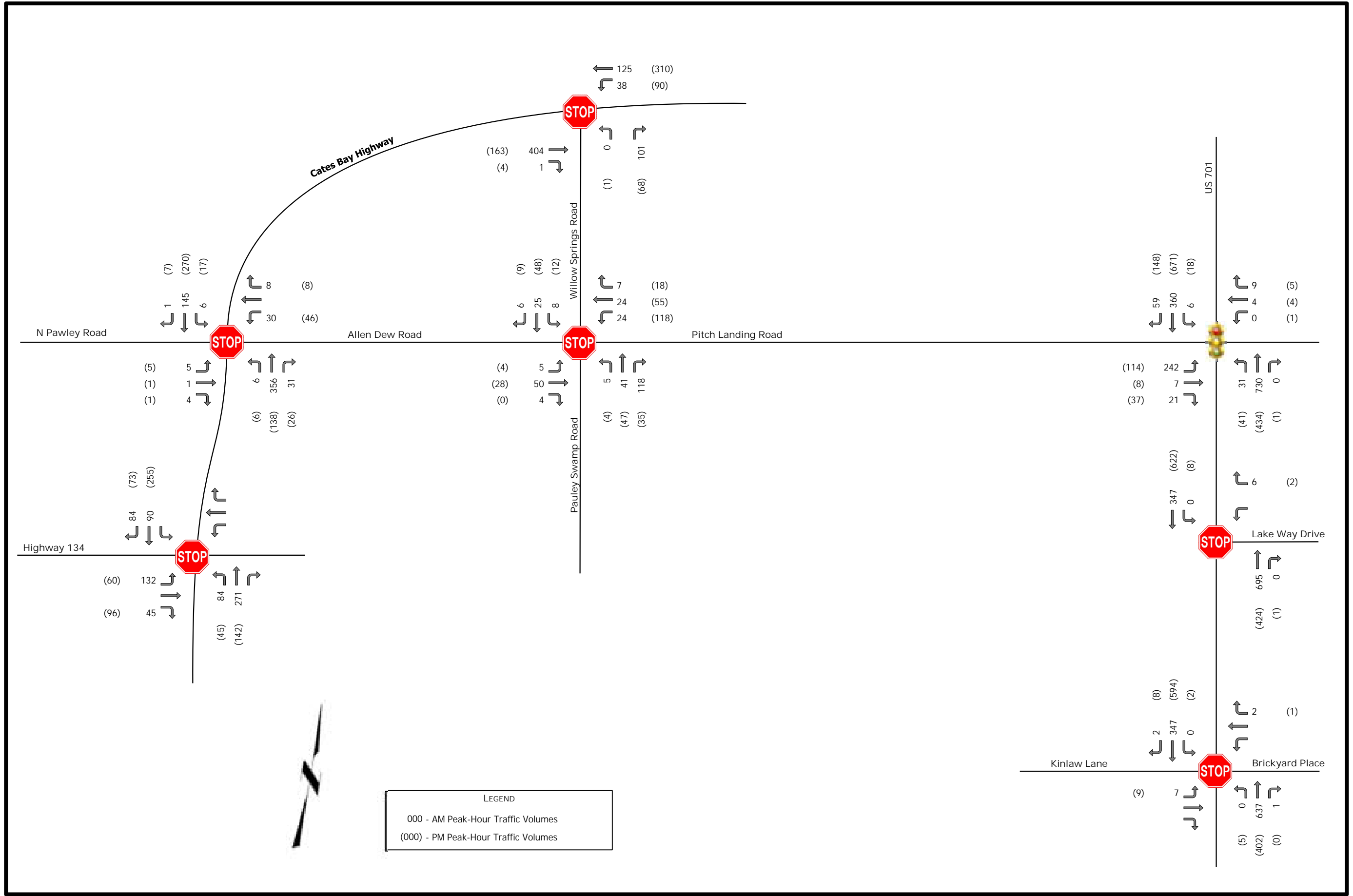
DATE COUNTED:

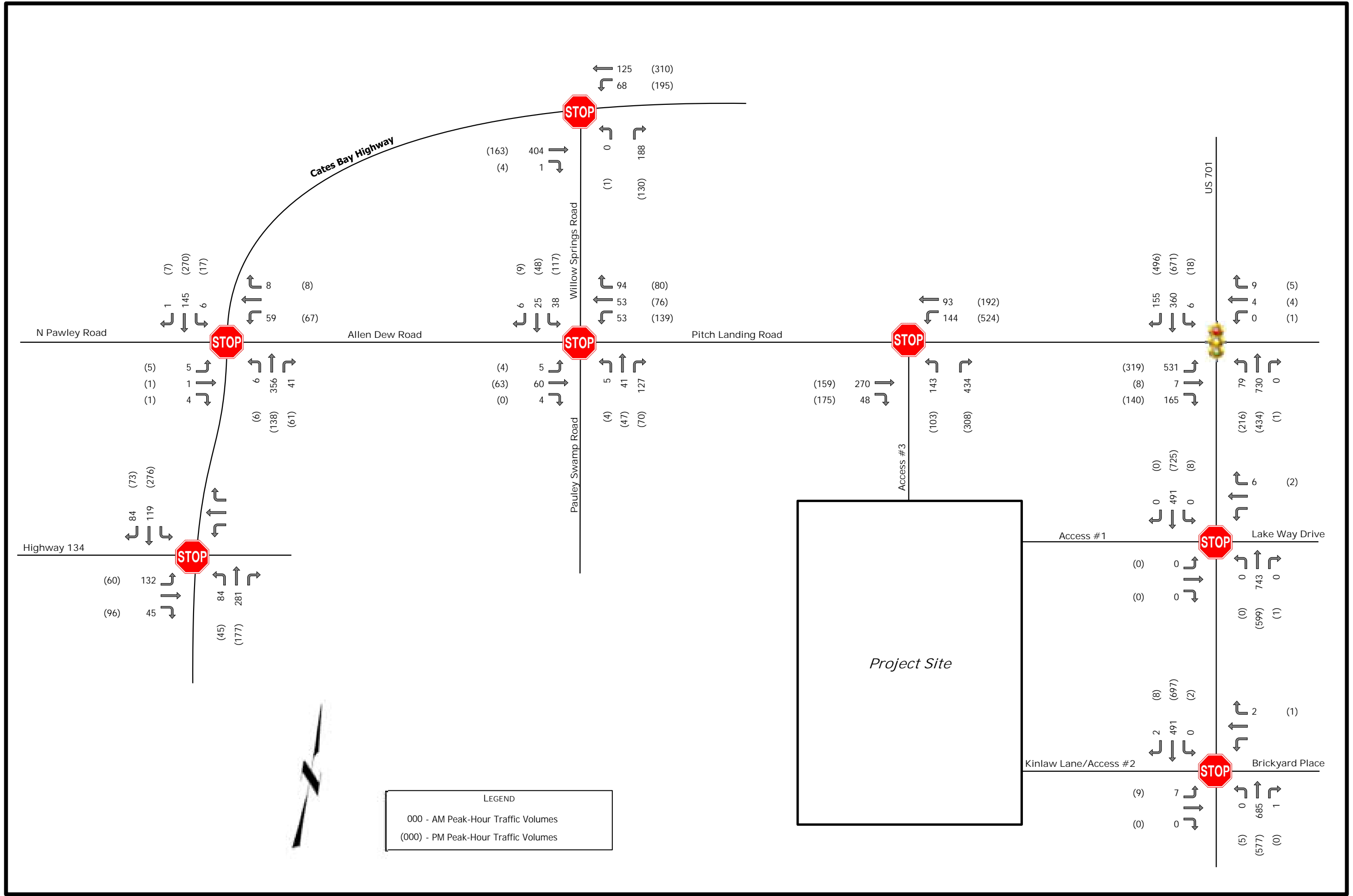
AM PEAK HOUR (7:00-8:00 AM)	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2022 TRAFFIC VOLUMES	4	42	3	20	20	6	4	35	100	7	21	5
Heavy Vehicle Percentage	2%	2%	2%	5%	2%	2%	2%	2%	2%	2%	5%	2%
Years To Phase 1 Buildout (2028)	6	6	6	6	6	6	6	6	6	6	6	6
Yearly Growth Rate	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Background Traffic Growth	1	8	1	4	4	1	1	6	18	1	4	1
2028 NO-BUILD TRAFFIC VOLUMES	5	50	4	24	24	7	5	41	118	8	25	6
Inbound Trip Distribution Percentage		5%							5%	15%		
Outbound Trip Distribution Percentage				5%	5%	15%						
Inbound New Project Traffic		10							9	30		
Outbound New Project Traffic				29	29	87						
Pass-By Project Traffic												
Total Buildout Project Traffic		10		29	29	87			9	30		
2028 BUILD TRAFFIC VOLUMES	5	60	4	53	53	94	5	41	127	38	25	6

PM PEAK HOUR (4:45-5:45 PM)	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2022 TRAFFIC VOLUMES	3	24	0	100	47	15	3	40	30	10	41	8
Heavy Vehicle Percentage	2%	2%	2%	2%	4%	2%	2%	3%	2%	2%	2%	2%
Years To Phase 1 Buildout (2028)	6	6	6	6	6	6	6	6	6	6	6	6
Yearly Growth Rate	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Background Traffic Growth	1	4	0	18	8	3	1	7	5	2	7	1
2028 NO-BUILD TRAFFIC VOLUMES	4	28	0	118	55	18	4	47	35	12	48	9
Inbound Trip Distribution Percentage		5%							5%	15%		
Outbound Trip Distribution Percentage				5%	5%	15%						
Inbound New Project Traffic		35							35	105		
Outbound New Project Traffic				21	21	62						
Pass-by Project Traffic												
Total New Project Traffic		35		21	21	62			35	105		
2028 BUILD TRAFFIC VOLUMES	4	63	0	139	76	80	4	47	70	117	48	9







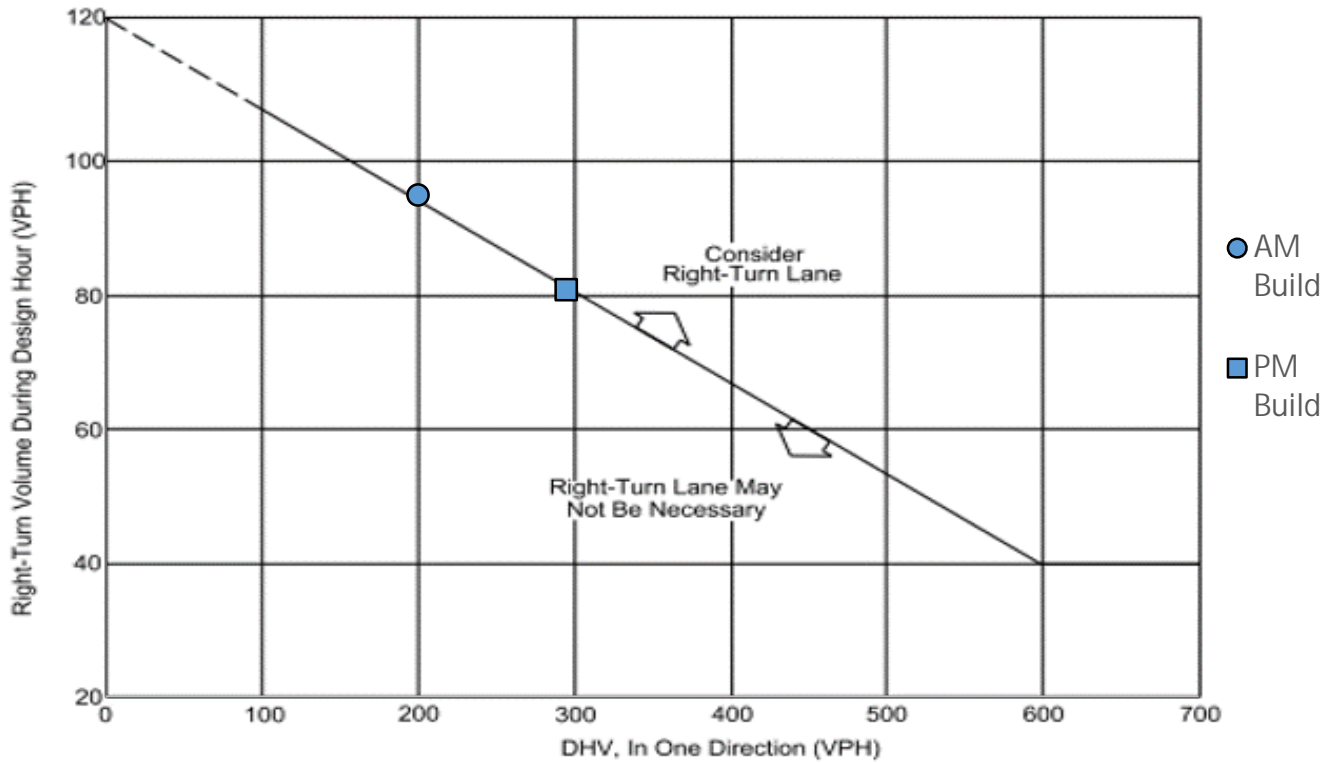


Warden Tract
RIGHT-TURN LANE WARRANT REVIEW

9.5-2

INTERSECTIONS

March 2017



Note: For highways with a design speed below 50 miles per hour with a DHV < 300 and where right turns > 40, an adjustment should be used. To read the vertical axis of the chart, subtract 20 from the actual number of right turns.

**GUIDELINES FOR RIGHT-TURN LANES AT UNSIGNALIZED INTERSECTIONS
ON TWO-LANE HIGHWAYS**

Figure 9.5-A

INTERSECTION: Pitch Landing Road & Willow Springs Road

MOVEMENT: Westbound right turn

SCENARIO	Design Hour Volume	Right Turn Volume	Symbol
AM Build	200	94	●
PM Build	295	80	■

INTERSECTION TRAFFIC VOLUME DEVELOPMENT

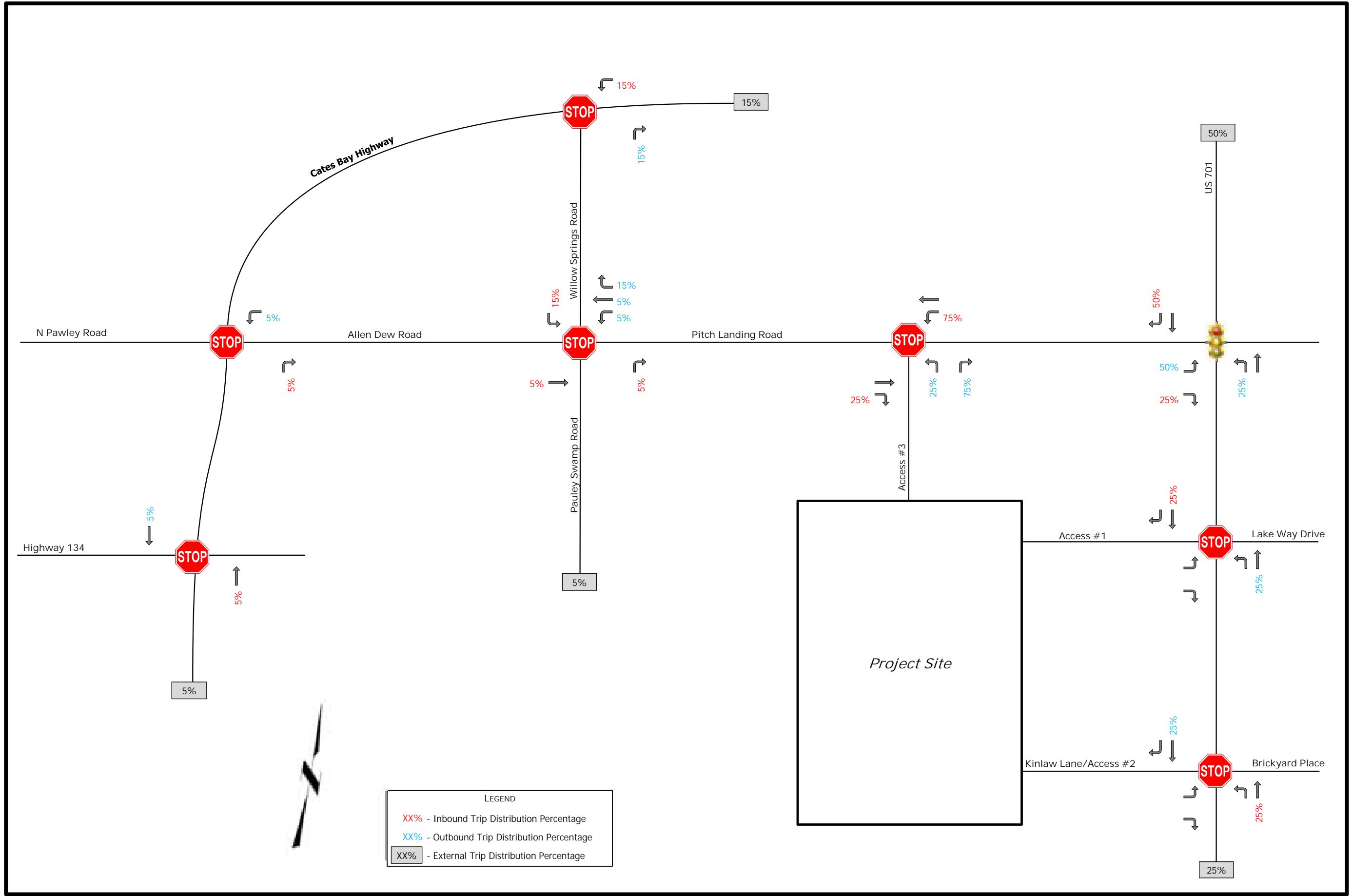
US 701 & Pitch Landing Road

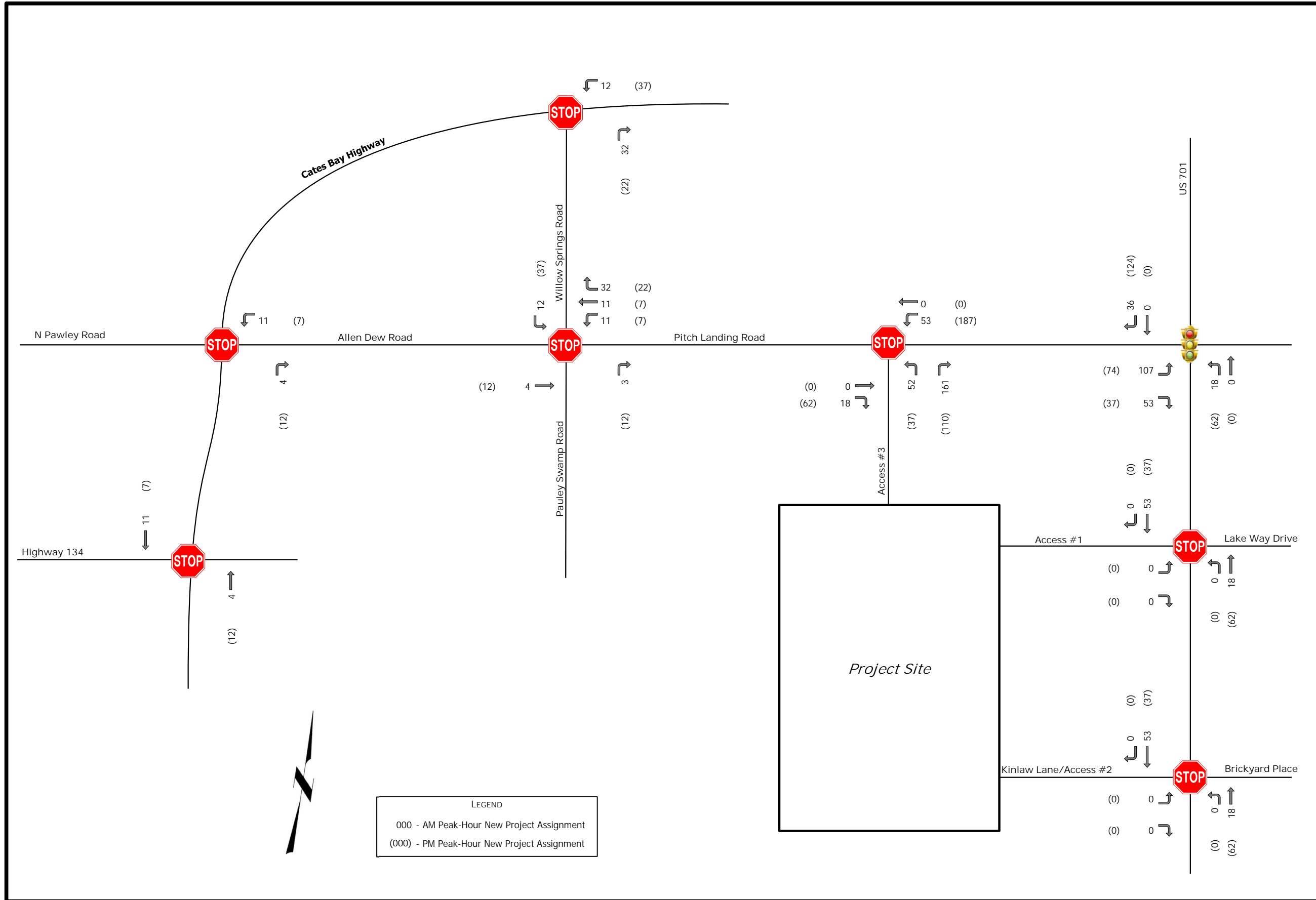
TRAFFIC CONTROL: Signalized

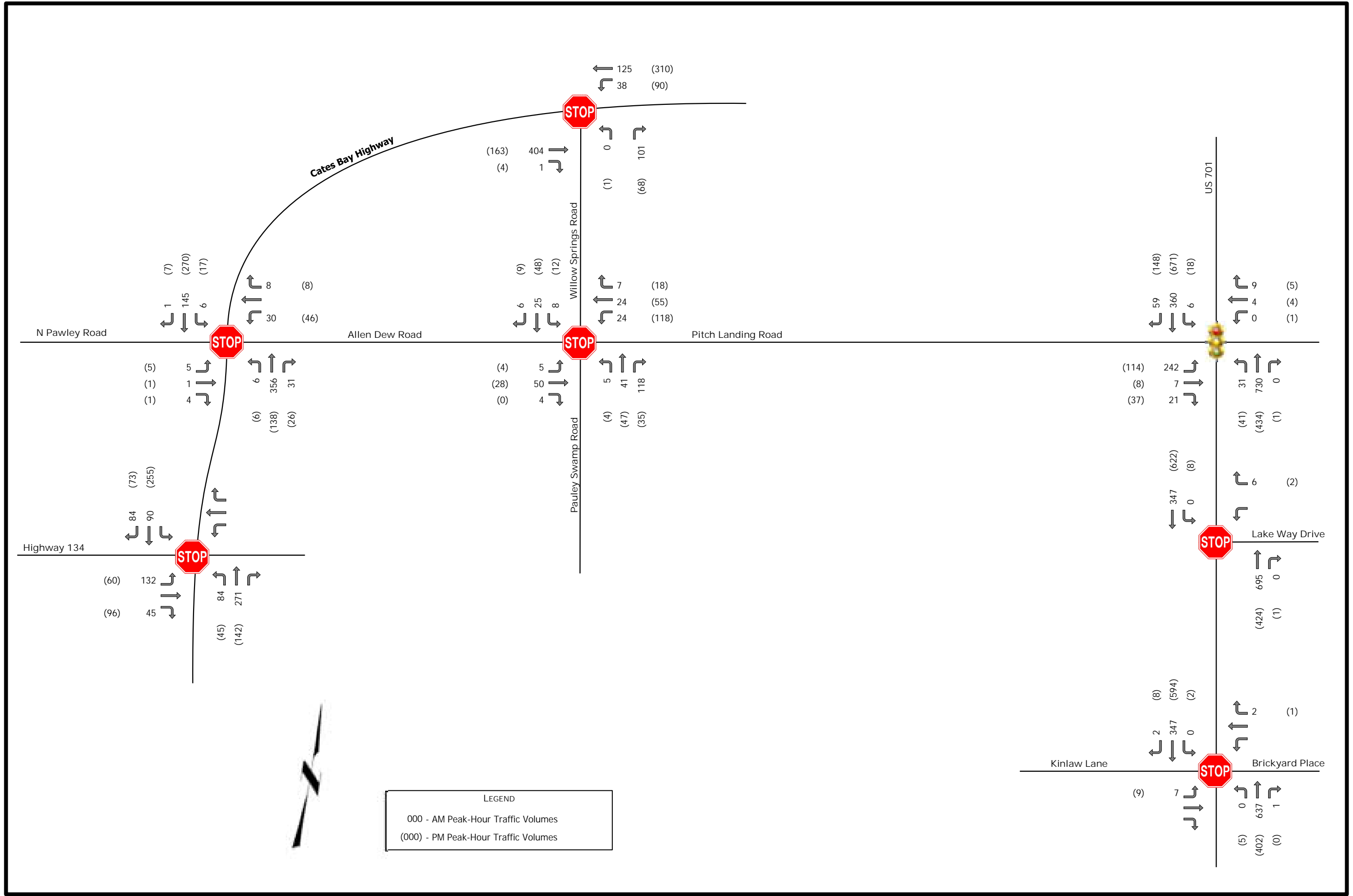
DATE COUNTED:

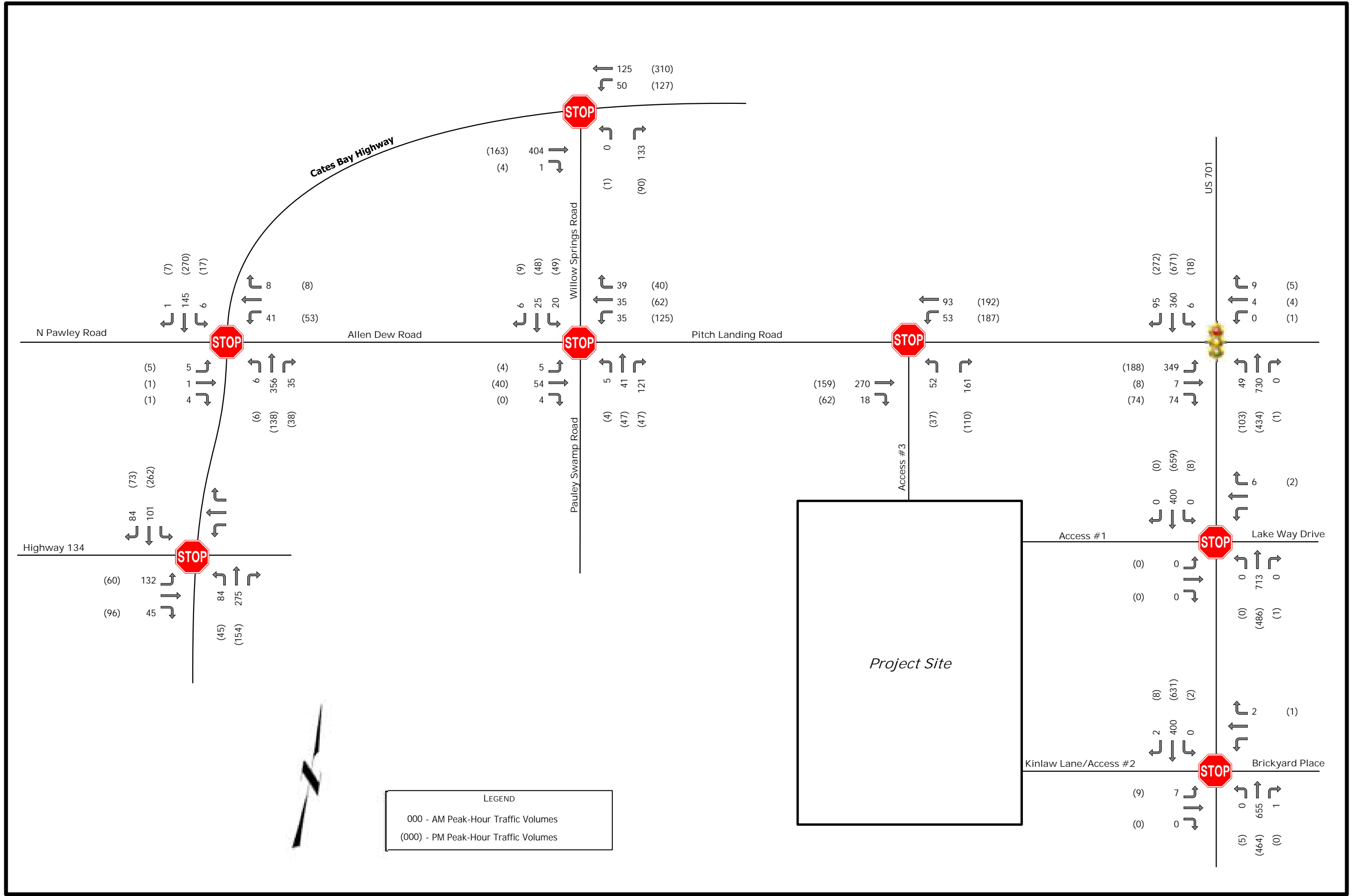
AM PEAK HOUR (7:00-8:00 AM)	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2022 TRAFFIC VOLUMES	205	6	18	0	3	8	26	619	0	5	305	50
Heavy Vehicle Percentage	3%	17%	2%	2%	2%	2%	4%	5%	2%	2%	9%	4%
Years To Phase 1 Buildout (2028)	6	6	6	6	6	6	6	6	6	6	6	6
Yearly Growth Rate	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Background Traffic Growth	37	1	3	0	1	1	5	111	0	1	55	9
2028 NO-BUILD TRAFFIC VOLUMES	242	7	21	0	4	9	31	730	0	6	360	59
Inbound Trip Distribution Percentage							25%					50%
Outbound Trip Distribution Percentage	50%		25%									
Inbound New Project Traffic							18					36
Outbound New Project Traffic	107		53									
Pass-By Project Traffic												
Total Buildout Project Traffic	107		53				18					36
2028 BUILD TRAFFIC VOLUMES	349	7	74	0	4	9	49	730	0	6	360	95

PM PEAK HOUR (4:45-5:45 PM)	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
2022 TRAFFIC VOLUMES	97	7	31	1	3	4	35	368	1	15	569	125
Heavy Vehicle Percentage	2%	2%	2%	2%	2%	25%	3%	7%	2%	2%	3%	2%
Years To Phase 1 Buildout (2028)	6	6	6	6	6	6	6	6	6	6	6	6
Yearly Growth Rate	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Background Traffic Growth	17	1	6	0	1	1	6	66	0	3	102	23
2028 NO-BUILD TRAFFIC VOLUMES	114	8	37	1	4	5	41	434	1	18	671	148
Inbound Trip Distribution Percentage							25%					50%
Outbound Trip Distribution Percentage	50%		25%									
Inbound New Project Traffic							62					124
Outbound New Project Traffic	74		37									
Pass-by Project Traffic												
Total New Project Traffic	74		37				62					124
2028 BUILD TRAFFIC VOLUMES	188	8	74	1	4	5	103	434	1	18	671	272









HCM 6th Signalized Intersection Summary
5: US-701 & Pitch Landing Road

2028 Dual Left Timing
AM Peak Hour

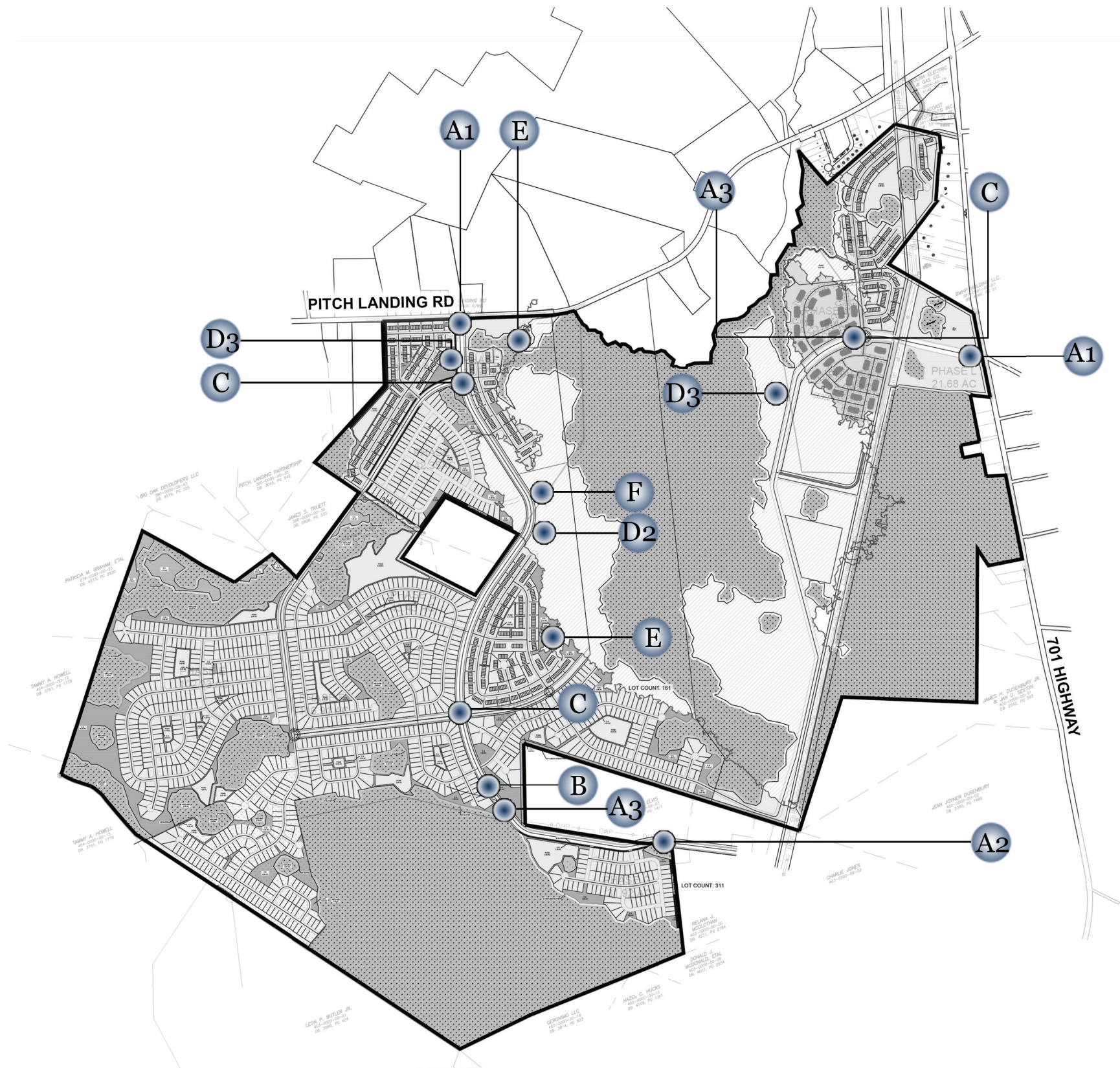


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↗	↘		↗	↘	↗
Traffic Volume (veh/h)	349	7	74	0	4	9	49	730	0	6	360	95
Future Volume (veh/h)	349	7	74	0	4	9	49	730	0	6	360	95
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1648	1870	1870	1870	1870	1841	1826	1870	1870	1767	1841
Adj Flow Rate, veh/h	379	8	80	0	4	10	53	793	0	7	391	103
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	17	2	2	2	2	4	5	2	2	9	4
Cap, veh/h	453	8	80	0	177	443	372	869	0	132	841	743
Arrive On Green	0.37	0.37	0.37	0.00	0.37	0.37	0.48	0.48	0.00	0.48	0.48	0.48
Sat Flow, veh/h	1011	21	213	0	474	1184	889	1826	0	684	1767	1560
Grp Volume(v), veh/h	467	0	0	0	0	14	53	793	0	7	391	103
Grp Sat Flow(s),veh/h/ln	1246	0	0	0	0	1657	889	1826	0	684	1767	1560
Q Serve(g_s), s	32.6	0.0	0.0	0.0	0.0	0.5	3.8	35.5	0.0	0.8	13.2	3.3
Cycle Q Clear(g_c), s	33.1	0.0	0.0	0.0	0.0	0.5	16.9	35.5	0.0	36.4	13.2	3.3
Prop In Lane	0.81		0.17	0.00		0.71	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	541	0	0	0	0	621	372	869	0	132	841	743
V/C Ratio(X)	0.86	0.00	0.00	0.00	0.00	0.02	0.14	0.91	0.00	0.05	0.46	0.14
Avail Cap(c_a), veh/h	541	0	0	0	0	621	389	903	0	145	874	771
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.9	0.0	0.0	0.0	0.0	17.4	21.3	21.4	0.0	38.3	15.6	13.0
Incr Delay (d2), s/veh	15.8	0.0	0.0	0.0	0.0	0.1	0.6	14.8	0.0	0.6	1.5	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.2	0.0	0.0	0.0	0.0	0.2	0.8	16.6	0.0	0.2	5.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.7	0.0	0.0	0.0	0.0	17.5	21.9	36.3	0.0	38.9	17.0	13.3
LnGrp LOS	D	A	A	A	A	B	C	D	A	D	B	B
Approach Vol, veh/h		467			14			846			501	
Approach Delay, s/veh		43.7			17.5			35.4			16.6	
Approach LOS		D			B			D			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		48.4		40.0		48.4		40.0				
Change Period (Y+Rc), s		* 6.3		6.9		* 6.3		6.9				
Max Green Setting (Gmax), s		* 44		33.1		* 44		33.1				
Max Q Clear Time (g_c+I1), s		38.4		35.1		37.5		2.5				
Green Ext Time (p_c), s		2.4		0.0		4.5		0.1				
Intersection Summary												
HCM 6th Ctrl Delay				32.2								
HCM 6th LOS				C								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												



WARDEN STATION

04/28/2023



LEGEND

- A1** Major Monumentation
- A2** Secondary Monumentation
- A3** Neighborhood Entry Monumentation
- B** Boulevard Streetscape
- C** Roundabout
- D1** Small Park Concept
- D2** Large Park Concept A
- D3** Large Park Concept B
- E** Multi Use Path
- F** Master Bark Park
- G** Individual Sales Center

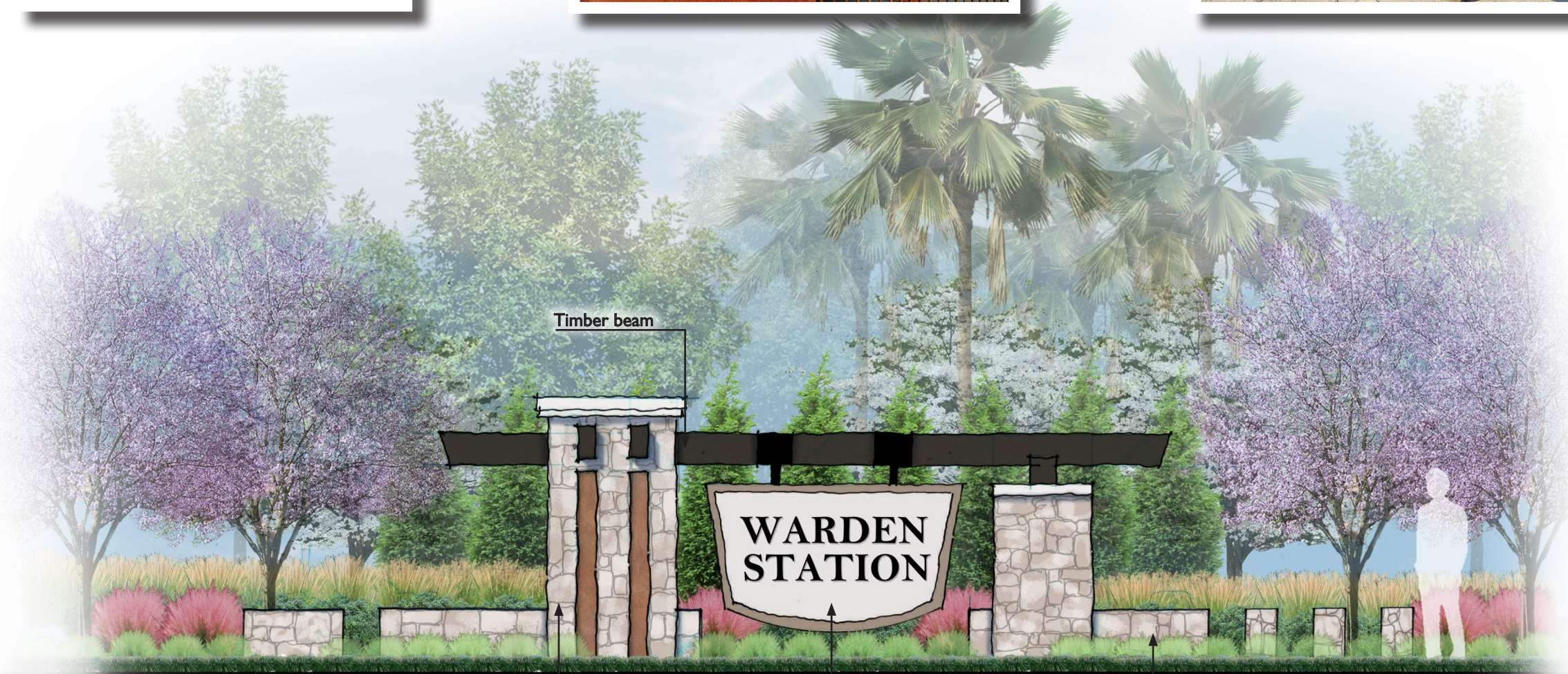


DRAFT

TABLE OF CONTENTS

WARDEN STATION
Conway, SC

This exhibit is conceptual in nature and may change at owner's discretion in order to meet jurisdictional codes, final site engineering requirements and budget based on pricing for the final plan.



Timber beam

9' tall stone column
with powder coated copper
colored insets and stone cap

HDU hanging sign
with raised lettering

Low stone wall



DRAFT

A1 - MAJOR MONUMENTATION

WARDEN STATION

Conway, SC

This exhibit is conceptual in nature and may change at owner's discretion in order to meet jurisdictional codes, final site engineering requirements and budget based on pricing for the final plan.



Timber beam

WARDEN
STATION

9' tall stone column
with powder coated copper
colored insets and stone cap

HDU hanging sign
with raised lettering

Low stone wall

CESO



BRD
LAND & INVESTMENT

DRAFT

A2 - SECONDARY MONUMENTATION

WARDEN STATION

Conway, SC

This exhibit is conceptual in nature and may change at owner's discretion in order to meet jurisdictional codes, final site engineering requirements and budget based on pricing for the final plan.



Neighborhood Entry A



Neighborhood Entry B

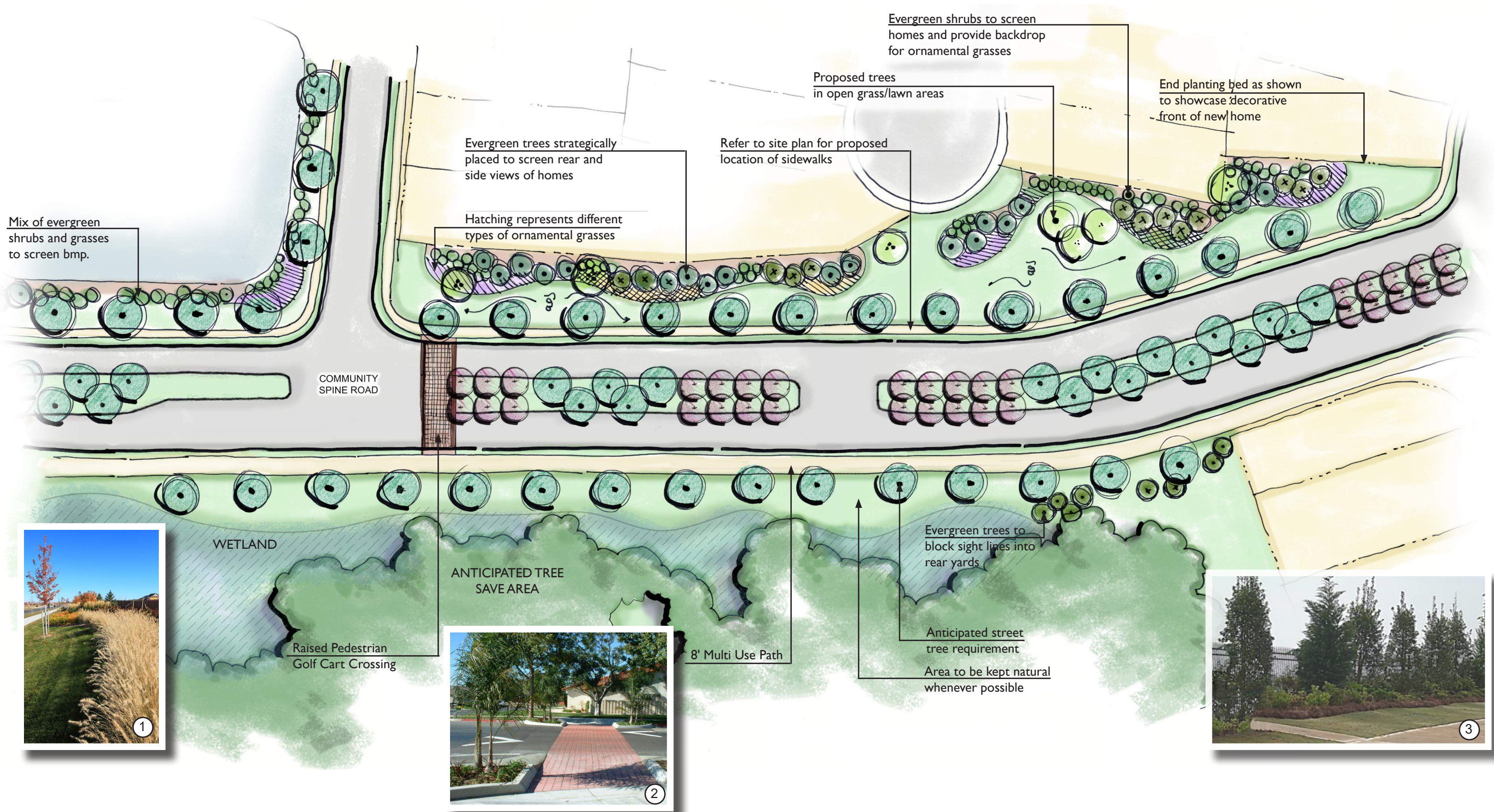
This exhibit is conceptual in nature and may change at owner's discretion in order to meet jurisdictional codes, final site engineering requirements and budget based on pricing for the final plan.

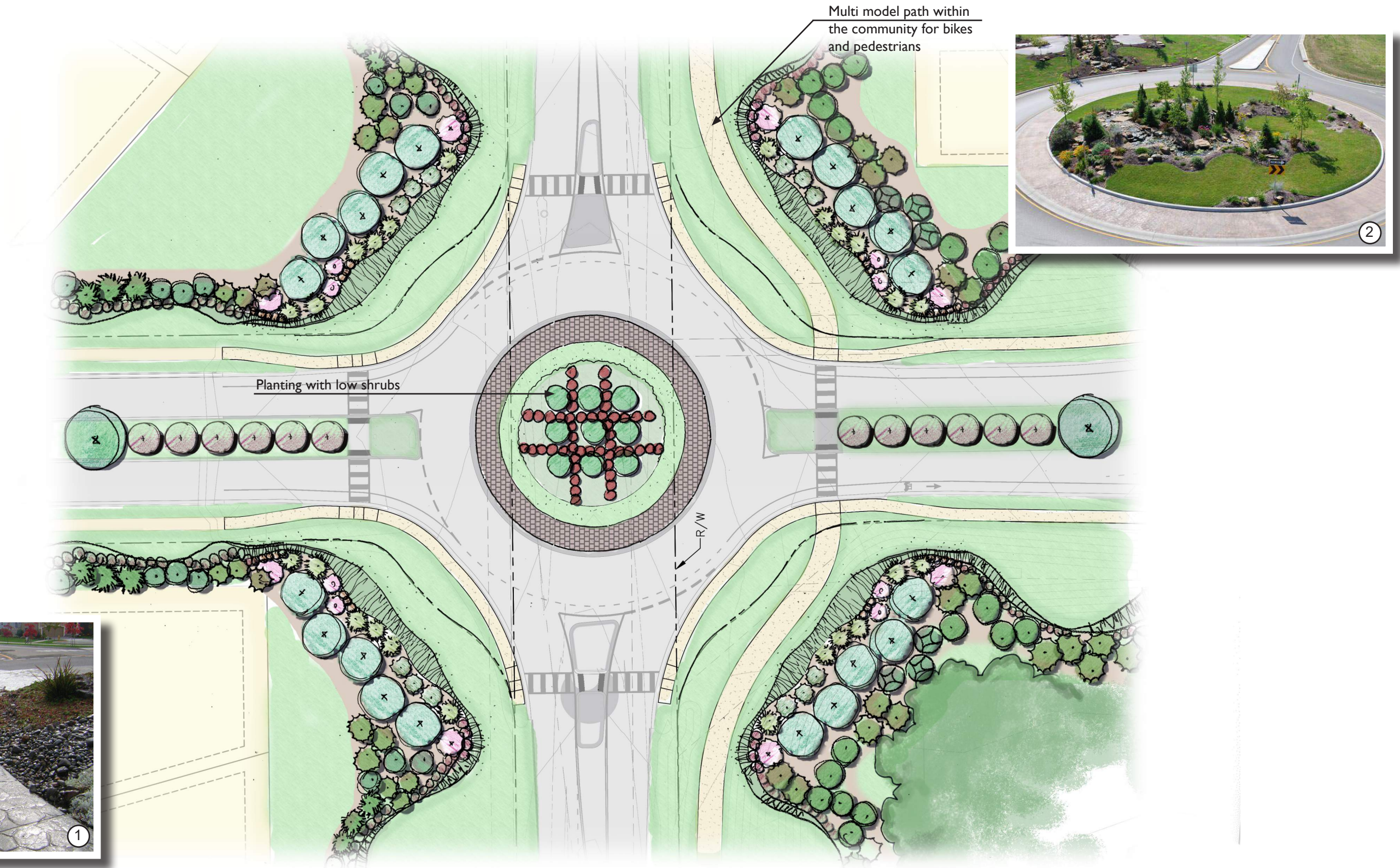


Marker Column A



Marker Column B





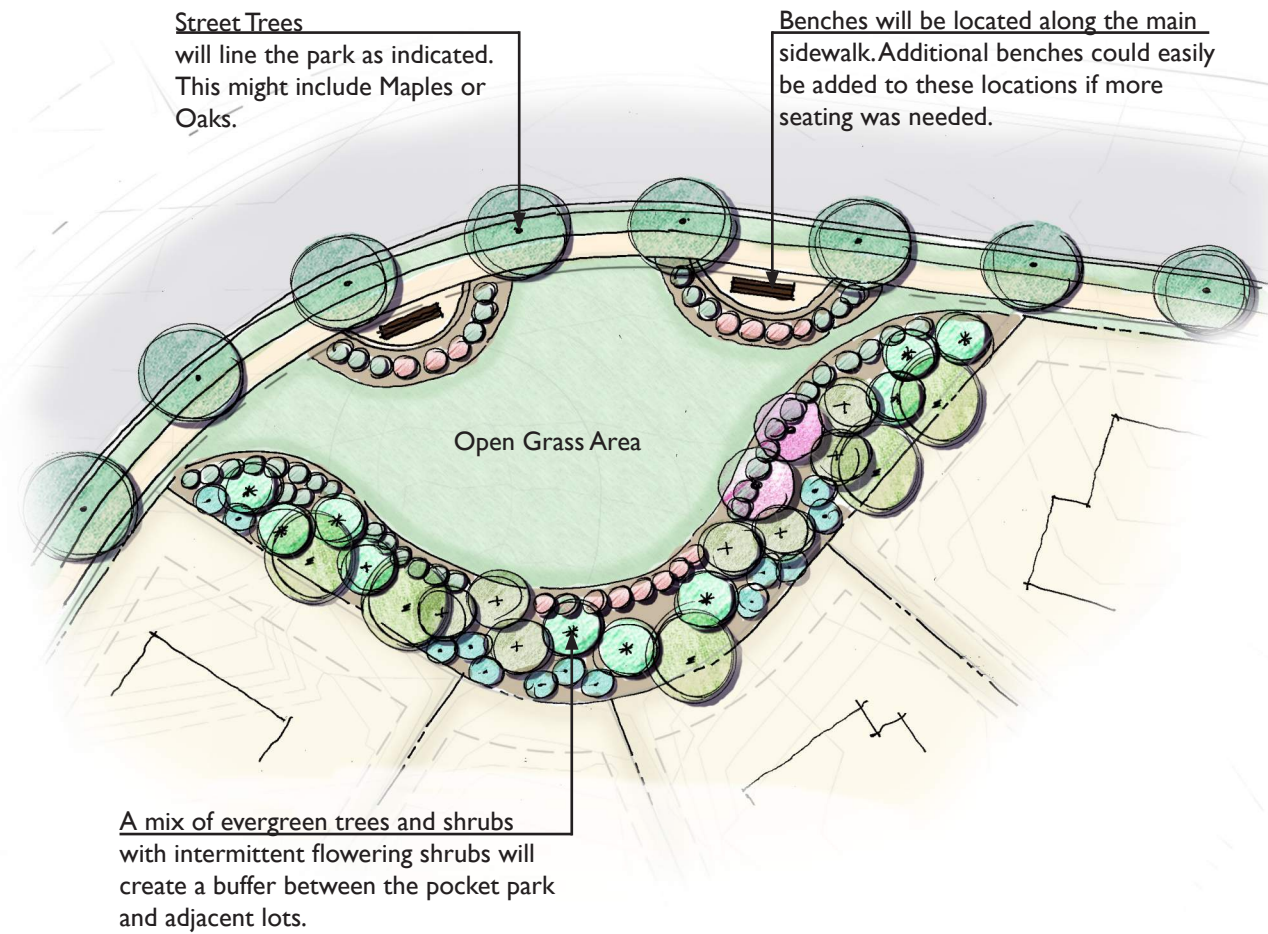
DRAFT

ROUNDAABOUT

WARDEN STATION

Conway, SC

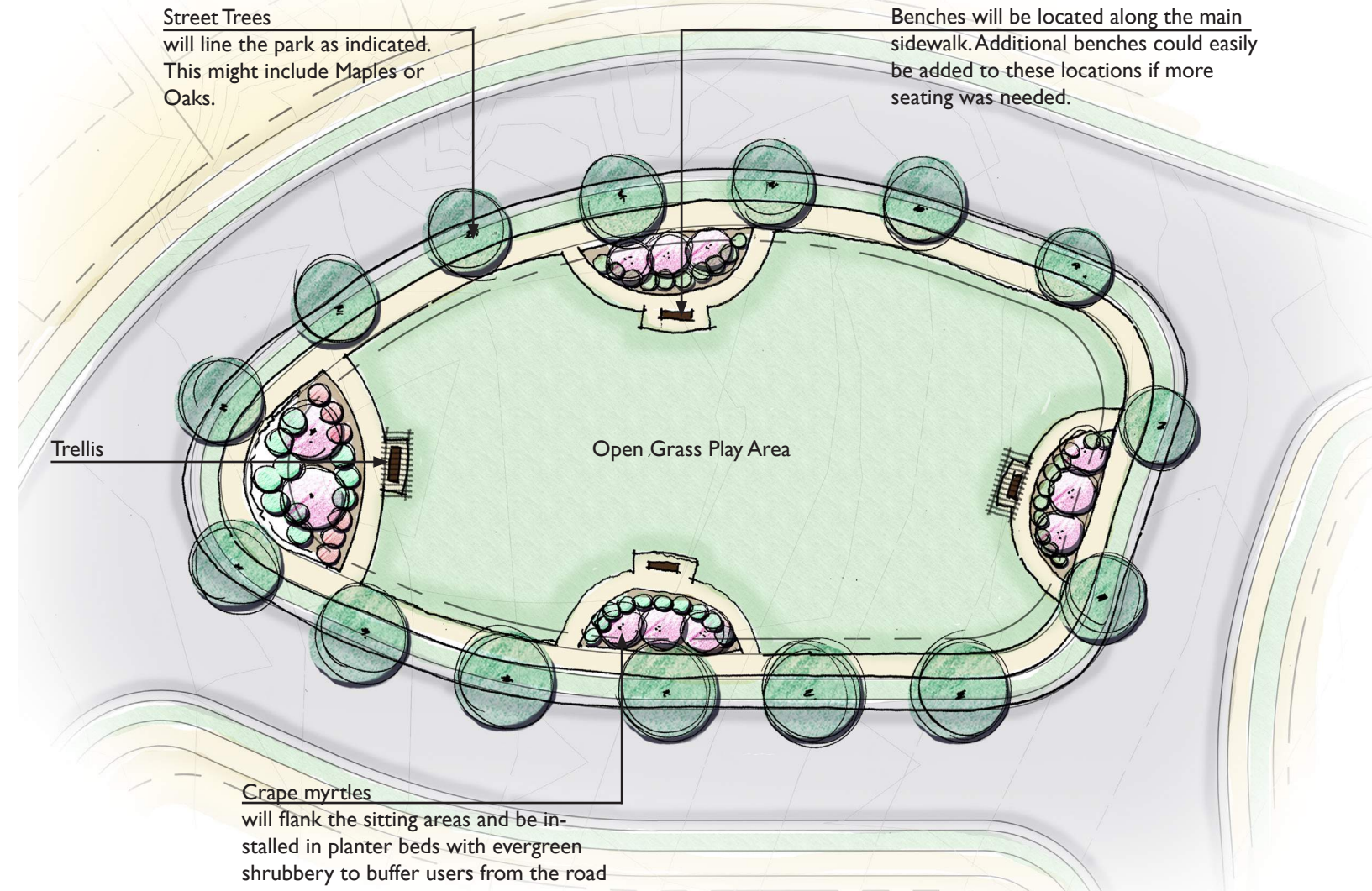
This exhibit is conceptual in nature and may change at owner's discretion in order to meet jurisdictional codes, final site engineering requirements and budget based on pricing for the final plan.



Small Park Concept



Large Park Concept A



DRAFT



This exhibit is conceptual in nature and may change at owner's discretion in order to meet jurisdictional codes, final site engineering requirements and budget based on pricing for the final plan.

POCKET PARK
WARDEN STATION
 Conway, SC



Large Park Concept B



DRAFT

POCKET PARK

WARDEN STATION

Conway, SC

This exhibit is conceptual in nature and may change at owner's discretion in order to meet jurisdictional codes, final site engineering requirements and budget based on pricing for the final plan.



1



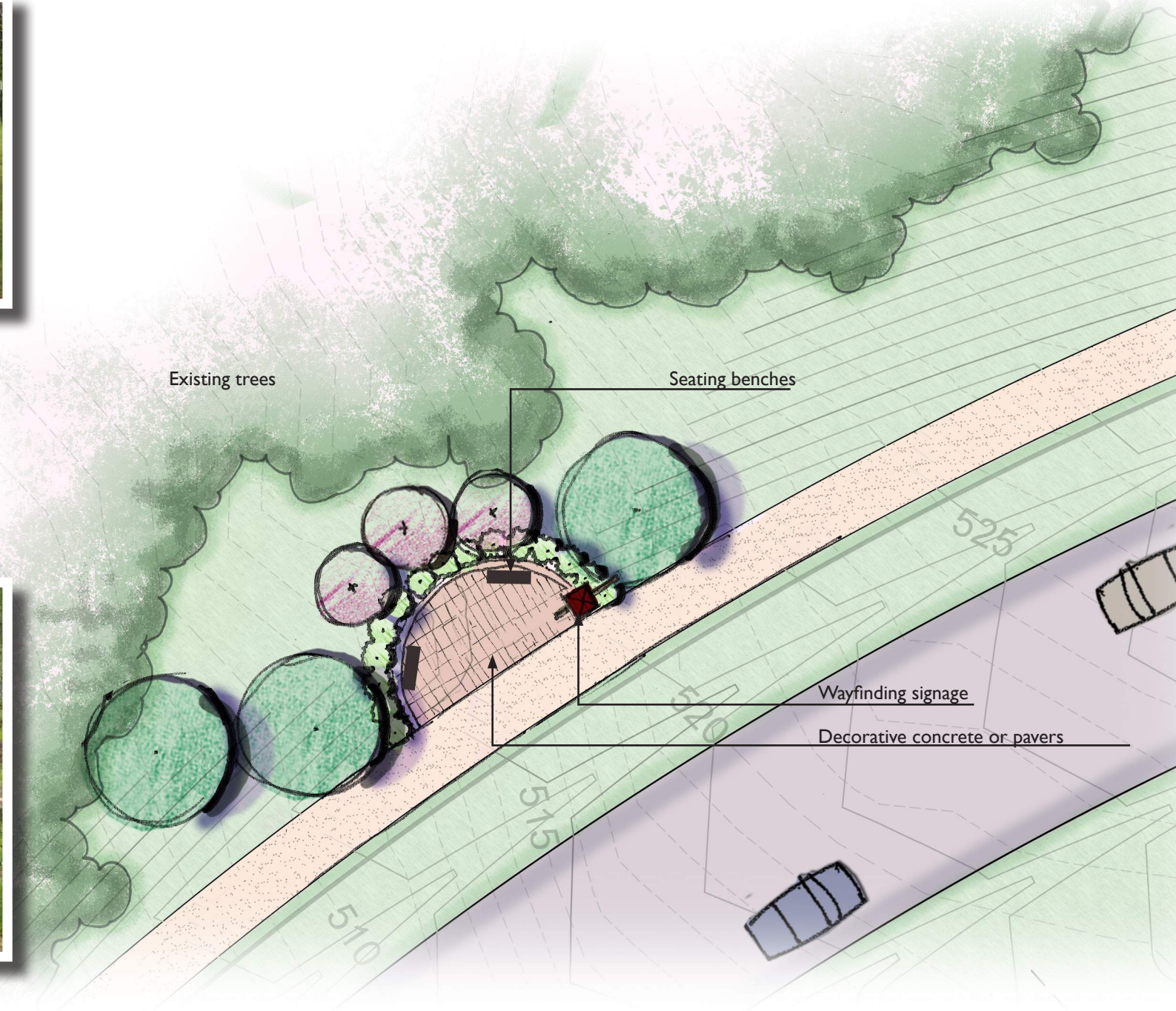
3



2



4



DRAFT

MULTI USE PATH
WARDEN STATION
 Conway, SC

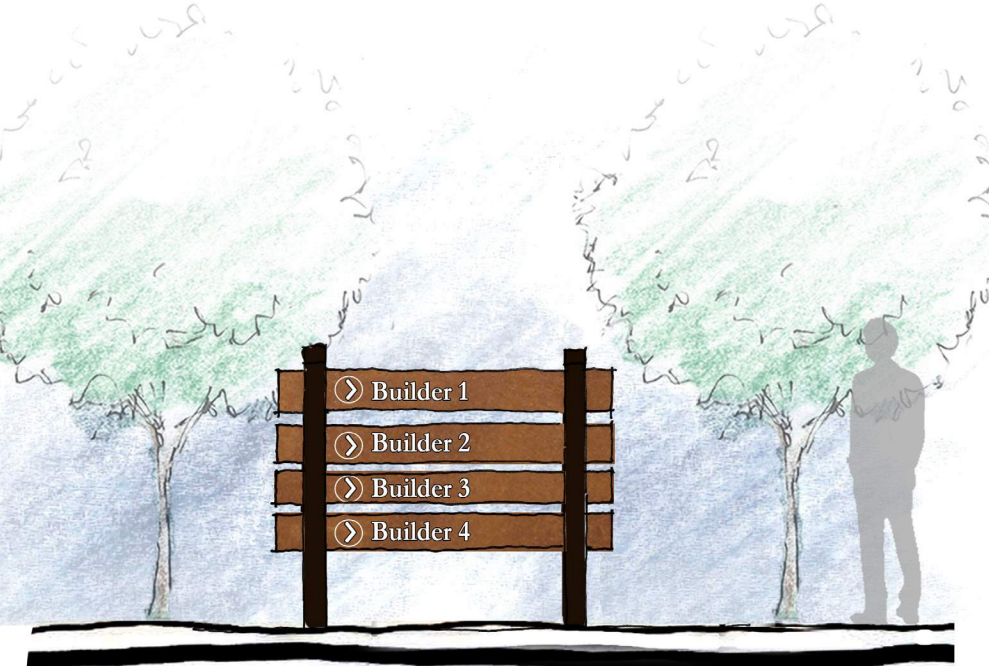
This exhibit is conceptual in nature and may change at owner's discretion in order to meet jurisdictional codes, final site engineering requirements and budget based on pricing for the final plan.



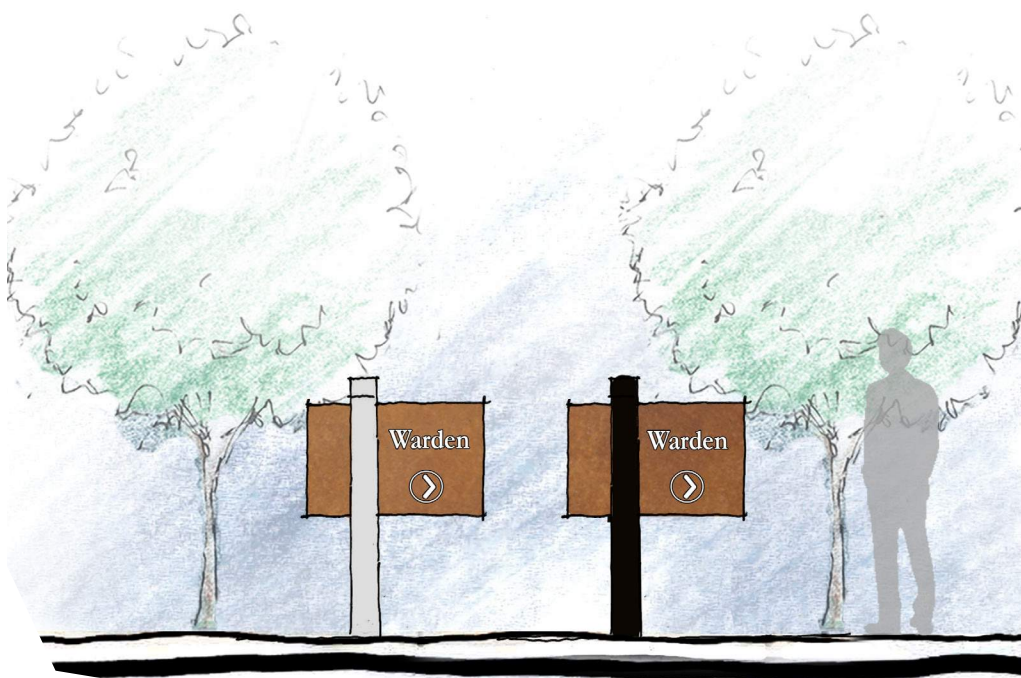
Major Trailhead Marker



Permanent Directional Signage



Temporary Directional Signage



Minor Trailhead Marker/ Miscellaneous Signage



Street Blade



DRAFT

STREETBLADE SIGNAGE

WARDEN STATION

Conway, SC

This exhibit is conceptual in nature and may change at owner's discretion in order to meet jurisdictional codes, final site engineering requirements and budget based on pricing for the final plan.



1



2



3



4



5



DRAFT

CENTRAL SALES CENTER
WARDEN STATION
 Conway, SC

This exhibit is conceptual in nature and may change at owner's discretion in order to meet jurisdictional codes, final site engineering requirements and budget based on pricing for the final plan.



1



2



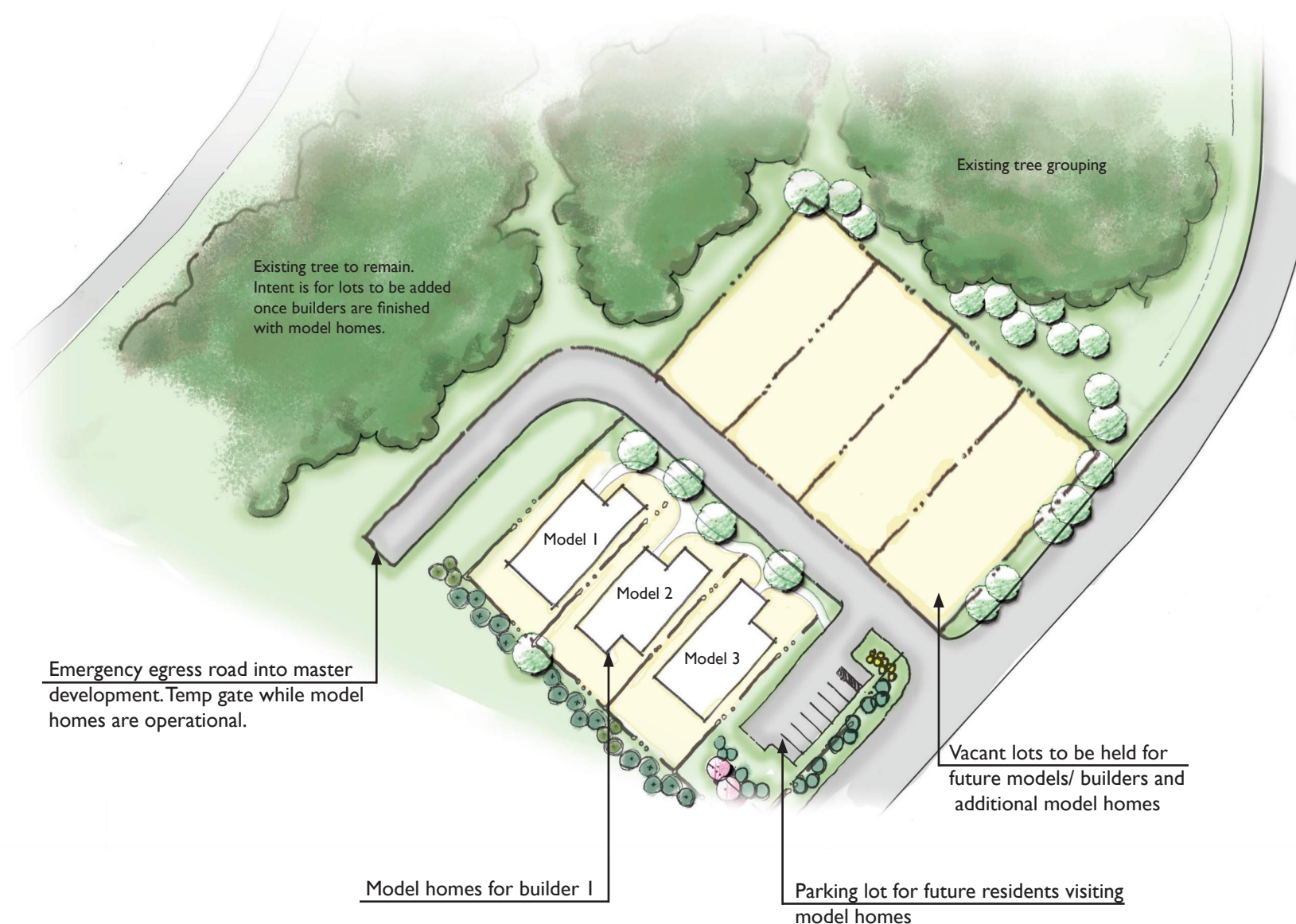
3



4



5



DRAFT

INDIVIDUAL SALES CENTER
WARDEN STATION
 Conway, SC

This exhibit is conceptual in nature and may change at owner's discretion in order to meet jurisdictional codes, final site engineering requirements and budget based on pricing for the final plan.



Benches



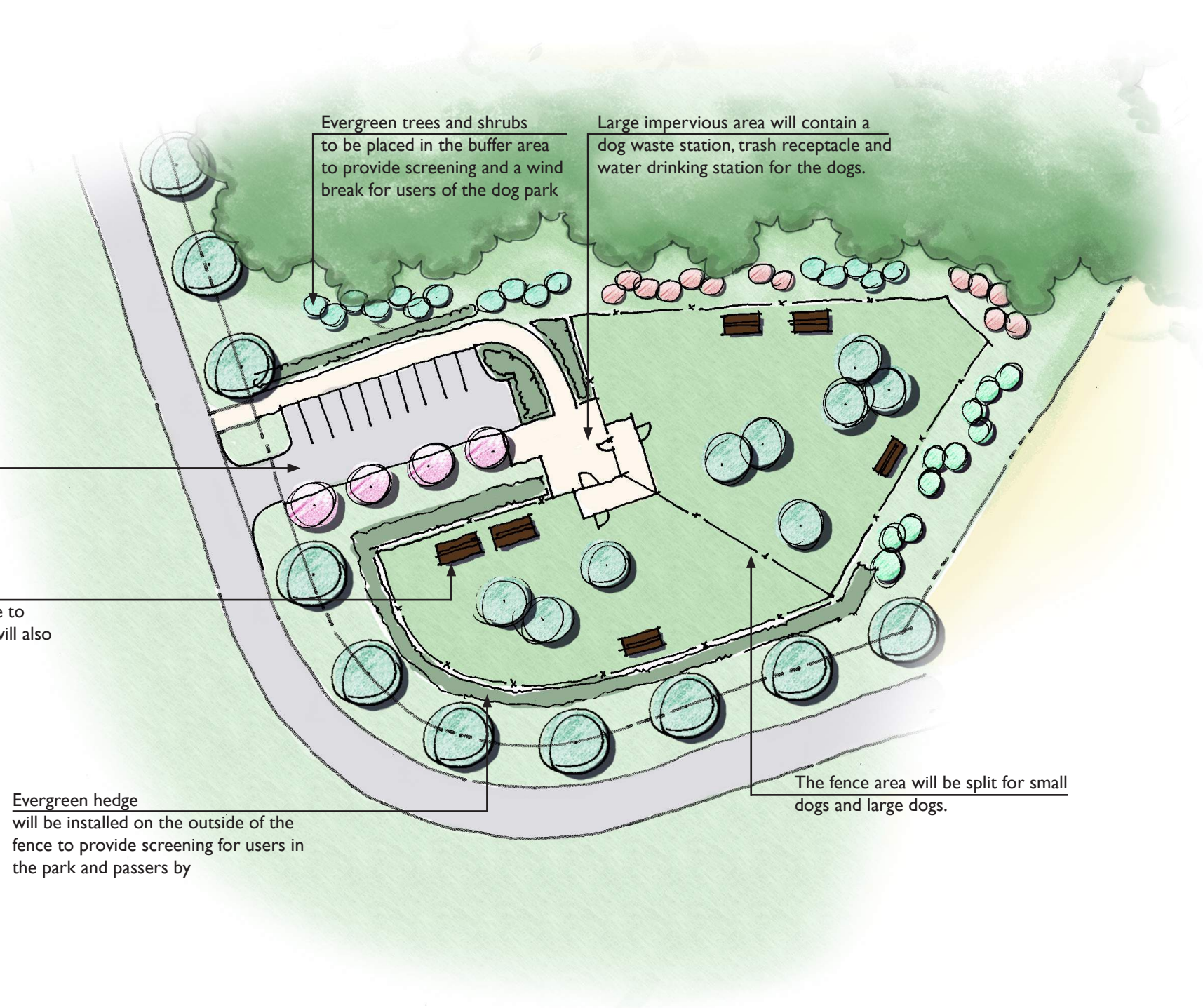
Dog Waste Station

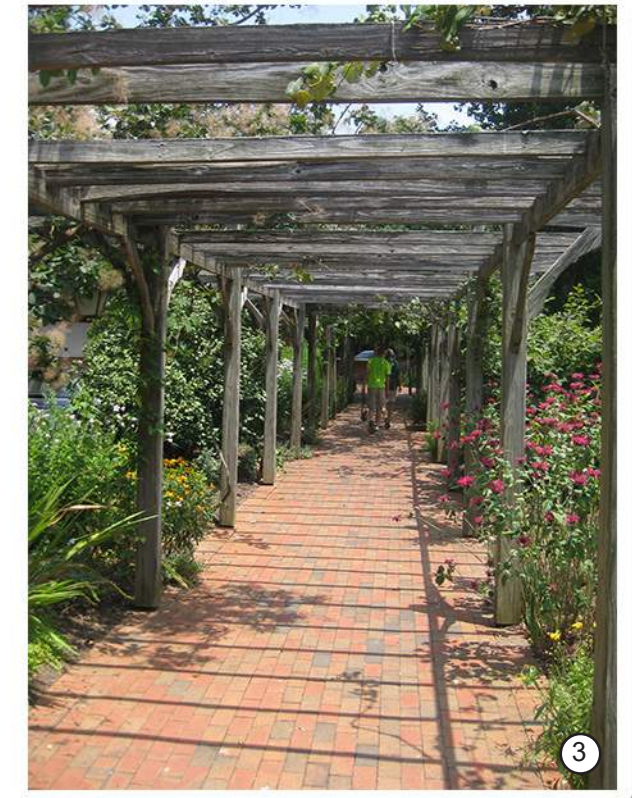
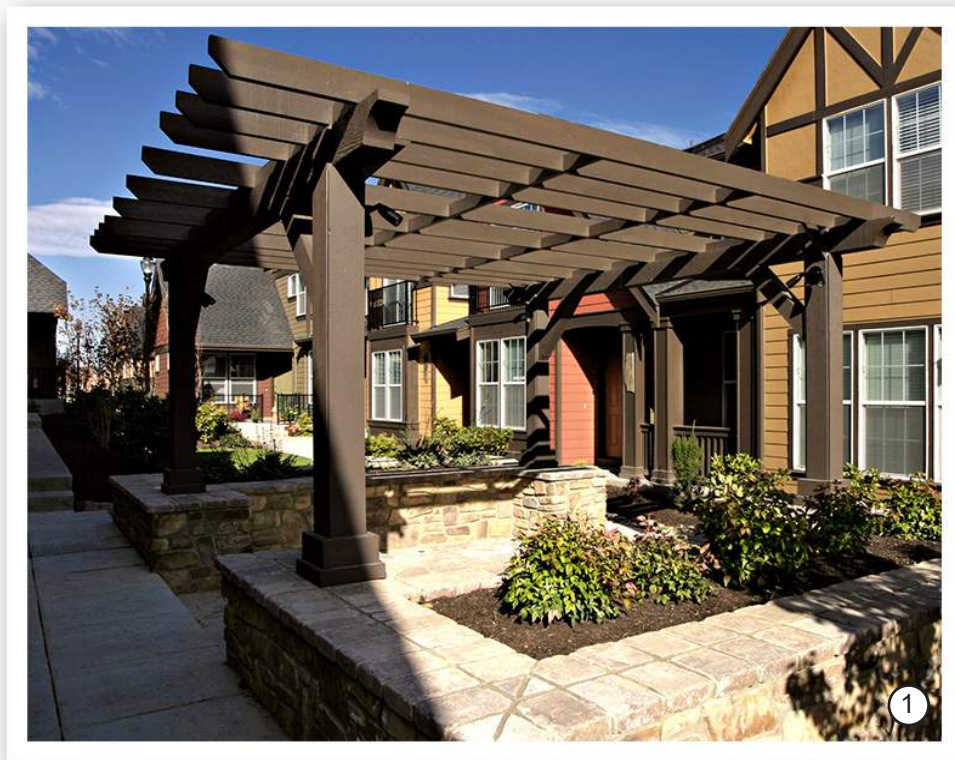


Dog Park Entry



Dog Water Station





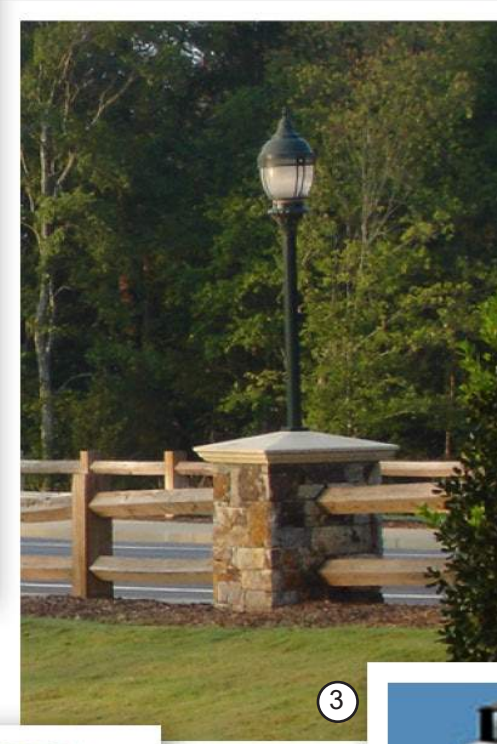
This exhibit is conceptual in nature and may change at owner's discretion in order to meet jurisdictional codes, final site engineering requirements and budget based on pricing for the final plan.

DRAFT

CHARACTER IMAGES - ARBORS

WARDEN STATION

Conway, SC



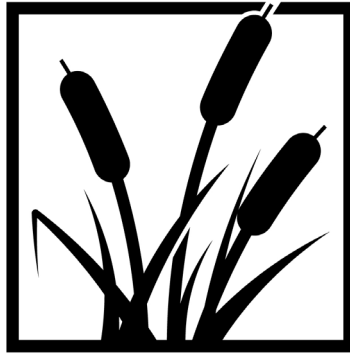
DRAFT

CHARACTER IMAGES - SITE FURNITURE

WARDEN STATION

Conway, SC

This exhibit is conceptual in nature and may change at owner's discretion in order to meet jurisdictional codes, final site engineering requirements and budget based on pricing for the final plan.



Biological Evaluation
Warren Tract
Conway, Horry County, South Carolina
Project No. 02337-23169

PREPARED FOR:

**BRD Land and Investments
234 Kinsley Park Drive, Suite 110
Fort Mill, South Carolina 29715**

PREPARED BY:

**The Brigman Company
Post office Box 1532
Conway, South Carolina 29526**

July 7, 2023



THE BRIGMAN COMPANY

July 7, 2023

BRD Land and Investments
234 Kinsley Park Drive, Suite 110
Fort Mill, SC 29715

Attention: Ms. Elizabeth Kurre

Reference: **Biological Evaluation**
Warden Tract
Conway, Horry County, South Carolina
Project No. 02337-23169

Dear Ms. Kurre:

The Brigman Company (TBC) is pleased to submit this report detailing our Biological Evaluation for the Warden Tract (i.e. the Property) located on Pitch Landing Road and US 701 near the City of Conway, Horry County, South Carolina. This work was performed in accordance with TBC's Professional Services Contract, authorized on July 6, 2023. This report and the on-site pedestrian survey have been conducted to assess the potential for the presence of federally protected species or habitat to support federally protected species prior to future development of the Property.

The Property is comprised of a tract of land (Horry County TMS# 149-00-05-015 and 160-00-01-004) totaling approximately 1,709.5 acres. Exhibit 1 of this report presents the approximate location of the Property. The Property is identified on a portion of the U.S. Geological Survey (USGS) 7.5-minute Conway, SC topographic quadrangle map dated 1980. Exhibit 2 of this report depicts the approximate location of the Property overlaid on the referenced topographic quadrangle.

Site and Habitat Descriptions

The Property is located in south central Horry County within the Coastal Plain Physiographic Province of South Carolina. The USGS topographic quadrangle (Exhibit 2) depicts the Property as mostly wooded in 1984. The surrounding properties consist of undeveloped, wooded land and a few residential home and some commercial properties that front US Highway 701. Exhibit 3 of this report depicts the Property overlaid on an aerial photograph.

The majority of the Property has been clear cut of timber, including the majority of wetland areas. The only remaining mature trees are those that are growing in areas that were too wet for the harvesting equipment. Based upon historic aerial photography, it appears the timber harvest began in mid-2016 and was completed prior to May 2017. The uplands have re-generating in loblolly pine (*Pinus taeda*) and with sweetgum (*Liquidambar styraciflua*), with dogfennel (*Eupatorium capillifolium*) and broom grass (*Andropogon virginicus*) in the herbaceous layer. The clear cut wetlands are have become dominated by herbaceous species, including, wool grass (*Scirpus Cyprinus*) and blue sedge (*Carex glaucescens*).



Protected Species

The U.S. Fish & Wildlife Service (USF&WS) *South Carolina List of At-risk, Candidate, Endangered, and Threatened Species – Horry County*, the USF&WS Information for Planning and Conservation (IPaC) website, and the South Carolina Department of Natural Resources (SCDNR) *Rare, Threatened, and Endangered Species and Communities Known to Occur in Horry County, SC* were consulted regarding current federally protected species within Horry County. The information was reviewed prior to conducting the site visit, to determine if known locations of protected species were located on or near the Property. The USF&WS database has twenty-one (22) federally protected species listed for Horry County, South Carolina and one candidate species. However, sixteen (16) of these species are dependent on either beach/sand dunes ecosystems, a marine ecosystem, or large rivers, which the Property does not contain or border. The remaining five (5) protected species and one (1) candidate species include:

Common Name	Scientific Name	Survey Window	Status
Bald Eagle	<i>Haliaeetus leucocephalus</i>	October 1 – May 15 (nesting season)	Bald & Golden Eagle Protection Act
Red-Cockaded Woodpecker	<i>Picoides borealis</i>	March 1 – July 31 (nesting season)	Endangered
American Wood Stork	<i>Mycteria americana</i>	February 15 – September 1 (nesting season)	Threatened
American Chaffseed	<i>Schwalbea americana</i>	May - August (1-2 months after a fire)	Endangered
Northern Long-eared Bat	<i>Myotis septentrionalis</i>	Year round	Threatened
Monarch Butterfly	<i>Danaus plexippus</i>	August-December	Candidate

A pedestrian field review was performed for protected species and suitable habitats to support protected species on July 6, 2023 by Mr. Jeffery Vereen of TBC. The results of the pedestrian field review are included in the following sections of this report, as well as a discussion of the above species, where applicable.

Plants:

No Effect

American chaffseed typically grows in sandy, acidic, seasonally moist to dry soils in open moist pine flatwoods, pine/wiregrass savannas, and transitional areas between peaty wetlands and xeric sandy soils. Suitable habitat for this species was not observed on the Property.



Vertebrates:

Not Likely to Adversely Affect

Birds:

Even though the bald eagle was taken off of the threatened species list, it is still offered protection under the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c), enacted in 1940. The bald eagle requires mature trees for nesting that are in close proximity to large bodies of water to feed. Site observations revealed that suitable nesting habitat does not exist on the Property. No nests were observed on the Property, nor were any bald eagles observed during the site reconnaissance.

The red-cockaded woodpecker requires mature longleaf pines or loblolly pine with an open understory that does not exceed 15' in height, and evenly spaced trees with an open, park-like stand. Site observations revealed that suitable nesting or foraging habitat does not exist on the Property.

The wood stork typically requires coastal areas, tidal waters, marshes, swamps, streams and mangroves for nesting and feeding. Suitable nesting habitat was not present on the Property, however, the wetlands of Bear Swamp does provide foraging habitat for the wood stork, however, the proposed project may affect, but is not likely to adversely affect the wood stork or any of the other listed species of birds for Horry County.

Reptiles and Amphibians:

The only federally protected species of reptiles or amphibians listed for Horry County are associated with the marine ecosystem, and the Property does not adjoin the Atlantic Ocean.

Fish and Marine Species:

There is no suitable habitat on or adjacent to the Property to support protected species of fish or marine species listed for Horry County.

Mammals:

The northern long-eared bat is a medium-sized bat approximately three to 3.7 inches, with a wingspan of nine to 10 inches. Fur color ranges from medium to dark brown on the back and tawny to pale brown on the underside. It is distinguished by its long ears in relation to other bats in the genus *Myotis*, which means mouse-eared. The northern long-eared bat uses caves and abandoned mines as winter hibernacula. It is found from Maine to North Carolina on the Atlantic Coast, westward to eastern Oklahoma, and north through the Dakotas. In summer, this bat will roost in small colonies or alone underneath bark or in cavities or crevices of both live trees and dead trees. The USFWS considers any live or dead tree with loose or exfoliating bark with a diameter-at-breast-height (DBH) greater than three inches to be potential summer roosting habitat. The trees on the Property range from approximately 3 inches to 10 inches DBH and could potentially provide summer roosting habitat for this species.

In recent coordination with the USF&WS (IPaC) and SCDNR Natural Heritage Trust Program in regard to northern long-eared bat occurrences on or in the vicinity of the Property, the USF&WS and SCDNR stated that there are no known NLEB maternity roosts or hibernacula located near the project area. Accordingly, future development of the Property "**not likely to adversely affect**" this species.



The remaining federally protected species of mammals listed for Horry County are marine species and the Property does not adjoin the Atlantic Ocean.

Invertebrate:

No Effect

Insects:

The Monarch butterfly (*Danaus plexippus*) originates in North America where an eastern and western population undertake extensive migrations. For overwintering monarchs, habitat with a specific microclimate is needed for protection from the elements, as well as moderate temperatures to avoid freezing. These conditions vary between populations. For the eastern North American population, most monarchs overwinter in Oyamel fir (*Abies religiosa*) tree roosts located in mountainous regions in central Mexico at an elevation of 2,400 to 3,600 meters. Monarchs living west of the Rocky Mountain range in North America primarily overwinter in California at sites along the Pacific Coast, roosting in eucalyptus (*Eucalyptus spp.*), Monterey pines (*Pinus radiata*) and Monterey cypress (*Hesperocyparis macrocarpa*) trees. Whether it's a field, roadside area, open area, wet area or urban garden, milkweed and flowering plants are needed for monarch habitat. Adult monarchs feed on the nectar of many flowers during breeding and migration, but they can only lay eggs on milkweed plants. During the site reconnaissance, no monarch butterflies or milkweed were observed on or directly adjacent to the Property, therefore should have no effect on this species.

Freshwater Mussels:

There are no federally protected species of freshwater mussel listed for Horry County.

Methodology

TBC reviewed the SCDNR and the USF&WS databases for records of protected species known to occur within Horry County. The purpose of the search was to identify current and historic documented occurrences of protected species located within this county. Additionally, TBC personnel reviewed available supporting information including the USGS topographic quadrangle and applicable soil survey data. The purpose of reviewing this supporting information was to identify drainage features and soil types in the site area that may be suitable habitat for protected species. During field reconnaissance, TBC personnel integrated the information obtained from this supporting documentation with field evaluation for the presence of protected species or potential protected species habitat.

Summary and Conclusions

Based on the literature review, habitat assessment, and pedestrian field review of the Property, it is our opinion that future land clearing activities associated with proposed development on the Property will have no effect on federally listed protected plant or candidate species for Horry County and may "not likely to adversely affect" the wood stork and the Northern Long-eared bat.



Biological Evaluation

Warden Tract

Conway, Horry County, South Carolina

Project No. 02337-23169

Closure

TBC appreciates the opportunity to be of service to you by performing this Biological Evaluation for the Property. Please contact us at (843) 248-9388 with questions regarding this report, or if you require additional information.

Sincerely,

Jeffery Vereen
Project Manager

jvereen@TheBrigmanCompany.com

Appendices

Exhibit 1: Project Area

Exhibit 2: USGS Topographic Map Exhibit

Exhibit 3: Aerial Exhibit

Exhibit 4: USDA/SCS Soil Survey Exhibit

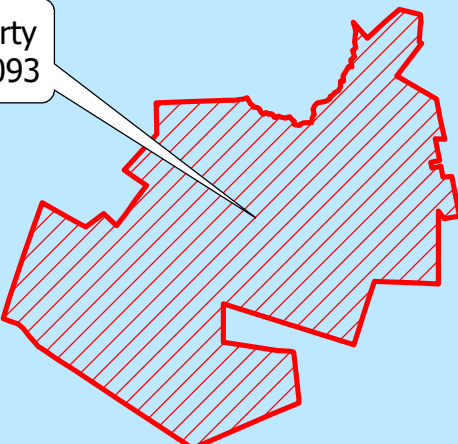
Site Photographs

USF&WS IPaC Report

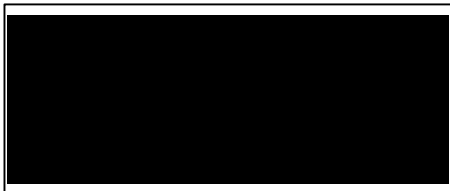
SCDNR Species List for Horry County

SCDNR Request for Threatened and Endangered Species Consultation Report

Subject Property
33.783 / -79.093



Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community



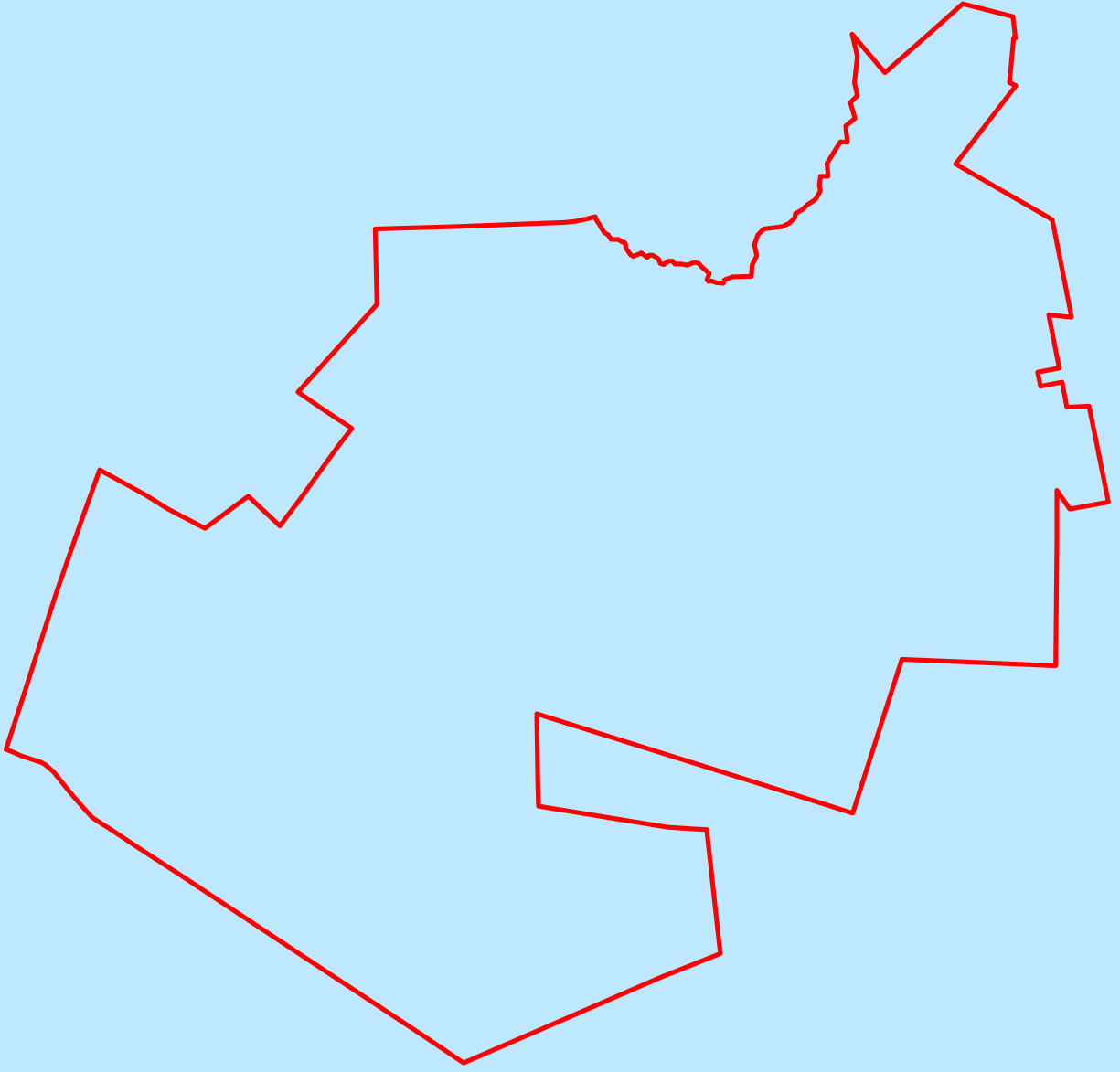
Site Vicinity Map

Warden Tract
TMS# 149-00-05-015 and 160-00-01-004
Conway, Horry County, SC
July 2023



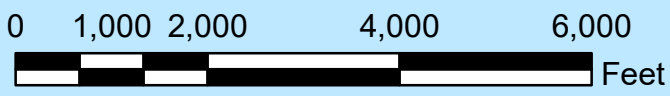
1 " = 1 miles

USGS 7.5-Min. Conway, SC Quad. (1980)



LEGEND

 Subject Property



Copyright © 2013 National Geographic Society, i-cubed



USGS Topographic Map

Warden Tract
TMS# 149-00-05-015 and 160-00-01-004
Conway, Horry County, SC
July 2023



1" = 2,000'

LEGEND

 Subject Property: 1,709.5 Ac+/-

 Wetland Area: 723.8 Ac+/-

1 Site Photograph Location and Number



Esri, HERE, Garmin, (c) OpenStreetMap contributors, Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

Aerial Photograph Exhibit

Warden Tract

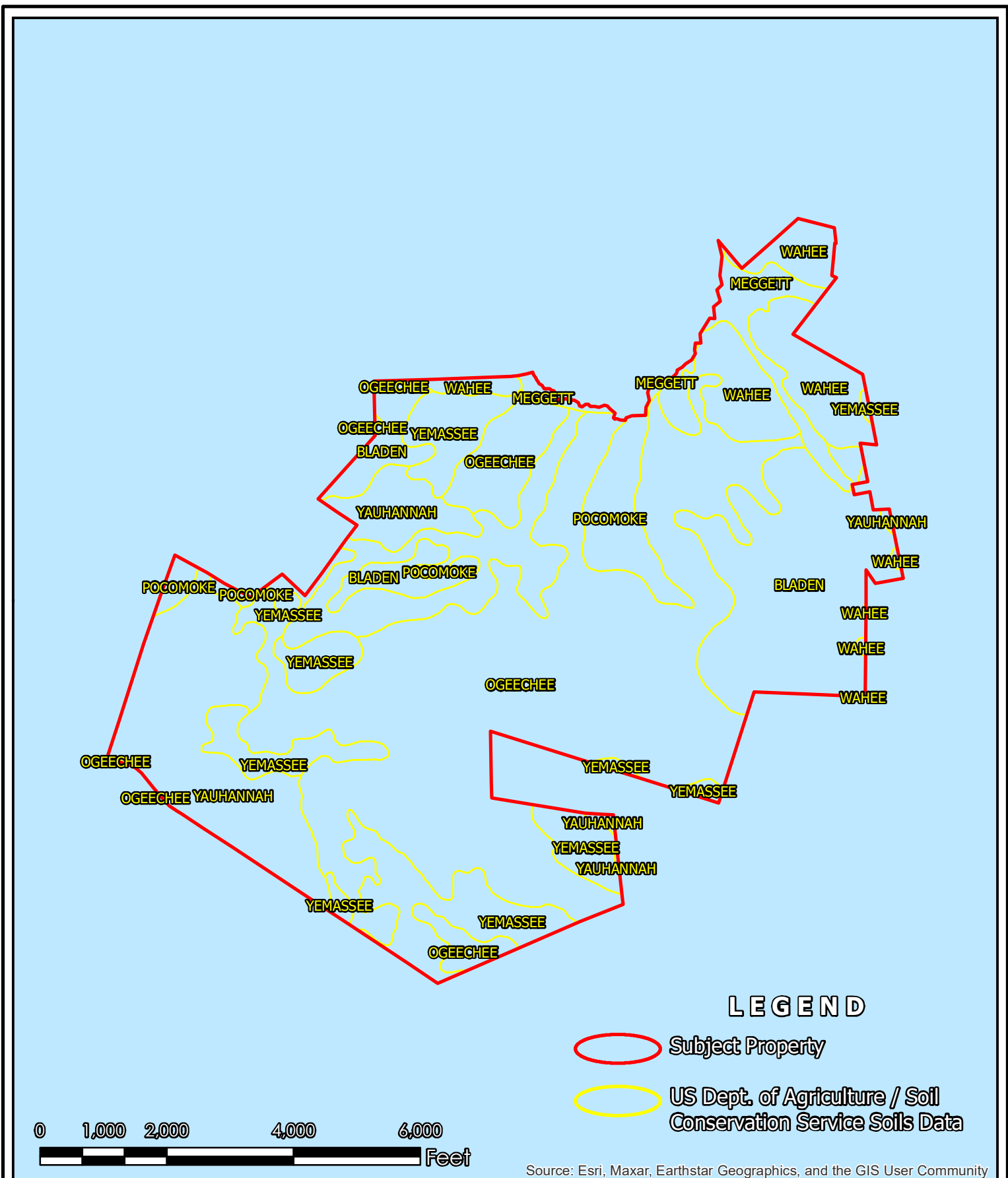
TMS# 149-00-05-015 and 160-00-01-004

Conway, Horry County, SC

July 2023



1" = 2,000'



LEGEND

-  Subject Property
-  US Dept. of Agriculture / Soil Conservation Service Soils Data



Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

USDA / SCS Soils Map

Warden Tract
 TMS# 149-00-05-015 and 160-00-01-004
 Conway, Horry County, SC
 July 2023



1" = 2,000'





1 Photo Point 1 facing east.



2 Photo Point 2 facing west.



3 Photo Point 2 facing east.



4 Photo Point 3 facing west.



Site Photographs
Warren Tract
Horry County, South Carolina

Project No.: 02337-23169

Taken by: JV

Date Taken: 07/06/23



5 Photo Point 3 facing south.



6 Photo Point 4 facing east.



7 Photo Point 4 facing west.



8 Photo Point 5 facing south.



**Site Photographs
Warren Tract
Horry County, South Carolina**

Project No.: 02337-23169

Taken by: JV

Date Taken: 07/06/23



9 Photo Point 6 facing north.



10 Photo Point 6 facing south.



11 Photo Point 7 facing north.



12 Photo Point 7 facing south.



**Site Photographs
Warren Tract
Horry County, South Carolina**

Project No.: 02337-23169

Taken by: JV

Date Taken: 07/06/23



13 Photo Point 8 facing west.



14 Photo Point 8 facing east.



15 Photo Point 9 facing south.



16 Photo Point 9 facing north.



**Site Photographs
Warren Tract
Horry County, South Carolina**

Project No.: 02337-23169

Taken by: JV

Date Taken: 07/06/23



17 Photo Point 10 facing north.



18 Photo Point 10 facing south.



19 Photo Point 11 facing west.



20 Photo Point 11 facing east.



Site Photographs
Warren Tract
Horry County, South Carolina

Project No.: 02337-23169

Taken by: JV

Date Taken: 07/06/23



21 Photo Point 12 facing west.



22 Photo Point 12 facing north.



23 Photo Point 13 facing north.



24 Photo Point 13 facing south.



Site Photographs
Warren Tract
Horry County, South Carolina

Project No.: 02337-23169

Taken by: JV

Date Taken: 07/06/23



United States Department of the Interior



FISH AND WILDLIFE SERVICE
South Carolina Ecological Services
176 Croghan Spur Road, Suite 200
Charleston, SC 29407-7558
Phone: (843) 727-4707 Fax: (843) 727-4218

In Reply Refer To:
Project Code: 2023-0100339
Project Name: warden Tract

July 03, 2023

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see <https://www.fws.gov/birds/policies-and-regulations.php>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see <https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
 - USFWS National Wildlife Refuges and Fish Hatcheries
 - Migratory Birds
 - Wetlands
-

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

South Carolina Ecological Services

176 Croghan Spur Road, Suite 200

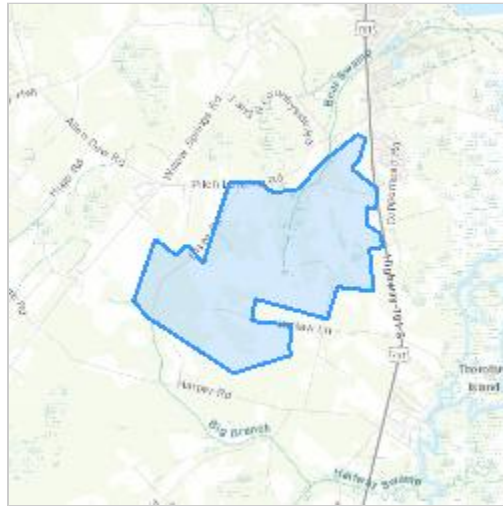
Charleston, SC 29407-7558

(843) 727-4707

PROJECT SUMMARY

Project Code: 2023-0100339
Project Name: warden Tract
Project Type: Commercial Development
Project Description: Proposed commercial development.
Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@33.7822491,-79.09061354569455,14z>



Counties: Horry County, South Carolina

ENDANGERED SPECIES ACT SPECIES

There is a total of 14 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered
Tricolored Bat <i>Perimyotis subflavus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

BIRDS

NAME	STATUS
Piping Plover <i>Charadrius melodus</i> Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered. There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6039	Threatened
Red Knot <i>Calidris canutus rufa</i> There is proposed critical habitat for this species. Species profile: https://ecos.fws.gov/ecp/species/1864	Threatened
Red-cockaded Woodpecker <i>Picoides borealis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7614	Endangered
Wood Stork <i>Mycteria americana</i> Population: AL, FL, GA, MS, NC, SC No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8477	Threatened

REPTILES

NAME	STATUS
Green Sea Turtle <i>Chelonia mydas</i> Population: North Atlantic DPS There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6199	Threatened
Kemp's Ridley Sea Turtle <i>Lepidochelys kempii</i> There is proposed critical habitat for this species. Species profile: https://ecos.fws.gov/ecp/species/5523	Endangered
Leatherback Sea Turtle <i>Dermochelys coriacea</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1493	Endangered
Loggerhead Sea Turtle <i>Caretta caretta</i> Population: Northwest Atlantic Ocean DPS There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1110	Threatened

INSECTS

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

FLOWERING PLANTS

NAME	STATUS
American Chaffseed <i>Schwalbea americana</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1286	Endangered
Canby's Dropwort <i>Oxypolis canbyi</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7738	Endangered
Pondberry <i>Lindera melissifolia</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1279	Endangered

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

MIGRATORY BIRDS

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

-
1. The [Migratory Birds Treaty Act](#) of 1918.
 2. The [Bald and Golden Eagle Protection Act](#) of 1940.
 3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern \(BCC\) list](#) or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
American Kestrel <i>Falco sparverius paulus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9587	Breeds Apr 1 to Aug 31
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Sep 1 to Jul 31

NAME	BREEDING SEASON
Brown-headed Nuthatch <i>Sitta pusilla</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Mar 1 to Jul 15
Chimney Swift <i>Chaetura pelagica</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 25
Eastern Whip-poor-will <i>Antrostomus vociferus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Aug 20
King Rail <i>Rallus elegans</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8936	Breeds May 1 to Sep 5
Lesser Yellowlegs <i>Tringa flavipes</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679	Breeds elsewhere
Painted Bunting <i>Passerina ciris</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Apr 25 to Aug 15
Prairie Warbler <i>Dendroica discolor</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Jul 31
Prothonotary Warbler <i>Protonotaria citrea</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 1 to Jul 31
Red-headed Woodpecker <i>Melanerpes erythrocephalus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Sep 10
Swallow-tailed Kite <i>Elanoides forficatus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8938	Breeds Mar 10 to Jun 30
Willet <i>Tringa semipalmata</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 20 to Aug 5
Wilson's Plover <i>Charadrius wilsonia</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 1 to Aug 20

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

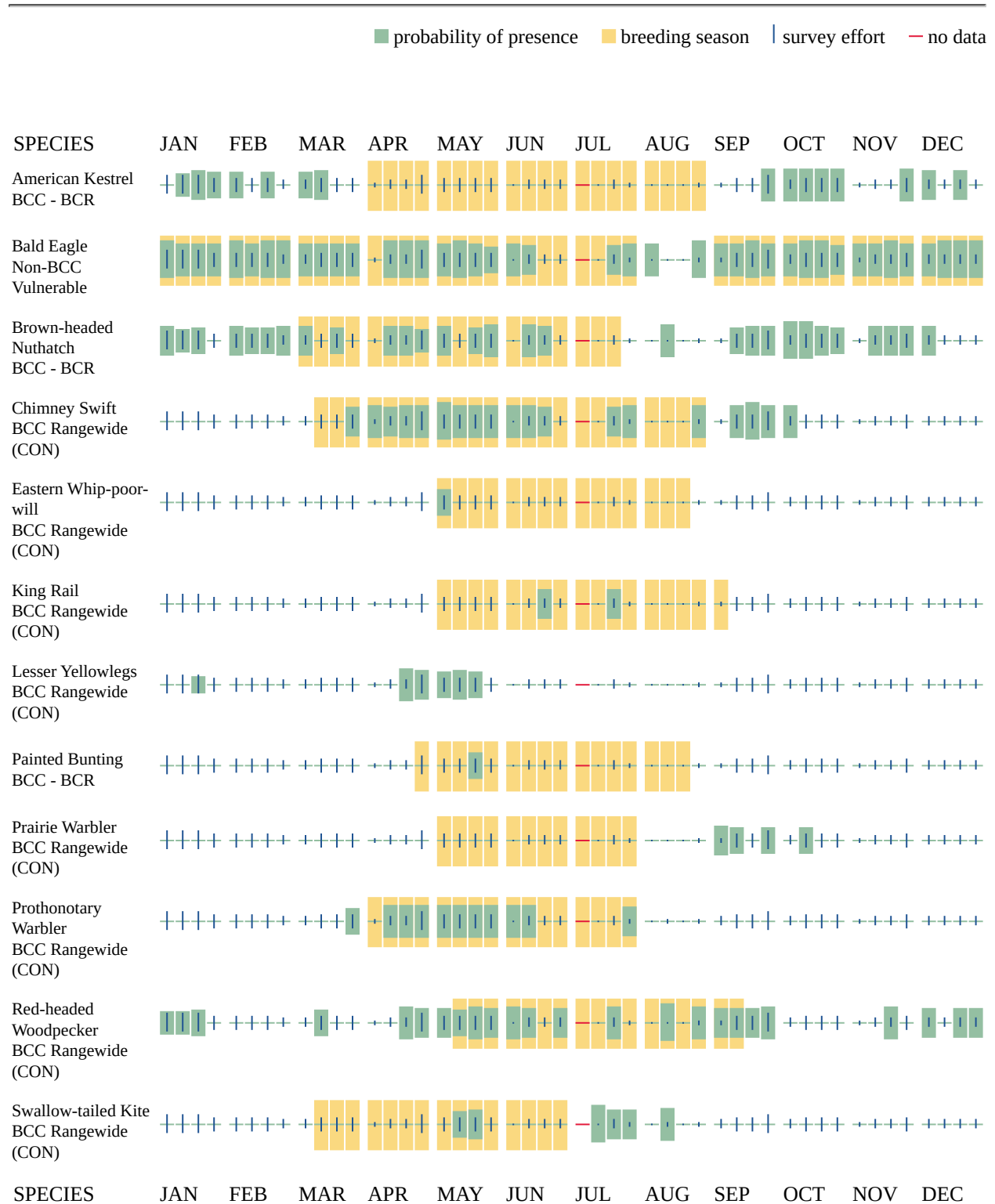
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

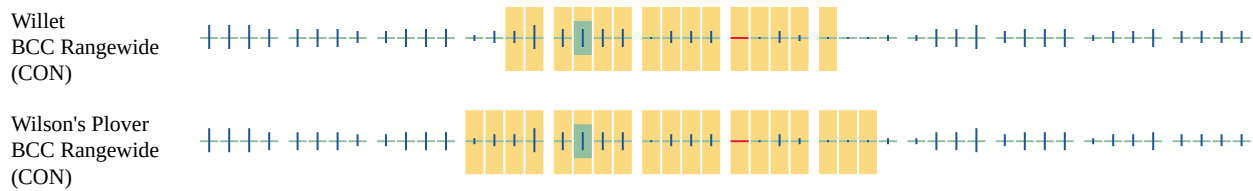
No Data (—)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.





Additional information can be found using the following links:

- Birds of Conservation Concern <https://www.fws.gov/program/migratory-birds/species>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>

MIGRATORY BIRDS FAQ

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the [RAIL Tool](#) and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

WETLANDS

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

FRESHWATER FORESTED/SHRUB WETLAND

- [PFO4/1A](#)
 - [PSS4/1B](#)
 - [PFO4B](#)
 - [PFO1F](#)
 - [PFO1B](#)
 - [PFO1C](#)
 - [PFO1/4B](#)
 - [PFO1/4A](#)
 - [PSS1C](#)
 - [PSS1Ad](#)
 - [PFO4A](#)
 - [PSS4/1Bd](#)
 - [PFO1/4Bd](#)
 - [PFO1Bd](#)
 - [PFO4Bd](#)
 - [PSS4B](#)
 - [PFO4C](#)
 - [PFO1Cd](#)
 - [PSS4A](#)
 - [PFO4/1C](#)
 - [PFO4/1B](#)
 - [PSS1Bd](#)
 - [PFO1/4Ad](#)
 - [PFO4/1Bd](#)
 - [PFO1Fd](#)
 - [PFO1A](#)
-

- [PSS1/4Bd](#)
- [PSS4C](#)
- [PFO1/4C](#)
- [PSS1/4Cd](#)

FRESHWATER EMERGENT WETLAND

- [PEM1F](#)
- [PEM1Bd](#)
- [PEM1A](#)
- [PEM1/SS4Bd](#)
- [PEM1B](#)
- [PEM1Cd](#)
- [PEM1C](#)

RIVERINE

- [R4SBC](#)
 - [R2UBH](#)
-

IPAC USER CONTACT INFORMATION

Agency: The Brigman Company
Name: Jeffery Vereen
Address: 607 Main Street
Address Line 2: 607 Main Street
City: Conway
State: SC
Zip: 29526
Email: jvereen@thebrigmancompany.com
Phone: 8432489388

HORRY COUNTY

CATEGORY	COMMON NAME/STATUS	SCIENTIFIC NAME	SURVEY WINDOW/ TIME PERIOD	COMMENTS
Amphibians	None Found			
Birds	American wood stork (T)	<i>Mycteria americana</i>	February 15-September 1	Nesting season
	Bald eagle (BGEPA)	<i>Haliaeetus leucocephalus</i>	October 1-May 15	Nesting season
	Black-capped petrel (ARS)	<i>Pterodroma hasitata</i>	April-October	Offshore water primarily
	Piping plover (T, CH)	<i>Charadrius melodus</i>	July 15-May 1	Migration and wintering
	Red-cockaded woodpecker (E)	<i>Picoides borealis</i>	March 1-July 31	Nesting season
	Red knot (T)	<i>Calidris canutus rufa</i>	August 1-May 31	Migration and wintering
	Saltmarsh sparrow (ARS)	<i>Ammodramus caudatus</i>	Fall/winter	Fall/winter surveys
Crustaceans	None Found			
Fishes	Atlantic sturgeon* (E)	<i>Acipenser oxyrinchus*</i>	February 1-April 30	Spawning migration
	Robust redhorse (ARS)	<i>Moxostoma robustum</i>	Late April-early May	Temperature dependent: 16-24°C
	Shortnose sturgeon* (E)	<i>Acipenser brevirostrum*</i>	February 1-April 30	Spawning migration
Insects	Monarch butterfly (C)	<i>Danaus plexippus</i>	August-December	Overwinter population departs: March-April
Mammals	Finback whale* (E)	<i>Balaenoptera physalus*</i>	November 1-April 30	Off the coast
	Humpback whale * (E)	<i>Megaptera novaengliae</i>	January 1-March 31	Migration off the coast
	Northern long-eared bat (T)	<i>Myotis septentrionalis</i>	Year round	Winter surveys not as successful
	Right whale* (E)	<i>Balaena glacialis</i>	November 1-April 30	Off the coast
	Sei whale* (E)	<i>Balaenoptera borealis</i>		
	Sperm whale* (E)	<i>Physeter macrocephalus</i>		
	Tri-colored bat (ARS)	<i>Perimyotis subflavus</i>	Year round	Found in mines and caves in the winter
	West Indian manatee (T)	<i>Trichechus manatus</i>	May 1-November 15	In coastal waters
Mollusks	None Found			



South Carolina Department of Natural Resources

Robert H. Boyles, Jr.
Director

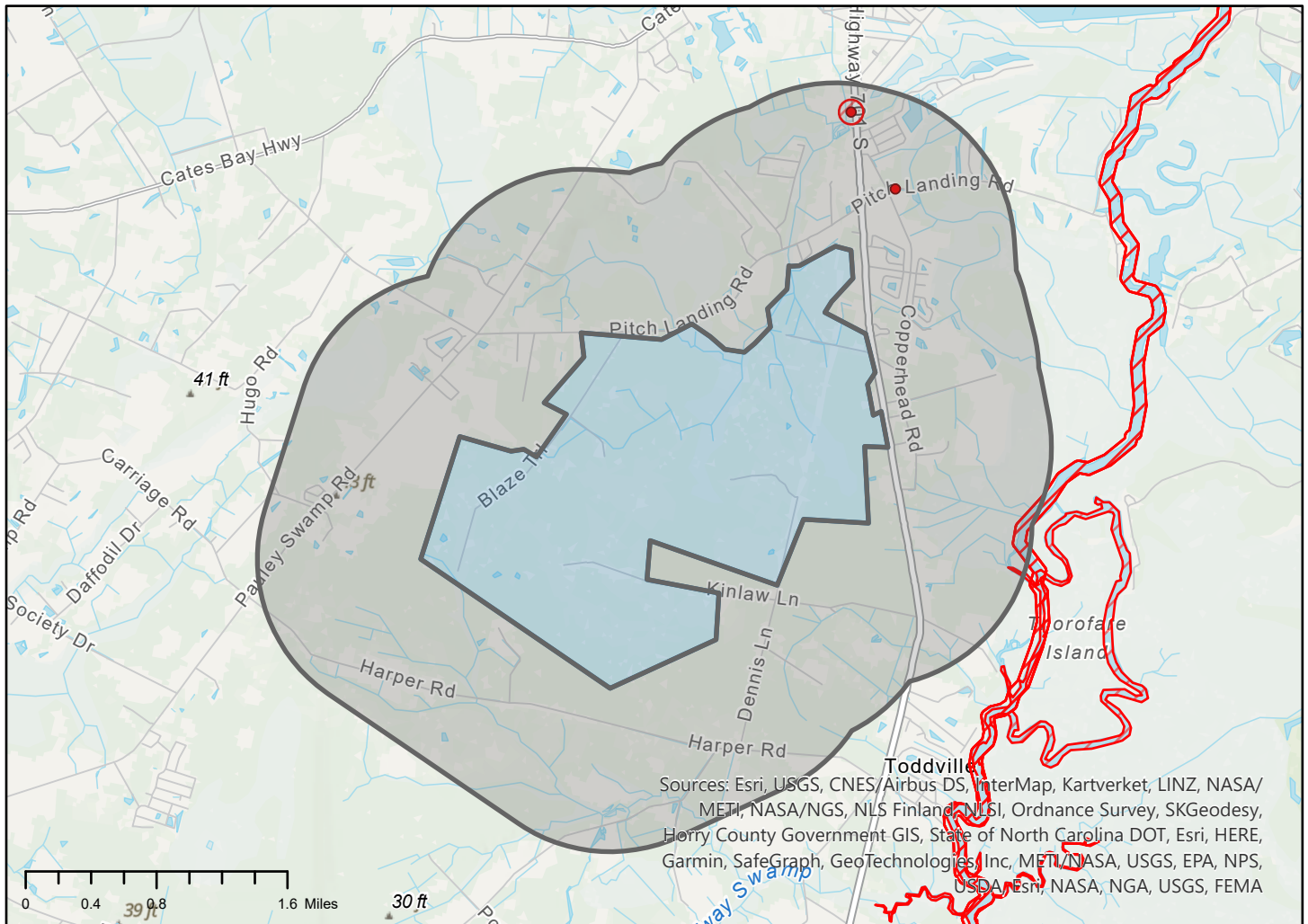
Emily C. Cope
Deputy Director for Wildlife and Freshwater Fisheries

PO Box 167
Columbia, SC 29202
(803) 734-1396
speciesreview@dnr.sc.gov

Requested on Monday, July 3, 2023 by Jeffery Vereen.

Re: Request for Threatened and Endangered Species Consultation
Jeffery Vereen - Warden Tract - Development (Commercial/Residential) - Horry County, South Carolina

The South Carolina Department of Natural Resources (SCDNR) has received your request for threatened and endangered species consultation of the above named project in Horry County, South Carolina. The following map depicts the project area and a 1 mile buffer surrounding:



Live Life Outdoors





South Carolina Department of Natural Resources

Robert H. Boyles, Jr.
Director

Emily C. Cope
Deputy Director for Wildlife and Freshwater Fisheries

This report includes the following items:

- A - A report for species which intersect the project area
- B - A report for species which intersect the buffer around the project area
- C - A list of best management practices relevant to species near to or within the project area
- D - A list of best management practices relevant to the project type
- E - A list of state & federally listed species within the county of the project area
- F - Instructions to submit new species observation records to the SC Natural Heritage Program

Please be advised:

The contents of this report, including all tables, maps, recommendations, and various other text, are produced as a direct result of the information a user provides at the time of submission. The SCDNR assumes that all information submitted by the user represents the project scope as proposed, and recommends that additional reports be requested should the scope deviate from how the project was initially represented to the SCDNR.

The technical comments outlined in this report are submitted to speak to the general impacts of the activities as described through inquiry by parties outside the South Carolina Department of Natural Resources. These technical comments are submitted as guidance to be considered and are not submitted as final agency comments that might be related to any unspecified local, state or federal permit, certification or license applications that may be needed by any applicant or their contractors, consultants or agents presently under review or not yet made available for public review. In accordance with its policy 600.01, Comments on Projects Under Department Review, the South Carolina Department of Natural Resources, reserves the right to comment on any permit, certification or license application that may be published by any regulatory agency which may incorporate, directly or by reference, these technical comments.

Interested parties are to understand that SCDNR may provide a final agency position to regulatory agencies if any local, state or federal permit, certification or license applications may be needed by any applicant or their contractors, consultants or agents. For further information regarding comments and input from SCDNR on your project, please contact our Office of Environmental Programs by emailing environmental@dnr.sc.gov or by visiting www.dnr.sc.gov/environmental. Pursuant to Section 7 of the Endangered Species Act, requests for formal letters of concurrence with regards to federally listed species should be directed to the USFWS.

Should you have any questions or need more information, please do not hesitate to contact our office by email at speciesreview@dnr.sc.gov or by phone at 803-734-1396.

Sincerely,

A handwritten signature in black ink, appearing to read "Joseph Lemeris, Jr.", is written over a light blue horizontal line.

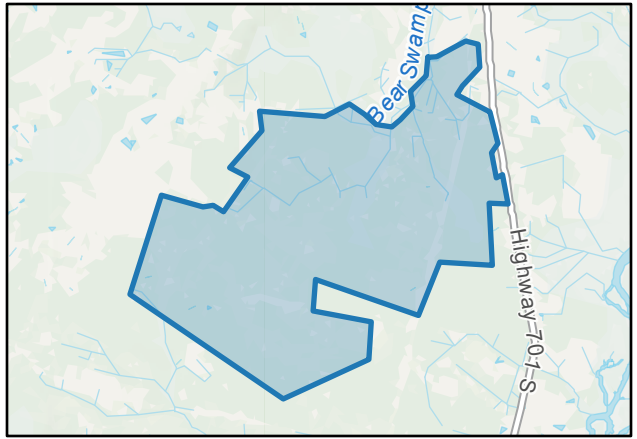
Joseph Lemeris, Jr.
Heritage Trust Program
SC Department of Natural Resources

Live Life Outdoors



A. Project Area - Species Report

There are 0 tracked species records found within the project footprint. The following table outlines occurrences found within the project footprint (if any), sorted by listing status and species name. Please keep in mind that this information is derived from existing databases and do not assume that it is complete. Areas not yet inventoried may contain significant species or communities. You can find more information about global and state rank status definitions by visiting Natureserve's web page. Please note that certain sensitive species found on site may be listed in this table but are not represented on the map. Please contact speciesreview@dnr.sc.gov should you have further questions related to sensitive species found within the project area.



Map Credits: Sources: Esri, USGS, CNES/Airbus DS, InterMap, Kartverket, LINZ, NASA/METI, NASA/NGS, NLS Finland, NLSI, Ordnance Survey, SKGeodesy, Horry County Government GIS, State of North Carolina DOT, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, Esri, NASA, NGA,

No records for species of concern are found within the project area

B. Buffer Area - Species Report

The following table outlines rare, threatened or endangered species found within 1 miles of the project footprint, arranged in order of protection status and species name. Please keep in mind that this information is derived from existing databases and do not assume that it is complete. Areas not yet inventoried may contain significant species or communities. You can find more information about global and state rank status definitions by visiting Natureserve's web page. Please note that certain sensitive species found within the buffer area may be listed in this table but are not represented on the map.



Map Credits: Sources: Esri, USGS, CNES/Airbus DS, InterMap, Kartverket, LINZ, NASA/METI, NASA/NGS, NLS Finland, NLSI, Ordnance Survey, SK Geodesy, Esri, NASA, NGA, USGS, Horry County Government GIS, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, EPA, NPS, USDA



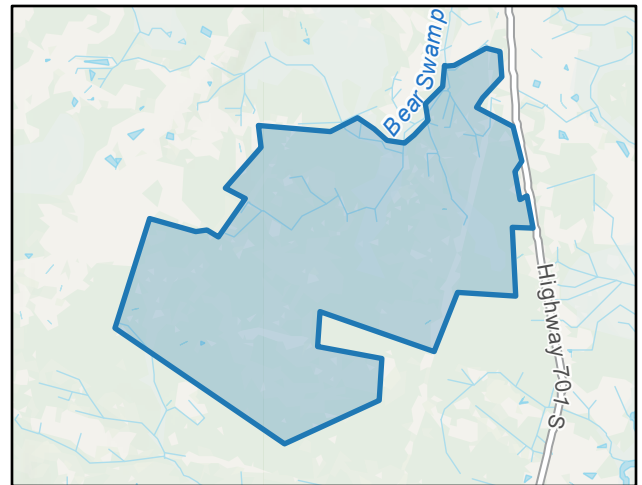
Scientific Name	Common Name	Federal Protection Status	State Protection Status	G Rank	S Rank	Last Obs. Date	Type
<i>Clemmys guttata</i>	Spotted Turtle	ARS: At-Risk Species	ST: State Threatened	G5	S3	2015-09-07	Zoological
<i>Trichechus manatus</i>	Florida Manatee	LT: Federally Threatened	SE: State Endangered	G2G3	S1S2	2022	Zoological
<i>Alosa aestivalis</i>	Blueback Herring	Not Applicable	Not Applicable	G3G4	S5	2021	Zoological
<i>Alosa mediocris</i>	Hickory Shad	Not Applicable	Not Applicable	G4	S4	2021	Zoological
<i>Alosa sapidissima</i>	American Shad	Not Applicable	Not Applicable	G5	S4S5	2021	Zoological
<i>Anguilla rostrata</i>	American Eel	Not Applicable	Not Applicable	G4	S3S4	1981-06-17	Zoological
<i>Enneacanthus obesus</i>	Banded Sunfish	Not Applicable	Not Applicable	G5	S3S4	1981-06-17	Zoological
<i>Sternotherus odoratus</i>	Eastern Musk Turtle	Not Applicable	R: Regulated	G5	S5	2021-09-01	Zoological

C. Species Best Management Practices (1 of 4)

SCDNR offers the following comments and best management practices (BMPs) regarding this project's potential impacts to species of concern which may be found on or near to the project area. Please contact speciesreview@dnr.sc.gov should you have further questions with regard to survey methods, consultation, or other species-related concerns.



Map Credits: Sources: Esri, USGS, CNES/Airbus DS, InterMap, Kartverket, LINZ, NASA/METI, NASA/NGS, NLS Finland, NLSI, Ordnance Survey, SKGeodesy, Horry County Government GIS, State of North Carolina DOT, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, Esri, NASA, NGA,



One or more occurrences of state listed species are found within or near to your project area. Please note that take of these species are prohibited under S.C. Code of Laws §50-15-30.

The SCDNR recommends that water construction-related activities such as dredging or piling installation be avoided during the months of February through April to limit disturbance to american shad, hickory shad, or blueback herring migrations that occur during this time.

To reduce potential construction-related impacts to the manatee to discountable and insignificant levels, the US Fish & Wildlife Service recommends implementing the following Standard Manatee Construction Conditions to all projects affecting the coastal waters of South Carolina (1 of 2):

- The permittee shall instruct all personnel associated with the project of the potential presence of manatees and the need to avoid collisions with manatees. All construction personnel must monitor water-related activities for the presence of manatee(s) during May 1 - November 15. Construction personnel are requested to monitor outside of that timeframe as manatees may be in the area before or after the above dates.
- The permittee shall advise all construction personnel that there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act of 1972 and the Endangered Species Act of 1973.
- Any siltation barriers used during the project shall be made of material in which manatees cannot become entangled and must be properly secured, and regularly monitored to avoid manatee entrapment.
- All vessels associated with the project shall operate at "no wake/idle" speeds at all times while in the construction area and while in water where the draft of the vessel provides less than a four-foot clearance from the bottom. All vessels will follow routes of deep water whenever possible.

To reduce potential construction-related impacts to the manatee to discountable and insignificant levels, the US Fish & Wildlife Service recommends implementing the following Standard Manatee Construction Conditions to all projects affecting the coastal waters of South Carolina (2 of 2):

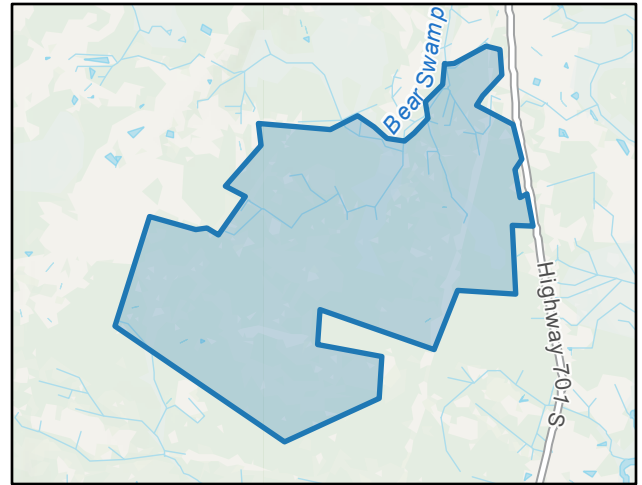
- If manatee(s) are seen within 100 yards of the active construction area all appropriate precautions shall be implemented to ensure protection of the manatee. These precautions shall include the operation of all moving equipment no closer than 50 feet to a manatee. Operation of any equipment closer than 50 feet to a manatee shall necessitate immediate shutdown of that equipment. Activities will not resume until the manatee(s) has departed the project area of its own volition.
- The permittee understands and agrees that all in-water lines (rope, chain, and cable, including the lines to secure turbidity curtains) must be stiff, taut, and non-looping. Examples of such lines are heavy metal chains or heavy cables that do not readily loop and tangle. Flexible in-water lines, such as nylon rope or any lines that could loop or tangle, must be enclosed in a plastic or rubber sleeve/tube to add rigidity and prevent the line from looping and tangling. In all instances, no excess line is allowed in the water. Where appropriate in water wires, cables, should be fitted with PVC sleeve from the surface to the bottom to prevent any potential scraping of the passing manatees.
- Any collision with and/or injury to a manatee shall be reported immediately to the U.S. Fish and Wildlife Service contacts: Melanie Olds, South Carolina Manatee Lead, Charleston Field Office, at 843-727-4707 ext. 205; or Terri Calleson, Manatee Recovery Coordinator, North Florida Field Office, at 904-731-3286.

C. Species Best Management Practices (2 of 4)

SCDNR offers the following comments and best management practices (BMPs) regarding this project's potential impacts to species of concern which may be found on or near to the project area. Please contact speciesreview@dnr.sc.gov should you have further questions with regard to survey methods, consultation, or other species-related concerns.



Map Credits: Sources: Esri, USGS, CNES/Airbus DS, InterMap, Kartverket, LINZ, NASA/METI, NASA/NGS, NLS Finland, NLSI, Ordnance Survey, SKGeodesy, Horry County Government GIS, State of North Carolina DOT, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, Esri, NASA, NGA,



Regarding spotted turtle (1 of 3): The spotted turtle (*Clemmys guttata*) is a state-threatened species and a federal At-Risk species (ARS). Spotted turtles may be allowed to be relocated into areas of suitable habitat, management, and conservation status; however, any plans for relocation should be submitted for review to SCDNR with a detailed description and images of the current and future habitat and proposed work plan and methodologies as it pertains to a relocation project. It should be noted that not all habitats are suitable for relocation.

- Avoid any construction in areas within or adjacent to aquatic resources (wetlands, streams, etc.) from January 15th through May 31st.
- Prior to any construction activity, install silt fencing from November 15th through January 15th. Silt fencing should include 45-degree arms to direct spotted turtles to the uplands adjacent to the waterbody and away from the construction site. The 45-degree arms should be placed at a minimum of 100 ft from the waterbody and no more than 300 ft from the waterbody. Additionally, silt fence arms should extend at least 50-ft and extend in each direction so that the ends of each 45-degree angle to the fence meet to form a triangle. Silt fencing should remain in place throughout the duration of the proposed construction activities.
- Prior to construction, monitor the silt fencing to ensure it is effectively working properly on a monthly basis. This should effectively exclude the species from the project area prior to construction activities. Once construction activities begin, the silt fence should be monitored weekly for the integrity of the fencing and the presence of spotted turtles or other herpetofauna or small wildlife species. If spotted turtles are encountered, the SCDNR state herpetologist should be notified immediately by calling 854-202-0472.

Regarding spotted turtle (2 of 3): Should the applicant not be able to install the silt fencing in accordance with the proposed window, it will require the applicant to install the exclusion fencing when the species is more active and has the potential to trap individuals with the area of proposed construction. Therefore, the SCDNR recommends checking the perimeter of the fencing twice daily for 14 days prior to ground disturbance and/or clearing in areas adjacent to and near these wetlands to ensure that spotted turtles are not trapped within the proposed project footprint.

Any turtles found within the construction area during this initial monitoring period and the construction monitoring period described below must be relocated. The relocation plan must be submitted to SCDNR for review prior to the installation of the silt fencing and the proper permits acquired from the SCDNR Herpetologist for the movement of a state protected species. Please contact the State Herpetologist by calling 854-202-0472.

Regarding spotted turtle (3 of 3): For areas where construction will occur in wetlands, the SCDNR recommends the following to prevent the take of this state protected species:

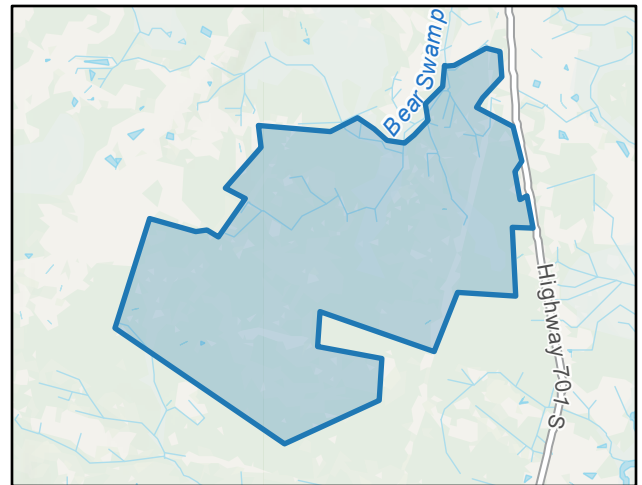
- Surveys for the presence of spotted turtle in wetlands to be impacted should occur from February 15th – April 15th. The best window for visually identifying spotted turtles as well as successfully trapping is February to early May. Visual surveys are usually most effective February to April and trapping, usually March to May. All of this depends on water levels in the surveyed wetland habitat. If dry or extremely low water levels, neither method will be effective or appropriate. Spotted turtles utilize wetland habitat during certain times of the year, but during periods of drought or low water levels, spotted turtles will aestivate in the surrounding forests adjacent to wetlands. The SCDNR recommends one of the methods detailed in the Spotted Turtle Assessment Protocol developed by the Spotted Turtle Working Group be utilized. Following completion of surveys, the results should be submitted to SCDNR, and further coordination occur if spotted turtle are found to be present onsite.

C. Species Best Management Practices (3 of 4)

SCDNR offers the following comments and best management practices (BMPs) regarding this project's potential impacts to species of concern which may be found on or near to the project area. Please contact speciesreview@dnr.sc.gov should you have further questions with regard to survey methods, consultation, or other species-related concerns.



Map Credits: Sources: Esri, USGS, CNES/Airbus DS, InterMap, Kartverket, LINZ, NASA/METI, NASA/NGS, NLS Finland, NLSI, Ordnance Survey, SKGeodesy, Horry County Government GIS, State of North Carolina DOT, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, Esri, NASA, NGA,



Species in the above table with SWAP priorities of High, Highest or Moderate are designated as having conservation priority under the South Carolina State Wildlife Action Plan (SWAP). SWAP species are those species of greatest conservation need not traditionally covered under any federal funded programs. Species are listed in the SWAP because they are rare or designated as at-risk due to knowledge deficiencies; species common in South Carolina but listed rare or declining elsewhere; or species that serve as indicators of detrimental environmental conditions. SCDNR recommends that appropriate measures should be taken to minimize or avoid impacts to the aforementioned species of concern.

This project falls within an area that supports black bear (*Ursus americanus*) populations, a moderate SWAP conservation priority species that requires fire-dependent habitats. The SCDNR recommends that any project area be developed with that in mind. Black bears are attracted to human foods, food waste and packaging (e.g. trash cans, litter, outdoor grills, bird feeders, etc.) and other scented substances and may become habituated to the presence of such attractants if they are obtained. Therefore, the development should be designed in a manner that will substantially minimize the availability of unnatural bear attractants. For example, any exterior trash receptacles must be designed and operated to be 'bear proof' and storage areas should be appropriately secured to prevent access by bears, etc. Some helpful bear-wise tactics can be found at <https://bearwise.org/six-bearwise-basics/>.

Related to American alligator (1 of 3):

American alligator (*Alligator mississippiensis*), a federally and state regulated species, is common throughout freshwater habitats in the Coastal Plain of South Carolina. Juvenile alligators frequently utilize stormwater or stormwater-like ponds, such as golf course ponds or resort lagoons, to avoid being preyed upon by larger adult alligators. Alligators are ambush predators that spend most of their lives in water. They have a natural fear of people unless they become habituated. Most often alligators become habituated when people feed them, either purposefully or accidentally. Please note it is illegal to feed, entice or molest an alligator pursuant to S.C. Code of Laws §50-15-500(C); it is also illegal to kill or possess an alligator without a permit pursuant to S.C. Code §50-15-500(D). Accidental feeding can occur when people do not properly dispose of food or fish carcasses associated with recreational fishing or indirect feeding of other wildlife, such as fish, turtles, or ducks, where alligators resides. A habituated alligator is more likely to approach or be near people and pose a potential threat. Therefore, any development should be designed in a manner that will substantially minimize the interaction of alligators and people.

Related to American alligator (2 of 3):

The SCDNR recommends the following best management practices to deter human and alligator interactions:

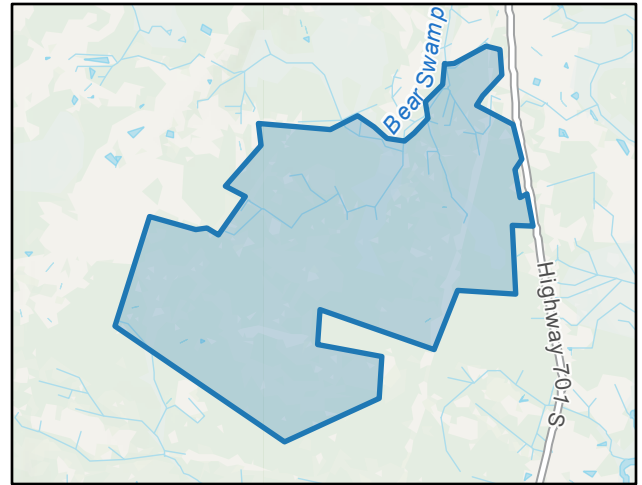
- Any private property or private yards near ponds or waterways should be fenced to limit unexpected alligator encounters. If fencing individual yards is not possible, fencing around the pond should occur. Keeping people, pets, and children from the edge of the water is the single best way to prevent alligator interactions. Due to the alligator's ability to ambush and lunge a great distance to capture its prey, walking paths around ponds should be a minimum of 10 feet from the shoreline. However, to provide greater protection, the SCDNR recommends this distance be increased to 30 feet to reduce alligator and human conflicts. Brush near the water's edge should be managed and considered in the minimum distance as alligators will utilize vegetation to rest and hunting to wait and ambush prey. If vegetation extends five feet from the edge of the water, then the walkway should be a minimum of 10 to ideally 30 feet beyond the farthest edge of vegetation from the water. Additionally, consideration should be given to require that all dogs on walkways near stormwater ponds or pond-like features in the neighborhood must be leashed to prevent alligator from targeting pets as prey. There should be a designated area included in design plans to provide a place for fishermen to properly dispose of fish carcasses or bait to avoid the accidental feeding and habituation of alligators.

C. Species Best Management Practices (4 of 4)

SCDNR offers the following comments and best management practices (BMPs) regarding this project's potential impacts to species of concern which may be found on or near to the project area. Please contact speciesreview@dnr.sc.gov should you have further questions with regard to survey methods, consultation, or other species-related concerns.



Map Credits: Sources: Esri, USGS, CNES/Airbus DS, InterMap, Kartverket, LINZ, NASA/METI, NASA/NGS, NLS Finland, NLSI, Ordnance Survey, SKGeodesy, Horry County Government GIS, State of North Carolina DOT, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, Esri, NASA, NGA,



Related to American alligator (3 of 3):

The SCDNR recommends the following best management practices to deter human and alligator interactions:

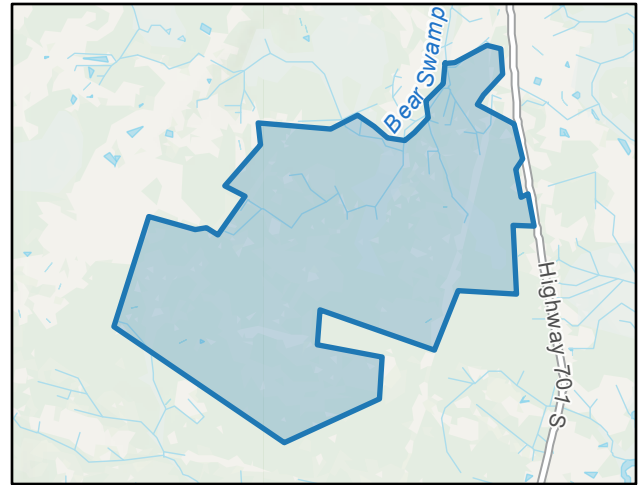
- Retention ponds, lagoons and other water features should be designed to limit the occurrence of alligator basking adjacent to homes and walkways. As alligators are more likely to bask on shallow slopes, this can be achieved by construction of shallow bank slopes away from the homes and steeper bank slopes near homes or walkways.
- Warning signs noting the presence of alligators and that feeding is illegal should be posted at the entrances to the neighborhood and at any access point where people may be able to approach the water's edge. Signs can be acquired by calling SCDNR at 843-546-6062 or can be purchased on our website at www.gooutdoorsouthcarolina.com.
- The SCDNR recommends that the HOA/management company for the residential development should provide information and educational handouts to all residents on an annual basis prior to spring and summer before alligator activity increases. Information and educational handouts are available on our website www.dnr.sc.gov/wildlife/herps/alligator.

D. Project Best Management Practices (1 of 5)

SCDNR offers the following comments and best management practices (BMPs) regarding this project's potential impacts to natural resources within or surrounding the project area. Please contact our Office of Environmental Programs at environmental@dnr.sc.gov should you have further questions with regard to best management practices related to this project area.



Map Credits: Sources: Esri, USGS, CNES/Airbus DS, InterMap, Kartverket, LINZ, NASA/METI, NASA/NGS, NLS Finland, NLSI, Ordnance Survey, SKGeodesy, Horry County Government GIS, State of North Carolina DOT, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, Esri, NASA, NGA,



Please be aware that the proposed development is in close proximity to property managed to maintain high-quality wildlife habitats using prescribed burning. Future property owners in this area should be made aware of the potential for smoke and hazardous conditions during seasonal prescribed burning events. In an effort to inform the public and allow for the continued use of this essential management tool, the SCDNR strongly encourages the use of smoke easement restrictive covenant and contract language associated with individual lots such that the owners of each individual lots will be required to acknowledge and agree that they may experience noise and smoke emanating from time to time from adjacent protected lands in connection with prescribed burning techniques employed to reduce understory growth, improve wildlife habitat and decrease chances of wildfire.

The project area is located immediately adjacent to or within 0.5 mile of a U.S. Fish and Wildlife National Wildlife Refuge (NWR). Because of the wildlife and habitat values provided by the NWR, the SCDNR recommends consultation with the U.S. Fish and Wildlife Service to best avoid and minimize impacts to this area of conservation importance. You can find the contact information for each refuge by visiting: <https://www.fws.gov/visit-us>

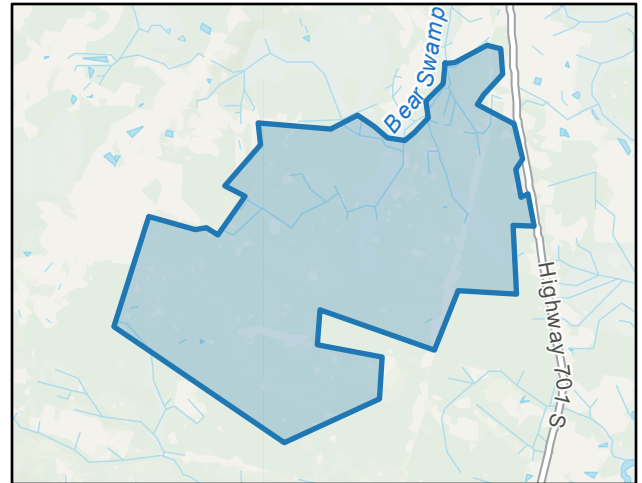
Review of available data, National Wetlands Inventory and hydric soils, indicate that wetlands or waters of the United States are present within your project area. These areas may require a permit from the U.S. Army Corps of Engineers (USACE), as well as a compensatory mitigation plan. SCDNR advises that you consult with the USACE Regulatory to determine if jurisdictional wetlands are present and if a permit and mitigation is required for any activities impacting these areas. For more information, please visit their website at www.sac.usace.army.mil/Missions/Regulatory. Additionally, a 401 Water Quality Certification may also be required from the SC Department of Health & Environmental Control. For more information, please visit their website at <https://www.scdhec.gov/environment/water-quality/water-quality-certification-section-401-clean-water-act>.

D. Project Best Management Practices (2 of 5)

SCDNR offers the following comments and best management practices (BMPs) regarding this project's potential impacts to natural resources within or surrounding the project area. Please contact our Office of Environmental Programs at environmental@dnr.sc.gov should you have further questions with regard to best management practices related to this project area.



Map Credits: Sources: Esri, USGS, CNES/Airbus DS, InterMap, Kartverket, LINZ, NASA/METI, NASA/NGS, NLS Finland, NLSI, Ordnance Survey, SKGeodesy, Horry County Government GIS, State of North Carolina DOT, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, Esri, NASA, NGA,



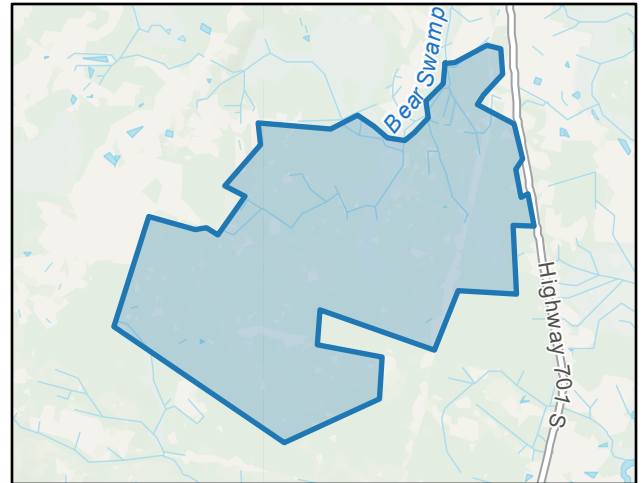
- All necessary measures must be taken to prevent oil, tar, trash and other pollutants from entering the adjacent offsite areas/wetlands/water.
 - Once the project is initiated, it must be carried to completion in an expeditious manner to minimize the period of disturbance to the environment.
 - Upon project completion, all disturbed areas must be permanently stabilized with vegetative cover (preferable), riprap or other erosion control methods as appropriate.
 - The project must be in compliance with any applicable floodplain, stormwater, land disturbance, shoreline management guidance or riparian buffer ordinances.
 - Prior to beginning any land disturbing activity, appropriate erosion and siltation control measures (e.g. silt fences or barriers) must be in place and maintained in a functioning capacity until the area is permanently stabilized.
 - Materials used for erosion control (e.g., hay bales or straw mulch) will be certified as weed free by the supplier.
 - Inspecting and ensuring the maintenance of temporary erosion control measures at least:
 - a. on a daily basis in areas of active construction or equipment operation;
 - b. on a weekly basis in areas with no construction or equipment operation; and
 - c. within 24 hours of each 0.5 inch of rainfall.
 - Ensuring the repair of all ineffective temporary erosion control measures within 24 hours of identification, or as soon as conditions allow if compliance with this time frame would result in greater environmental impacts.
 - Land disturbing activities must avoid encroachment into any wetland areas (outside the permitted impact area). Wetlands that are unavoidably impacted must be appropriately mitigated.
 - Your project may require a Stormwater Permit from the SC Department of Health & Environmental Control, please visit <https://www.scdhec.gov/environment/water-quality/stormwater>
-
- If clearing must occur, riparian vegetation within wetlands and waters of the U.S. must be conducted manually and low growing, woody vegetation and shrubs must be left intact to maintain bank stability and reduce erosion.
 - Construction activities must avoid and minimize, to the greatest extent practicable, disturbance of woody shoreline vegetation within the project area. Removal of vegetation should be limited to only what is necessary for construction of the proposed structures.
 - Where necessary to remove vegetation, supplemental plantings should be installed following completion of the project. These plantings should consist of appropriate native species for this ecoregion and exclude plant species found on the exotic pest plant council list: https://www.se-eppc.org/southcarolina/SCEPPC_LIST2014finalOct.pdf.

D. Project Best Management Practices (3 of 5)

SCDNR offers the following comments and best management practices (BMPs) regarding this project's potential impacts to natural resources within or surrounding the project area. Please contact our Office of Environmental Programs at environmental@dnr.sc.gov should you have further questions with regard to best management practices related to this project area.



Map Credits: Sources: Esri, USGS, CNES/Airbus DS, InterMap, Kartverket, LINZ, NASA/METI, NASA/NGS, NLS Finland, NLSI, Ordnance Survey, SKGeodesy, Horry County Government GIS, State of North Carolina DOT, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, Esri, NASA, NGA,



- Review of available data, National Hydrography Dataset, indicates that streams or waters of the United States are present within your project area. These areas may require a permit from the U.S. Army Corps of Engineers (USACE), as well as a compensatory mitigation plan. SCDNR advises that you consult with the USACE Regulatory to determine if jurisdictional waters are present and if a permit and mitigation is required for any activities impacting these areas. For more information, please visit their website at www.sac.usace.army.mil/Missions/Regulatory. Additionally, a 401 Water Quality Certification or a State Navigable Waters permit may also be required from the SC Department of Health & Environmental Control. For more information, please visit the following websites:
 - <https://www.scdhec.gov/environment/water-quality/water-quality-certification-section-401-clean-water-act>
 - <https://www.scdhec.gov/environment/water-quality/navigable-waters>
- Excavation/Construction activities must not occur during fish spawning season from March through June due to its negative impacts on eggs and reproduction activities.
- If clearing must occur, riparian vegetation within wetlands and waters of the U.S. must be conducted manually and low growing, woody vegetation and shrubs must be left intact to maintain bank stability and reduce erosion.
- Construction activities must avoid and minimize, to the greatest extent practicable, disturbance of woody shoreline vegetation within the project area. Removal of vegetation should be limited to only what is necessary for construction of the proposed structures.
- Where necessary to remove vegetation, supplemental plantings should be installed following completion of the project. These plantings should consist of appropriate native species for this ecoregion.

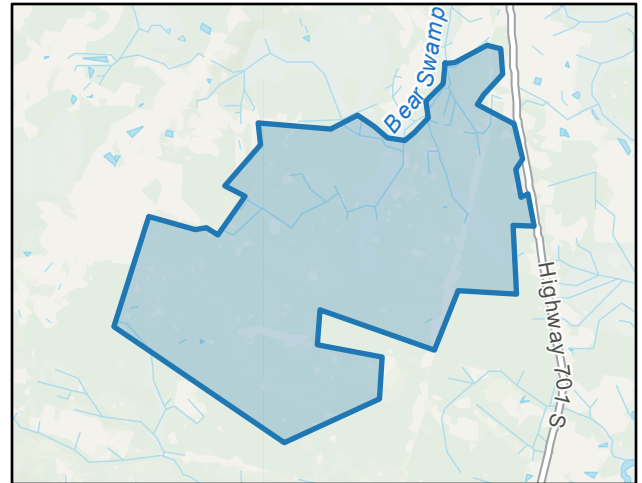
Your project area includes a FEMA special flood hazard area and may require a permit from the County National Floodplain Insurance Program Manager before impacts occur to aquatic resources and the associated floodplains on site. Please refer to <https://www.dnr.sc.gov/water/flood/documents/nfipadmindirectory.pdf> to find your appropriate contact information.

D. Project Best Management Practices (4 of 5)

SCDNR offers the following comments and best management practices (BMPs) regarding this project's potential impacts to natural resources within or surrounding the project area. Please contact our Office of Environmental Programs at environmental@dnr.sc.gov should you have further questions with regard to best management practices related to this project area.



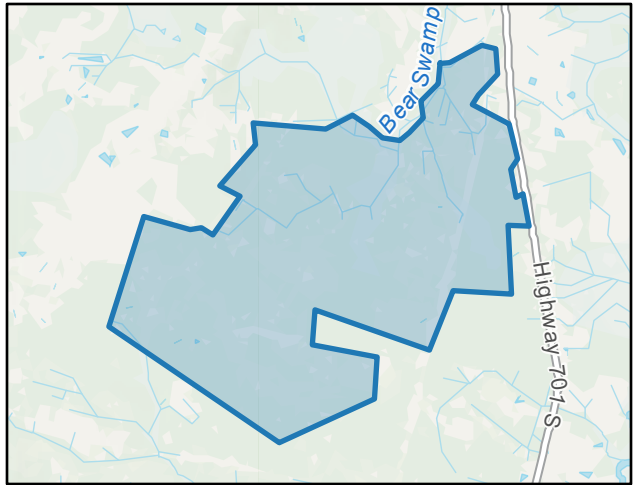
Map Credits: Sources: Esri, USGS, CNES/Airbus DS, InterMap, Kartverket, LINZ, NASA/METI, NASA/NGS, NLS Finland, NLSI, Ordnance Survey, SKGeodesy, Horry County Government GIS, State of North Carolina DOT, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, Esri, NASA, NGA,



- Residential and commercial development has grown exponentially in recent years. Activities associated with these developments can have detrimental impacts on wildlife and aquatic resources such as habitat fragmentation, loss of available habitats and pollution, especially stormwater pollution. The result of these impacts causes the displacement of species and increases wildlife and human interactions. However, properly planned and sited development activities may allow for economic expansion with minimal negative impacts.
- Where appropriate, particularly adjacent to wetlands and water bodies, drainage plans and construction measures for residential and commercial development should be designed to control erosion and sedimentation, water quality degradation and other negative impacts on adjacent water and wetlands utilizing the best available design research. Developers proposing development activities should contact and work closely with local community development planning entities.
- Developments should be planned where growth is most compatible with natural resources utilizing residential and commercial cluster development methods, maximizing green spaces which can both be beneficial to protect natural resources and provide recreational opportunities for outdoor enthusiasts.
- Developments should be designed and constructed to avoid impact to wetland and stream areas whenever possible and to minimize unavoidable wetland and stream impacts to the maximum extent possible. Aquatic habitats and other sensitive natural areas should be identified in the initial planning stages of the project and incorporated in their natural state into the overall development plan.
- Developments should be designed to maintain the integrity and contiguity of wetland and stream systems and their associated riparian corridors, including the establishment of protective upland buffers around and between undisturbed aquatic systems whenever possible. Projects should be designed to minimize habitat fragmentation, including the construction of a limited number of road and utility crossings through streams and wetlands.
- The SCDNR recommends that the applicant incorporate vegetated bioswales, catch basins and/or bioretention cells/rain gardens into development plans beyond the regulatory requirements of the Stormwater Permitting requirements to add additional features to aid in capturing and filtering runoff from hardened surfaces. These structures can protect water quality and prevent oil, gas and other pollutants from directly entering nearby waterways. In addition, the SCDNR strongly recommends the use of permeable or porous pavement surfaces when possible. Permeable surfaces allow for rainfall to filter through the soil which aids in flood control and improves water quality.
- The following resources are available from Clemson Extension to assist:
 - <https://hgic.clemson.edu/factsheet/an-introduction-to-bioswales/>
 - <https://hgic.clemson.edu/factsheet/rain-garden-plants-introduction/>
 - <https://hgic.clemson.edu/factsheet/bioretention-cells-a-guide-for-your-residents/>
 - <https://hgic.clemson.edu/factsheet/an-introduction-to-porous-pavement/>
 - <https://hgic.clemson.edu/factsheet/trees-for-stormwater-management/>

D. Project Best Management Practices (5 of 5)

SCDNR offers the following comments and best management practices (BMPs) regarding this project's potential impacts to natural resources within or surrounding the project area. Please contact our Office of Environmental Programs at environmental@dnr.sc.gov should you have further questions with regard to best management practices related to this project area.



Map Credits: Sources: Esri, USGS, CNES/Airbus DS, InterMap, Kartverket, LINZ, NASA/METI, NASA/NGS, NLS Finland, NLSI, Ordnance Survey, SKGeodesy, Horry County Government GIS, State of North Carolina DOT, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, Esri, NASA, NGA,

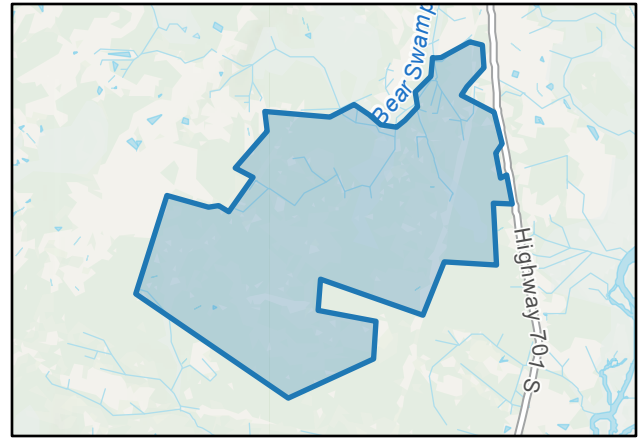
- Your project boundary lies within a coastal county in South Carolina which means you may also need a Coastal Zone Consistency Certification for your project from the SC Department of Health and Environmental Control. For more information, visit: <https://www.scdhec.gov/environment/your-water-coast/ocean-coastal-management/beach-management/coastal-permits/coastal-zone>
- If your project could affect coastal waters, tidelands, beaches and beach/dune systems, you may also need a critical area permit from the SC Department of Health and Environmental Control. For more information, visit: <https://www.scdhec.gov/environment/your-water-coast/ocean-coastal-management/beach-management/coastal-permits/critical-1>

E. State & Federally Listed Species in Horry County

The South Carolina Department of Natural Resources' Heritage Trust Program organizes a database that captures and tracks element of occurrence data for rare, threatened and endangered species, both federal and state. Please keep in mind that this information included within this report is derived from existing databases, and do not assume that it is complete. Areas not yet inventoried may contain significant species or communities. If your project requires the assessment of potential threatened or endangered species that could be within the project area, the SCDNR asks that you include a review of the state listed species within the county or watershed in addition to those that may be within the report as being within the project footprint or within 1-mile of the proposed project area. Consideration should be given to the occurrence of suitable habitat onsite, species movement and connectivity of habitat when assessing the likelihood of a state listed species on the project area.



Map Credits: Sources: Esri, USGS, CNES/Airbus DS, InterMap, Kartverket, LINZ, NASA/METI, NASA/NGS, NLS Finland, NLSI, Ordnance Survey, SKGeodesy, Horry County Government GIS, State of North Carolina DOT, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, Esri, NASA, NGA,

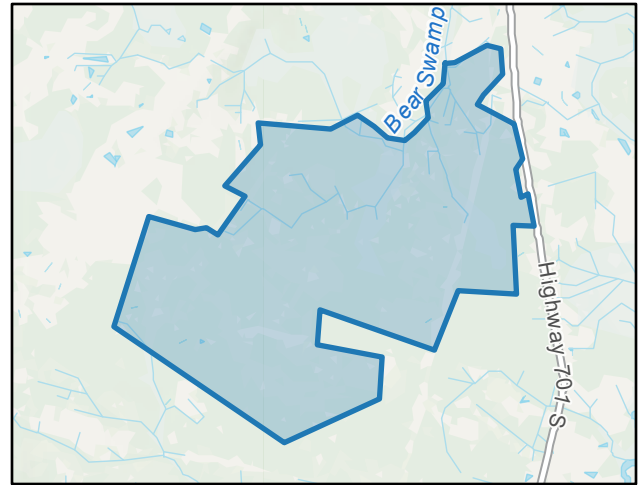


County	Scientific Name	Common Name	G Rank	S Rank	Federal Protection Status	State Protection Status	Group Type
Horry	<i>Acipenser brevirostrum</i>	Shortnose Sturgeon	G3	S3	LE: Federally Endangered	SE: State Endangered	Zoological
Horry	<i>Acipenser oxyrinchus</i>	Atlantic Sturgeon	G3	S3	LE: Federally Endangered	Not Applicable	Zoological
Horry	<i>Atrytone arogos</i>	Arogos Skipper; Eastern Beard Grass Skipper	G2G3	SH	ARS: At-Risk Species	Not Applicable	Zoological
Horry	<i>Bombus pensylvanicus</i>	American Bumble Bee	G3G4	SNR	ARS: At-Risk Species	Not Applicable	Zoological
Horry	<i>Caretta caretta</i>	Loggerhead Sea Turtle	G3	S3	LT: Federally Threatened	ST: State Threatened	Zoological
Horry	<i>Charadrius melodus</i>	Piping Plover	G3	S2N	LT: Federally Threatened	SE: State Endangered	Zoological
Horry	<i>Clemmys guttata</i>	Spotted Turtle	G5	S3	ARS: At-Risk Species	ST: State Threatened	Zoological
Horry	<i>Corynorhinus rafinesquii</i>	Rafinesque's Big-eared Bat	G3G4	S2	Not Applicable	SE: State Endangered	Zoological
Horry	<i>Danaus plexippus</i>	Monarch Butterfly	G4	S4	C: Candidate	Not Applicable	Zoological
Horry	<i>Dryobates borealis</i>	Red-cockaded Woodpecker	G3	S2	LE: Federally Endangered	SE: State Endangered	Zoological
Horry	<i>Elanoides forficatus</i>	Swallow-tailed Kite	G5	S1S2	MBTA: Migratory Bird Treaty Act	SE: State Endangered	Zoological
Horry	<i>Elassoma boehlkei</i>	Carolina Pygmy Sunfish	G2	S1	Not Applicable	ST: State Threatened	Zoological
Horry	<i>Haliaeetus leucocephalus</i>	Bald Eagle	G5	S3B,S3N	Bald & Golden Eagle Protection Act	ST: State Threatened	Zoological
Horry	<i>Heterodon simus</i>	Southern Hog-nosed Snake	G2	S1S2	Not Applicable	ST: State Threatened	Zoological
Horry	<i>Laterallus jamaicensis</i>	Black Rail	G3	S1	LT: Federally Threatened	Not Applicable	Zoological
Horry	<i>Mycteria americana</i>	Wood Stork	G4	S2	LT: Federally Threatened	SE: State Endangered	Zoological
Horry	<i>Sternula antillarum</i>	Least Tern	G4	S2	MBTA: Migratory Bird Treaty Act	ST: State Threatened	Zoological
Horry	<i>Trichechus manatus</i>	Florida Manatee	G2G3	S1S2	LT: Federally Threatened	SE: State Endangered	Zoological
Horry	<i>Amaranthus pumilus</i>	Seabeach Amaranth, Dwarf Amaranth	G2	S1	LT: Federally Threatened	Not Applicable	Botanical
Horry	<i>Dionaea muscipula</i>	Venus Flytrap, Meadow Clam, Tippitiwitchet	G2	S1	ARS: At-Risk Species	Not Applicable	Botanical
Horry	<i>Fimbristylis perpusilla</i>	Harper's Fimbry	G2	S1	ARS: At-Risk Species	Not Applicable	Botanical
Horry	<i>Ludwigia ravenii</i>	Raven's Seedbox	G1G2	S1	ARS: At-Risk Species	Not Applicable	Botanical
Horry	<i>Sabulina paludicola</i>	Godfrey's Sandwort	G1	SX	ARS: At-Risk Species	Not Applicable	Botanical
Horry	<i>Schwalbea americana</i>	Chaffseed	G2	S2	LE: Federally Endangered	Not Applicable	Botanical
Horry	<i>Sporobolus teretifolius</i>	Wireleaf Dropseed	G2	S1	ARS: At-Risk Species	Not Applicable	Botanical

F. Instructions for Submitting Species Observations

The SC Natural Heritage Dataset relies on continuous monitoring and surveying for species of concern throughout the state. Any records of species of concern found within this project area would greatly benefit the quality and comprehensiveness of the statewide dataset for rare, threatened and endangered species. Below are instructions for how to download the SC Natural Heritage Occurrence Reporting Form through the Survey123 App.

Map Credits: Sources: Esri, USGS, CNES/Airbus DS, InterMap, Kartverket, LINZ, NASA/METI, NASA/NGS, NLS Finland, NLSI, Ordnance Survey, SKGeodesy, Horry County Government GIS, State of North Carolina DOT, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, Esri, NASA, NGA,



Conservation Ranks & SWAP Priority Status

The SC Natural Heritage Program assigns S Ranks for species tracked within the state of South Carolina based on ranking methodology developed by NatureServe and its state program network. For information conservation rank definitions, please visit <https://explorer.natureserve.org/AboutTheData/Statuses>

The SCDNR maintains and updates its State Wildlife Action Plan (SWAP) every 10 years. This plan categorizes species of concern by Moderate, High, and Highest Priority. Please visit <https://www.dnr.sc.gov/swap/index.html> for more information about the SC SWAP.

Important Information Regarding Element Occurrence Data:

The South Carolina Department of Natural Resources' Heritage Trust Program organizes a database that captures and tracks element of occurrence data for rare, threatened and endangered species, both federal and state. Please keep in mind that this information included within this report is derived from existing databases, and do not assume that it is complete. Areas not yet inventoried may contain significant species or communities. If your project requires the assessment of potential threatened or endangered species that could be within the project area, the SCDNR asks that you include a review of the state listed species within the county or watershed in addition to those that may be within the report as being within the project footprint or within 1-mile of the proposed project area. Consideration should be given to the occurrence of suitable habitat onsite, species movement and connectivity of habitat when assessing the likelihood of a state listed species on the project area. To view these lists please visit our county and watershed dashboards at our website: <https://schtportal.dnr.sc.gov/portal/apps/sites/#track>

Instructions for accessing the SC Natural Heritage Occurrence Reporting Form

For use in a browser (on your desktop/PC):

- 1) Follow <https://bit.ly/scht-reporting-form>
- 2) Select 'Open in browser'
- 3) The form will open and you can begin entering data!

This method of access will also work on a browser on a mobile device, but only when connected to the internet. To use the form in the field without relying on data/internet access, follow the steps below.

For use on a smartphone or tablet using the field app:

- 1) Download the Survey123 App from the Google Play store or the Apple Store. This app is free to download. Allow the app to use your location.
- 2) Use the camera app (or other QR Reader app) to scan the QR code on this page from your smartphone or tablet. Click on the 'Open in the Survey123 field app'. This will prompt a window to allow Survey123 to download the SC Natural Heritage Occurrence Reporting Form. Select 'Open.'
- 3) The form will automatically open in Survey123, and you can begin entering data! This form will stay loaded in the app on your device until you manually delete it, and you can submit as many records as you like.





September 6, 2022

Buller River Development | Land & Investment
234 Kinsley Park Drive, Suite 110
Fort Mill, South Carolina 29715

Attention: Mr. Pat Quinn
pat@pdscarolinas.com

Reference: **Federally Listed Species and Habitat Assessment
Warden Property**
Conway, Horry County, South Carolina
S&ME Project No. 22350299

Dear Mr. Quinn,

S&ME, Inc. (S&ME) is submitting this Federally Listed Species and Habitat Assessment in compliance with the Endangered Species Act (ESA) in part of federal actions that may be required associated with Clean Water Act (CWA) Section 404/401 permitting services for proposed residential development of an approximately 1,637-acre property located south of Pitch Landing Road and west of Highway 701 in Conway, Horry County, South Carolina. (Horry County Parcel Identification Number 40300000002). This assessment was conducted in accordance with S&ME Proposal Number 22350299, dated July 18, 2022.

The project area is depicted on the following figures: Project Area (**Figure 1**), United States Geological Society (USGS) Topographic Map (**Figure 2**), Aerial Photograph (**Figure 3**), and United States Department of Agriculture (USDA) Soil Conservation Service (SCS) (**Figure 4**), and site photographs in **Attachment I**. As requested by Mr. Quinn of Providence Development Solutions (PDS), on behalf of Buller River Development | Land & Investment (BRDL), the information contained herein was prepared as part of an evaluation of potential impacts to migratory birds; federally listed threatened, endangered, and candidate species; and designated critical habitat.

◆ METHODOLOGY

S&ME personnel generated a report of federally listed threatened, endangered, and/or candidate species known to occur in Horry County using the United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) online service; the South Carolina (SC) Department of Natural Resources (DNR) Heritage Trust Program (HTP) Species Reviewer website; and SCDNR List of At-Risk, Candidate, Endangered and Threatened Species By County list. Results of this review are presented in **Table 2**. Species lists and USFWS and SCDNR database reports are included in **Attachment II**. Federally listed threatened, endangered, and candidate species information and site habitat observations were reviewed to determine their likely occurrence within the project area.

Supporting information was researched for the purpose of identifying soil types and vegetative communities. The supporting information reviewed included aerial photography, topographic quadrangle maps, soil survey sheets, land use information, and data from the National Wetlands Inventory (NWI). SCHTP database was also consulted regarding documented Element Occurrences (EOs) for rare species, important natural communities, natural areas, or conservation/managed areas within the property.



◆ SITE AND HABITAT DESCRIPTIONS

Ms. Suzanne Knudsen, an S&ME natural resources project manager, and Joey Lawler, PWS an S&ME senior scientist and project manager, conducted a site reconnaissance of the project area on August 9th and 10th, 2022 to identify potential habitat of federally listed threatened, endangered, and candidate species within the project area.

The project area is within southern Horry County within the Environmental Protection Agency's (EPA) Middle Atlantic Coastal Plain (Level III)/ Carolina Flatwoods (Level IV) ecoregion of South Carolina. A review of historical aerial photographs revealed that the majority of the project area was clearcut of mature timber around 1994 and replanted which was harvested again in 2016-2017.

The project area consists predominately of naturally revegetated, cutover forests with Bear Swamp and its tributaries within the north-central portion of the project area and a hardwood forested wetland within the central portion of the project area adjacent to a cell tower outparcel. Several cutover wetlands are located throughout the project area. The properties adjacent to the project area consist of forestland, agricultural land, single-family residences, a cell tower, and a few scattered commercial facilities.

According to the USDA-SCS Soil Survey Exhibit (**Figure 4, Attachment I**), soils mapped within the project area include:

- ◆ Bladen fine sandy loam
- ◆ Meggett loam
- ◆ Ogeechee loamy fine sand
- ◆ Pocomoke fine sandy loam
- ◆ Wahee fine sandy loam
- ◆ Yauhannah fine sandy loam
- ◆ Yemassee loamy fine sand

The site can be categorized into the following habitat types: pine monoculture; secondary growth-cutover wetlands; hardwood forested wetlands; cutover upland forest; and ruderal communities that include a maintained utility corridor, fallow fields, and along unpaved logging roads.

Pine Monoculture

Remaining loblolly pine (*Pinus taeda*) monoculture areas that were not harvested in 2016-2017 are present in the southern portion of the project area. The pines in these areas are approximately 12 to 14 inches diameter. Dominant overstory species included loblolly pine. Understory species were limited due to the dense, closed pine canopy but included saplings of sweetgum (*Liquidambar styraciflua*), red maple (*Acer rubrum*), red bay (*Persea borbonia*), and muscadine (*Vitis rotundifolia*).

Secondary Growth-Cutover Wetlands

Secondary growth-cutover wetlands were observed within the southern, eastern and western portions of the project area. Dominant vegetation included saplings of sweet gum and loblolly as well as groundsel tree (*Baccharis halimifolia*), swamp ti-ti (*Cyrilla racemiflora*), yellow jessamine (*Gelsemium sempervirens*), yaupon holly (*Ilex vomitoria*), horse sugar (*Symplocos tinctoria*), bracken fern (*Pteridium aquilinum*), Maryland meadow beauty (*Rhexia mariana*), red maple, American beauty berry (*Callicarpa americana*), switch cane (*Arundinaria tecta*), river



cane (*Arundinaria gigantea*), sphagnum moss (*Sphagnum* sp.), fetterbush (*Lyonia lucida*), inkberry (*Ilex glabra*), sweet pepperbush (*Clethra alnifolia*), netted chain fern (*Woodwardia areolata*), persimmon (*Diospyros virginiana*), sweetbay magnolia (*Magnolia virginiana*), wax myrtle (*Morella cerifera*), red bay, royal fern (*Osmunda regalis*), myrtle dahoon (*Ilex myrtifolia*), Mexican primrose (*Oenothera speciosa*), Curtiss' milkwort (*Polygala curtissii*), Barbara's buttons (*Marshallia* sp.), low pinebarren milkwort (*Polygala ramosa*), round-leaved boneset (*Eupatorium rotundifolium*), cross-leaved milkwort (*Polygala cruciata*), and Saint Peter's wort (*Hypericum crux-andreae*).

Hardwood Forested Wetlands

Bear Swamp is located within the north-central portion of the project area and a forested wetland is located within the central portion of the project area. The primary vegetation observed included bald cypress (*Taxodium distichum*), swamp tupelo (*Nyssa biflora*), persimmon, willow oak (*Q. phellos*), black gum (*N. sylvatica*), water oak (*Q. nigra*), green ash (*Fraxinus pennsylvanica*), red maple, sweet bay magnolia, sweet gum, and red bay. Herbaceous vegetation included royal fern, cinnamon fern, Virginia chain fern (*W. virginica*), blackberry (*Rubus* sp.), Maryland meadow beauty, trumpet vine (*Campsis radicans*), soft rush (*Juncus effusus*), and lizard's tail (*Saururus cernuus*).

Secondary Growth - Cutover Upland Forest

Secondary growth cutover upland forest was dominated by saplings of southern magnolia (*Magnolia grandiflora*), sweetgum, loblolly pine, red maple, willow oak, water oak, wax myrtle, American holly, persimmon, and winged sumac (*Rhus copallinum*). Groundcover and woody vine species included broomsedge (*Andropogon virginicus*), dog fennel (*Eupatorium capillifolium*), blackberry, goldenrod (*Solidago* spp.), little bluestem (*Schizachyrium scoparium*), bracken fern, common greenbrier (*Smilax rotundifolia*), and muscadine.

Maintained Utility Corridors, Fallow Fields, and Unpaved Logging Roads

Maintained utility corridors are located within the northern and southern portions of the project area and fallow fields and logging roads are located throughout the project area. Dominant vegetation observed within these areas include groundsel tree, Brazilian verbena (*Verbena brasiliensis*), bitter sneezeweed (*Helenium autumnale*), Maryland meadow beauty, stinking camphorweed (*Pluchea foetida*), dog fennel, round-leaved boneset, Japanese stiltgrass (*Microstegium vimineum*), bush clover (*Sericea lespedeza*), and winged sumac.

◆ MIGRATORY BIRDS

The following migratory bird information is intended to identify project area land uses that may be related to potential impacts to migratory birds. The IPaC database report included a Resource List (**Attachment II**) which addresses migratory birds and their probability of presence on the project area. The IPaC report identified several migratory birds of concern, including the bald eagle (*Haliaeetus leucocephalus*), that are expected to occur within the project area. This information is outlined in **Table 1** below.



Table 1 – Migratory Birds of Concern for Horry County

Common Name	Scientific Name	Breeding Season
American Kestrel	<i>Falco sparverius Paulus</i>	April 1 to August 31
Bald Eagle	<i>Haliaeetus leucocephalus</i>	September 1 to July 31
Brown-headed Nuthatch	<i>Sitta pusilla</i>	March 1 to July 15
Chimney Swift	<i>Chaetura pelagica</i>	March 15 to August 25
Eastern Whip-poor-will	<i>Antrostomus vociferus</i>	May 1 to August 20
King Rail*	<i>Rallus elegans</i>	May 1 to September 5
Lesser Yellowlegs*	<i>Tringa flavipes</i>	Breeds elsewhere
Painted Bunting	<i>Passerina ciris</i>	April 25 to August 15
Prairie Warbler	<i>Dendroica discolor</i>	May 1 to July 31
Prothonotary Warbler	<i>Protonotaria citrea</i>	April 1 to July 31
Red-headed Woodpecker	<i>Melanerpes erythrocephalus</i>	May 10 to September 10
Swallow-tailed Kite	<i>Elanoides forficatus</i>	March 10 to June 30
Willet*	<i>Tringa semipalmata</i>	April 20 to August 5
Wilson’s Plover*	<i>Charadrius wilsonia</i>	April 1 to August 20

*Shorebirds

The USGS quadrangle map, aerial photographs including Google Earth imagery, and generated SCDNR and IPaC database reports (**Attachment II**) were reviewed to determine the general land uses within a one-mile radius of the project area. The surrounding land use within the one-mile search radius is primarily forestland, agricultural land, single-family residences, a cell tower, and a few scattered commercial facilities. Except for the Waccamaw River which is approximately 4,000 feet east from the project area, no other large surface water features that could be conducive to migratory bird concentrations, including the bald eagle, are located within a one-mile radius of the project site.

◆ SPECIES EVALUATION

The IPaC report indicates that no designated critical habitat has been reported as occurring within the project area. SCDNR maintains a database of EOs for federal- and state-listed species, rare species, natural communities, natural areas, or conservation/managed areas in the state of South Carolina. The SCNHP database report did not identify any EOs within the project area. The SCHATP database identified two species EOs within one mile of the project area that are state-listed species, the state threatened spotted turtle (*Clemmys guttata*) and the state endangered Florida manatee (*Trichechus manatus*). As listed in **Table 2** below, the IPaC report identified federally listed threatened, endangered, or candidate species that could occur within the project area.

Table 2 – Federally Listed Threatened, Endangered, and Candidate Species for Horry County

Common Name	Scientific Name	Federal Listing
Atlantic Sturgeon	<i>Acipenser oxyrinchus</i>	E
Shortnose Sturgeon	<i>Acipenser brevirostrum</i>	E
Northern Long-eared Bat	<i>Myotis septentrionalis</i>	T



Common Name	Scientific Name	Federal Listing
Bald Eagle	<i>Haliaeetus leucocephalus</i>	BGEPA
Red-cockaded Woodpecker	<i>Picoides borealis</i>	E
Wood Stork	<i>Mycteria americana</i>	T
Monarch Butterfly	<i>Danaus plexippus</i>	C
American Chaffseed	<i>Schwalbea americana</i>	E
Canby's Dropwort	<i>Tiedemannia canbyi</i>	E
Pondberry	<i>Lindera melissifolia</i>	E

E = Federal Endangered T = Federal Threatened BGEPA = Bald and Golden Eagle Protection Act C = Federal Candidate

Marine and Coastal Flora and Fauna

BIOLOGICAL CONCLUSION: NO EFFECT

In addition to the species listed above, one coastal flora, seabeach amaranth, was listed for Horry County. Multiple marine and coastal fauna were listed for Horry County. These include the shorebirds piping plover (Charadrius melodus) and the red knot (Calidris canutus rufa). Four sea turtles listed include the green sea turtle (Chelonia mydas), Kemp's ridley sea turtle (Lepidochelys kempii), leatherback sea turtle (Dermochelys coriacea), and loggerhead sea turtle (Caretta caretta). Marine mammals listed included finback whale (Balaenoptera physalus), humpback whale (Megaptera novaengliae), right whale (Balaena glacialis), sperm whale (Balaenoptera borealis), and West Indian Manatee. Due to the lack of a marine and coastal environment, the proposed project would have No Effect on these species.

Atlantic Sturgeon

BIOLOGICAL DETERMINATION: NO EFFECT

The Atlantic sturgeon is a cartilaginous, anadromous fish growing to a length of up to 14 feet. Individuals are bluish-black or olive brown with a white belly and have five rows of plates along the body. Four barbels located in front of the mouth are used to located food along the river bottom. The Atlantic sturgeon can be differentiated from the shortnose sturgeon by its larger size, smaller mouth, narrower snout, and their plates. This species migrates from saltwater to freshwater to spawn from February to March. The Atlantic sturgeon's habitat consists of nearshore coastal waters along the Atlantic coast of North America.

The project area does not contain suitable habitat for the Atlantic sturgeon. There are no rivers or large streams within the site. Accordingly, future development of the project area is not expected to impact this species.

Shortnose Sturgeon

BIOLOGICAL DETERMINATION: NO EFFECT

The shortnose sturgeon is a bony, anadromous fish growing to a length of up to four feet. Shortnose sturgeon exhibit five rows of plates along the body, with olive to black coloring along the back, and yellow to white coloring on its belly. Four barbels located in front of the mouth are used to located food along the river bottom. The shortnose sturgeon migrates from saltwater to freshwater to spawn from April to May. The shortnose sturgeon's



habitat consists of tidal river systems along the Atlantic coast of North America. This species typically occupies the channels and deeper holes within the river, while feeding shallow areas at night.

The site does not contain suitable habitat for the shortnose sturgeon. There are no rivers or large streams within the project area. Accordingly, future development of the project area will have no effect on this species.

Northern Long-eared Bat

BIOLOGICAL DETERMINATION: FINAL 4(D) RULE

The northern long-eared bat is a medium-sized bat approximately three to 3.7 inches, with a wingspan of nine to 10 inches. Fur color ranges from medium to dark brown on the back and tawny to pale brown on the underside. It is distinguished by its long ears in relation to other bats in the genus *Myotis*, which means mouse-eared. The northern long-eared bat uses caves and abandoned mines as winter hibernacula. It is found from Maine to North Carolina on the Atlantic Coast, westward to eastern Oklahoma, and north through the Dakotas. In summer, this bat will roost in small colonies or alone underneath bark or in cavities or crevices of both live trees and dead trees. The USFWS considers any live or dead tree with loose or exfoliating bark with a diameter at breast height (DBH) greater than three inches to be potential summer roosting habitat.

The project area consists of hardwood and pine forests which are not suitable for winter hibernacula for this species but could provide summer roosting habitat. However, recent communications with SCDNR revealed there are no records of the presence of summer roosting or winter hibernacula for this species within two miles of the project area. Potential habitat for the NLEB exists within the scattered woodland of the project area. The proposed project is consistent with activities analyzed in the USFWS January 5, 2016, Programmatic Biological Opinion (PBO) for the Final 4(d) Rule on the NLEB in that the project area is not located within hibernacula sites, within ¼-mile of known hibernacula sites, or within a 150-foot radius of a known, occupied maternity roosts during the pup season of June 1 through July 31 (**Attachment II**). Therefore, the project is relying on the findings of the PBO for the Final 4(d) Rule on the NLEB in that incidental take is exempt if unavoidable and a may affect, not likely to adversely affect determination will not be assigned. If a may affect, not likely to adversely affect determination is desired, USFWS and SCDNR states tree removal be avoided during active bat season between April 1st through October 15th.

S&ME completed an effects determination key through USFWS IPaC and received a consistency letter on August 5, 2022 that stated the proposed project may affect the Northern long-eared bat. However, the letter stated that the proposed project is not likely to result in unauthorized take of the northern long-eared bat. As such, no further coordination is required.

Bald Eagle

BIOLOGICAL DETERMINATION: NO EFFECT

This large raptor has characteristic adult plumage consisting of a white head and tail with a dark brown body. Juvenile eagles are completely dark brown and do not fully develop the white head and tail until their fifth or sixth year. The typical nest is constructed of large sticks and is lined with soft materials such as pine needles and grasses. The nests are very large, measuring up to six feet across and weighing hundreds of pounds.



The bald eagle habitat includes mature forests near large bodies of water for nesting, and rivers, lakes, and sounds for foraging. The nearest body of water that could provide suitable habitat for the bald eagle is the Waccamaw River, approximately 4,000 feet (0.75 mile) east from the project area. The project area does contain suitable nesting habitat in the more mature pines on the edges of the project area and cypress trees in Bear Swamp. However, no individuals or nests of bald eagles were observed on the project area during the site reconnaissance. Accordingly, the proposed project carries a No Effect determination.

Red-Cockaded Woodpecker

BIOLOGICAL CONCLUSION: NO EFFECT

The red-cockaded woodpecker is a small bird measuring approximately seven inches in length. The bird is identified by the black and white barred back, white cheek patch, and by the red "cockade" feathers. These red feathers are limited to the male birds of the species and can only be seen when the male bird is disturbed or otherwise excited.

Red-cockaded woodpeckers require open mature forests of southern pines, generally approximately 60-120 years old for nesting sites. These birds need large, live older pines in which they can excavate their nesting cavities often in trees infected with a fungus that produces red-heart disease. Long leaf and loblolly pines are preferred, but other species of pine can also be acceptable. Dense stands or stands with dense understories are avoided. The red-cockaded woodpecker forages in pine and pine hardwood stands that are at least 30 years old, preferring stands with pine trees 10 inches or larger in DBH. Clusters of cavity trees can include one or more cavity trees with an average of 10 cavities on 3-60 acres. Sufficient foraging habitat can be provided on 80-125 acres. The red-cockaded woodpecker is threatened by hardwood midstory encroachment and a lack of suitable mature trees for nesting.

The project area did not contain suitable nesting habitat for the red-cockaded woodpecker. The pine stands remaining on the project area were too young to support red-cockaded nesting or foraging habitat. The understories of the remaining pines were very dense vegetation to support quality foraging habitat. A review of aerial photography and pine stand observations from accessible roads and trails did not identify pine stands of sufficient age for nesting habitat adjacent to the project area. SCDNR has no EOs for this species within a one-mile radius and the site reconnaissance did not identify individuals of the red-cockaded woodpecker. Accordingly, future development of the project area is anticipated to impact this species and carries a No Effect determination.

American Wood Stork

BIOLOGICAL DETERMINATION: MAY AFFECT, NOT LIKELY TO ADVERSELY AFFECT

The wood stork is a large wading bird that is approximately 50 inches tall and has a wingspan of approximately five feet. The plumage of the wood stork is primarily white, with black primary and secondary wing feathers and a short, black tail. The head and neck are dark gray and primarily unfeathered. The wood stork displays a prominent black bill that is slightly decurved and thick at the base. The wood stork feeds primarily on small fish, including minnows and shellfish. Nests are constructed as high as 100 feet in the tops of trees.

The wood stork requires shallow wetland areas with a depth of six to 10 inches. The bird's primary habitat is brackish and freshwater wetland areas with associated these shallow water zones. The wood stork favors depressional areas within larger wetland systems that are subject to falling water levels due to the resultant



concentration of fish species. wood storks are highly colonial and prefer forested wetland areas (swamps) or islands surrounded by open water.

The open water portion of Bear Swamp within the northern project area is likely less than one foot deep and could provide potential foraging habitat for the wood stork. Most of this wetland consisted of a closed canopy. No fish or crustaceans were observed within Bear Swamp. No individuals of the wood stork or their active or abandoned nest sites were observed during the site reconnaissance. Accordingly, future development of the site may affect, but is not likely to adversely affect this species.

Monarch Butterfly

BIOLOGICAL DETERMINATION: NOT APPLICABLE FOR CANDIDATE SPECIES

The monarch butterfly is reddish/orange in color with black vein like markings. It has a black border around its wings with white spots. In the spring and summer, the monarch butterfly's primary habitat is open field and meadows containing milkweed. In the winter it can be found on the coast of southern California as well as high altitudes of central Mexico.

The project area vegetation is a mixture of pine and hardwood forests, wetlands, a maintained utility corridor, cutover forest, fallow fields, and log roads. While the maintained utility corridor contained open grassy habitat, milkweed was not observed within the project area during the field review. No individuals of monarch butterfly were observed during the field review.

American Chaffseed

BIOLOGICAL DETERMINATION: NO EFFECT

American chaffseed is an erect, perennial herb that grows to a height of 12 to 24 inches tall. The entire plant, including the leaves and flowers, are covered with fine hairs. Chaffseed has simple, alternate leaves that are lance-shaped to elliptic. The leaves are one to two inches long and approximately 0.5 inch wide, ascending and reduced upwards. The flowers are in a terminal raceme with two bracts at the base of the calyx and one at the stalk base of each flower. The bracts and leaves are purplish tinged. The corollas range from creamy yellow to purple-tinted green with rose-tinted green and are shaped like turtle's heads. The fruit resembles a capsule that is divided into four sections that shed numerous, winged seeds. The seeds are linear and greenish brown in color. The flowering occurs in May through June, with the fruiting period occurring June through July. American chaffseed is found in moist to dry sandy soils in the Coastal Plain. The species prefers fire-maintained areas such as the margins of wet savannas and open, moist pine flatwoods. Chaffseed also occurs within open grass and sedge systems. The species depends on a fluctuating water table and frequent fire to maintain the open habitat it requires.

The project area does not contain suitable habitat for American chaffseed. There are no wet savannas, moist pine flatwoods, or open grass-sedge systems within the project area. Accordingly, the proposed project carries a No Effect determination.



Canby's Dropwort

BIOLOGICAL DETERMINATION: NO EFFECT

Canby's dropwort is a perennial herb growing to a height of two to four feet. The stems are hollow and erect with slender leaves. The species is aromatic, smelling like dill. The flowers of Canby's dropwort have white petals, pale green sepals, and are five-parted. The leaves are round in cross-section, thin, and divided by partitions. The flowering period is from July through September. The primary habitats of Canby's dropwort are wet pineland ponds and savannas, wet meadows, and around the edges of open cypress ponds. The species prefers habitat with little or no canopy closure. Canby's dropwort prefers soils with a high-water table.

The project area does not contain suitable habitat for Canby's dropwort. Although there are wetlands within the project area, there were no wet pineland ponds, savannas or open cypress ponds and the majority of the wetlands within the project area have been previously impacted by poor best management practices from silvicultural activities and do not represent suitable habitat for Canby's dropwort. The site reconnaissance was conducted during its flowering period of July through September. No individuals of this species were observed during the site reconnaissance. Accordingly, the proposed project carries a No Effect determination.

Pondberry

BIOLOGICAL DETERMINATION: NO EFFECT

Pondberry is a fragrant, deciduous shrub that grows approximately six feet in height. Its drooping leaves are alternating and measure two to six inches in length. The upper surface of the leaves is dark green with soft hairs and smells like sassafras when crushed. Its yellow flowers occur in tight clusters and the flowering period occurs in March through April. Fruits are bright red and fleshy with the fruiting period occurring in August through September. The preferred habitat for pondberry consists of margins of lime sinks, wet depressions in pine flatwoods, margins of pond cypress-swamp gum swamp forest, open bogs, and sandy sinks.

The site reconnaissance was conducted during pondberry's fruiting season. Suitable habitat may exist within Bear Swamp within the north-central portion of the project area. No individuals of pondberry were observed. Accordingly, the proposed project carries a No Effect determination.

◆ CONCLUSIONS

Based on the readily available information and field review of habitat conditions within the project area, potential suitable habitat for the wood stork exists within the project area so that May Affect, Not Likely To Adversely Affect determinations for these species are warranted. The proposed project is likely to have No Effect on marine and coastal fauna, bald eagle, red-cockaded woodpecker, monarch butterfly, American chaffseed, Canby's dropwort, or pondberry. The proposed project is relying on the PBO Final 4(d) rule for the northern long-eared bat.



◆ CLOSURE

S&ME appreciates the continued opportunity to provide our services to BRDL. If you have any questions or comments, please contact Suzanne Knudsen at 704-231-3800 or Carl Hewett at 704-351-4448.

Sincerely,

S&ME, Inc.

Handwritten signature of Suzanne L. Knudsen in black ink.

Suzanne L. Knudsen
Natural Resources Project Manager

Handwritten signature of Chris Daves in black ink.

Chris Daves, PWS
S&ME Senior Reviewer/Senior Scientist

Attachments:

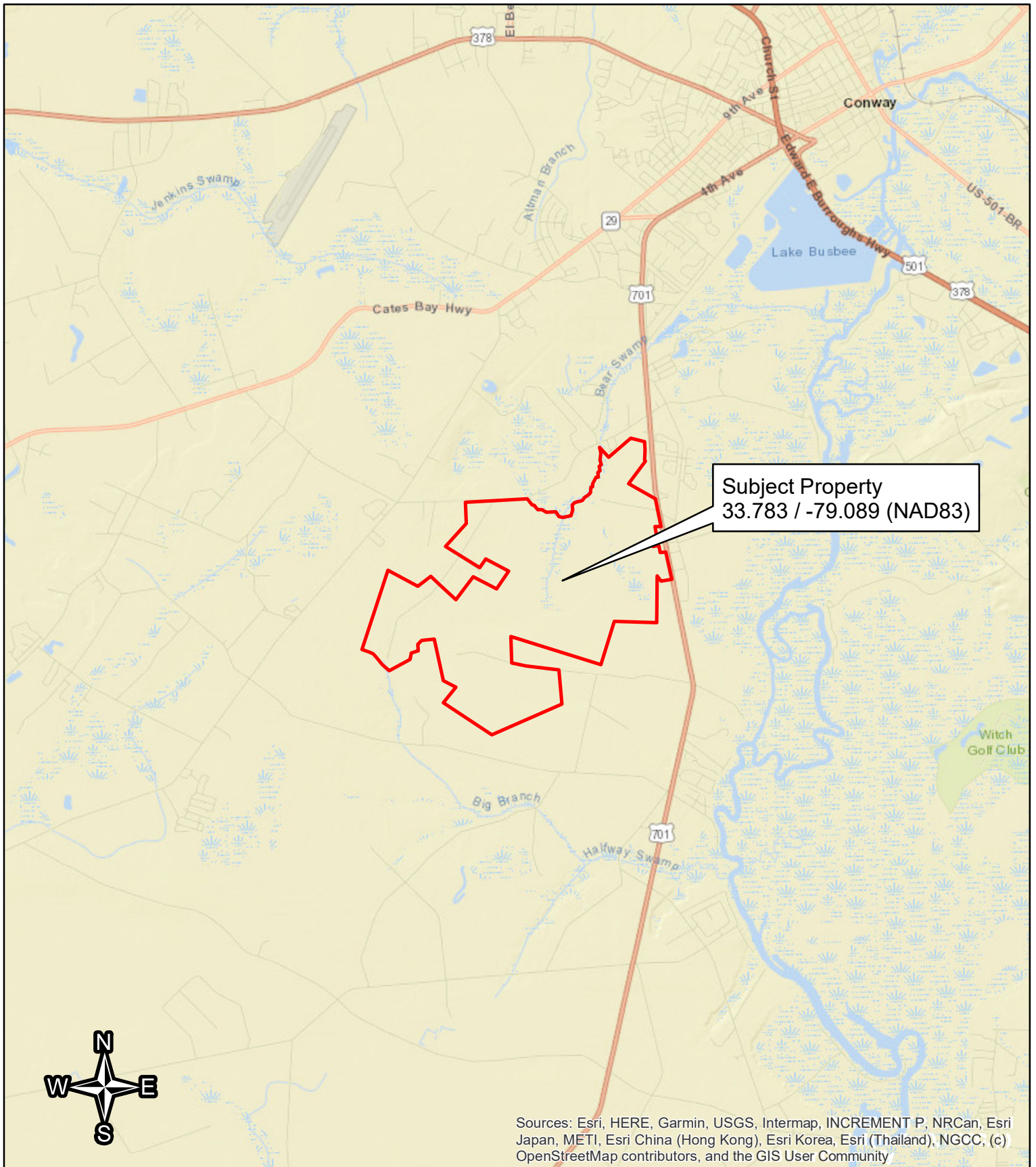
Attachment I

- Figure 1 – Project Area
- Figure 2 – USGS Topographic Map Exhibit
- Figure 3 – Aerial Photograph Exhibit
- Figure 4 – USDA/SCS Soil Survey Exhibit
- Site Photographs

Attachment II

USFWS IPaC Database Report; SCDNR Database Report; South Carolina List of At-Risk, Candidate, Endangered, and Threatened Species by County; and USFWS Northern Long-Eared Bat Consistency Letter

Attachment I – Exhibits and Site Photographs

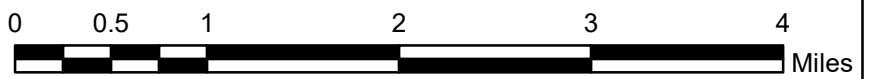


Subject Property
33.783 / -79.089 (NAD83)



Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

EXHIBIT DISCLAIMER: PLEASE NOTE THIS EXHIBIT IS FOR INFORMATIONAL PURPOSES ONLY. IT IS NOT MEANT FOR DESIGN, LEGAL, OR ANY OTHER USES. THERE ARE NO GUARANTEES REGARDING ACCURACY. S&ME, INC. ASSUMES NO RESPONSIBILITY FOR ANY DECISION MADE OR ANY ACTIONS TAKEN BY THE USER BASED UPON THIS EXHIBIT.

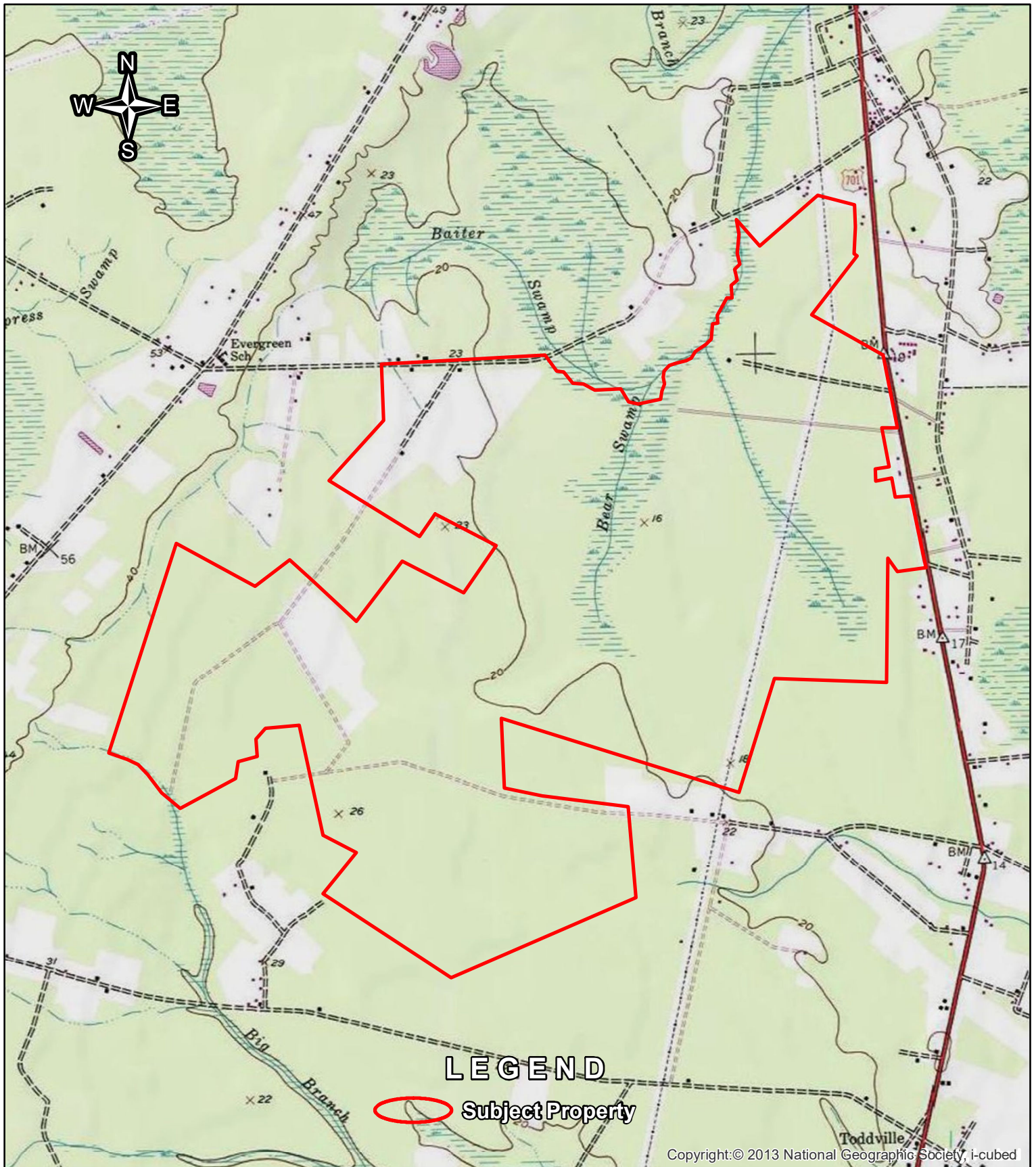


Project No:	22350299
Source:	ESRI
Source Date:	2016
Date:	July 2022

Project Area
Warden Tract
TMS# 149-00-05-015
Conway, Horry County, SC



Figure No.
1



LEGEND

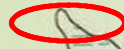
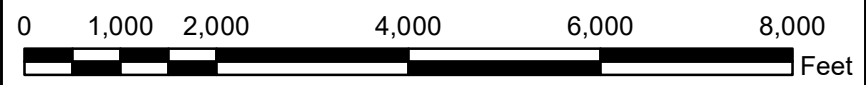
 **Subject Property**

EXHIBIT DISCLAIMER: PLEASE NOTE THIS EXHIBIT IS FOR INFORMATIONAL PURPOSES ONLY. IT IS NOT MEANT FOR DESIGN, LEGAL, OR ANY OTHER USES. THERE ARE NO GUARANTEES REGARDING ACCURACY. S&ME, INC. ASSUMES NO RESPONSIBILITY FOR ANY DECISION MADE OR ANY ACTIONS TAKEN BY THE USER BASED UPON THIS EXHIBIT.



Project No:	22350299
Source:	USGS
Quad:	Conway, SC / 1980
Date:	July 2022

**USGS Topographic Map Exhibit
Warden Tract
TMS# 149-00-05-015
Conway, Horry County, SC**



Figure No.
2

Copyright:© 2013 National Geographic Society, i-cubed

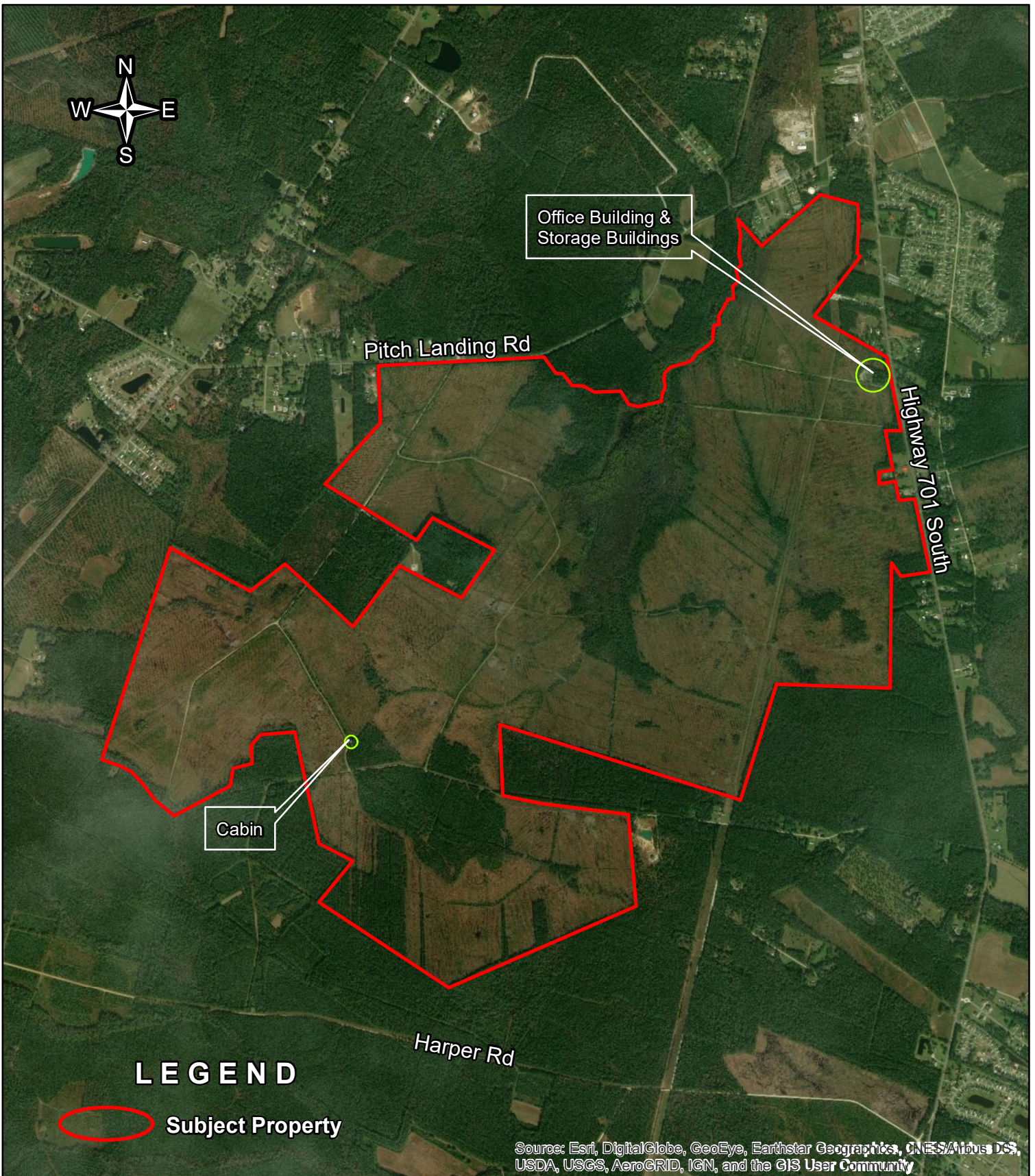
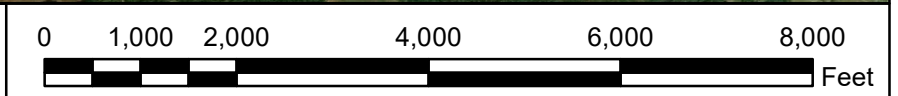


EXHIBIT DISCLAIMER: PLEASE NOTE THIS EXHIBIT IS FOR INFORMATIONAL PURPOSES ONLY. IT IS NOT MEANT FOR DESIGN, LEGAL, OR ANY OTHER USES. THERE ARE NO GUARANTEES REGARDING ACCURACY. S&ME, INC. ASSUMES NO RESPONSIBILITY FOR ANY DECISION MADE OR ANY ACTIONS TAKEN BY THE USER BASED UPON THIS EXHIBIT.

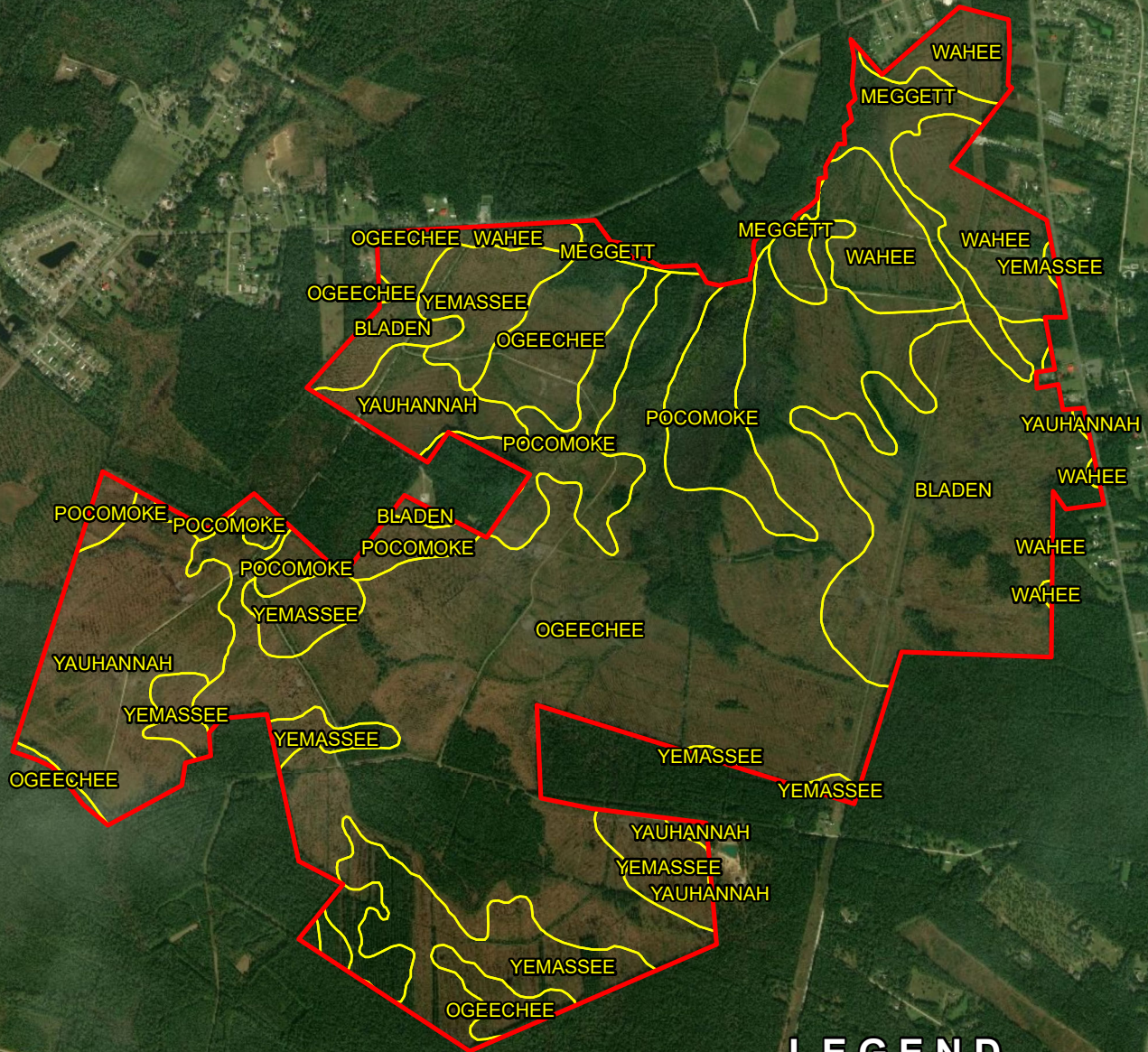


Project No:	22350299
Source:	ESRI
Source Date:	2018
Date:	July 2022

Aerial Photograph Exhibit
Warden Tract
TMS# 149-00-05-015
Conway, Horry County, SC



Figure No.
3



LEGEND

-  Subject Property
-  U.S. Department of Agriculture (USDA)
Soil Conservation Service (SCS)
Soil Survey Data

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

EXHIBIT DISCLAIMER: PLEASE NOTE THIS EXHIBIT IS FOR INFORMATIONAL PURPOSES ONLY. IT IS NOT MEANT FOR DESIGN, LEGAL, OR ANY OTHER USES. THERE ARE NO GUARANTEES REGARDING ACCURACY. S&ME, INC. ASSUMES NO RESPONSIBILITY FOR ANY DECISION MADE OR ANY ACTIONS TAKEN BY THE USER BASED UPON THIS EXHIBIT.





Project No:	22350299
Source:	SCDNR GIS Site
Source Date:	1982
Date:	July 2022

USDA/SCS Soil Survey Exhibit Warden Tract TMS# 149-00-05-015 Conway, Horry County, SC





Figure No.
4





		August 9-10, 2022
		Photographer: Suzanne Knudsen
1	Pine monoculture forestland within the project area off of one of the access roads.	
		August 9-10, 2022
		Photographer: Suzanne Knudsen
2	Multiple wetlands, including this forested wetland (Bear Swamp), were observed within the project area.	





		8/9/2022
	Photographer: Suzanne Knudsen	
<p>3</p>	<p>This mature hardwood and pine forest located within the project area.</p>	
		8/9/2022
	Photographer: Suzanne Knudsen	
<p>4</p>	<p>This bottom land hardwood forest and riparian zone within the project area is associated with Bear Swamp was located adjacent to a tributary.</p>	



		8/9/2022
		Photographer: Suzanne Knudsen
<p>5</p>	<p>A maintained utility corridor runs north to south in the eastern portion of the project area.</p>	
		8/9/2022
		Photographer: Suzanne Knudsen
<p>6</p>	<p>Fallow fields were observed within the project area, this one shown with ponding of water.</p>	



		8/9/2022
		Photographer: Suzanne Knudsen
7	Typical logging road within the project area.	
		8/9/2022
		Photographer: Suzanne Knudsen
8	Cutover wetland within the project area.	

**Attachment II – USFWS IPaC Database Report; SCDNR
Database Report; South Carolina List of At-Risk, Candidate,
Endangered, and Threatened Species by County; USFWS
Northern Long-eared Bat Consistency Letter**



United States Department of the Interior



FISH AND WILDLIFE SERVICE
South Carolina Ecological Services
176 Croghan Spur Road, Suite 200
Charleston, SC 29407-7558
Phone: (843) 727-4707 Fax: (843) 727-4218

In Reply Refer To:
Project Code: 2022-0071693
Project Name: Warden Tract

August 05, 2022

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Northern Long-eared Bat: Additionally, please note that on March 23, 2022, the Service published a proposal to reclassify the northern long-eared bat (NLEB) as endangered under the Endangered Species Act. The U.S. District Court for the District of Columbia has ordered the Service to complete a new final listing determination for the NLEB by November 2022 (Case 1:15-cv-00477, March 1, 2021). The bat, currently listed as threatened, faces extinction due to the range-wide impacts of white-nose syndrome (WNS), a deadly fungal disease affecting cave-dwelling bats across the continent. The proposed reclassification, if finalized, would remove the current 4(d) rule for the NLEB, as these rules may be applied only to threatened species. Depending on the type of effects a project has on NLEB, the change in the species' status may trigger the need to re-initiate consultation for any actions that are not completed and for which the Federal action agency retains discretion once the new listing determination becomes effective (anticipated to occur by December 30, 2022). If your project may result in incidental take of NLEB after the new listing goes into effect this will first need to be addressed in an updated consultation that includes an Incidental Take Statement. If your project may require re-initiation of consultation, please contact our office for additional guidance.

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see <https://www.fws.gov/birds/policies-and-regulations.php>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and

recommended conservation measures see <https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
 - USFWS National Wildlife Refuges and Fish Hatcheries
 - Migratory Birds
 - Wetlands
-

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

South Carolina Ecological Services

176 Croghan Spur Road, Suite 200

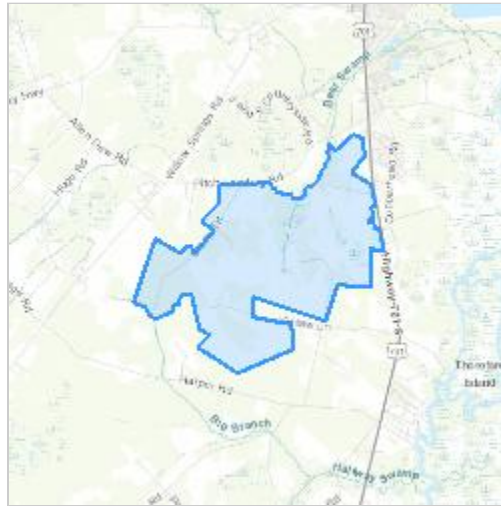
Charleston, SC 29407-7558

(843) 727-4707

Project Summary

Project Code: 2022-0071693
Project Name: Warden Tract
Project Type: Residential Construction
Project Description: residential subdivision
Project Location:

Approximate location of the project can be viewed in Google Maps: [https://
www.google.com/maps/@33.78196415,-79.09511399393043,14z](https://www.google.com/maps/@33.78196415,-79.09511399393043,14z)



Counties: Horry County, South Carolina

Endangered Species Act Species

There is a total of 13 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Birds

NAME	STATUS
Piping Plover <i>Charadrius melodus</i> Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered. There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/6039	Threatened
Red Knot <i>Calidris canutus rufa</i> There is proposed critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/1864	Threatened
Red-cockaded Woodpecker <i>Picoides borealis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7614	Endangered
Wood Stork <i>Mycteria americana</i> Population: AL, FL, GA, MS, NC, SC No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8477	Threatened

Reptiles

NAME	STATUS
Green Sea Turtle <i>Chelonia mydas</i> Population: North Atlantic DPS There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/6199	Threatened
Kemp's Ridley Sea Turtle <i>Lepidochelys kempii</i> There is proposed critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/5523	Endangered
Leatherback Sea Turtle <i>Dermochelys coriacea</i> There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/1493	Endangered
Loggerhead Sea Turtle <i>Caretta caretta</i> Population: Northwest Atlantic Ocean DPS There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/1110	Threatened

Insects

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

Flowering Plants

NAME	STATUS
American Chaffseed <i>Schwalbea americana</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1286	Endangered
Canby's Dropwort <i>Oxypolis canbyi</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7738	Endangered
Pondberry <i>Lindera melissifolia</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1279	Endangered

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

-
1. The [Migratory Birds Treaty Act](#) of 1918.
 2. The [Bald and Golden Eagle Protection Act](#) of 1940.
 3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern \(BCC\) list](#) or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
American Kestrel <i>Falco sparverius paulus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9587	Breeds Apr 1 to Aug 31
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Sep 1 to Jul 31

NAME	BREEDING SEASON
Brown-headed Nuthatch <i>Sitta pusilla</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Mar 1 to Jul 15
Chimney Swift <i>Chaetura pelagica</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 25
Eastern Whip-poor-will <i>Antrostomus vociferus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Aug 20
King Rail <i>Rallus elegans</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8936	Breeds May 1 to Sep 5
Lesser Yellowlegs <i>Tringa flavipes</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679	Breeds elsewhere
Painted Bunting <i>Passerina ciris</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Apr 25 to Aug 15
Prairie Warbler <i>Dendroica discolor</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Jul 31
Prothonotary Warbler <i>Protonotaria citrea</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 1 to Jul 31
Red-headed Woodpecker <i>Melanerpes erythrocephalus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Sep 10
Swallow-tailed Kite <i>Elanoides forficatus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8938	Breeds Mar 10 to Jun 30
Willet <i>Tringa semipalmata</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 20 to Aug 5
Wilson's Plover <i>Charadrius wilsonia</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 1 to Aug 20

Probability Of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

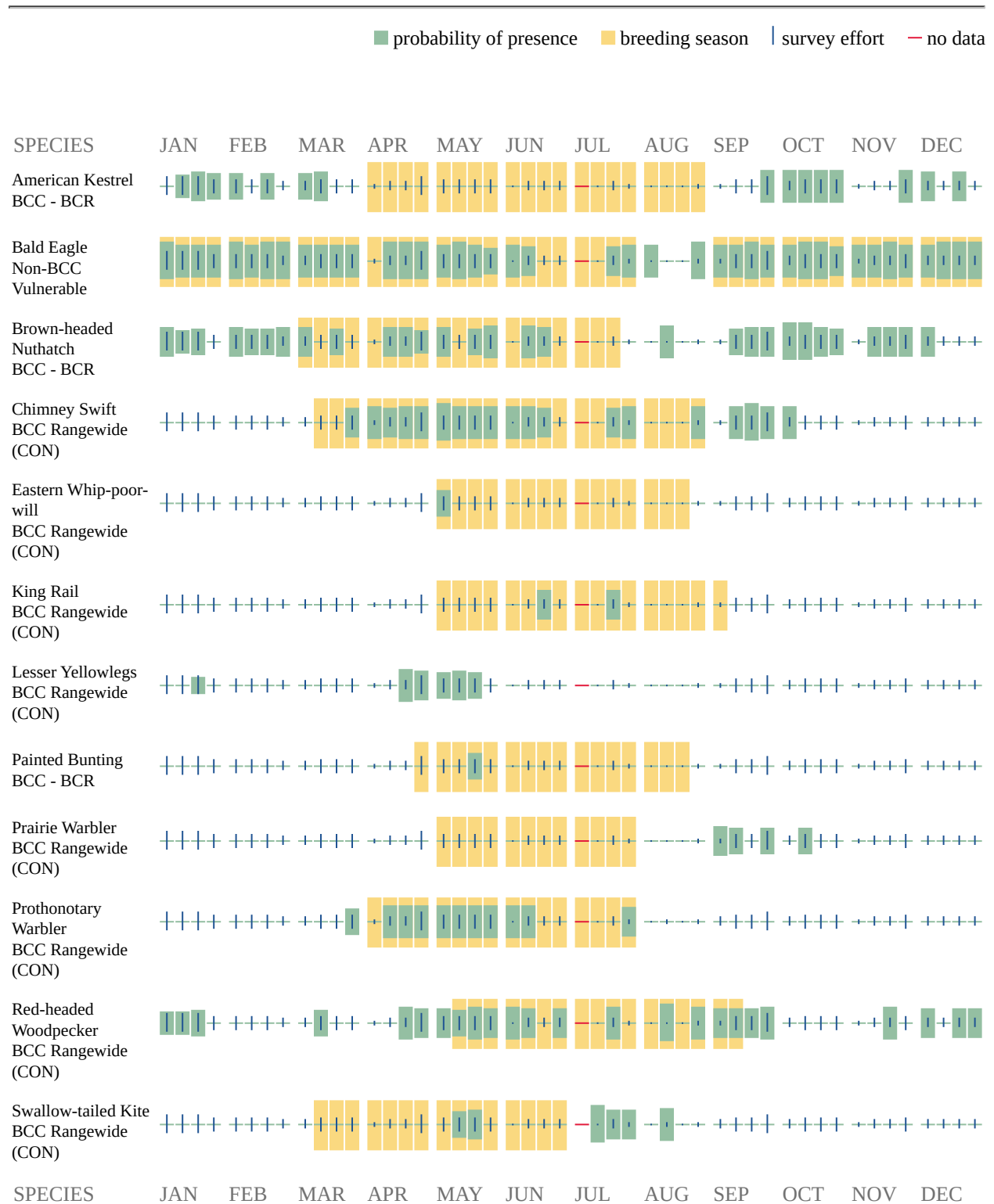
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

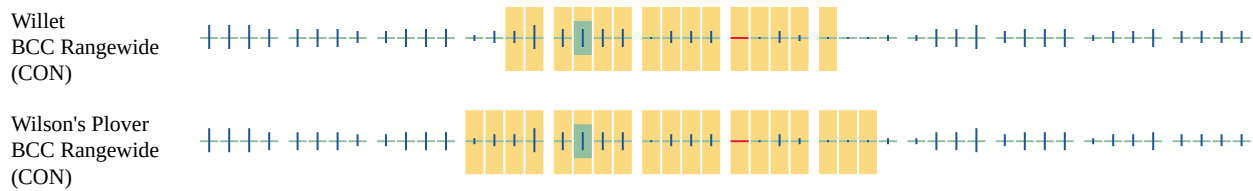
No Data (-)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.





Additional information can be found using the following links:

- Birds of Conservation Concern <https://www.fws.gov/program/migratory-birds/species>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>

Migratory Birds FAQ

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the [RAIL Tool](#) and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Wetlands

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

FRESHWATER EMERGENT WETLAND

- [Palustrine](#)

RIVERINE

- [Riverine](#)
-

IPaC User Contact Information

Agency: S&ME, Inc.

Name: Suzanne Knudsen

Address: 2016 Ayrsley Town Boulevard, Suite 2-A

City: Charlotte

State: NC

Zip: 28273

Email: sknudsen@smeinc.com

Phone: 7045234726

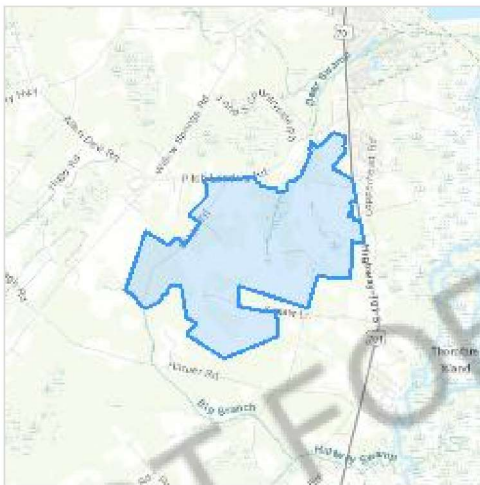
IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Horry County, South Carolina



Local office

South Carolina Ecological Services

☎ (843) 727-4707

📅 (843) 727-4218

176 Croghan Spur Road, Suite 200
Charleston, SC 29407-7558

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
------	--------

Northern Long-eared Bat *Myotis septentrionalis*

Threatened

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/9045>

Birds

NAME

STATUS

Piping Plover *Charadrius melodus*

Threatened

There is **final** critical habitat for this species. The location of the critical habitat is not available.

<https://ecos.fws.gov/ecp/species/6039>

Red Knot *Calidris canutus rufa*

Threatened

Wherever found

There is **proposed** critical habitat for this species. The location of the critical habitat is not available.

<https://ecos.fws.gov/ecp/species/1864>

Red-cockaded Woodpecker *Picoides borealis*

Endangered

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/7614>

Wood Stork *Mycteria americana*

Threatened

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/8477>

Reptiles

NAME

STATUS

Green Sea Turtle *Chelonia mydas*

Threatened

There is **final** critical habitat for this species. The location of the critical habitat is not available.

<https://ecos.fws.gov/ecp/species/6199>

Kemp's Ridley Sea Turtle *Lepidochelys kempii*

Endangered

Wherever found

There is **proposed** critical habitat for this species. The location of the critical habitat is not available.

<https://ecos.fws.gov/ecp/species/5523>

Leatherback Sea Turtle *Dermochelys coriacea*

Endangered

Wherever found

There is **final** critical habitat for this species. The location of the critical habitat is not available.

<https://ecos.fws.gov/ecp/species/1493>

Loggerhead Sea Turtle *Caretta caretta*

Threatened

There is **final** critical habitat for this species. The location of the critical habitat is not available.

<https://ecos.fws.gov/ecp/species/1110>

Insects

NAME

STATUS

Monarch Butterfly *Danaus plexippus*

Candidate

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/9743>

Flowering Plants

NAME

STATUS

American Chaffseed *Schwalbea americana*

Endangered

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/1286>

Canby's Dropwort *Oxypolis canbyi*

Endangered

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/7738>

Pondberry *Lindera melissifolia*

Endangered

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/1279>

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

1. The [Migratory Birds Treaty Act](#) of 1918.

2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <https://www.fws.gov/program/migratory-birds/species>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME

BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)

American Kestrel *Falco sparverius paulus*

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
<https://ecos.fws.gov/ecp/species/9587>

Breeds Apr 1 to Aug 31

Bald Eagle *Haliaeetus leucocephalus*

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
<https://ecos.fws.gov/ecp/species/1626>

Breeds Sep 1 to Jul 31

Brown-headed Nuthatch *Sitta pusilla*

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Breeds Mar 1 to Jul 15

<p>Chimney Swift <i>Chaetura pelagica</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds Mar 15 to Aug 25
<p>Eastern Whip-poor-will <i>Antristomus vociferus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds May 1 to Aug 20
<p>King Rail <i>Rallus elegans</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8936</p>	Breeds May 1 to Sep 5
<p>Lesser Yellowlegs <i>Tringa flavipes</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679</p>	Breeds elsewhere
<p>Painted Bunting <i>Passerina ciris</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA</p>	Breeds Apr 25 to Aug 15
<p>Prairie Warbler <i>Dendroica discolor</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds May 1 to Jul 31
<p>Prothonotary Warbler <i>Protonotaria citrea</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds Apr 1 to Jul 31
<p>Red-headed Woodpecker <i>Melanerpes erythrocephalus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds May 10 to Sep 10
<p>Swallow-tailed Kite <i>Elanoides forficatus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8938</p>	Breeds Mar 10 to Jun 30
<p>Willet <i>Tringa semipalmata</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds Apr 20 to Aug 5
<p>Wilson's Plover <i>Charadrius wilsonia</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds Apr 1 to Aug 20

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

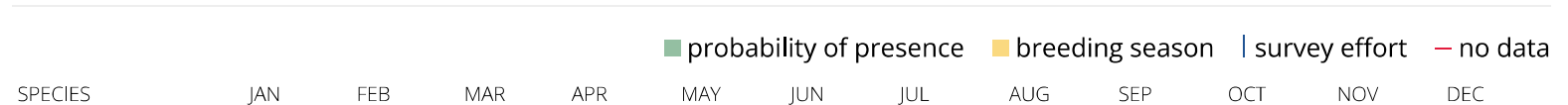
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (-)

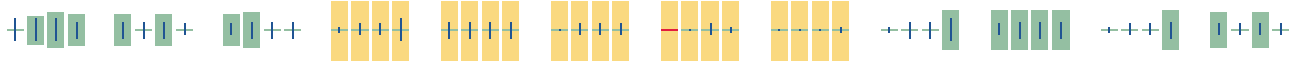
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

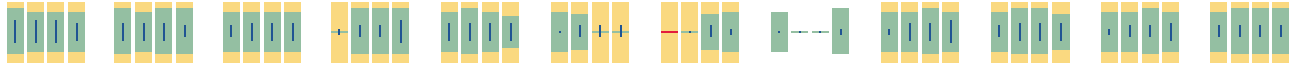
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



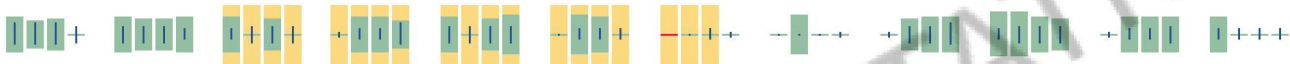
American Kestrel
 BCC - BCR (This is a
 Bird of Conservation
 Concern (BCC) only
 in particular Bird
 Conservation
 Regions (BCRs) in the
 continental USA)



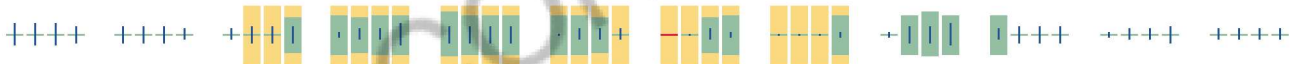
Bald Eagle
 Non-BCC Vulnerable
 (This is not a Bird of
 Conservation
 Concern (BCC) in this
 area, but warrants
 attention because of
 the Eagle Act or for
 potential
 susceptibilities in
 offshore areas from
 certain types of
 development or
 activities.)



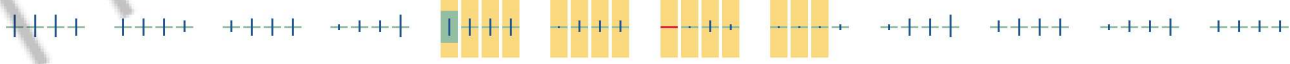
Brown-headed
 Nuthatch
 BCC - BCR (This is a
 Bird of Conservation
 Concern (BCC) only
 in particular Bird
 Conservation
 Regions (BCRs) in the
 continental USA)



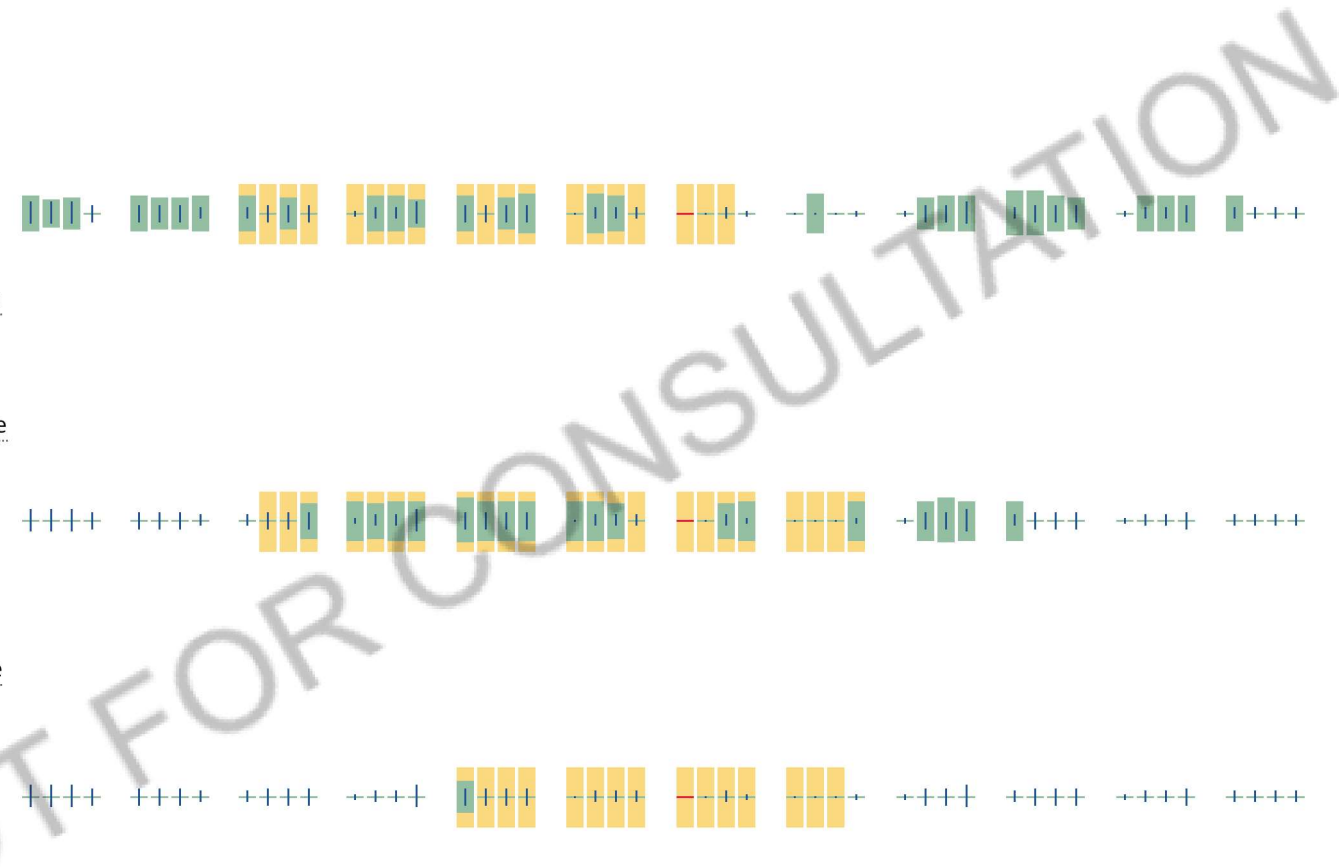
Chimney Swift
 BCC Rangewide
 (CON) (This is a Bird
 of Conservation
 Concern (BCC)
 throughout its range
 in the continental
 USA and Alaska.)



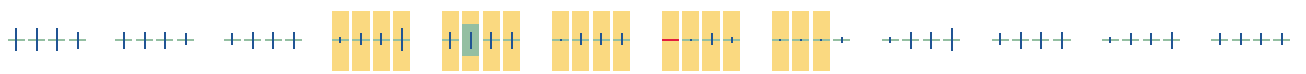
Eastern Whip-poor-will
 BCC Rangewide
 (CON) (This is a Bird
 of Conservation
 Concern (BCC)
 throughout its range
 in the continental
 USA and Alaska.)



King Rail
 BCC Rangewide
 (CON) (This is a Bird
 of Conservation
 Concern (BCC)
 throughout its range
 in the continental
 USA and Alaska.)



Wilson's Plover
BCC Rangewide
(CON) (This is a Bird
of Conservation
Concern (BCC)
throughout its range
in the continental
USA and Alaska.)



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the [RAIL Tool](#) and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and

3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Coastal Barrier Resources System

Projects within the [John H. Chafee Coastal Barrier Resources System](#) (CBRS) may be subject to the restrictions on federal expenditures and financial assistance and the consultation requirements of the Coastal Barrier Resources Act (CBRA) (16 U.S.C. 3501 et seq.). For more information, please contact the local [Ecological Services Field Office](#) or visit the [CBRA Consultations website](#). The CBRA website provides tools such as a flow chart to help determine whether consultation is required and a template to facilitate the consultation process.

THERE ARE NO KNOWN COASTAL BARRIERS AT THIS LOCATION.

Data limitations

The CBRS boundaries used in IPaC are representations of the controlling boundaries, which are depicted on the [official CBRS maps](#). The boundaries depicted in this layer are not to be considered authoritative for in/out determinations close to a CBRS boundary (i.e., within the "CBRS Buffer Zone" that appears as a hatched area on either side of the boundary). For projects that are very close to a CBRS boundary but do not clearly intersect a unit, you may contact the Service for an official determination by following the instructions here: <https://www.fws.gov/service/coastal-barrier-resources-system-property-documentation>

Data exclusions

CBRS units extend seaward out to either the 20- or 30-foot bathymetric contour (depending on the location of the unit). The true seaward extent of the units is not shown in the CBRS data, therefore projects in the offshore areas of units (e.g., dredging, breakwaters, offshore wind energy or oil and gas projects) may be subject to CBRA even if they do not intersect the CBRS data. For additional information, please contact CBRA@fws.gov.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER EMERGENT WETLAND

[Palustrine](#)

RIVERINE

[Riverine](#)

A full description for each wetland code can be found at the [National Wetlands Inventory website](#)

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

South Carolina Department of Natural Resources



PO Box 167
Columbia, SC 29202
(803) 734-1396
speciesreview@dnr.sc.gov

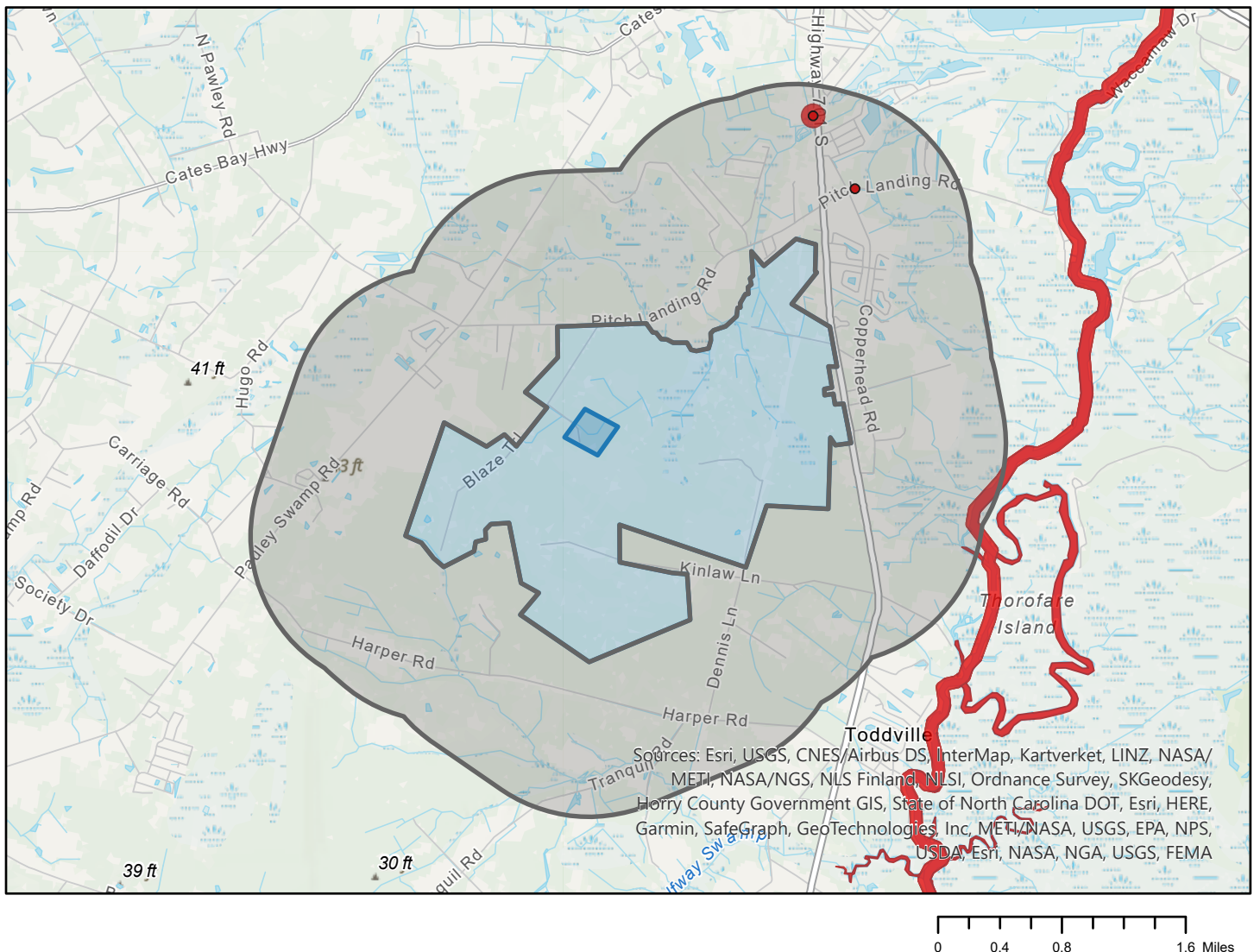
Robert H. Boyles, Jr.
Director

Emily C. Cope
Deputy Director for
Wildlife and Freshwater Fisheries

Requested on Monday, August 1, 2022 by Suzanne Knudsen.

Re: Request for Threatened and Endangered Species Consultation
S&ME, Inc. Suzanne Knudsen - Warden Tract Protected Species Assessment - Development (Commercial/
Residential) - Horry County, South Carolina

The South Carolina Department of Natural Resources (SCDNR) has received your request for threatened and endangered species consultation of the above named project in Horry County, South Carolina. The following map depicts the project area and a 1 mile buffer surrounding:



South Carolina Department of Natural Resources



Robert H. Boyles, Jr.

Director

Emily C. Cope

Deputy Director for

Wildlife and Freshwater Fisheries

This report includes the following items:

- A - A report for species which intersect the project area
- B - A report for species which intersect the buffer around the project area
- C - A list of best management practices relevant to species near to or within the project area
- D - A list of best management practices relevant to the project type
- E - Instructions to submit new species observation records to the SC Natural Heritage Program

Please be advised:

The contents of this report, including all tables, maps, recommendations, and various other text, are produced as a direct result of the information a user provides at the time of submission. The SCDNR assumes that all information submitted by the user represents the project scope as proposed, and recommends that additional reports be requested should the scope deviate from how the project was initially represented to the SCDNR.

The technical comments outlined in this report are submitted to speak to the general impacts of the activities as described through inquiry by parties outside the South Carolina Department of Natural Resources. These technical comments are submitted as guidance to be considered and are not submitted as final agency comments that might be related to any unspecified local, state or federal permit, certification or license applications that may be needed by any applicant or their contractors, consultants or agents presently under review or not yet made available for public review. In accordance with its policy 600.01, Comments on Projects Under Department Review, the South Carolina Department of Natural Resources, reserves the right to comment on any permit, certification or license application that may be published by any regulatory agency which may incorporate, directly or by reference, these technical comments.

Interested parties are to understand that SCDNR may provide a final agency position to regulatory agencies if any local, state or federal permit, certification or license applications may be needed by any applicant or their contractors, consultants or agents. For further information regarding comments and input from SCDNR on your project, please contact our Office of Environmental Programs by emailing environmental@dnr.sc.gov or by visiting www.dnr.sc.gov/environmental. Pursuant to Section 7 of the Endangered Species Act, requests for formal letters of concurrence with regards to federally listed species should be directed to the USFWS.

Should you have any questions or need more information, please do not hesitate to contact our office by email at speciesreview@dnr.sc.gov or by phone at 803-734-1396.

Sincerely,

A handwritten signature in black ink, appearing to read "Joseph Lemeris, Jr.", is written over a light blue horizontal line.

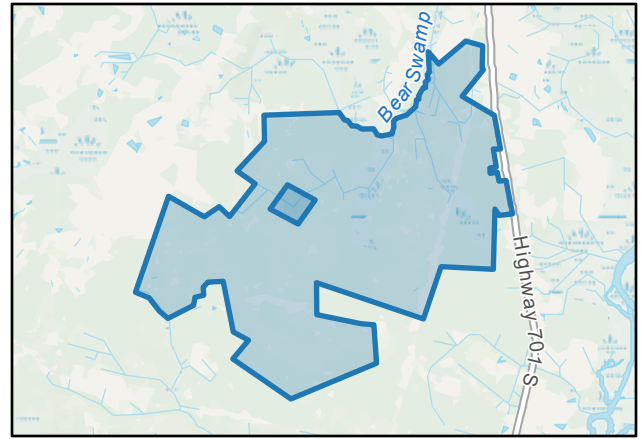
Joseph Lemeris, Jr.
Heritage Trust Program
SC Department of Natural Resources

A. Project Area - Species Report

There are 0 tracked species records found within the project footprint. The following table outlines occurrences found within the project footprint (if any), sorted by listing status and species name. Please keep in mind that this information is derived from existing databases and do not assume that it is complete. Areas not yet inventoried may contain significant species or communities. You can find more information about global and state rank status definitions by visiting Natureserve's web page. Please note that certain sensitive species found on site may be listed in this table but are not represented on the map. Please contact speciesreview@dnr.sc.gov should you have further questions related to sensitive species found within the project area.



Map Credits: Sources: Esri, USGS, CNES/Airbus DS, InterMap, Kartverket, LINZ, NASA/METI, NASA/NGS, NLS Finland, NLSI, Ordnance Survey, SKGeodesy, Horry County Government GIS, State of North Carolina DOT, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, Esri, NASA, NGA,



No records for species of concern are found within the project area

B. Buffer Area - Species Report

The following table outlines rare, threatened or endangered species found within 1 miles of the project footprint, arranged in order of protection status and species name. Please keep in mind that this information is derived from existing databases and do not assume that it is complete. Areas not yet inventoried may contain significant species or communities. You can find more information about global and state rank status definitions by visiting NatureServe's web page. Please note that certain sensitive species found within the buffer area may be listed in this table but are not represented on the map.



Map Credits: Sources: Esri, USGS, CNES/Airbus DS, InterMap, Kartverket, LINZ, NASA/METI, NASA/NGS, NLS Finland, NLSI, Ordnance Survey, SK Geodesy, Esri, NASA, NGA, USGS, Horry County Government GIS, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, EPA, NPS, USDA



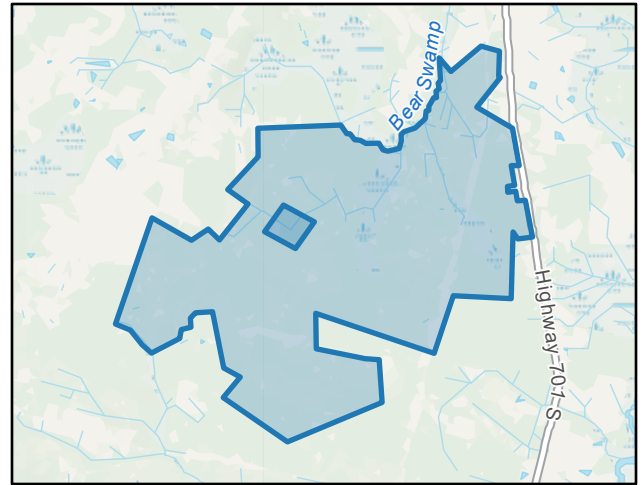
Common Name	Scientific Name	Federal Protection Status	State Protection Status	SWAP Priority	Last Observation Date
Spotted Turtle	<i>Clemmys guttata</i>	ARS: At-Risk Species	ST: State Threatened	High	2015-09-07
Florida Manatee	<i>Trichechus manatus</i>	LT: Federally Threatened	SE: State Endangered	Highest	2020
American Eel	<i>Anguilla rostrata</i>	Not Applicable	Not Applicable	Highest	1981-06-17
American Shad	<i>Alosa sapidissima</i>	Not Applicable	Not Applicable	Highest	2021
Banded Sunfish	<i>Enneacanthus obesus</i>	Not Applicable	Not Applicable	Moderate	1981-06-17
Blueback Herring	<i>Alosa aestivalis</i>	Not Applicable	Not Applicable	Highest	2021
Hickory Shad	<i>Alosa mediocris</i>	Not Applicable	Not Applicable	Highest	2021
Eastern Musk Turtle	<i>Sternotherus odoratus</i>	Not Applicable	R: Regulated	Not Applicable	2021-09-01

C. Species Best Management Practices (1 of 2)

SCDNR offers the following comments and best management practices (BMPs) regarding this project's potential impacts to species of concern which may be found on or near to the project area. Please contact speciesreview@dnr.sc.gov should you have further questions with regard to survey methods, consultation, or other species-related concerns.



Map Credits: Sources: Esri, USGS, CNES/Airbus DS, InterMap, Kartverket, LINZ, NASA/METI, NASA/NGS, NLS Finland, NLSI, Ordnance Survey, SKGeodesy, Horry County Government GIS, State of North Carolina DOT, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, Esri, NASA, NGA,



One or more occurrences of state listed species are found within or near to your project area. Please note that take of these species are prohibited under S.C. Code of Laws §50-15-30.

The SCDNR recommends that water construction-related activities such as dredging or piling installation be avoided during the months of February through April to limit disturbance to american shad, hickory shad, or blueback herring migrations that occur during this time.

To reduce potential construction-related impacts to the manatee to discountable and insignificant levels, the US Fish & Wildlife Service recommends implementing the following Standard Manatee Construction Conditions to all projects affecting the coastal waters of South Carolina (1 of 2):

- The permittee shall instruct all personnel associated with the project of the potential presence of manatees and the need to avoid collisions with manatees. All construction personnel must monitor water-related activities for the presence of manatee(s) during May 1 - November 15. Construction personnel are requested to monitor outside of that timeframe as manatees may be in the area before or after the above dates.
- The permittee shall advise all construction personnel that there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act of 1972 and the Endangered Species Act of 1973.
- Any siltation barriers used during the project shall be made of material in which manatees cannot become entangled and must be properly secured, and regularly monitored to avoid manatee entrapment.
- All vessels associated with the project shall operate at “no wake/idle” speeds at all times while in the construction area and while in water where the draft of the vessel provides less than a four-foot clearance from the bottom. All vessels will follow routes of deep water whenever possible.

To reduce potential construction-related impacts to the manatee to discountable and insignificant levels, the US Fish & Wildlife Service recommends implementing the following Standard Manatee Construction Conditions to all projects affecting the coastal waters of South Carolina (2 of 2):

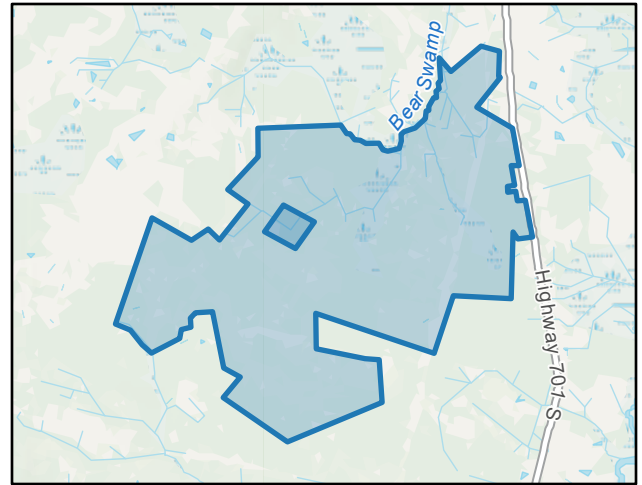
- If manatee(s) are seen within 100 yards of the active construction area all appropriate precautions shall be implemented to ensure protection of the manatee. These precautions shall include the operation of all moving equipment no closer than 50 feet to a manatee. Operation of any equipment closer than 50 feet to a manatee shall necessitate immediate shutdown of that equipment. Activities will not resume until the manatee(s) has departed the project area of its own volition.
- The permittee understands and agrees that all in-water lines (rope, chain, and cable, including the lines to secure turbidity curtains) must be stiff, taut, and non-looping. Examples of such lines are heavy metal chains or heavy cables that do not readily loop and tangle. Flexible in-water lines, such as nylon rope or any lines that could loop or tangle, must be enclosed in a plastic or rubber sleeve/tube to add rigidity and prevent the line from looping and tangling. In all instances, no excess line is allowed in the water. Where appropriate in water wires, cables, should be fitted with PVC sleeve from the surface to the bottom to prevent any potential scraping of the passing manatees.
- Any collision with and/or injury to a manatee shall be reported immediately to the U.S. Fish and Wildlife Service contacts: Melanie Olds, South Carolina Manatee Lead, Charleston Field Office, at 843-727-4707 ext. 205; or Terri Calleson, Manatee Recovery Coordinator, North Florida Field Office, at 904-731-3286.

C. Species Best Management Practices (2 of 2)

SCDNR offers the following comments and best management practices (BMPs) regarding this project's potential impacts to species of concern which may be found on or near to the project area. Please contact speciesreview@dnr.sc.gov should you have further questions with regard to survey methods, consultation, or other species-related concerns.



Map Credits: Sources: Esri, USGS, CNES/Airbus DS, InterMap, Kartverket, LINZ, NASA/METI, NASA/NGS, NLS Finland, NLSI, Ordnance Survey, SKGeodesy, Horry County Government GIS, State of North Carolina DOT, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, Esri, NASA, NGA,



The spotted turtle is a state-threatened species and a federal At-Risk species (ARS). If spotted turtles are found to occur on the proposed site, please note the following:

- Prior to habitat disturbance in the proposed work area, the areas of impact be completely surveyed by individuals qualified to identify this species and its habitat;
- It is unlawful for any person to take, possess, transport, import, export, process, sell, offer for sale, ship, or receive for shipment any spotted turtle without a permit from the department;
- Spotted turtles may be allowed to be relocated into areas of suitable habitat, management, and conservation status; however, any plans for relocation should be submitted for review to SCDNR with a detailed description and images of the current and future habitat and proposed work plan and methodologies as it pertains to a relocation project.

Cavity- and tree-roosting bat species including the federally threatened northern long-eared bat (*Myotis septentrionalis*), state-endangered Rafinesque's big-eared bat (*Corynorhinus rafinesquii*), and the federally at-risk tricolored bat (*Perimyotis subflavus*) have been known to occur in the county of the proposed site. As a conservation measure, it is recommended that any tree clearing activities be conducted during the inactive season for Northern long-eared bat (November 15th through March 31st) to avoid negative impacts to the species. If any of the above species are found on-site, please contact the USFWS and SCDNR.

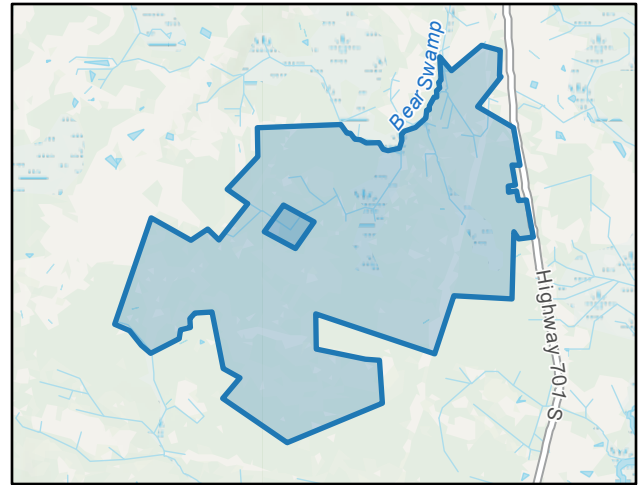
Species in the above table with SWAP priorities of High, Highest or Moderate are designated as having conservation priority under the South Carolina State Wildlife Action Plan (SWAP). SWAP species are those species of greatest conservation need not traditionally covered under any federal funded programs. Species are listed in the SWAP because they are rare or designated as at-risk due to knowledge deficiencies; species common in South Carolina but listed rare or declining elsewhere; or species that serve as indicators of detrimental environmental conditions. SCDNR recommends that appropriate measures should be taken to minimize or avoid impacts to the aforementioned species of concern.

D. Project Best Management Practices (1 of 4)

SCDNR offers the following comments and best management practices (BMPs) regarding this project's potential impacts to natural resources within or surrounding the project area. Please contact our Office of Environmental Programs at environmental@dnr.sc.gov should you have further questions with regard to best management practices related to this project area.



Map Credits: Sources: Esri, USGS, CNES/Airbus DS, InterMap, Kartverket, LINZ, NASA/METI, NASA/NGS, NLS Finland, NLSI, Ordnance Survey, SKGeodesy, Horry County Government GIS, State of North Carolina DOT, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, Esri, NASA, NGA,



The project area is located immediately adjacent to or within 0.5 mile of a U.S. Fish and Wildlife National Wildlife Refuge (NWR). Because of the wildlife and habitat values provided by the NWR, the SCDNR recommends consultation with the U.S. Fish and Wildlife Service to best avoid and minimize impacts to this area of conservation importance. You can find the contact information for each refuge by visiting: <https://www.fws.gov/visit-us>

If this project is associated with the Federal Government and the project area is or once was used as farmland, we recommend that consultation occur with the U.S. Department of Agriculture's Natural Resource Conservation Service (NRCS) per the Farmland Protection Policy Act; areas of the site are classified as prime farmland or farmland of statewide importance.

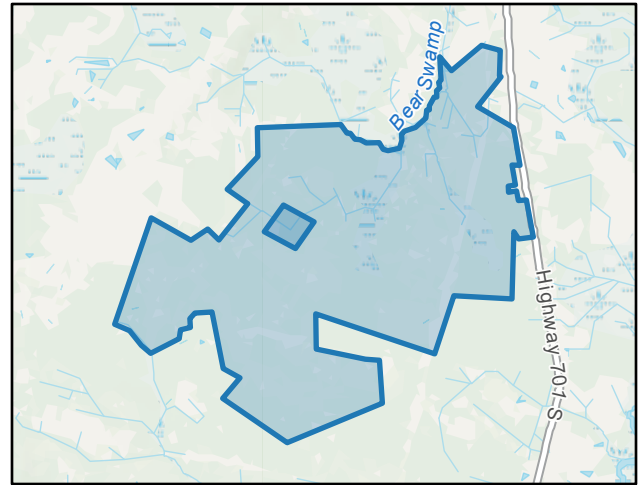
- All necessary measures must be taken to prevent oil, tar, trash and other pollutants from entering the adjacent offsite areas/wetlands/ water.
 - Once the project is initiated, it must be carried to completion in an expeditious manner to minimize the period of disturbance to the environment.
 - Upon project completion, all disturbed areas must be permanently stabilized with vegetative cover (preferable), riprap or other erosion control methods as appropriate.
 - The project must be in compliance with any applicable floodplain, stormwater, land disturbance, shoreline management guidance or riparian buffer ordinances.
 - Prior to beginning any land disturbing activity, appropriate erosion and siltation control measures (e.g. silt fences or barriers) must be in place and maintained in a functioning capacity until the area is permanently stabilized.
 - Materials used for erosion control (e.g., hay bales or straw mulch) will be certified as weed free by the supplier.
 - Inspecting and ensuring the maintenance of temporary erosion control measures at least:
 - a. on a daily basis in areas of active construction or equipment operation;
 - b. on a weekly basis in areas with no construction or equipment operation; and
 - c. within 24 hours of each 0.5 inch of rainfall.
 - Ensuring the repair of all ineffective temporary erosion control measures within 24 hours of identification, or as soon as conditions allow if compliance with this time frame would result in greater environmental impacts.
 - Land disturbing activities must avoid encroachment into any wetland areas (outside the permitted impact area). Wetlands that are unavoidably impacted must be appropriately mitigated.
 - Your project may require a Stormwater Permit from the SC Department of Health & Environmental Control, please visit <https://www.scdhec.gov/environment/water-quality/stormwater>
- If clearing must occur, riparian vegetation within wetlands and waters of the U.S. must be conducted manually and low growing, woody vegetation and shrubs must be left intact to maintain bank stability and reduce erosion.
- Construction activities must avoid and minimize, to the greatest extent practicable, disturbance of woody shoreline vegetation within the project area. Removal of vegetation should be limited to only what is necessary for construction of the proposed structures.
 - Where necessary to remove vegetation, supplemental plantings should be installed following completion of the project. These plantings should consist of appropriate native species for this ecoregion.

D. Project Best Management Practices (2 of 4)

SCDNR offers the following comments and best management practices (BMPs) regarding this project's potential impacts to natural resources within or surrounding the project area. Please contact our Office of Environmental Programs at environmental@dnr.sc.gov should you have further questions with regard to best management practices related to this project area.



Map Credits: Sources: Esri, USGS, CNES/Airbus DS, InterMap, Kartverket, LINZ, NASA/METI, NASA/NGS, NLS Finland, NLSI, Ordnance Survey, SKGeodesy, Horry County Government GIS, State of North Carolina DOT, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, Esri, NASA, NGA,



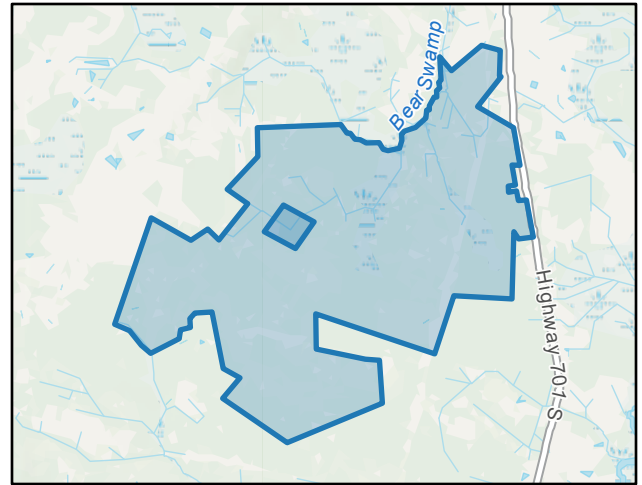
- Review of available data, National Hydrography Dataset, indicates that streams or waters of the United States are present within your project area. These areas may require a permit from the U.S. Army Corps of Engineers (USACE), as well as a compensatory mitigation plan. SCDNR advises that you consult with the USACE Regulatory to determine if jurisdictional waters are present and if a permit and mitigation is required for any activities impacting these areas. For more information, please visit their website at www.sac.usace.army.mil/Missions/Regulatory. Additionally, a 401 Water Quality Certification or a State Navigable Waters permit may also be required from the SC Department of Health & Environmental Control. For more information, please visit the following websites:
 - <https://www.scdhec.gov/environment/water-quality/water-quality-certification-section-401-clean-water-act>
 - <https://www.scdhec.gov/environment/water-quality/navigable-waters>
- Excavation/Construction activities must not occur during fish spawning season from March through June due to its negative impacts on eggs and reproduction activities.
- If clearing must occur, riparian vegetation within wetlands and waters of the U.S. must be conducted manually and low growing, woody vegetation and shrubs must be left intact to maintain bank stability and reduce erosion.
- Construction activities must avoid and minimize, to the greatest extent practicable, disturbance of woody shoreline vegetation within the project area. Removal of vegetation should be limited to only what is necessary for construction of the proposed structures.
- Where necessary to remove vegetation, supplemental plantings should be installed following completion of the project. These plantings should consist of appropriate native species for this ecoregion.

D. Project Best Management Practices (3 of 4)

SCDNR offers the following comments and best management practices (BMPs) regarding this project's potential impacts to natural resources within or surrounding the project area. Please contact our Office of Environmental Programs at environmental@dnr.sc.gov should you have further questions with regard to best management practices related to this project area.



Map Credits: Sources: Esri, USGS, CNES/Airbus DS, InterMap, Kartverket, LINZ, NASA/METI, NASA/NGS, NLS Finland, NLSI, Ordnance Survey, SKGeodesy, Horry County Government GIS, State of North Carolina DOT, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, Esri, NASA, NGA,



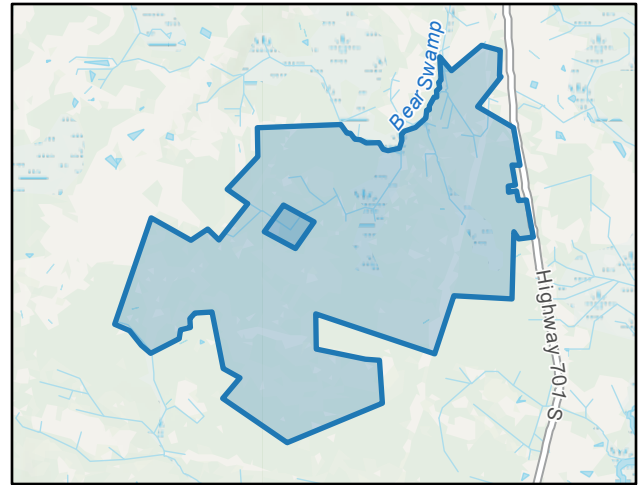
- Residential and commercial development has grown exponentially in recent years. Activities associated with these developments can have detrimental impacts on wildlife and aquatic resources such as habitat fragmentation, loss of available habitats and pollution, especially stormwater pollution. The result of these impacts causes the displacement of species and increases wildlife and human interactions. However, properly planned and sited development activities may allow for economic expansion with minimal negative impacts.
- Where appropriate, particularly adjacent to wetlands and water bodies, drainage plans and construction measures for residential and commercial development should be designed to control erosion and sedimentation, water quality degradation and other negative impacts on adjacent water and wetlands utilizing the best available design research. Developers proposing development activities should contact and work closely with local community development planning entities.
- Developments should be planned where growth is most compatible with natural resources utilizing residential and commercial cluster development methods, maximizing green spaces which can both be beneficial to protect natural resources and provide recreational opportunities for outdoor enthusiasts.
- Developments should be designed and constructed to avoid impact to wetland and stream areas whenever possible and to minimize unavoidable wetland and stream impacts to the maximum extent possible. Aquatic habitats and other sensitive natural areas should be identified in the initial planning stages of the project and incorporated in their natural state into the overall development plan.
- Developments should be designed to maintain the integrity and contiguity of wetland and stream systems and their associated riparian corridors, including the establishment of protective upland buffers around and between undisturbed aquatic systems whenever possible. Projects should be designed to minimize habitat fragmentation, including the construction of a limited number of road and utility crossings through streams and wetlands.
- The SCDNR recommends that the applicant incorporate vegetated bioswales, catch basins and/or bioretention cells/rain gardens into development plans beyond the regulatory requirements of the Stormwater Permitting requirements to add additional features to aid in capturing and filtering runoff from hardened surfaces. These structures can protect water quality and prevent oil, gas and other pollutants from directly entering nearby waterways. In addition, the SCDNR strongly recommends the use of permeable or porous pavement surfaces when possible. Permeable surfaces allow for rainfall to filter through the soil which aids in flood control and improves water quality.
- The following resources are available from Clemson Extension to assist:
 - <https://hgic.clemson.edu/factsheet/an-introduction-to-bioswales/>
 - <https://hgic.clemson.edu/factsheet/rain-garden-plants-introduction/>
 - <https://hgic.clemson.edu/factsheet/bioretention-cells-a-guide-for-your-residents/>
 - <https://hgic.clemson.edu/factsheet/an-introduction-to-porous-pavement/>
 - <https://hgic.clemson.edu/factsheet/trees-for-stormwater-management/>

D. Project Best Management Practices (4 of 4)

SCDNR offers the following comments and best management practices (BMPs) regarding this project's potential impacts to natural resources within or surrounding the project area. Please contact our Office of Environmental Programs at environmental@dnr.sc.gov should you have further questions with regard to best management practices related to this project area.



Map Credits: Sources: Esri, USGS, CNES/Airbus DS, InterMap, Kartverket, LINZ, NASA/METI, NASA/NGS, NLS Finland, NLSI, Ordnance Survey, SKGeodesy, Horry County Government GIS, State of North Carolina DOT, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, Esri, NASA, NGA,

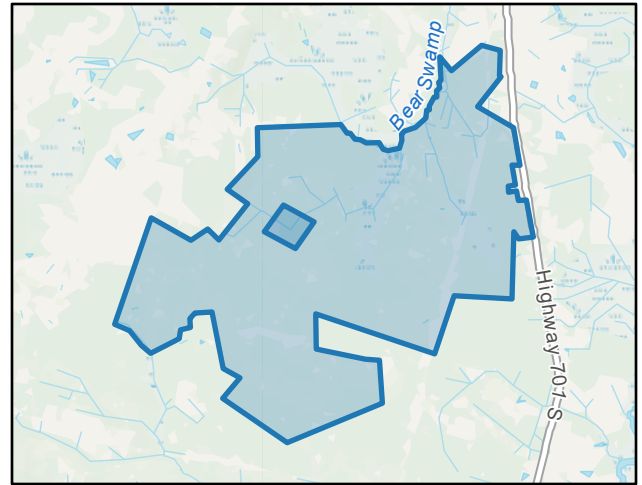


- Your project boundary lies within a coastal county in South Carolina which means you may also need a Coastal Zone Consistency Certification for your project from the SC Department of Health and Environmental Control. For more information, visit: <https://www.scdhec.gov/environment/your-water-coast/ocean-coastal-management/beach-management/coastal-permits/coastal-zone>
- If your project could affect coastal waters, tidelands, beaches and beach/dune systems, you may also need a critical area permit from the SC Department of Health and Environmental Control. For more information, visit: <https://www.scdhec.gov/environment/your-water-coast/ocean-coastal-management/beach-management/coastal-permits/critical-1>

E. Instructions for Submitting Species Observations

The SC Natural Heritage Dataset relies on continuous monitoring and surveying for species of concern throughout the state. Any records of species of concern found within this project area would greatly benefit the quality and comprehensiveness of the statewide dataset for rare, threatened and endangered species. Below are instructions for how to download the SC Natural Heritage Occurrence Reporting Form through the Survey123 App.

Map Credits: Sources: Esri, USGS, CNES/Airbus DS, InterMap, Kartverket, LINZ, NASA/METI, NASA/NGS, NLS Finland, NLSI, Ordnance Survey, SKGeodesy, Horry County Government GIS, State of North Carolina DOT, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, Esri, NASA, NGA,



Conservation Ranks & SWAP Priority Status

The SC Natural Heritage Program assigns S Ranks for species tracked within the state of South Carolina based on ranking methodology developed by NatureServe and its state program network. For information conservation rank definitions, please visit <https://explorer.natureserve.org/AboutTheData/Statuses>

The SCDNR maintains and updates its State Wildlife Action Plan (SWAP) every 10 years. This plan categorizes species of concern by Moderate, High, and Highest Priority. Please visit <https://www.dnr.sc.gov/swap/index.html> for more information about the SC SWAP.

Instructions for accessing the SC Natural Heritage Occurrence Reporting Form

For use in a browser (on your desktop/PC):

- 1) Follow <https://bit.ly/scht-reporting-form>
- 2) Select 'Open in browser'
- 3) The form will open and you can begin entering data!

This method of access will also work on a browser on a mobile device, but only when connected to the internet. To use the form in the field without relying on data/internet access, follow the steps below.

For use on a smartphone or tablet using the field app:

- 1) Download the Survey123 App from the Google Play store or the Apple Store. This app is free to download. Allow the app to use your location.
- 2) No need to sign in. However, you will need to provide the app with our Heritage Trust GIS portal web address. You will only need to do this once: (this is a known bug with ESRI's software, and future releases of the form should not require the below steps. Bear with us in the meantime!).
 - a. Tap 'Sign in'
 - b. Tap the settings (gear symbol) in the upper right corner
 - c. Tap 'Add Portal'
 - d. After the 'https://', type schtportal.dnr.sc.gov/portal
 - e. Tap 'Add Portal'
 - f. Tap the back-arrow icon (upper left corner) twice to return to the main sign in page.
- 3) Use the camera app (or other QR Reader app) to scan the QR code on this page from your smartphone or tablet. Click on the 'Open in the Survey123 field app'. This will prompt a window to allow Survey123 to download the SC Natural Heritage Occurrence Reporting Form. Select 'Open.'
- 4) The form will automatically open in Survey123, and you can begin entering data! This form will stay loaded in the app on your device until you manually delete it, and you can submit as many records as you like.



HORRY COUNTY

CATEGORY	COMMON NAME/STATUS	SCIENTIFIC NAME	SURVEY WINDOW/ TIME PERIOD	COMMENTS
Amphibians	None Found			
Birds	American wood stork (T)	<i>Mycteria americana</i>	February 15-September 1	Nesting season
	Bald eagle (BGEPA)	<i>Haliaeetus leucocephalus</i>	October 1-May 15	Nesting season
	Black-capped petrel (ARS)	<i>Pterodroma hasitata</i>	April-October	Offshore water primarily
	Piping plover (T, CH)	<i>Charadrius melodus</i>	July 15-May 1	Migration and wintering
	Red-cockaded woodpecker (E)	<i>Picoides borealis</i>	March 1-July 31	Nesting season
	Red knot (T)	<i>Calidris canutus rufa</i>	August 1-May 31	Migration and wintering
	Saltmarsh sparrow (ARS)	<i>Ammodramus caudacuta</i>	Fall/winter	Fall/winter surveys
Crustaceans	None Found			
Fishes	Atlantic sturgeon* (E)	<i>Acipenser oxyrinchus*</i>	February 1-April 30	Spawning migration
	Robust redhorse (ARS)	<i>Moxostoma robustum</i>	Late April-early May	Temperature dependent: 16-24°C
	Shortnose sturgeon* (E)	<i>Acipenser brevirostrum*</i>	February 1-April 30	Spawning migration
Insects	Monarch butterfly (C)	<i>Danaus plexippus</i>	August-December	Overwinter population departs: March-April
Mammals	Finback whale* (E)	<i>Balaenoptera physalus*</i>	November 1-April 30	Off the coast
	Humpback whale * (E)	<i>Megaptera novaengliae</i>	January 1-March 31	Migration off the coast
	Northern long-eared bat (T)	<i>Myotis septentrionalis</i>	Year round	Winter surveys not as successful
	Right whale* (E)	<i>Balaena glacialis</i>	November 1-April 30	Off the coast
	Sei whale* (E)	<i>Balaenoptera borealis</i>		
	Sperm whale* (E)	<i>Physeter macrocephalus</i>		
	Tri-colored bat (ARS)	<i>Perimyotis subflavus</i>	Year round	Found in mines and caves in the winter
West Indian manatee (T)	<i>Trichechus manatus</i>	May 1-November 15	In coastal waters	
Mollusks	None Found			

HORRY COUNTY

CATEGORY	COMMON NAME/STATUS	SCIENTIFIC NAME	SURVEY WINDOW/ TIME PERIOD	COMMENTS
Plants	American chaffseed (E)	<i>Schwalbea americana</i>	May-August	1-2 months after a fire
	Carolina-birds-in-a-nest (ARS)	<i>Macbridea caroliniana</i>	July-November	
	Ciliate-leaf tickseed (ARS)	<i>Coreopsis integrifolia</i>	August-November	
	Godfrey's stitchwort (ARS)	<i>Minuartia godfreyi</i>	April-June	
	Harper's fimbriatylis (ARS)	<i>Fimbristylis perpusilla</i>	July-September	
	Seabeach amaranth (T)	<i>Amaranthus pumilus</i>	July-October	
	Venus flytrap (ARS*)	<i>Dionaea muscipula</i>	May-June	
	Wire-leaved dropseed (ARS)	<i>Sporobolus teretifolius</i>	August-September	Following fire
Reptiles	Green sea turtle ** (T)	<i>Chelonia mydas</i> **	May 1-October 31	Nesting and hatching
	Kemp's ridley sea turtle ** (E)	<i>Lepidochelys kempii</i> **	May 1-October 31	In coastal waters
	Leatherback sea turtle ** (E)	<i>Dermochelys coriacea</i> **	May 1-October 31	Nesting and hatching
	Loggerhead sea turtle ** (T, CH)	<i>Caretta caretta</i> **	May 1-October 31	Nesting and hatching
	Spotted turtle (ARS)	<i>Clemmys guttata</i>	February-early April	

* Contact National Marine Fisheries Service (NMFS) for more information on this species.

** The U.S. Fish and Wildlife Service (FWS) and NMFS share jurisdiction of this species.

ARS Species that the FWS has been petitioned to list and for which a positive 90-day finding has been issued (listing may be warranted); information is provided only for conservation actions as no Federal protections currently exist.

ARS* Species that are either former Candidate Species or are emerging conservation priority species.

BGEPA Federally protected under the Bald and Golden Eagle Protection Act

C FWS or NMFS has on file sufficient information on biological vulnerability and threat(s) to support proposals to list these species.

CH Critical Habitat

E Federally Endangered

P or P – CH Proposed for listing or critical habitat in the Federal Register

S/A Federally protected due to similarity of appearance to a listed species

T Federally Threatened

These lists should be used only as a guideline, not as the final authority. The lists include known occurrences and areas where the species has a high possibility of occurring. Records are updated as deemed necessary and may differ from earlier lists.

For a list of State endangered, threatened, and species of concern, please visit <https://www.dnr.sc.gov/species/index.html>.



July 7, 2023

The Brigman Company
P.O. Box 1532
Conway, SC 29526

Attention: Charles C. Oates, Jr.

Reference: **Cultural Resources Background Review**
Warden Tract
Horry County, South Carolina
S&ME Project No. 23130302

Dear Mr. Oates:

S&ME, Inc. (S&ME), on behalf of The Brigman Company, has completed a Cultural Resources Background Review for the Warden Tract in Horry County, South Carolina (Figures 1 and 2). S&ME staff completed this study in general accordance with S&ME Proposal Number 22130302, dated July 6, 2023.

◆ Project Setting

The Brigman Company is considering development of Warden Tract. The property is approximately 1,668.2 acres located southwest of the intersection of SC Highway 70 South and Pitch Landing Road in Conway, Horry County, South Carolina (Appendix A). The Project Area is identified by Horry County as a portion of TMS Nos. 149-00-05-015 and 160-00-01-004.

The Project Area is located in the Lower Coastal Plain physiographic province. The topography is mostly level, with an elevation of approximately 0-26 feet above mean sea level (AMSL). The properties adjacent to the Project Area consist of forestland, agricultural land, single-family residences, a cell tower, and a few scattered commercial facilities.

As part of a 2020 Protected Species Assessment, S&ME's naturalists described the property as divided into four habitat types: pine monoculture forestland, recently cutover land, hardwood, bottom land hardwood forest, and a maintained utility corridor, and noted that the majority of the property was timbered in 2016-2017.

As part of their review of the property the U.S. Army Corps of Engineers issued a Preliminary Jurisdictional Determination (SAC-2020-01556) confirming that 714.3 acres of the property are wetlands, and the property contains 107,866 Linear feet of Non-wetland Waters. Bear Swamp is centrally located on the property (Appendix A).

Soils in the Project Area consist primarily of poorly drained sand and sandy loams. The USDA records seven soil types in the Project Area (Figure 3). The descriptions are presented below in Table 1 (USDA Web Soil Survey, Accessed February 1, 2022).



Table 1. USDA Soils Data

Soil Series	Drainage	Permeability
Bladen fine sandy loam	Poorly Drained	Slow
Meggett loam	Poorly Drained	Slow
Ogeechee loamy fine sand	Poorly Drained	Rapid
Pocomoke fine sandy loam	Very Poorly Drained	Moderately Rapid
Wahee fine sandy loam	Somewhat Poorly Drained	Slow
Yauhannah fine sandy loam	Moderately Well Drained	Moderate
Yemassee loamy fine sand	Somewhat Poorly Drained	Moderate

◆ Methods

On July 6, 2023, Quinn-Monique Ogden, RPA, conducted a background literature and records search for the Project Area and its surroundings. The archaeological and historic context of the property is documented by identifying previously reported cultural resources within a 0.25-mile radius of the subject property. The records examined for the property include ArchSite, a GIS-based Cultural Resource Information System for previously recorded archaeological and historic resources, as well as the SCDAH *Finding Aid* for previous architectural surveys near the Project Area.

◆ Results

Background research (Figure 4) indicated three cultural resource surveys have been conducted in a 0.25-mile search radius surrounding the property (Nagle et al. 2020, Richey 2008, Utterback 1988). Nagle et al.’s 2020 survey examined a portion of the current Project Area. No previously recorded archaeological sites and three historic structures (108 0109, 108 0075, and 3155) are recorded within a 0.25-mile radius surrounding the property. (Table 2; Figure 1, 2, and 4).

Table 1. Previously Recorded Resources within 0.25 mile of the Project Area

Site No.	Description	NRHP Status
108 0109	Jim Edwards House circa 1900	Not eligible
108 0075	W. D. Clardy circa 1925	Not eligible
3155	Dwelling circa 1925	Not eligible

As part of the background research, S&ME staff also examined historic maps of the Project Area. Mills’ Atlas (1825) depicts the Project Area south of Conwayborough and Pitch Landing Ferry with landowners Sarves and Roger in the vicinity (Figure 5). The USGS 1943 Conway quadrangle depicts the Project Area containing three structures in the north and two structures along tertiary roads within the Project Area (Figure 6). The 1967 Georgetown quadrangle features the Project Area south of Sand Ridge, west of Highway 701 (Figure 7). The 1980



Conway quadrangle (Figure 1) depicts five structures in the same location as depicted on the 1943 Conway quadrangle and on a recent aerial photograph (Figure 2).

◆ Conclusion

Background research indicated that a portion of the Project Area has been the subject of a previous cultural resources survey efforts. No previously recorded archaeological sites and three historic structures are recorded within the 0.25-mile radius. The previous surveys that addressed aboveground resources found the documented structure were not eligible for inclusion in the National Register of Historic Places.

Additionally, this research has documented past ground disturbing activities that have likely decreased the chance of archaeological sites surviving, if present, and documented that much of the Project Area is composed of poorly drained soils, or part of jurisdictional wetlands. Based on these characteristics, it appears that the Project Area has a generally low probability of containing undisturbed archaeological deposits.

As this study was limited to a literature review, we did not conduct fieldwork or other survey efforts necessary to identify currently undocumented resources that may be present. If at some point the proposed development requires federal oversight or permitting, then the lead federal agency will be required to initiate the Section 106 process (per 36 CFR 800.(3)) to determine, in consultation with the State Historic Preservation Office (SHPO), whether consultation with other stakeholders is appropriate.

◆ Closing

S&ME appreciates the opportunity to provide you with this report. If you have questions about the report, please do not hesitate to contact Aaron Brummitt at (843) 884-0005 or via e-mail at abrummitt@smeinc.com.

Sincerely,
S&ME, Inc.

A handwritten signature in black ink, appearing to read 'Aaron Brummitt'.

Aaron Brummitt, RPA
Principal Investigator

A handwritten signature in black ink, appearing to read 'Quinn-Monique Ogden'.

Quinn-Monique Ogden, RPA
Project Archaeologist

Attachments: Appendix A: Client-Provided Map, Figures 1-7



◆ References Cited

Mills, Robert

1825 Horry District, South Carolina surveyed by Charles Vignoles & Henry Ravenel, 1820. *Atlas of the State of South Carolina*. F. Lucas, Jr., Baltimore.

Nagle, Kimberly, Paul Connell, and Heather Carpini

2020 *Cultural Resource Survey South Conway Loop Phase III Gas Pipeline Horry County, South Carolina*. Report prepared for the United States Office of Fish and Wildlife, by S&ME Inc. Columbia, South Carolina.

Richie, Staci

2008 *Horry County Historic Resources Survey*. Report prepared for the South Carolina Department for Archives and History, Columbia, by New South and Associates, Stone Mountain, Georgia.

Utterback, James

1988 *Horry County Historic Resources Survey*. Report prepared for the South Carolina Department for Archives and History, Columbia. J. David Utterback, Inc.: Socastee, SC.

United States Geological Survey

1934 Conway. 7.5-minute topographic quadrangle. Available at: <<http://historicalmaps.arcgis.com/usgs/>>

1967 Georgetown. 60-minute topographic quadrangle. Available at: <<http://historicalmaps.arcgis.com/usgs/>>


1980 Conway. 7.5-minute topographic quadrangle. Available at: <<http://historicalmaps.arcgis.com/usgs/>>



◆ **Appendix A: Client-Provided Map**

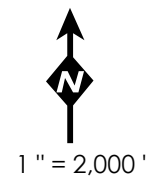
LEGEND

 Subject Property: 1,709.5 Ac+/-

 Potential Wetlands: 723.8 Ac+/-

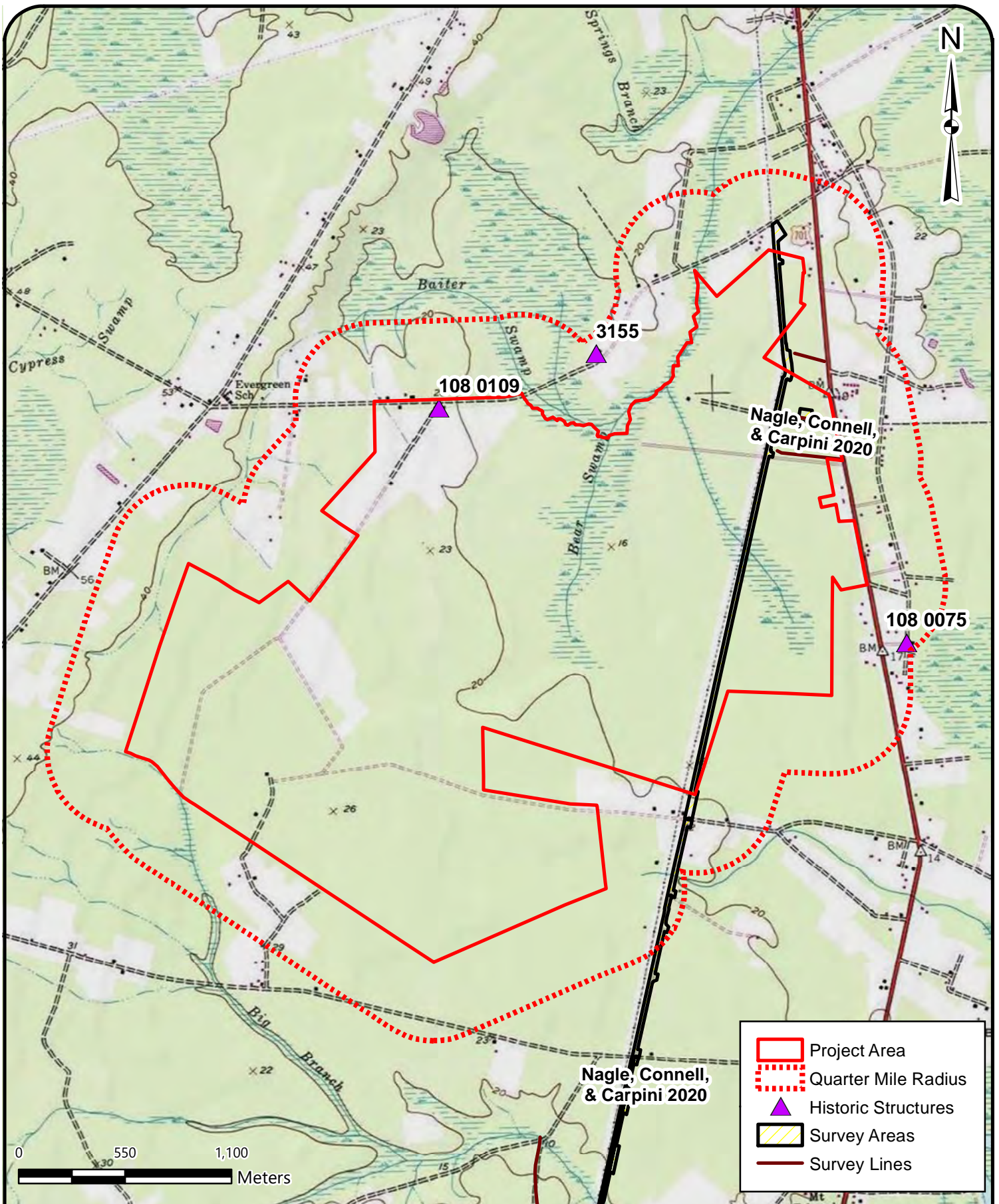


Aerial Photograph Exhibit
Warden Tract
TMS# 149-00-05-015 and 160-00-01-004
Conway, Horry County, SC
July 2023





◆ **Figures 1-7**



	Project Area
	Quarter Mile Radius
	Historic Structures
	Survey Areas
	Survey Lines

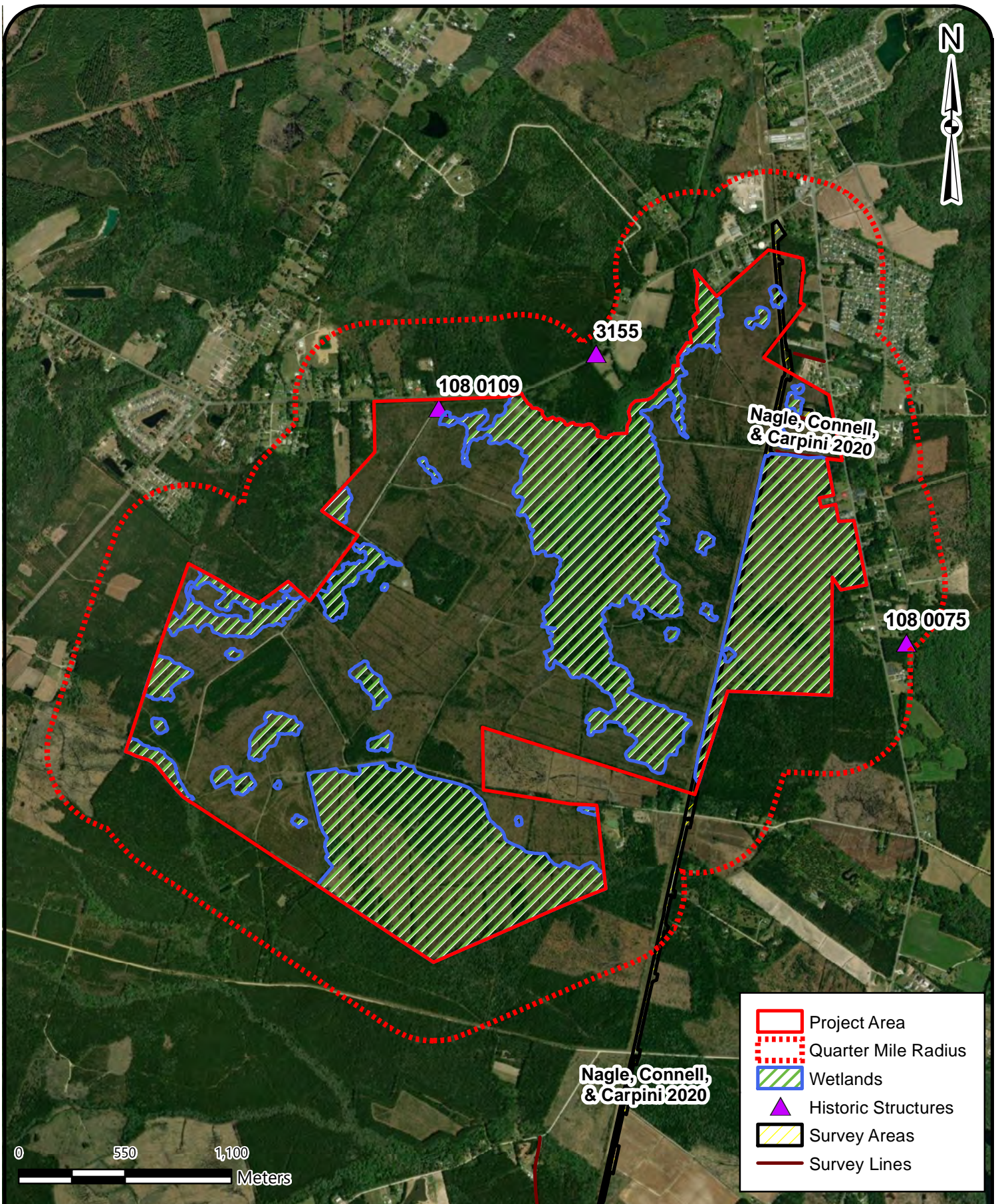
0 550 1,100 Meters

Location of Project Area
USGS 7.5 Minute Conway 1980
 Cultural Resources Document Review
 Warden Tract
 Horry County, South Carolina

SCALE:
1:25,955
 DATE:
7-6-23
 PROJECT NUMBER
23130302

FIGURE NO.
1



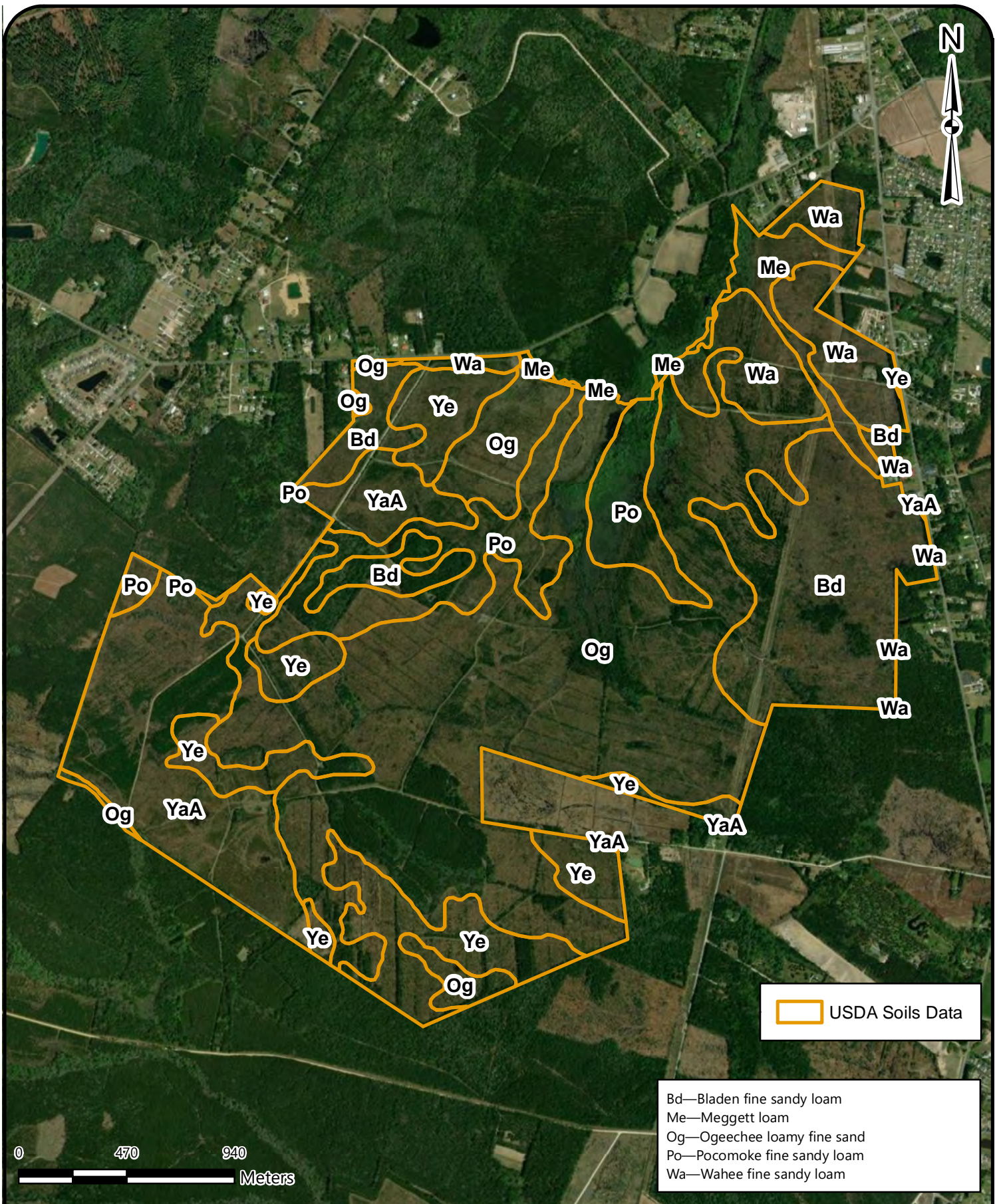



0 550 1,100 Meters

- Project Area
- Quarter Mile Radius
- Wetlands
- ▲ Historic Structures
- Survey Areas
- Survey Lines

Nagle, Connell, & Carpini 2020

	Location of Project Area Aerial Photograph	SCALE: 1:25,955	FIGURE NO. 2
	Cultural Resources Document Review Warden Tract	DATE: 7-6-23	
	Horry County, South Carolina	PROJECT NUMBER 23130302	



 USDA Soils Data

Bd—Bladen fine sandy loam
 Me—Meggett loam
 Og—Ogeechee loamy fine sand
 Po—Pocomoke fine sandy loam
 Wa—Wahee fine sandy loam

0 470 940
 Meters


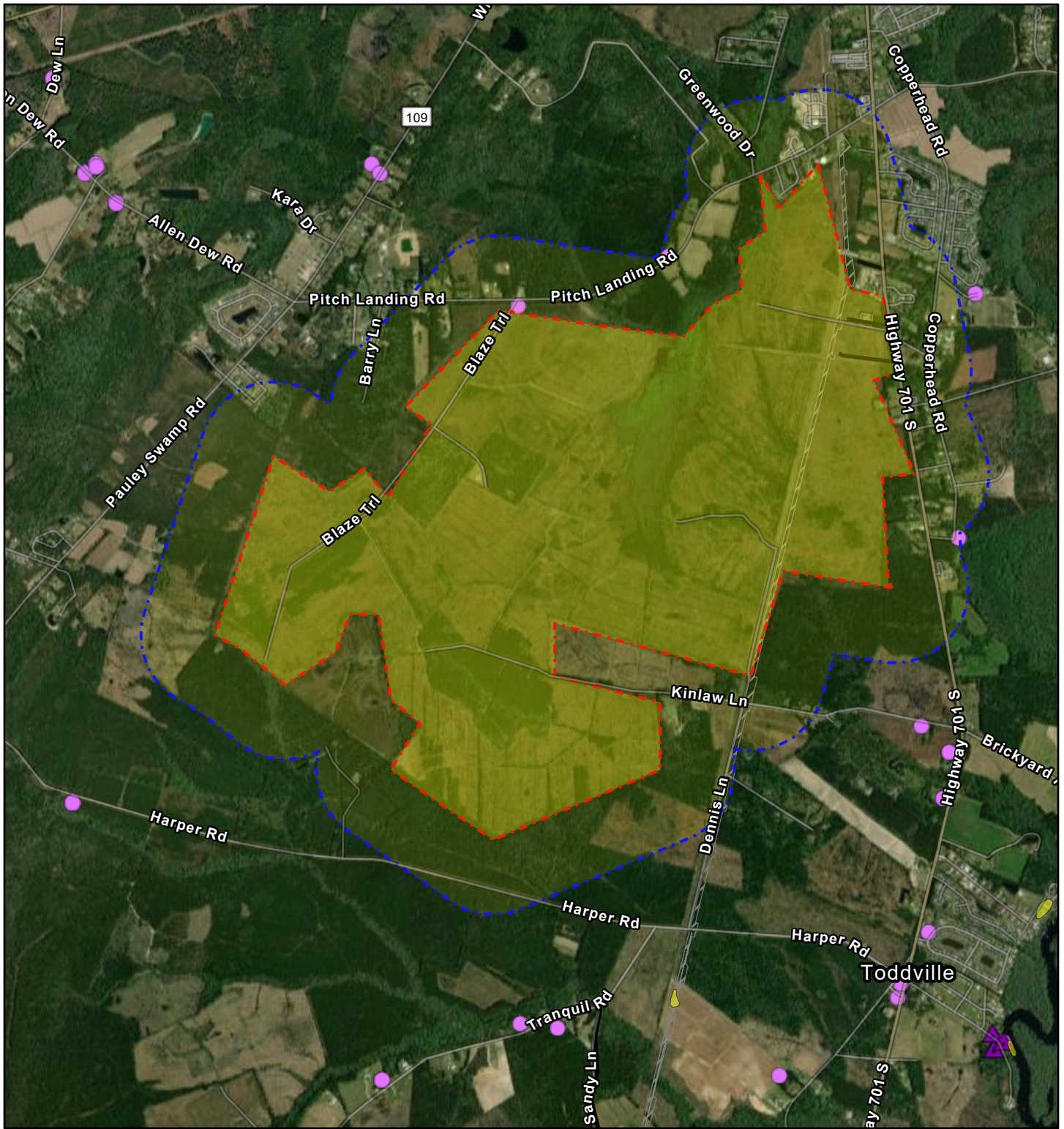

	Soil Data within Project Area Aerial Photograph	SCALE: 1:21,869	FIGURE NO. 3
	Cultural Resources Document Review Warden Tract Horry County, South Carolina	DATE: 7-7-23	
		PROJECT NUMBER 23130302	

Figure 4. Archsite Map




June 5, 2023


1:36,112

 Archaeological Sites

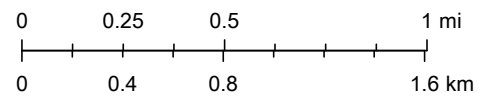
Historic Structures

 Not Eligible or Requires Evaluation

 Eligible

 Survey Lines

 Survey Areas



Horry County Government GIS, State of North Carolina DOT, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, Maxar

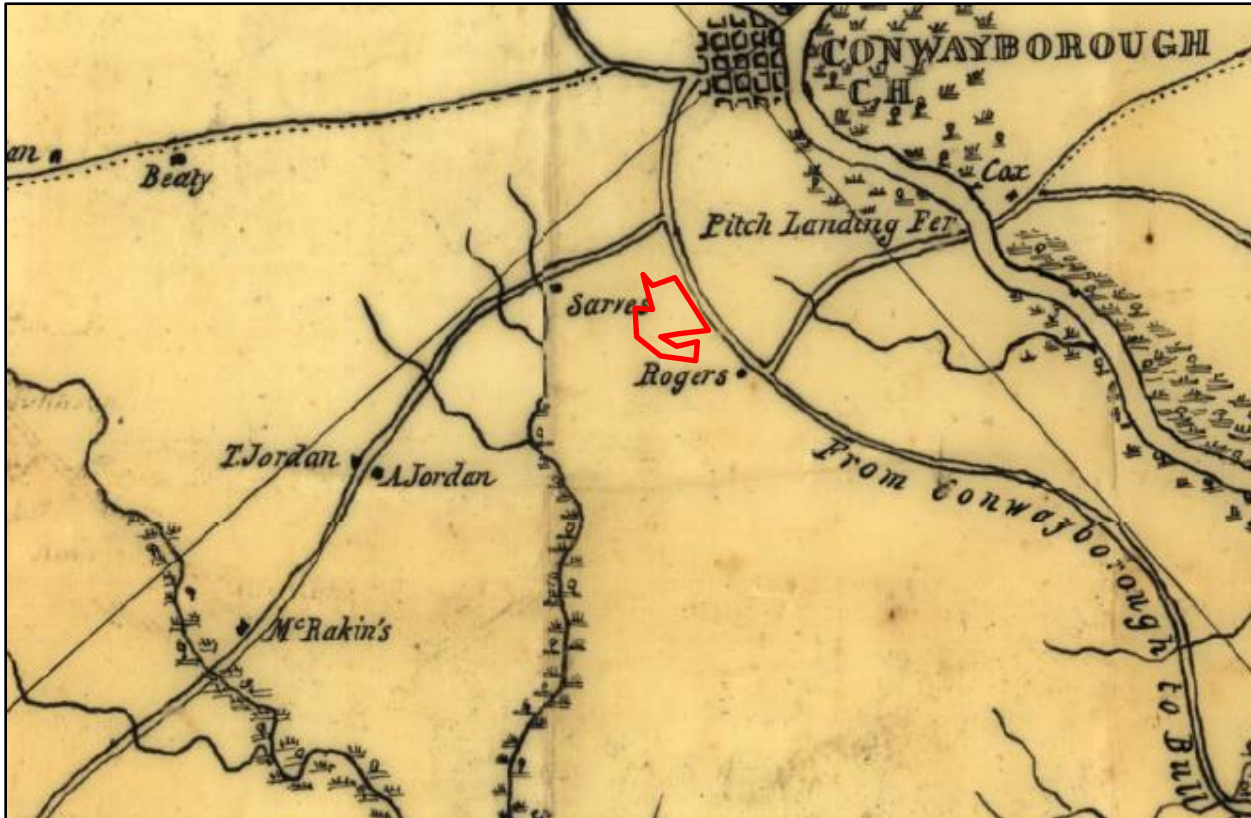
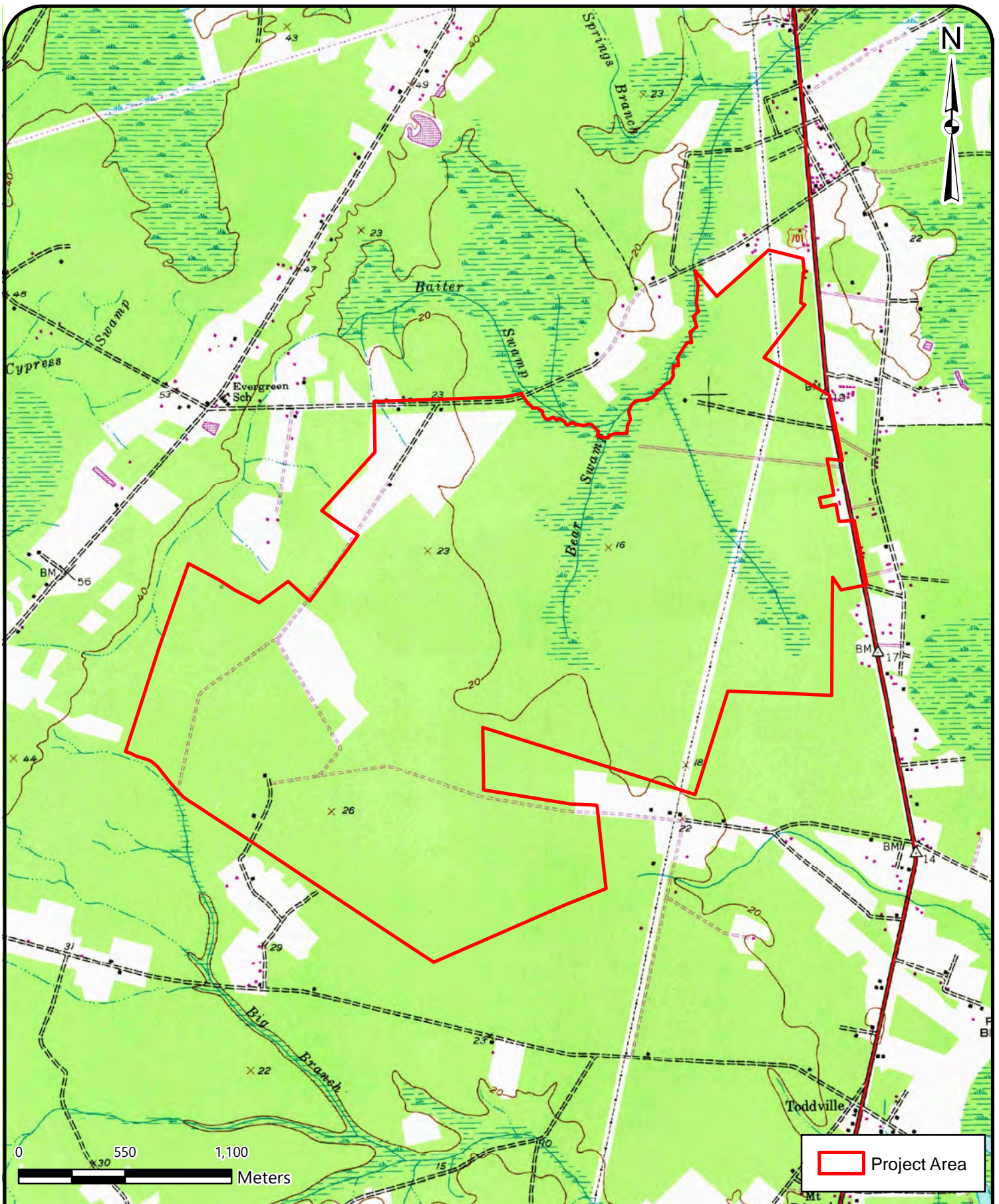


Figure 5. Portion of Mills 1825 Horry District Map, showing approximate location of Project Area.

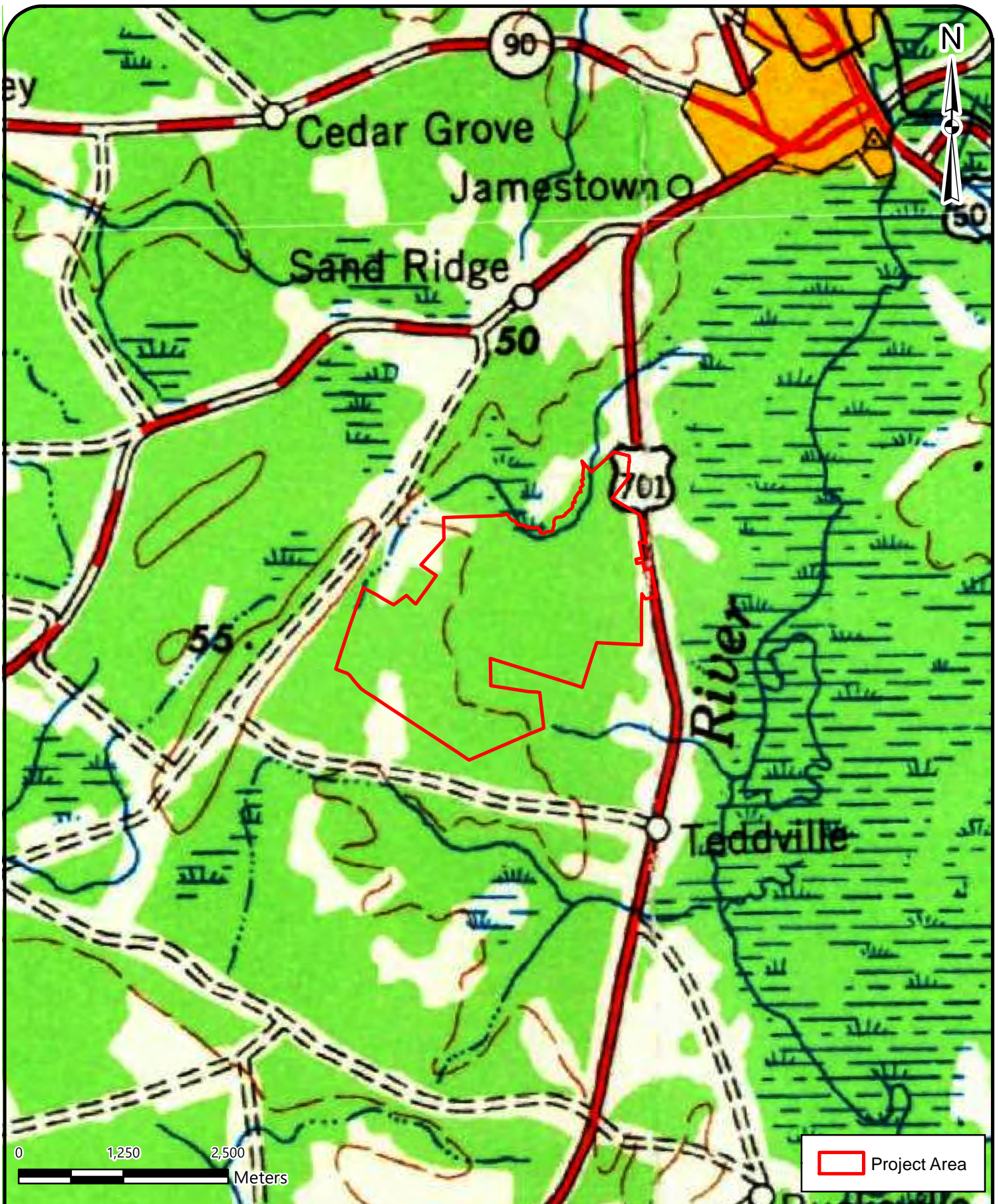


Location of Project Area
USGS 7.5 Minute Conway 1943
 Cultural Resources Document Review
 Warden Tract
 Horry County, South Carolina

SCALE:
 1:25,955
 DATE:
 7-6-23
 PROJECT NUMBER
 23130302

FIGURE NO.
6





Location of Project Area
USGS 60 Minute Georgetown 1967
 Cultural Resources Document Review
 Warden Tract
 Horry County, South Carolina

SCALE:
1:60,000
 DATE:
7-6-23
 PROJECT NUMBER
23130302

FIGURE NO.

7



DEPARTMENT OF THE ARMY
CHARLESTON DISTRICT, CORPS OF ENGINEERS
1949 INDUSTRIAL PARK ROAD, ROOM 140
CONWAY, SOUTH CAROLINA 29526

January 6, 2021

Regulatory Division

Mr. Charles Oates
S&ME, Inc.
1330 Highway 501 Business
Conway, South Carolina 29527
coates@smeinc.com

Dear Mr. Oates:

This is in response to your request for a preliminary jurisdictional determination (PJD). Based on information submitted to the U.S. Army Corps of Engineers (Corps) we have determined there may be waters of the United States, including wetlands on your parcel located at the following:

Project Number:	SAC-2020-01556
County:	Horry County
Project/Site Size:	1,668.2 Acres
Latitude:	33.7816°
Longitude:	-79.0936°
Project/Site Location:	TMS# 149-00-05-015, 012, and 011, located west of and adjacent to U.S. 701, south of Conway
Waters (Acreage/Linear Feet):	714.3 Acres of wetlands and 107,866 Linear feet of Non-wetland Waters

A copy of the PJD form and the map dated January 4, 2021, and titled "Preliminary Jurisdictional Determination Exhibit / Conway Warden Station Tract / TMS# 149-00-05-015, 012, and 011 / Conway, Horry County, SC" is enclosed. Please carefully read this form, then sign and return a copy to the project manager at the following Robert.C.Huff@usace.army.mil within 30 days from the date of this notification.

Please be advised a Department of the Army permit will be required for regulated work in all areas which may be waters of the United States, as indicated in this PJD. For purposes of computation of impacts, compensatory mitigation requirements, and other resource protection measures, a permit decision made on the basis of a PJD will treat all waters and wetlands, which would be affected in any way by the permitted activity on the site, as if they are jurisdictional waters of the United States. Should you desire an approved Corps determination, one will be issued upon request.

You are cautioned that work performed in areas which may be waters of the United States, as indicated in the PJD, without a Department of the Army permit could subject you to enforcement action.

The delineation included herein has been conducted to identify the location and extent of the aquatic resource boundaries and/or the jurisdictional status of aquatic resources for purposes of the Clean Water Act for the particular site identified in this request. This delineation and/or jurisdictional determination may not be valid for the Wetland Conservation Provisions of the Food Security Act of 1985, as amended. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should discuss the applicability of a certified wetland determination with the local USDA service center, prior to starting work.

If you submit a permit application as a result of this PJD, include a copy of this letter and the depiction as part of the application. Not submitting the letter and depiction will cause a delay while we confirm a PJD was performed for the proposed permit project area. Note that some or all of these areas may be regulated by other state or local government entities, and you should contact the South Carolina Department of Health and Environmental Control, Bureau of Water and/or Office of Ocean and Coastal Resource Management, to determine the limits of their jurisdiction.

In all future correspondence, please refer to file number SAC-2020-01556. A copy of this letter is forwarded to State and/or Federal agencies for their information. If you have any questions, please contact me at (843) 365-4316, or by email at Robert.C.Huff@usace.army.mil.

Sincerely,



Digitally signed by
HUFF.ROBERT.CHURCHFUL.III.10
53912733
DN: c=US, o=U.S. Government,
ou=DoD, ou=PKI, ou=USA,
cn=HUFF.ROBERT.CHURCHFUL.II
I.1053912733
Date: 2021.01.06 14:41:20 -05'00'

Rob Huff
Team Lead

Enclosures:

Preliminary Jurisdictional Determination Form

Notification of Appeal Options

Map titled "Preliminary Jurisdictional Determination Exhibit / Conway Warden Station Tract / TMS# 149-00-05-015, 012, and 011 / Conway, Horry County, SC"

Copies Furnished:

Mr. Hunter Dawkins
Johnson Development Associates, Inc.
100 Dunbar Street, Suite 400
Spartanburg, South Carolina 29306
hdawkins@johnsondevelopment.net

SC DHEC - OCRM
1362 McMillan Avenue, Suite 400
North Charleston, South Carolina 29405
OCRMPermitting@dhec.sc.gov

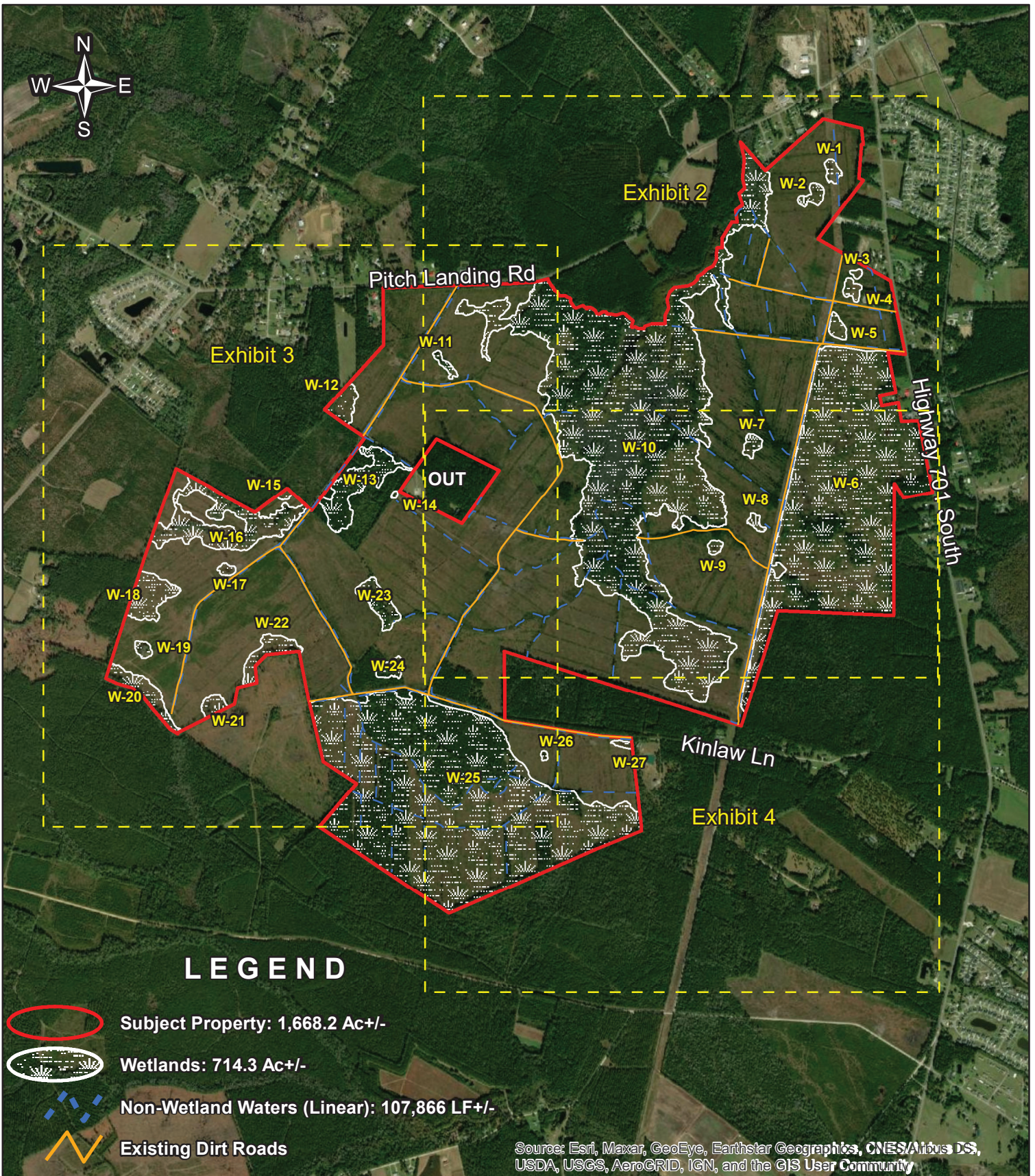
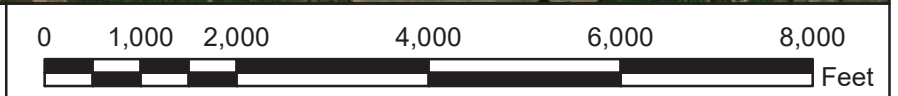


EXHIBIT DISCLAIMER: PLEASE NOTE THIS EXHIBIT IS FOR INFORMATIONAL PURPOSES ONLY. IT IS NOT MEANT FOR DESIGN, LEGAL, OR ANY OTHER USES. THERE ARE NO GUARANTEES REGARDING ACCURACY. S&ME, INC. ASSUMES NO RESPONSIBILITY FOR ANY DECISION MADE OR ANY ACTIONS TAKEN BY THE USER BASED UPON THIS EXHIBIT.







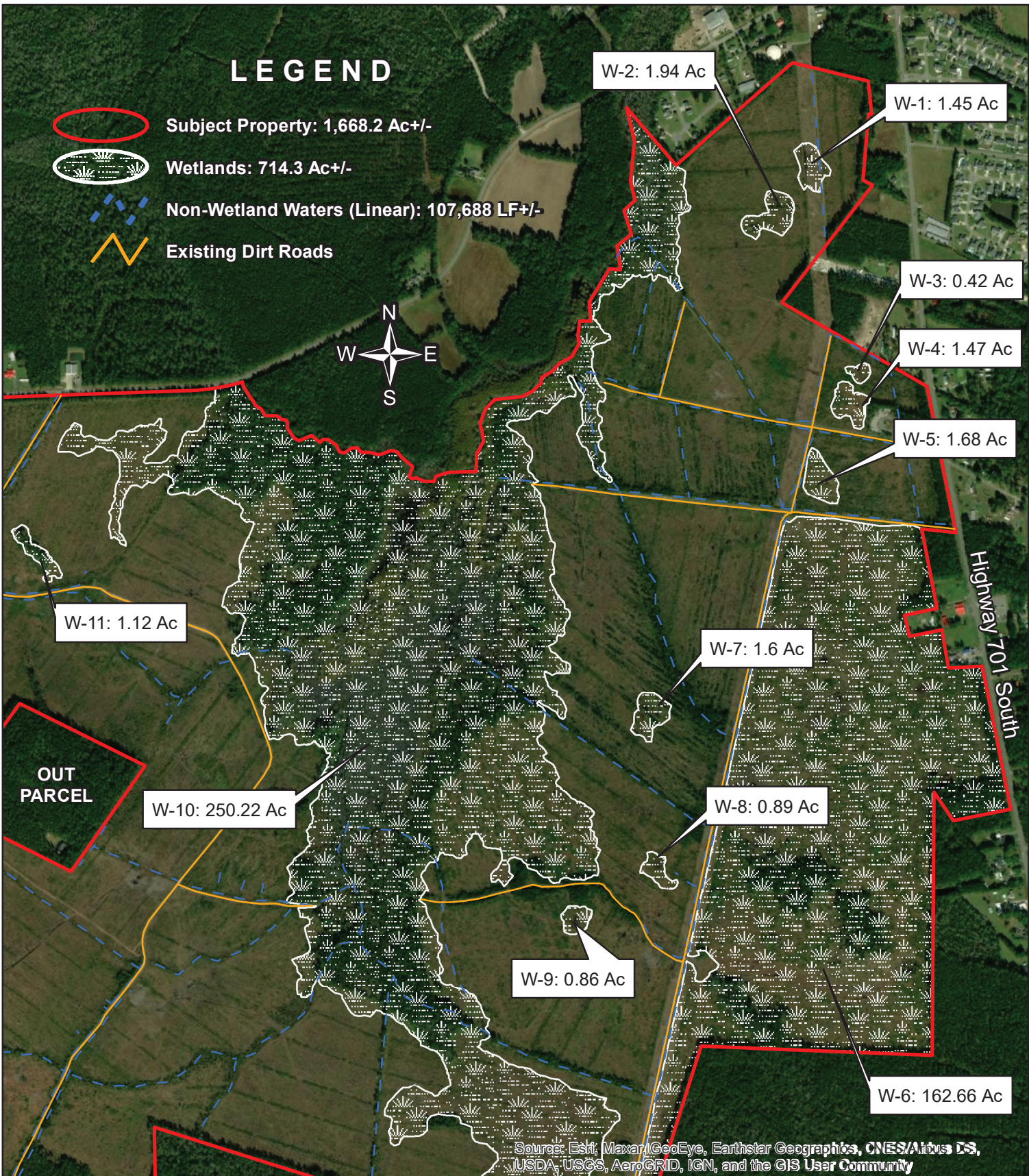
Project No:	4269-20-051
Source:	ESRI
Source Date:	2020
Revised Date:	January 4, 2021

Preliminary Jurisdictional Determination Exhibit
Conway Warden Station Tract
TMS# 149-00-05-015, 012, and 011
Conway, Horry County, SC

	Exhibit No.
	1

LEGEND

-  Subject Property: 1,668.2 Ac+/-
-  Wetlands: 714.3 Ac+/-
-  Non-Wetland Waters (Linear): 107,688 LF+/-
-  Existing Dirt Roads



Source: Esri, Maxar/GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

EXHIBIT DISCLAIMER: PLEASE NOTE THIS EXHIBIT IS FOR INFORMATIONAL PURPOSES ONLY. IT IS NOT MEANT FOR DESIGN, LEGAL, OR ANY OTHER USES. THERE ARE NO GUARANTEES REGARDING ACCURACY. S&ME, INC. ASSUMES NO RESPONSIBILITY FOR ANY DECISION MADE OR ANY ACTIONS TAKEN BY THE USER BASED UPON THIS EXHIBIT.



Project No:	4269-20-051
Source:	ESRI
Source Date:	2020
Revised Date:	January 4, 2021

Preliminary Jurisdictional Determination Exhibit
Conway Warden Station Tract
TMS# 149-00-05-015, 012, and 011
Conway, Horry County, SC



Exhibit No.
2

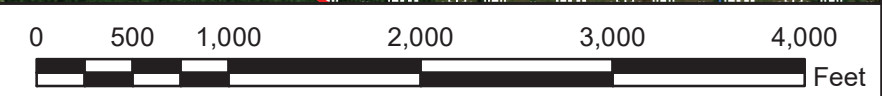
LEGEND

-  Subject Property: 1,668.2 Ac+/-
-  Wetlands: 714.3 Ac+/-
-  Non-Wetland Waters (Linear): 107,866 LF+/-
-  Existing Dirt Roads



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

EXHIBIT DISCLAIMER: PLEASE NOTE THIS EXHIBIT IS FOR INFORMATIONAL PURPOSES ONLY. IT IS NOT MEANT FOR DESIGN, LEGAL, OR ANY OTHER USES. THERE ARE NO GUARANTEES REGARDING ACCURACY. S&ME, INC. ASSUMES NO RESPONSIBILITY FOR ANY DECISION MADE OR ANY ACTIONS TAKEN BY THE USER BASED UPON THIS EXHIBIT.



Project No:	4269-20-051
Source:	ESRI
Source Date:	2020
Revised Date:	January 4, 2021

Preliminary Jurisdictional Determination Exhibit
Conway Warden Station Tract
TMS# 149-00-05-015, 012, and 011
Conway, Horry County, SC

	Exhibit No.
	3

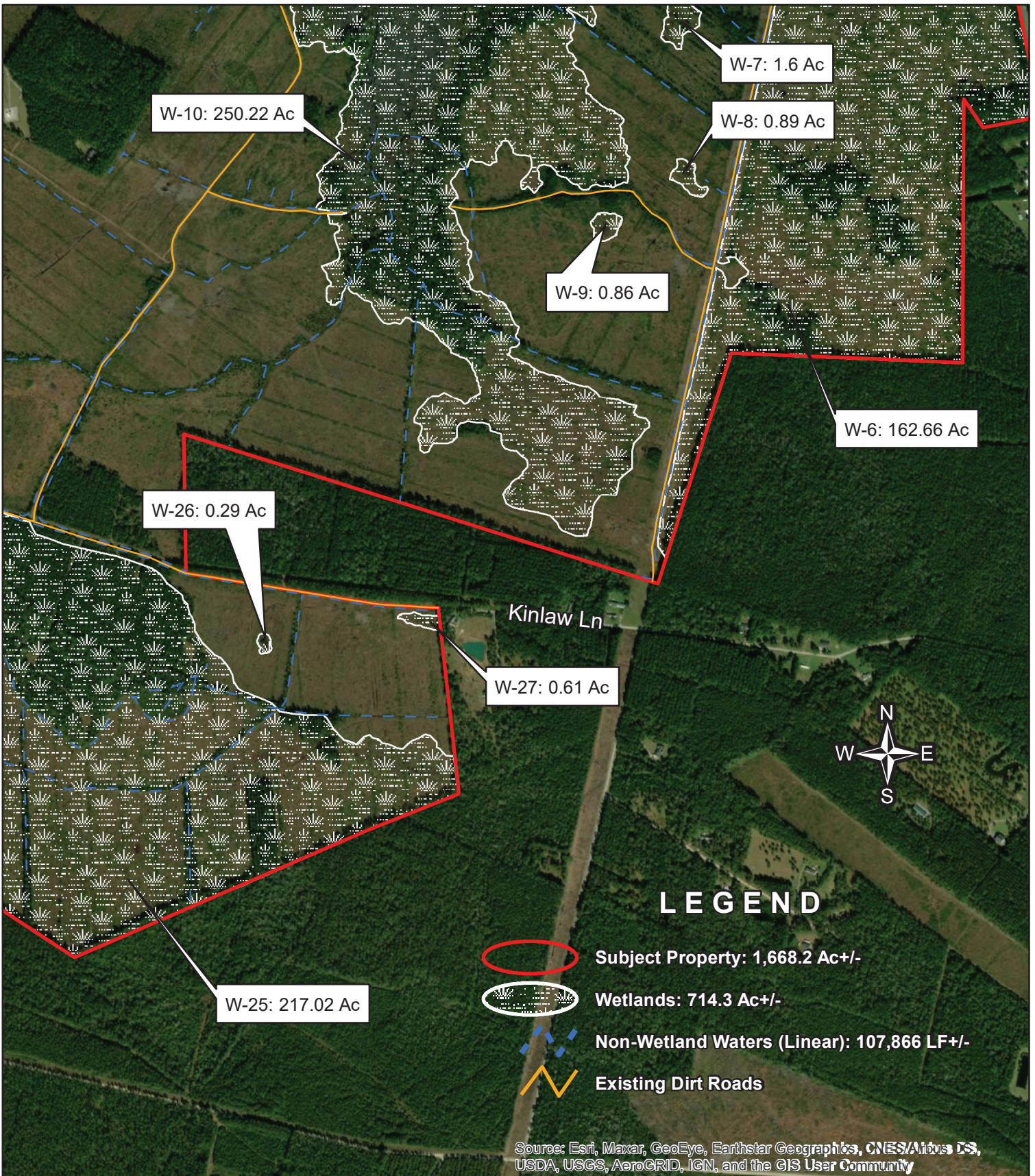
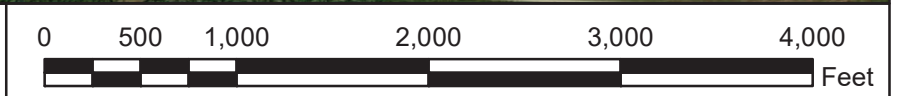


EXHIBIT DISCLAIMER: PLEASE NOTE THIS EXHIBIT IS FOR INFORMATIONAL PURPOSES ONLY. IT IS NOT MEANT FOR DESIGN, LEGAL, OR ANY OTHER USES. THERE ARE NO GUARANTEES REGARDING ACCURACY. S&ME, INC. ASSUMES NO RESPONSIBILITY FOR ANY DECISION MADE OR ANY ACTIONS TAKEN BY THE USER BASED UPON THIS EXHIBIT.



Project No:	4269-20-051
Source:	ESRI
Source Date:	2020
Revised Date:	January 4, 2021

Preliminary Jurisdictional Determination Exhibit
Conway Warden Station Tract
TMS# 149-00-05-015, 012, and 011
Conway, Horry County, SC

	Exhibit No.
	4

Brandon Truesdale

From: Josh M <josh@pdscarolinas.com>
Sent: Monday, March 27, 2023 5:06 PM
To: Brandon Truesdale; Felix Pitts; Kaitlyn Weimer
Cc: Patrick Quinn; Elizabeth Kurre
Subject: FW: SAC-2023-00042 Evelyn Richardson Tract Delineation Concurrence
Attachments: SAC-2023-00042 Wetland Map.pdf

G3, see attached and email below. We are good to go on Richardson Tract (Warden Station) wetlands.

Thanks.

From: Elizabeth Kurre <lizzy@pdscarolinas.com>
Date: Monday, March 27, 2023 at 4:13 PM
To: Josh M <josh@pdscarolinas.com>
Subject: FW: SAC-2023-00042 Evelyn Richardson Tract Delineation Concurrence

Everything is approved and no further action is needed for the wetland deliniation for the Richardson Tract.

Thanks,
Lizzy Kurre
434-996-9680

From: Elizabeth Kurre
Sent: Monday, February 20, 2023 10:57 AM
To: Brandon Truesdale <brandon@g3engineering.org>; Felix Pitts <Felix@g3engineering.org>; Kaitlyn Weimer <kweimer@g3engineering.org>
Cc: Patrick Quinn <pat@pdscarolinas.com>; Josh M <josh@pdscarolinas.com>
Subject: FW: SAC-2023-00042 Evelyn Richardson Tract Delineation Concurrence

Good Morning Brandon,

Not sure if you all got this e-mail as well but attached is the wetlands map for the Richardson Tract. Please let me know if you have any questions about it or need additional information.

Thanks,
Lizzy Kurre
434-996-9680

From: Huff, Robert C CIV USARMY CESAC (USA) <Robert.C.Huff@usace.army.mil>
Sent: Wednesday, February 15, 2023 11:33 AM
To: Elizabeth Kurre <lizzy@pdscarolinas.com>; coates@thebrigmancompany.com
Cc: OCRMPermitting@dhec.sc.gov
Subject: SAC-2023-00042 Evelyn Richardson Tract Delineation Concurrence

This is in response to your request for a Delineation Concurrence (SAC-2023-00042), received in our office on December 21, 2022, for a 72.8-acre site identified as Tax Map Sequence (TMS) # 160-00-01-004 located southwest of Kinlaw Lane near Conway, Horry County, South Carolina (Latitude: 33.7729°, Longitude: -79.1076°).

The review area is part of an overall project known as Evelyn Richardson Tract. Based on a review of the information you submitted, the delineated boundaries depicted on the map titled "Delineation Concurrence Exhibit / Evelyn Richardson Tract / TMS# 160-00-01-004" and dated December 21, 2022, are a reasonable representation of the aquatic resources located onsite.

This information is sufficient for planning and permitting purposes with our office. Unless otherwise requested, no further correspondence will be forthcoming regarding this request.

In all future correspondence, please refer to file number SAC-2023-00042. A copy of this letter is forwarded to State and/or Federal agencies for their information. If you have any questions, please contact Rob Huff, Team Lead, at (843) 365-4239, or by email at Robert.C.Huff@usace.army.mil.

Sincerely,



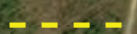
Rob Huff
Team Lead / Biologist
Northeast Branch, USACE
843.365.4239

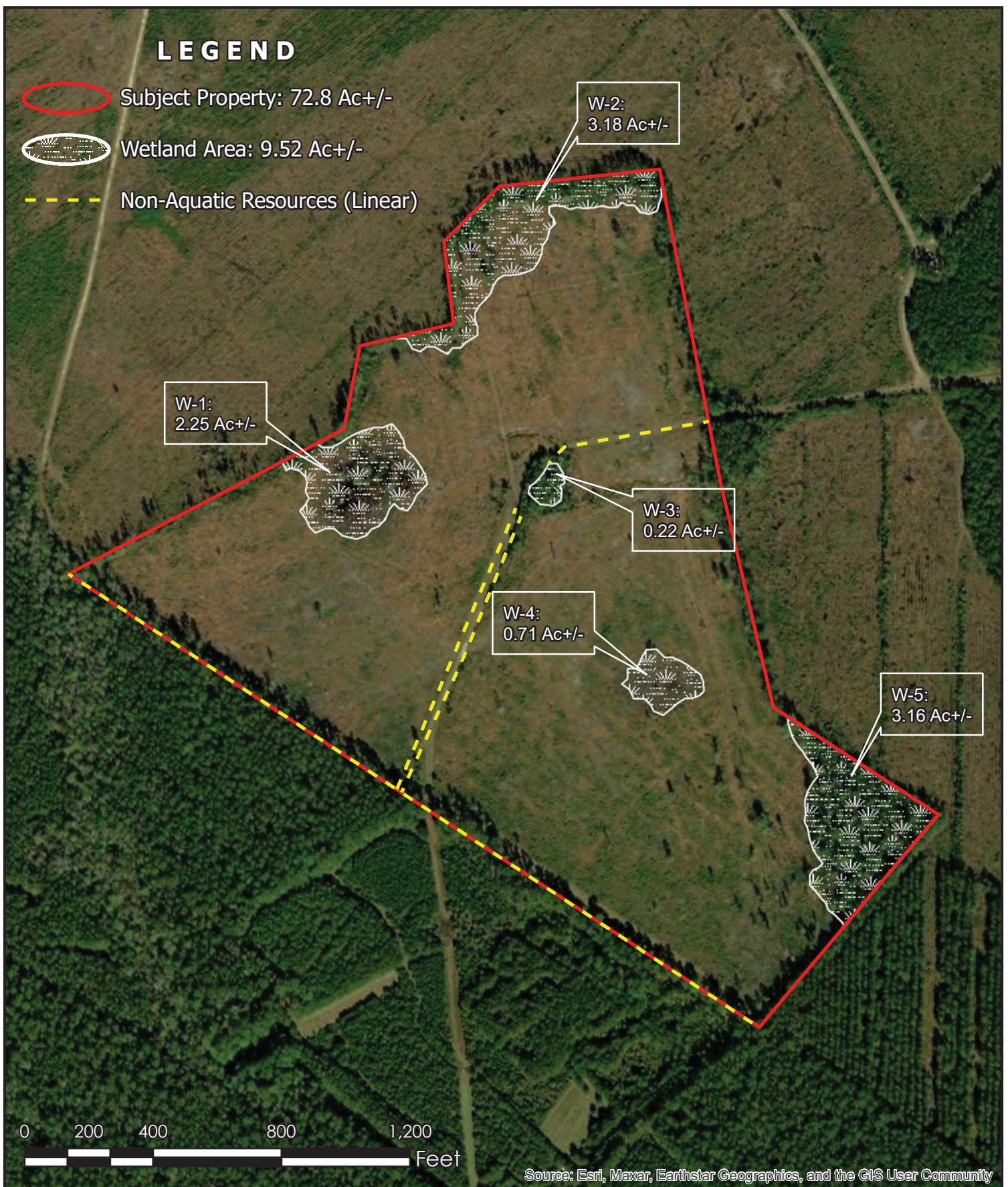


Due to the current situation involving COVID-19, I am currently teleworking and will generally be available via e-mail. Please be advised that response time may be delayed due to remote network connectivity and an increased volume of virtual meetings. Thanks in advance for your patience.

Complete our Regulatory Service Survey at <https://regulatory.ops.usace.army.mil/customer-service-survey/>

LEGEND

-  Subject Property: 72.8 Ac+/-
-  Wetland Area: 9.52 Ac+/-
-  Non-Aquatic Resources (Linear)



Delineation Concurrence Exhibit

Evelyn Richardson Tract
TMS# 160-00-01-004
Conway, Horry County, South Carolina
December 21, 2022



1" = 400'



THE BRIGMAN COMPANY

June 21, 2023

BRD Land and Investments
234 Kinsley Park Drive, Suite 110
Fort Mill, SC 29715

Attention: Elizabeth Kurre

**Reference: Wetland Assessment Report
Portion of the Warden Tract
Conway, Horry County, SC**

Dear Ms. Kurre:

The Brigman Company (TBC) has completed a Wetland Assessment for the Portion of the Warden Tract (i.e., the Property). Our services were conducted in accordance with The Brigman Company Professional Services Contract authorized on June 19, 2023. The purpose of this Wetland Assessment is to provide our opinion, based on a site visit and publicly available mapping, as to the potential presence of wetland areas within the Property.

TBC reviewed publicly available mapping sources in preparation of this report, such as: color infrared aerial photographs, U.S. Geological Survey (USGS) 7.5-Minute topographic quadrangle maps, U.S. Department of Agriculture (USDA) soils information, U.S. Fish & Wildlife Service (USF&WS) National Wetland Inventory maps, and LiDAR data. Site observations were conducted on June 20 and 21, 2023.

Based on our review of the previously noted sources of information, in conjunction with the site observations, we believe that the approximate 165-acre Property contains approximately 126 acres of wetlands. The attached exhibit depicts the approximate location of the wetlands on the Property.

Our findings have been developed in accordance with generally accepted standards of practice in the Charleston District of the United States Army Corps of Engineers. No other warranty is expressed or implied. Please be aware that the United States Army Corps of Engineers is the sole authority responsible for certifying the presence or absence of jurisdictional wetlands and future changes in their regulations/guidelines may affect the findings represented in this letter.

TBC appreciates the opportunity to be of service to you by conducting this Wetland Assessment on the above-referenced project. Should you have any questions or require additional information, please contact us at (843) 248-9388.

Sincerely,

Charles C. Oates, Jr.
Project Manager

www.thebrigmancompany.com

P.O. Box 1532 – Conway, SC 29528 – (843) 248-9388

The wetland and non-wetland areas depicted on this sketch have not been verified by the United States Army Corps of Engineers (USACE) and are subject to change. Our findings have been developed in accordance with generally accepted standards of practice of the USACE. No other warranty is expressed or implied. The client recognizes that the USACE is the sole authority responsible for certifying the presence or absence of jurisdictional and non-jurisdictional wetlands, and that future changes in their regulations/guidelines may affect the findings represented in this sketch. The wetlands depicted on this sketch have NOT been delineated in the field or surveyed by a P.L.S. Please note that a final Jurisdictional Determination (JD) Letter should be obtained from the USACE prior to any land disturbing activities taking place on the property.



TBC
THE BRIGMAN CO.

Preliminary Wetland Assessment Exhibit

Portion of the Warden Tract
Portion of TMS# 149-00-05-015
Conway, Horry County, SC
June 21, 2023



1" = 700'



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, CHARLESTON DISTRICT
1949 INDUSTRIAL PARK ROAD, ROOM 140
CONWAY, SOUTH CAROLINA 29526

March 5, 2023

Regulatory Division

Mr. Patrick Quinn
BRD Land & Investment
234 Kinsley Park Drive
Fort Mills, South Carolina 29715
pat@pdscarolinas.com

Dear Mr. Quinn:

This is in response to your request for an Approved Jurisdictional Determination (AJD) (SAC-2022-01538) received in our office on October 17, 2022, for a 21.5-acre site identified as Tax Map Sequence (TMS) #s 381-00-00-003, 381-08-01-0006, 381-08-04-0009, 0012 and 0014, located north and south of Pitch Landing Road near Conway, in Horry County, South Carolina (Latitude: 33.8006°, Longitude: -79.0785°). An AJD is used to indicate the Corps has identified the presence or absence of wetlands and/or other aquatic resources on a site, including their accurate location(s) and boundaries, as well as their jurisdictional status pursuant to Section 404 of the Clean Water Act (CWA) (33 U.S.C. § 1344) and/or navigable waters of the United States pursuant to Section 10 of the Rivers and Harbors Act of 1899 (RHA) (33 U.S.C. § 403).

The site is shown on the attached map entitled "**Approved Jurisdictional Determination Exhibit** / Pitch Landing Road Tracts / PIN# 381-00-00-003, 381-08-01-0006, 381-08-04-0012, 0014, 0009 / Conway, Horry County, South Carolina / October 10, 2022" and dated October 10, 2022, prepared by The Brigman Company. Based on a review of aerial photography, topographic maps, National Wetlands Inventory maps, soil survey information, Wetland Determination Data Form(s), and Previous Jurisdictional Determination SAC-2001-34600-3JH, dated July 1, 2009, we conclude the site, as shown on the referenced map, does not contain any aquatic resources subject to regulatory jurisdiction under Section 404 of the CWA or Section 10 of the RHA.

Attached is a form describing the basis of jurisdiction for the delineated area(s). Note that some or all of these areas may be regulated by other state or local government entities, and you should contact the South Carolina Department of Health and Environmental Control, Bureau of Water, or Department of Ocean and Coastal Resource Management, to determine the limits of their jurisdiction.

This AJD is valid for five (5) years from the date of this letter unless new information warrants revision before the expiration date. This AJD is an appealable action under the Corps of Engineers administrative appeal procedures defined at 33 CFR Part 331. The

administrative appeal options, process and appeals request form is attached for your convenience and use.

This AJD was conducted pursuant to Corps of Engineers' regulatory authority to identify the limits of Corps of Engineers' jurisdiction for the particular site identified in this request. This AJD may not be valid for the wetland conservation provisions of the Food Security Act of 1985. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service, prior to starting work.

In all future correspondence, please refer to file number SAC-2022-01538. A copy of this letter is forwarded to State and/or Federal agencies for their information. If you have any questions, please contact Rob Huff, Team Lead, at (843) 365-4239, or by email at Robert.C.Huff@usace.army.mil.

Sincerely,



Rob Huff
Team Lead

Attachments:

Approved Jurisdictional Determination Form
Notification of Appeal Options




Map entitled "Approved Jurisdictional Determination Exhibit / Pitch Landing Road Tracts / PIN# 381-00-00-003, 381-08-01-0006, 381-08-04-0012, 0014, 0009 / Conway, Horry County, South Carolina / October 10, 2022"

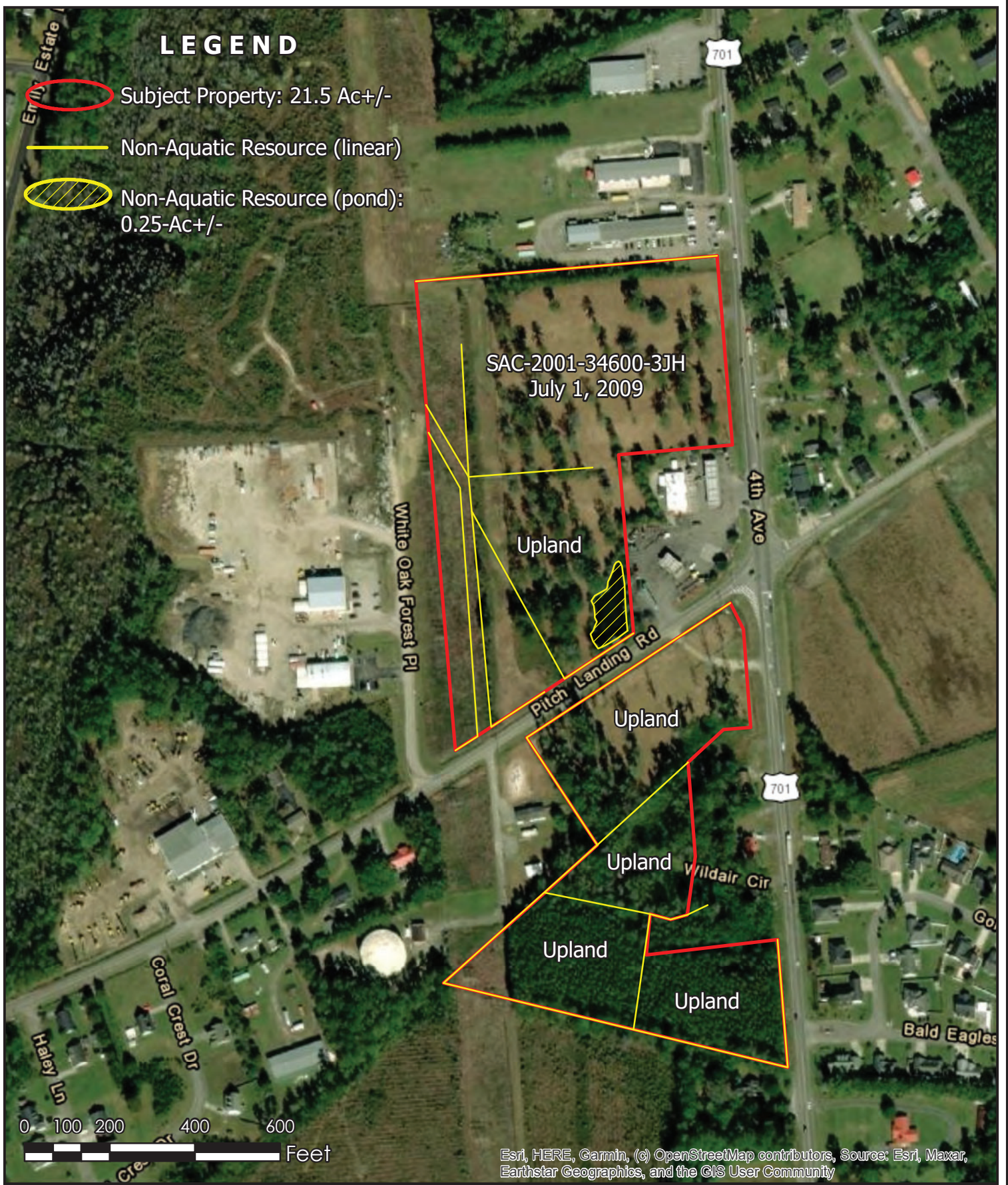
Copies Furnished:

Mr. Charles Oates, Jr.
The Brigman Company, Inc.
PO Box 1532
Conway, South Carolina 29528
coates@thebrigmancompany.com

SCDHEC - OCRM
1362 McMillan Avenue, Suite 400
North Charleston, South Carolina 29405
OCRMPermitting@dhec.sc.gov

LEGEND

-  Subject Property: 21.5 Ac+/-
-  Non-Aquatic Resource (linear)
-  Non-Aquatic Resource (pond): 0.25-Ac+/-



Esri, HERE, Garmin, (c) OpenStreetMap contributors, Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



TBC
THE BRIGMAN CO.

Approved Jurisdictional Determination Exhibit

Pitch Landing Road Tracts
 PIN# 381-00-00-003, 381-08-01-0006, 381-08-04-0012, 0014, 0009
 Conway, Horry County, South Carolina
 October 10, 2022



1" = 300'

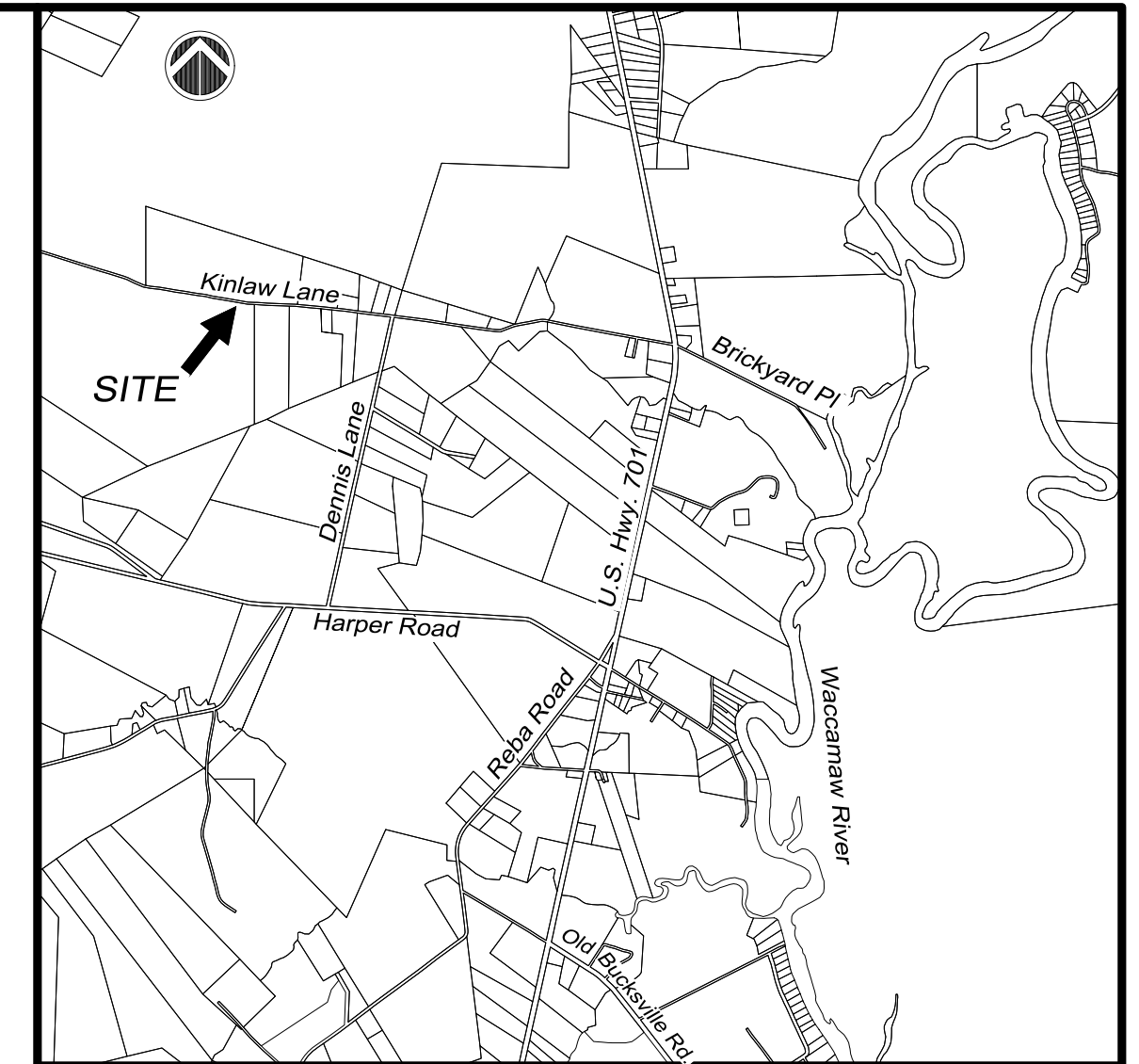
Construction Plans

for

HORRY COUNTY DIRT ROAD IMPROVEMENTS

KINLAW LANE (Project #S102015)

RIDE 3 - GROUP 2



VICINITY MAP
N.T.S.

UTILITY LIST:

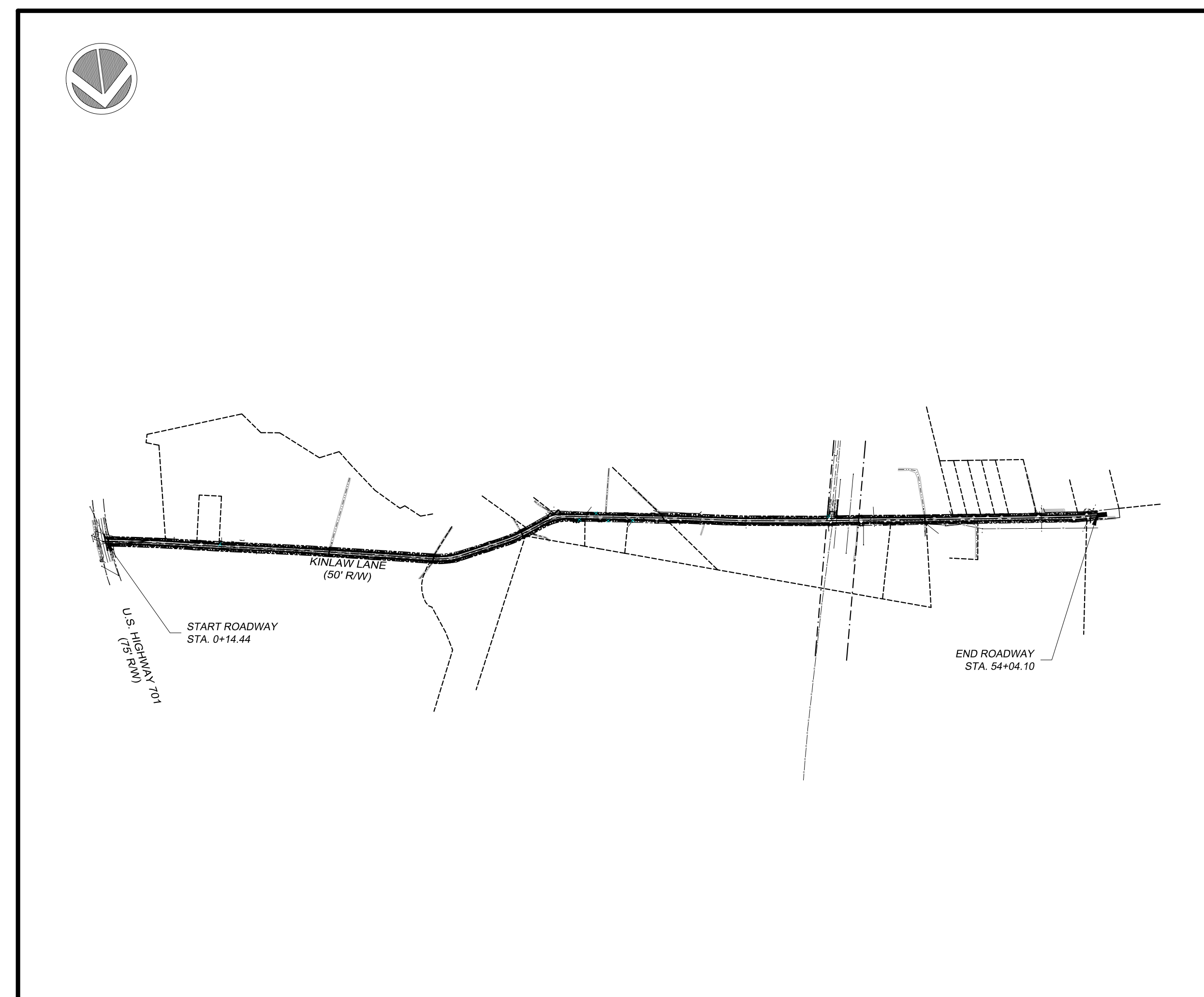
SANTEE COOPER
305A Gardner Lacey Road
Myrtle Beach, SC 29579-7248
Phone: (843) 347-3399 ext. 3088
Contact: Wade R. Brown

HORRY ELECTRIC COOPERATIVE
2774 Cultra Road
P.O. Box 119
Conway, SC 29528
Phone: (843) 503-8916
Contact: Blake Stevens

HORRY TELEPHONE COOPERATIVE
3480 Hwy. 701 North
Building #10402
P.O. Box 1820
Conway, SC 29528
Phone: (843) 369-8273
Contact: Todd Blanton

GRAND STRAND WATER & SEWER AUTHORITY
170 Jackson Bluff Road
P.O. Box 2368
Conway, SC 29528
Phone: (843) 443-8267
Contact: Jason Poston
(Sewer and Water Transmission)

BUCKSPORT WATER SYSTEM, INC.
P.O. Box 1032
Conway, SC 29528
Phone: (843) 248-3195
Contact: Keith Collins



SITE LAYOUT

SCALE: 1" = 500'

SHEET SCHEDULE

SHEET TITLE	SHEET NUMBER	ORIGINAL DATE	REVISION DATE
COVER SHEET	1	May 13, 2021	July 13, 2022
GENERAL NOTES AND LEGEND	2	May 13, 2021	May 23, 2022
RIGHT-OF-WAY DATA SHEET	3	May 13, 2021	March 25, 2022
EROSIONS CONTROL DATA SHEET	4	May 13, 2021	-
SEDIMENT AND EROSION CONTROL DETAILS	5	May 13, 2021	-
SIGN TABLE DATA SHEET / MISCELLANEOUS DETAILS	6	May 13, 2021	July 13, 2022
KINLAW LANE PLAN AND PROFILE	7	May 13, 2021	July 13, 2022
KINLAW LANE PLAN AND PROFILE	8	May 13, 2021	July 13, 2022
KINLAW LANE PLAN AND PROFILE	9	May 13, 2021	July 13, 2022
KINLAW LANE PLAN AND PROFILE	10	May 13, 2021	July 13, 2022
KINLAW LANE PLAN AND PROFILE	11	May 13, 2021	July 13, 2022
KINLAW LANE PLAN AND PROFILE	12	May 13, 2021	July 13, 2022
KINLAW LANE PLAN AND PROFILE	13	May 13, 2021	July 13, 2022
KINLAW LANE PLAN AND PROFILE	14	May 13, 2021	July 13, 2022
KINLAW LANE PLAN AND PROFILE	15	May 13, 2021	July 13, 2022
KINLAW LANE PLAN AND PROFILE	16	May 13, 2021	July 13, 2022
KINLAW LANE CROSS SECTIONS	17	May 13, 2021	July 13, 2022
KINLAW LANE CROSS SECTIONS	18	May 13, 2021	-
KINLAW LANE CROSS SECTIONS	19	May 13, 2021	July 13, 2022
KINLAW LANE CROSS SECTIONS	20	May 13, 2021	-
KINLAW LANE CROSS SECTIONS	21	May 13, 2021	-
KINLAW LANE CROSS SECTIONS	22	May 13, 2021	-
KINLAW LANE CROSS SECTIONS	23	May 13, 2021	-
KINLAW LANE CROSS SECTIONS	24	May 13, 2021	July 13, 2022
KINLAW LANE CROSS SECTIONS	25	May 13, 2021	July 13, 2022
KINLAW LANE CROSS SECTIONS	26	May 13, 2021	July 13, 2022

* This set is current through sheet dated July 13, 2022.

3 DAYS BEFORE DIGGING IN
SOUTH CAROLINA
CALL 811
www.sc811.org
PALMETTO UTILITY LOCATION SERVICE

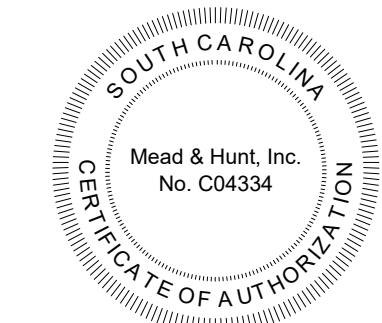
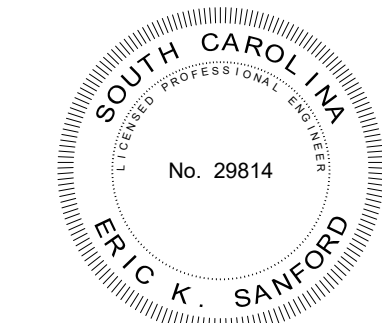
REVISION OCCURRENCE LIST			
REVISION NO.	DATE	REVISION DESCRIPTION	BY
3	7-13-22	REVISED PER MEAD & HUNT REVIEW.	PES
2	5-23-22	REVISED PER MEAD & HUNT REVIEW.	PES
1	3-25-22	REVISED PER HORRY COUNTY REVIEW.	PES

Owner:
HORRY COUNTY
OFFICE OF PUBLIC WORKS
4401 PRIVETTS ROAD
CONWAY, SC 29526

Prepared by:
DDC ENGINEERS
A BOLTON & MENK, INC. COMPANY
1298 PROFESSIONAL DRIVE
MYRTLE BEACH, SC 29577

DDC Engineers
BOLTON & MENK, INC.
www.ddcinc.com

1298 PROFESSIONAL DRIVE
MYRTLE BEACH, SOUTH CAROLINA 29577
Phone: (843) 692-3200
Email: MyrtleBeach@bolton-menk.com
www.bolton-menk.com



Mead & Hunt

Mead & Hunt
333 WELLNESS DRIVE
MYRTLE BEACH, SC 29579
Phone: (843) 839-1490

GENERAL NOTES:

1. PROVISIONS SHALL BE MADE TO ENSURE POSITIVE DRAINAGE ON THE SITE AT ALL TIMES. NATURAL DRAINAGE FEATURES DISTURBED BY CONSTRUCTION MUST BE RE-ESTABLISHED. NO PONDING DUE TO SPOILS STOCKPILING OR OTHER ACTIVITIES SHALL BE PERMITTED.
2. WORK WITHIN PUBLIC RIGHT-OF-WAYS OR PRIVATE EASEMENTS SHALL BE ACCOMPLISHED BY THE CONTRACTOR ACCORDING TO THE REQUIREMENTS OR CONDITIONS OF THE ENCROACHMENT PERMIT OR OTHER LEGAL DOCUMENTS AS THOUGH DOCUMENTS WERE ISSUED IN THE CONTRACTOR'S NAME. THE CONTRACTOR SHALL MAINTAIN COPIES OF THESE DOCUMENTS ON THE SITE AT ALL TIMES.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING EXISTING UTILITIES AND FOR REPAIRING ANY DAMAGE TO SAME. UTILITY LOCATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE AND MAY NOT BE COMPLETE. THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES THAT MAY HAVE SERVICE IN THE AREA FOR AN ACCURATE LOCATION PRIOR TO BEGINNING WORK.
4. WHEN THE CONTRACTOR IS UNABLE TO COMPLETE HIS WORK AS SHOWN ON THE PLANS BECAUSE OF AN EXISTING UTILITY, THE CONTRACTOR SHALL STAKE THE LOCATION OF THE UTILITY PRIOR TO PROCEEDING AND CONTACT THE ENGINEER.
5. THE CONTRACTOR SHALL NOTIFY ALL PUBLIC AGENCIES, THE OWNER, THE ENGINEER AND ALL OTHER CONCERNED PARTIES WHEN CONSTRUCTION IS TO COMMENCE. PRIOR TO ANY CONSTRUCTION, A PRE CONSTRUCTION MEETING SHALL BE HELD WITH THE COUNTY, THE CONTRACTOR, THE ENGINEER AND ANY OTHER INTERESTED PARTY.
6. DATA REQUIRED FOR PREPARATION OF AS-BUILT DRAWINGS SHALL BE OBTAINED BY THE CONTRACTOR AT THE TIME OF INSTALLATION. THIS DATA SHALL BE ACCUMULATED BY THE CONTRACTOR DURING THE CONSTRUCTION PERIOD AND BE SUBMITTED TO THE ENGINEER IN A NEAT AND LEGIBLE MANNER AFTER COMPLETION OF THE PROJECT.
7. ALL WORK SHALL BE IN ACCORDANCE WITH THE APPLICABLE FEDERAL, SOUTH CAROLINA AND LOCAL ORDINANCES, REGULATIONS, SPECIFICATIONS AND PERMITS. THE CONTRACTOR IS RESPONSIBLE FOR ACQUIRING ALL LICENSES AND PERMITS AS REQUIRED.
8. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO GRADING.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL SILT BARRIERS AND SEDIMENT CONTROL INSTALLATIONS DURING CONSTRUCTION UNTIL COMPLETION OF THE SITE DEVELOPMENT.
10. ALL DISTURBED AREAS SHALL BE GRASSED AND STABILIZED IMMEDIATELY AFTER FINAL GRADING, AS PER THE GRASSING SPECIFICATIONS.
11. ALL SLOPES SHALL BE HYDROSEEDDED, AS PER THE GRASSING REQUIREMENTS AND SCDOT SPECIFICATIONS.
12. ON ALL SLOPES, THE CONTRACTOR SHALL PROTECT AGAINST WASHOUTS BY AN APPROVED METHOD. ANY WASHOUT WHICH OCCURS SHALL BE REGRADED AND RESEEDDED AT THE CONTRACTOR'S EXPENSE UNTIL GOOD GRASS IS ESTABLISHED.
13. THE CONTRACTOR SHALL INSTALL AND MAINTAIN SILT BARRIERS AROUND ALL DRAINAGE STRUCTURES UNTIL ALL CONSTRUCTION HAS BEEN COMPLETED.
14. ADDITIONAL EROSION CONTROL MEASURES WILL BE EMPLOYED WHERE DETERMINED NECESSARY BY ACTUAL SITE CONDITIONS.
15. PROVISIONS TO PREVENT EROSION OF SOIL FROM THE SITE SHALL BE, AT MINIMUM, IN CONFORMANCE WITH THE REQUIREMENTS OF HORRY COUNTY AND SCDHEC-OCRM DEALING WITH EROSION AND SEDIMENTATION.
16. PERPETUAL MAINTENANCE OF THE ROADWAY AND STORM DRAINAGE SYSTEM SHALL BE THE RESPONSIBILITY OF HORRY COUNTY.
17. CONTRACTOR IS RESPONSIBLE FOR RELOCATING EXISTING ROADWAY SIGNS, MAILBOXES AND FENCES AS NECESSARY.
18. CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL TREES LOCATED WITHIN THE ROAD EASEMENT, UNLESS OTHERWISE NOTED ON THE PLANS. COORDINATION WITH THE RCE BEFORE THE CLEARING PROCESS STARTS IS REQUIRED.
19. ALL CONCRETE DRIVEWAYS SHALL BE SAWCUT AT THE TIE IN LOCATION AS DIRECTED BY THE ENGINEER.
20. THE STANDARD DRIVEWAY WIDTH IS 15' WITH A 5' RADIUS UNLESS OTHERWISE NOTED IN THE PLANS, OR AS DIRECTED BY THE ENGINEER.
21. CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL EXISTING SIGNS HAVE REFLECTIVITY TYPE 3. ANY SIGNS NOT HAVING REFLECTIVITY TYPE 3 SHALL BE REPLACED BY THE CONTRACTOR AS INSTRUCTED BY THE ON SITE ENGINEER. ALL SIGNS SHALL BE PLACED IN ACCORDANCE WITH THE MUTCD AND SCDOT STANDARD DRAWINGS.

LEGEND

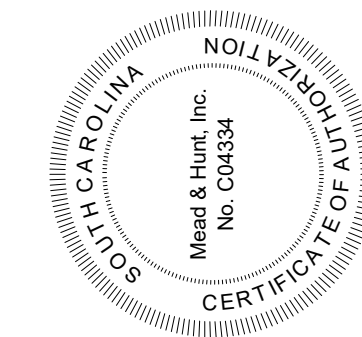
EXISTING	PROPOSED	DESCRIPTION
---	---	RIGHT-OF-WAY
---	---	CENTERLINE
---	---	EASEMENT
---	---	SWALE / DITCH
		TREES
		TREE LINE
		PAVEMENT
		EX. ROAD
		CONTOUR
		SPOT ELEVATION
		MAILBOX
		POWER POLE
		GUY WIRE
		TELEPHONE PEDESTAL
		OVERHEAD ELECTRIC
		UNDERGROUND ELECTRIC
		GAS
		SIGN
		WATER
		WATER VALVE
		WATER VALVE MARKER
		WATER METER
		FIRE HYDRANT
		SANITARY SEWER
		SANITARY SEWER MANHOLE
		GRINDER PUMP STATION
		SANITARY CLEAN OUT
		FORCE MAIN
		STORM DRAIN
		STORM DRAIN STRUCTURE

EROSION CONTROL LEGEND

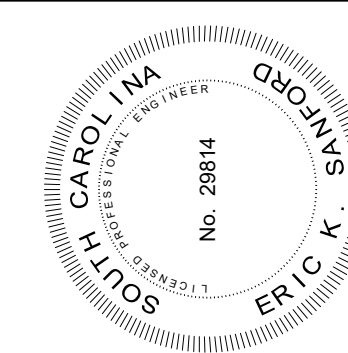
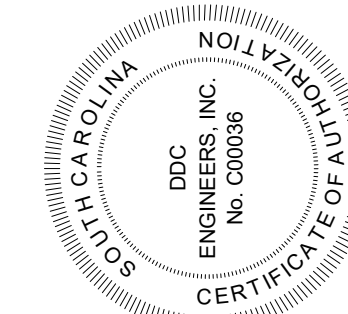
SYMBOL	PRACTICE	DESCRIPTION
	INLET PROTECTION	A TEMPORARY SEDIMENT BARRIER LAID AROUND A STORM DRAIN INLET TO PREVENT SEDIMENT FROM ENTERING THE DRAINAGE SYSTEM.
	OUTLET PROTECTION	RIP RAP CHANNEL / BANK PLACED BELOW DRAINAGE OUTLETS TO REDUCE THE VELOCITY OF FLOW, EROSION, AND STABILIZE GRADES DOWNSTREAM OF OUTLET STRUCTURES.
	TEMPORARY CHECK DAM	RIP RAP BANK PLACED BELOW DRAINAGE OUTLETS TO REDUCE THE VELOCITY OF FLOW, EROSION, AND STABILIZE GRADES DOWN STREAM OF DRAINAGE OUTLETS.
	SILT FENCE	A TEMPORARY STRUCTURE USED TO SLOW THE VELOCITY OF RUN-OFF, CAUSE SEDIMENT DEPOSITION AT THE STRUCTURE, AND FILTER SEDIMENT FROM RUN-OFF.
	CONSTRUCTION LIMITS	A DEFINED AREA THAT ALL LAND DISTURBANCE WILL OCCUR DURING CONSTRUCTION.
	PERMANENT EROSION CONTROL MATTING (HIGH PERFORMANCE TRM PYRAMAT BY S1 SEDISOLUTIONS OR EQUAL)	A PERMANENT REINFORCEMENT MAT TO PREVENT SOIL EROSION AND MAINTAIN PERMANENT GROUND COVER.
	SEDIMENT TUBE	SEDIMENT TUBE PLACED IN EXISTING OR PROPOSED DITCH SECTIONS TO REDUCE THE VELOCITY OF FLOW, EROSION AND STABILIZE GRADES DOWN STREAM OR DRAINAGE OUTLETS.
	DISTURBED AREA STABILIZATION (WITH TEMPORARY VEGETATION)	ESTABLISHING PERMANENT VEGETATIVE COVER SUCH AS TREES, SHRUBS, VINES, GRASSES, SOY, OR LEGUMES ON DISTURBED AREAS.

SEEDING NOTES:

1. INCLUDES RURAL AREAS ADJACENT TO WELL-DEVELOPED LAWNS.
2. NOT REQUIRED ON SHOULDERS, MEDIANS, ETC., AND SLOPES UNDER 5 FEET IN HEIGHT.
3. GIANT BERMUDA SEED, INCLUDING NK-37, SHALL NOT BE USED.
4. RESEEDING CRIMSON CLOVER SHALL BE INOCULATED IN ACCORDANCE WITH SUBSECTION 810.05. DO NOT PLANT CLOVER IN MEDIANS OR IN RURAL AREAS ADJACENT TO WELL-DEVELOPED LAWNS.
5. THE CONTRACTOR SHALL OBTAIN A SATISFACTORY STAND OF PERENNIAL VEGETATION WHOSE ROOT SYSTEM SHALL BE DEVELOPED SUFFICIENTLY TO SURVIVE DRY PERIODS AND WINTER WEATHER, AND BE CAPABLE OF RE-ESTABLISHMENT IN THE SPRING. THE PERENNIAL VEGETATIVE COVER SHALL HAVE A MINIMUM COVERAGE DENSITY OF 70% FOR THE SEEDDED AREAS. CONTRACTOR SHALL DETERMINE ALL RATES OF APPLICATION NECESSARY TO PRODUCE THE REQUIRED STAND OF GRASS, AND SHALL FOLLOW THE APPLICATION PROCEDURES AS SPECIFIED HEREIN.



Mead & Hunt
333 WELLNESS DRIVE
MYRTLE BEACH, SC 29579
Phone: (843) 839-1490



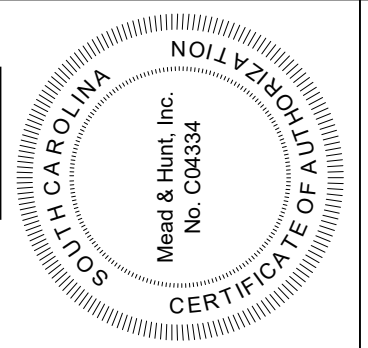
NO.	DATE	REVISION DESCRIPTION	BY
3	7-13-22	REVISED PER MEAD & HUNT REVIEW.	PES
2	5-23-22	REVISED PER MEAD & HUNT REVIEW.	PES

GENERAL NOTES AND LEGEND
KINLAW LANE
HORRY COUNTY ROADS - RIDE 3 - GROUP 2
HORRY COUNTY, SOUTH CAROLINA
PREPARED FOR: HORRY COUNTY

SCALE:	NO SCALE
DATE:	5-13-21
DESIGNED BY:	EKS
DRAWN BY:	PES
APPROV. BY:	EKS
PROJECT NO.:	20087E
2	
FILE NO.:	20087E

RIGHT-OF-WAY DATA SHEET

STATE	COUNTY	ROUTE/ROAD NO.	SHEET NO.
SC	HORRY	KINLAW LANE	4



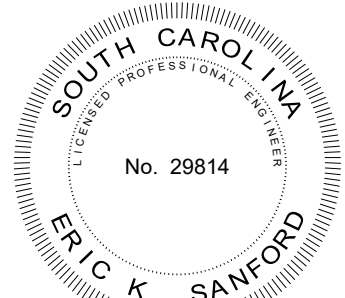
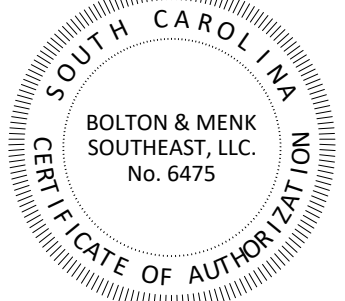
TRACT NO.	PROPERTY OWNER	PROPERTY IDENTIFICATION NUMBER	TYPE OF INSTRUMENT	PERMISSION (YES)				REMARKS
				OUTFALL DITCH	SLOPE	DRAINAGE STRUCTURE	DRIVEWAY TIE-IN	
1	David Martin	40207040002		NO	NO	NO	NO	EXISTING R/W EASEMENT
2	Velma Dusenbury	40200000004		YES	NO	NO	NO	PROPOSED R/W EASEMENT
3	Archie Conner	40208030002		NO	NO	NO	NO	PROPOSED R/W EASEMENT
4	Malcom Kinlaw	40208040006		YES	NO	NO	NO	EXISTING R/W EASEMENT
5	Malcom Kinlaw (Est of)	40208040005		YES	NO	NO	YES	EXISTING R/W EASEMENT
6	Malcom Kinlaw	40208040004		YES	NO	NO	YES	EXISTING R/W EASEMENT
7	David Martin Etal	40300000007		YES	NO	NO	NO	EXISTING R/W EASEMENT
8	Yvonne Asbury-Clark	40305040005		NO	NO	NO	NO	PROPOSED R/W EASEMENT
9	Yvonne Asbury-Clark	40305040004		NO	NO	NO	NO	PROPOSED R/W EASEMENT
10	Yvonne Asbury-Clark	40305040003		NO	NO	NO	NO	PROPOSED R/W EASEMENT
11	Yvonne Asbury-Clark	40305040002		NO	NO	NO	NO	PROPOSED R/W EASEMENT
12	Karissa Coxum	40305040001		YES	NO	NO	NO	PROPOSED R/W EASEMENT
13	Relana Jah'melle McGlothan	40300000005		YES	NO	NO	NO	PROPOSED R/W EASEMENT
14	Nicholas Hill	40306020001		NO	NO	NO	NO	PROPOSED R/W EASEMENT
15	Betty Martin	40300000003		NO	NO	NO	NO	PROPOSED R/W EASEMENT
16	Velma Dusenbury	40300000004		NO	NO	NO	NO	EXISTING R/W EASEMENT
17	Renee Grassie & Greg Bernhardt	40305010005		NO	NO	NO	NO	EXISTING R/W EASEMENT
18	Erma Dunmore Etal	40305010002		NO	NO	NO	NO	EXISTING R/W EASEMENT
19	Robert B Days	40305010001		NO	NO	NO	NO	EXISTING R/W EASEMENT
20	Robert B Days	40305020001		NO	NO	NO	NO	PROPOSED R/W EASEMENT
21	Charlie Jones	40305020002		NO	NO	NO	NO	PROPOSED R/W EASEMENT
22	Malcom Kinlaw	40305020003		NO	NO	NO	NO	EXISTING R/W EASEMENT
23	Malcom Kinlaw	40208040003		NO	NO	NO	NO	PROPOSED R/W EASEMENT
24	Kinlaw Properties LLC	40208040001		NO	NO	NO	NO	PROPOSED R/W EASEMENT
25	Jean Dusenbury Joyner	40200000002		NO	NO	NO	NO	NO EASEMENT
26	James Williams	40208010001		NO	NO	NO	NO	PROPOSED R/W EASEMENT
27	Joseph S Dusenbury Jr	40200000003		NO	NO	NO	NO	PROPOSED R/W EASEMENT



333 WELLNESS DRIVE
MYRTLE BEACH, SC 29579
TELEPHONE: (843)939-1490

PROJECT NO.:	100
DATE:	05-13-2021
DRAWN BY:	DESIGNER
CHECKED BY:	CHECKER
SCALE:	NYS

KINLAW ROAD
HORRY COUNTY, SC
RIGHT-OF-WAY DATA SHEET

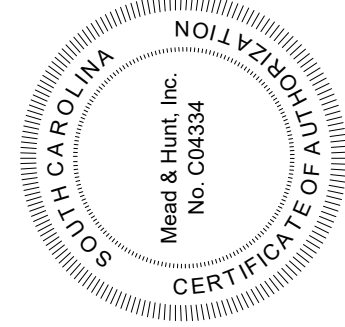


DATE	3/25/2022
REVISION	
PER COUNTY COMMENTS	

EROSION CONTROL DATA SHEET

STATE	COUNTY	ROAD / ROUTE NO.	SHEET NO.
SC	HORRY	NAME	EC1

INFORMATION ONLY

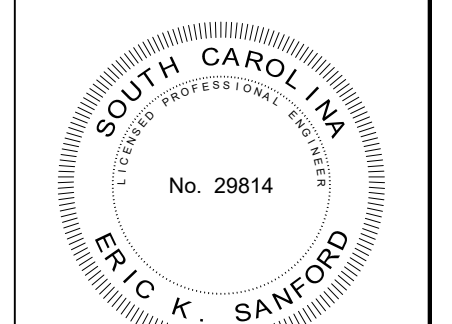


Mead & Hunt

878 SOUTH LAKE DR.
WELLSVILLE DRIVE
TELEPHONE: (843)983-4800

PROJECT NO.:	100
DATE:	05-13-2021
DRAWN BY:	DESIGNER
CHECKED BY:	CHECKER
SCALE:	NYS

KINLAW ROAD
 HORRY COUNTY, SOUTH CAROLINA
 EROSION CONTROL DATA SHEET



DATE	
REVISION	

SHEET
4

INFORMATION ONLY

TEMPORARY EROSION CONTROL BLANKET

ROAD / ROUTE	STATION TO STATION		SIDE	DEPTH OF BLANKET (FT)	DITCH BOTTOM WIDTH (FT)	SLOPES x : 1		MSY
	FRONT	BACK				FRONT	BACK	
Kinlaw	40+30	41+25	L	1	0	3.0	2.0	0.100
TOTAL								0.100

RIP RAP

ROAD / ROUTE	RIP RAP				GEOTEXTILE FABRIC		COMMENTS
	STATION	CLASS	SIDE	TONS	CLASS	SY	
Kinlaw	0+29	B	L	7	B	9	
	0+29	B	R	7	B	9	
	12+19	B	R	8	B	10	
	12+23	B	L	8	B	10	
	17+80	B	R	8	B	10	
	17+86	B	L	8	B	10	
	22+83	B	R	8	B	10	
	22+85	B	L	8	B	10	
	30+53	B	L	7	B	9	
	30+73	B	R	7	B	9	
	38+93	B	L	7	B	9	
	40+34	B	L	7	B	9	
	44+73	B	R	7	B	9	
	44+73	B	L	7	B	9	
	TOTAL				104	TOTAL	

THESE QUANTITIES DO NOT INCLUDE RIP RAP OR GEOTEXTILE FABRIC USED FOR INSTALLING DRIVEWAY PIPES, STONE CHECK DAMS OR SILT BASINS

STONE CHECK DAM

ROAD / ROUTE	STATION TO STATION	SIDE	RIP RAP CLASS	SPACING (FT)	TONS	COMMENTS
TOTAL						

SEDIMENT TUBES IN DITCHES

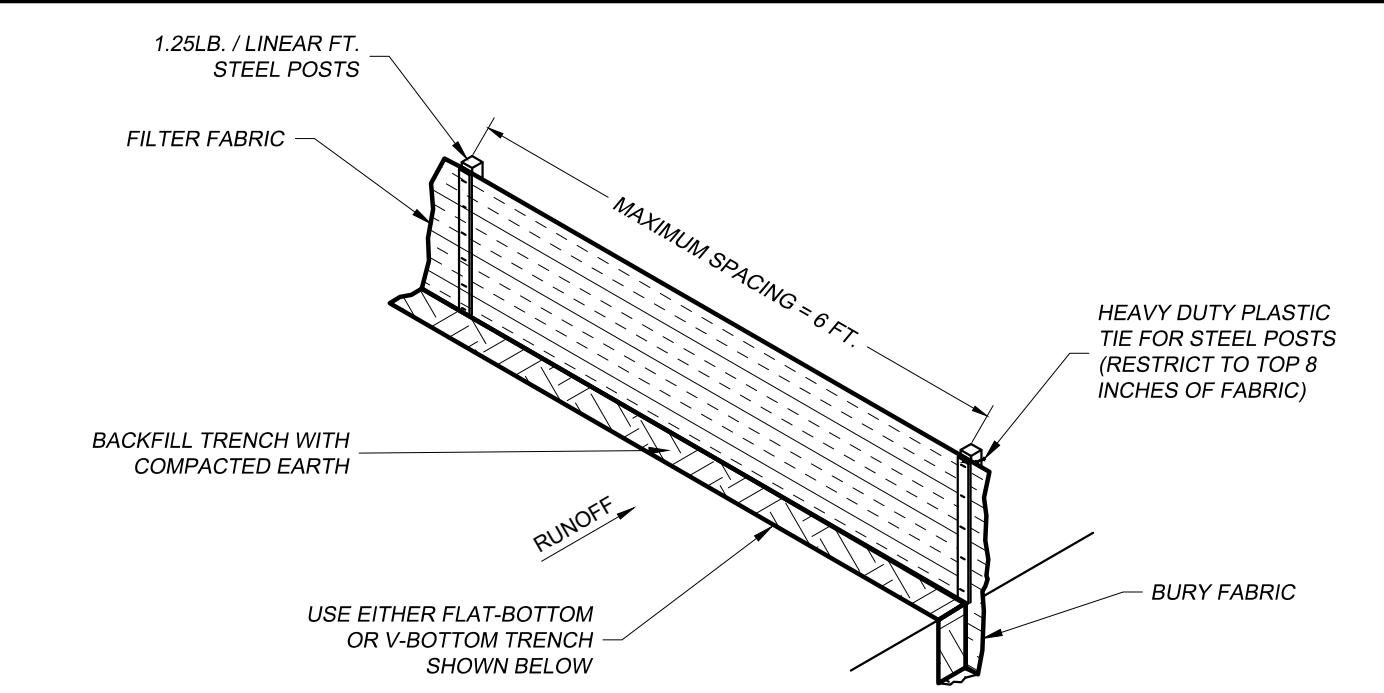
ROAD / ROUTE	STATION TO STATION		SIDE	AVERAGE LENGTH	SPACING (FT)	TOTAL	COMMENTS
	FRONT	BACK					
Kinlaw	0+30	53+50	R	12	150	66	
	0+30	53+75	L	12	150	65	
TOTAL						131	

SILT FENCE

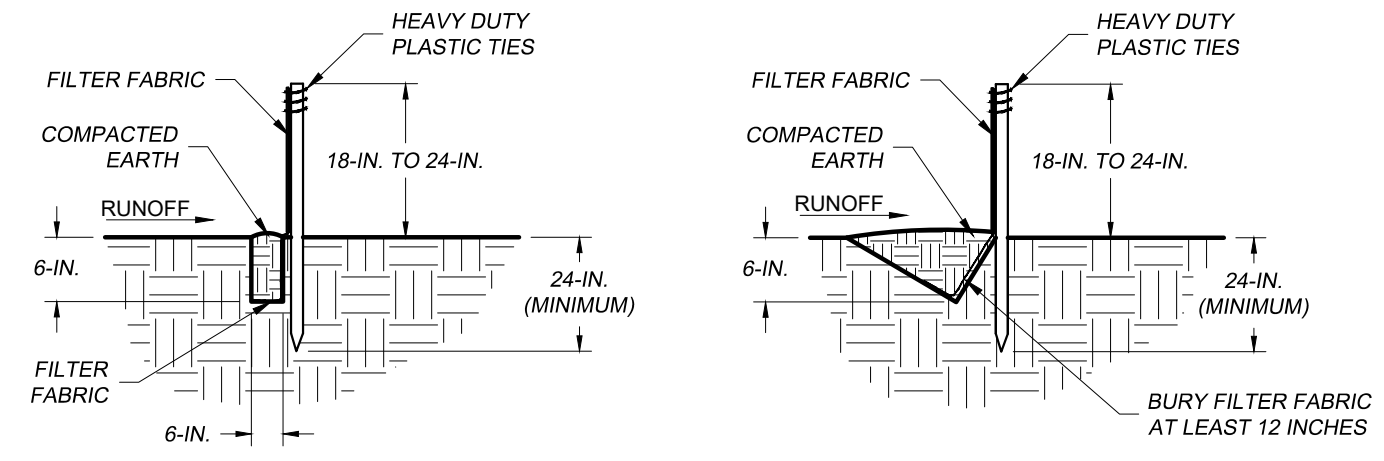
ROAD / ROUTE	STATION TO STATION	SIDE	TOTAL (LF)	COMMENTS
TOTAL			0	

SILT BASIN

ROAD / ROUTE	STATION TO STATION	SIDE	LENGTH (FT)	WIDTH (FT)	RIP RAP		GEOTEXTILE FABRIC	
					CLASS	TONS	CLASS	SY
COMMENTS:								
COMMENTS:								
COMMENTS:								
COMMENTS:								
TOTAL					0	TOTAL		0



SILT FENCE INSTALLATION



FLAT-BOTTOM TRENCH DETAIL V-SHAPED TRENCH DETAIL

SILT FENCE - GENERAL NOTES:

- DO NOT PLACE SILT FENCE ACROSS CHANNELS OR IN OTHER AREAS SUBJECT TO CONCENTRATED FLOWS. SILT FENCE SHOULD NOT BE USED AS A VELOCITY CONTROL BMP. CONCENTRATED FLOWS ARE ANY FLOWS GREATER THAN 0.5 CFS.
- MAXIMUM SHEET OR OVERLAND FLOW PATH LENGTH TO THE SILT FENCE SHALL BE 100 FEET.
- MAXIMUM SLOPE STEEPNESS (NORMAL [PERPENDICULAR] TO THE FENCE LINE) SHALL BE 2:1.
- SILT FENCE JOINTS, WHEN NECESSARY SHALL BE COMPLETED BY ONE OF THE FOLLOWING OPTIONS:
 - WRAP EACH FABRIC TOGETHER AT A SUPPORT POST WITH BOTH ENDS FASTENED TO THE POST, WITH A 1 FOOT MINIMUM OVERLAP.
 - OVERLAP SILT FENCE BY INSTALLING 3 FEET PAST THE SUPPORT POST TO WHICH THE NEW SILT FENCE ROLL IS ATTACHED. ATTACH OLD ROLL TO NEW ROLL WITH HEAVY DUTY PLASTIC TIES, OR
 - OVERLAP ENTIRE WIDTH OF EACH SILT FENCE ROLL FROM ONE SUPPORT POST TO THE NEXT SUPPORT POST.
- ATTACH FILTER FABRIC TO THE STEEL POSTS USING HEAVY DUTY PLASTIC TIES THAT ARE EVENLY SPACED WITHIN THE TOP 8 INCHES OF THE FABRIC.
- INSTALL THE SILT FENCE PERPENDICULAR TO THE DIRECTION OF THE STORM WATER FLOW AND PLACE THE SILT FENCE THE PROPER DISTANCE FROM THE TOE OF STEEP SLOPES TO PROVIDE SEDIMENT STORAGE AND ACCESS FOR MAINTENANCE AND CLEAN OUT.
- INSTALL SILT FENCE CHECKS (TIE-BACKS) EVERY 50-100 FEET, DEPENDENT ON SLOPE, ALONG SILT FENCE THAT IS INSTALLED WITH SLOPE AND WHERE CONCENTRATED FLOWS ARE EXPECTED OR ARE DOCUMENTED ALONG THE PROPOSED / INSTALLED SILT FENCE.

SILT FENCE - POST REQUIREMENTS

- SILT FENCE POSTS MUST BE 48 INCH LONG STEEL POSTS THAT MEET, AT A MINIMUM, THE FOLLOWING PHYSICAL CHARACTERISTICS:
 - COMPOSED OF A HIGH STRENGTH STEEL WITH A MINIMUM YIELD STRENGTH OF 50,000 PSI.
 - INCLUDE A STANDARD "T" SECTION WITH A NOMINAL FACE WIDTH OF 1.38 INCHES AND A NOMINAL "T" LENGTH OF 1.48 INCHES.
 - WEIGH 1.25 POUNDS PER FOOT (±8%).
- POSTS SHALL BE EQUIPPED WITH PROJECTIONS TO AID IN FASTENING OF FILTER FABRIC.
- STEEL POSTS MAY NEED TO HAVE A METAL SOIL STABILIZATION PLATE WELDED NEAR THE BOTTOM WHEN INSTALLED ALONG STEEP SLOPES OR INSTALLED IN LOOSE SOILS. THE PLATE SHOULD HAVE A MINIMUM CROSS SECTION OF 17 SQUARE INCHES AND BE COMPOSED OF 15 GAUGE STEEL, AT A MINIMUM. THE METAL SOIL STABILIZATION PLATE SHOULD BE COMPLETELY BURIED.
- INSTALL POSTS A MINIMUM OF 24 INCHES. A MINIMUM HEIGHT OF 1 TO 2 INCHES ABOVE THE FABRIC SHALL BE MAINTAINED, AND A MAXIMUM HEIGHT OF 3 FEET SHALL BE MAINTAINED ABOVE THE GROUND.
- POST SPACING SHALL BE AT A MAXIMUM OF 6 FEET ON CENTER.

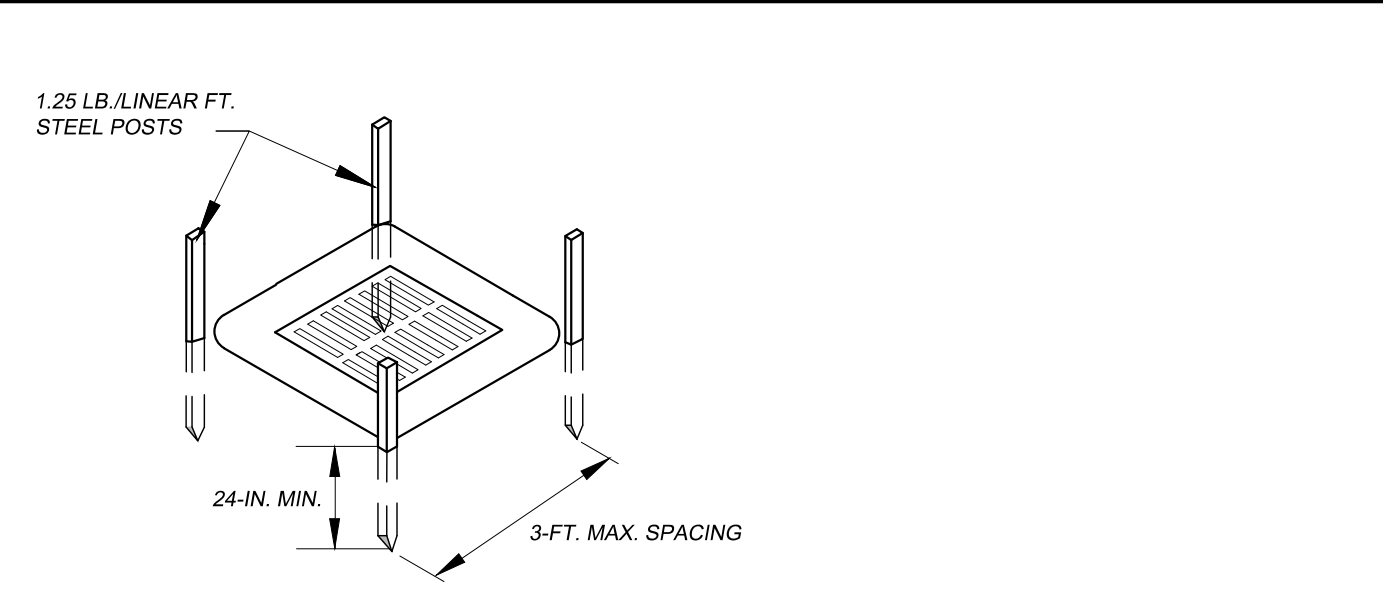
SILT FENCE - FABRIC REQUIREMENTS

- SILT FENCE MUST BE COMPOSED OF WOVEN GEOTEXTILE FILTER FABRIC THAT CONSISTS OF THE FOLLOWING REQUIREMENTS:
 - COMPOSED OF FIBERS CONSISTING OF LONG CHAIN SYNTHETIC POLYMERS OF AT LEAST 85% BY WEIGHT OF POLYOLEFINS, POLYESTERS OR POLYAMIDES THAT ARE FORMED INTO A NETWORK SUCH THAT THE FILAMENTS OR YARNS RETAIN DIMENSIONAL STABILITY RELATIVE TO EACH OTHER.
 - FREE OF ANY TREATMENT OR COATING WHICH MIGHT ADVERSELY ALTER ITS PHYSICAL PROPERTIES AFTER INSTALLATION.
 - FREE OF ANY DEFECTS OR FLAWS THAT SIGNIFICANTLY AFFECT ITS PHYSICAL AND/OR FILTERING PROPERTIES; AND,
 - HAVE A MINIMUM WIDTH OF 36 INCHES.
- USE ONLY FABRIC APPEARING ON SC DOT'S QUALIFIED PRODUCTS LISTING (QPL), APPROVAL SHEET #34 MEETING THE REQUIREMENTS OF THE MOST CURRENT EDITION OF THE SC DOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
- 12 INCHES OF THE FABRIC SHOULD BE PLACED WITHIN EXCAVATED TRENCH AND TOED IN WHEN THE TRENCH IS BACKFILLED.
- FILTER FABRIC SHALL BE PURCHASED IN CONTINUOUS ROLLS AND CUT TO THE LENGTH OF THE BARRIER TO AVOID JOINTS.
- FILTER FABRIC SHALL BE INSTALLED AT A MINIMUM OF 24 INCHES ABOVE THE GROUND.

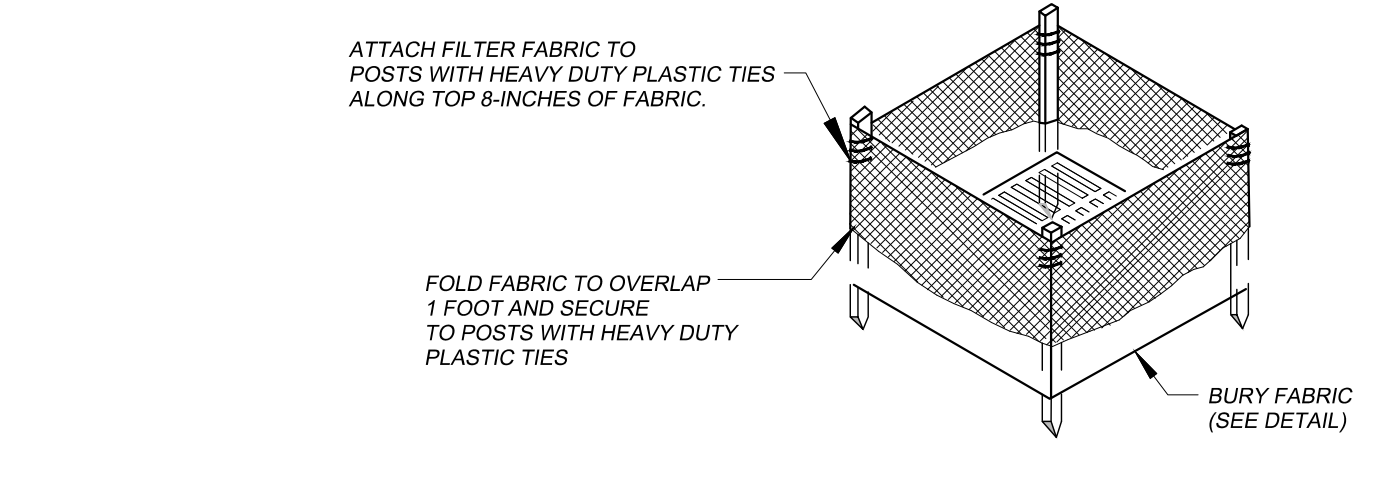
SILT FENCE - INSPECTION & MAINTENANCE

- THE KEY TO FUNCTIONAL SILT FENCE IS WEEKLY INSPECTIONS, ROUTINE MAINTENANCE AND REGULAR SEDIMENT REMOVAL.
- REGULAR INSPECTIONS OF SILT FENCE SHALL BE CONDUCTED ONCE EVERY CALENDAR WEEK AND, AS RECOMMENDED, WITHIN 24 HOURS AFTER EACH RAINFALL EVEN THAT PRODUCES 1/2 INCH OR MORE OF PRECIPITATION.
- ATTENTION TO SEDIMENT ACCUMULATIONS ALONG THE SILT FENCE IS EXTREMELY IMPORTANT. ACCUMULATED SEDIMENT SHOULD BE CONTINUALLY MONITORED AND REMOVED WHEN NECESSARY.
- REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES 1/3 THE HEIGHT OF THE SILT FENCE.
- REMOVED SEDIMENT SHALL BE PLACED IN STOCKPILE STORAGE AREAS OR SPREAD THINLY ACROSS DISTURBED AREA. STABILIZE THE REMOVED SEDIMENT AFTER IT IS RELOCATED.
- CHECK FOR AREAS WHERE STORM WATER RUNOFF HAS ERODED A CHANNEL BENEATH THE SILT FENCE, OR WHERE THE FENCE HAS SAGGED OR COLLAPSED DUE TO RUNOFF OVERTOPPING THE SILT FENCE. INSTALL CHECKTIE-BACKS AND/OR REINSTALL SILT FENCE, AS NECESSARY.
- CHECK FOR TEARS WITHIN THE SILT FENCE, AREAS WHERE SILT FENCE HAS BEGUN TO DECOMPOSE, AND FOR ANY OTHER CIRCUMSTANCE THAT MAY RENDER THE SILT FENCE INEFFECTIVE. REMOVE DAMAGED SILT FENCE AND REINSTALL NEW SILT FENCE IMMEDIATELY.
- SILT FENCE SHOULD BE REMOVED WITHIN 30 DAYS AFTER FINAL STABILIZATION IS ACHIEVED AND ONCE IT IS REMOVED, THE RESULTING DISTURBED AREA SHALL BE PERMANENTLY STABILIZED.

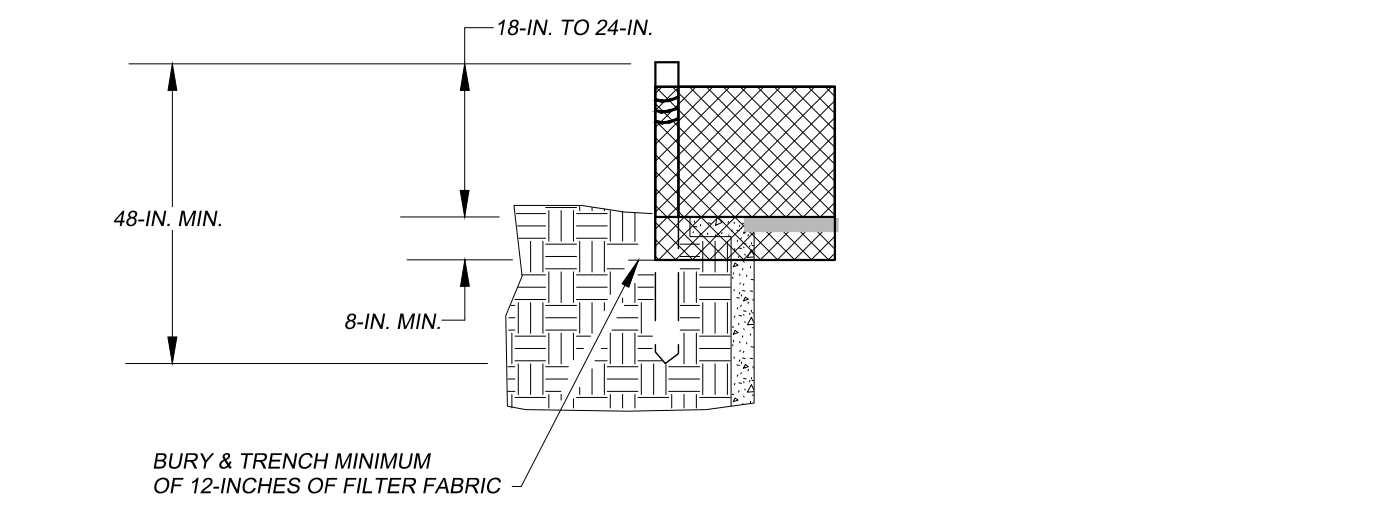
SF CONSTRUCTION OF A SILT FENCE
 SCALE: N.T.S.



POST INSTALLATION DETAIL



FILTER FABRIC INSTALLATION DETAIL



FILTER FABRIC BURIAL DETAIL

TYPE A - POST REQUIREMENTS

- SILT FENCE POSTS MUST BE 48 INCH LONG STEEL POSTS THAT MEET, AT A MINIMUM, THE FOLLOWING PHYSICAL CHARACTERISTICS:
 - COMPOSED OF A HIGH STRENGTH STEEL WITH A MINIMUM YIELD STRENGTH OF 50,000 PSI.
 - INCLUDE A STANDARD "T" SECTION WITH A NOMINAL FACE WIDTH OF 1.38 INCHES AND A NOMINAL "T" LENGTH OF 1.48 INCHES.
 - WEIGH 1.25 POUNDS PER FOOT (±8%).
- POSTS SHALL BE EQUIPPED WITH PROJECTIONS TO AID IN FASTENING OF FILTER FABRIC.
- INSTALL POSTS TO A MINIMUM OF 24 INCHES. A MINIMUM HEIGHT OF 1 TO 2 INCHES ABOVE THE FABRIC SHALL BE MAINTAINED, AND A MAXIMUM HEIGHT OF 3 FEET SHALL BE MAINTAINED ABOVE THE GROUND.
- POST SPACING SHALL BE AT A MAXIMUM OF 3 FEET ON CENTER.

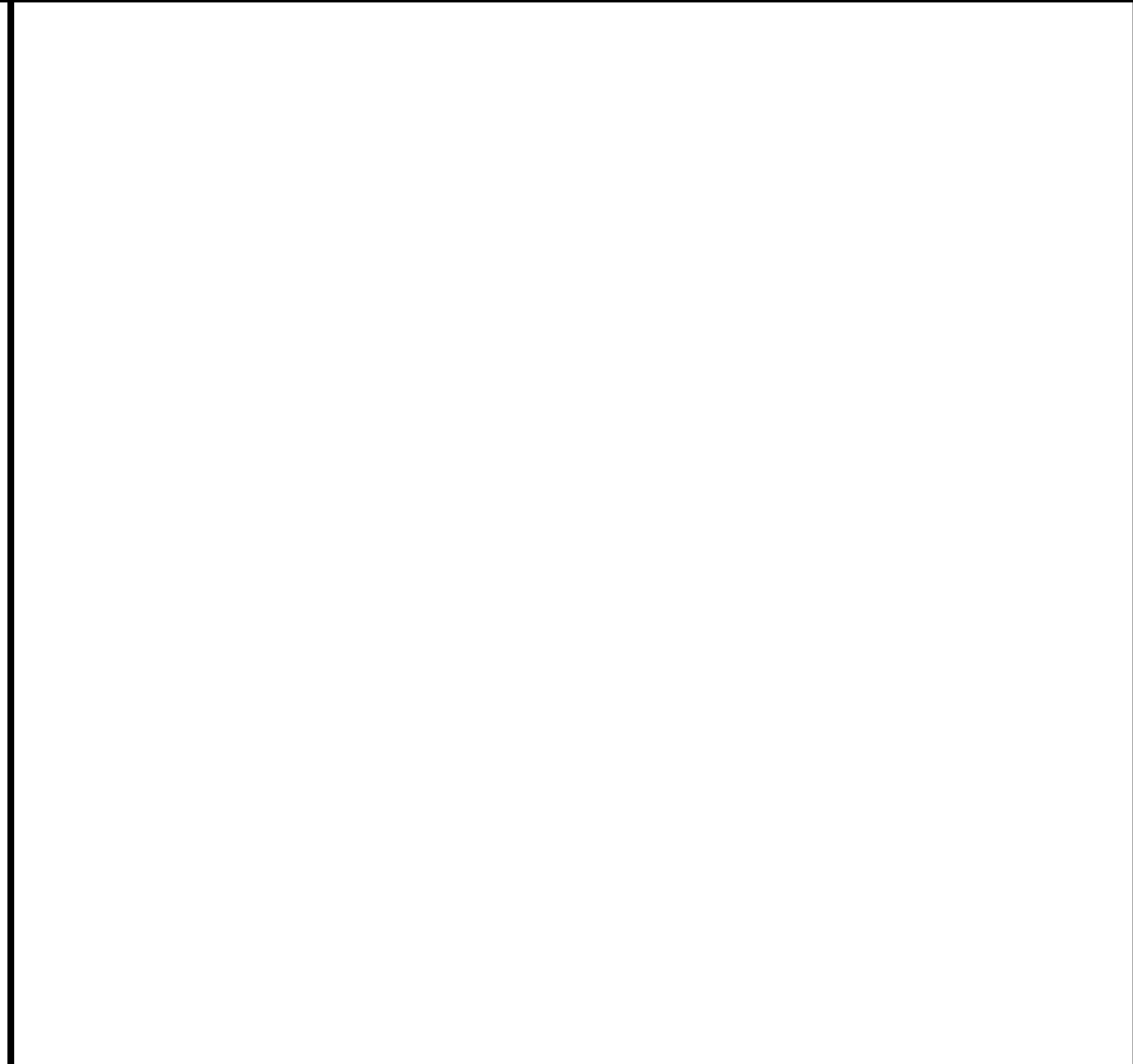
TYPE A - FILTER FABRIC REQUIREMENTS

- SILT FENCE MUST BE COMPOSED OF WOVEN GEOTEXTILE FILTER FABRIC THAT CONSISTS OF THE FOLLOWING REQUIREMENTS:
 - COMPOSED OF FIBERS CONSISTING OF LONG CHAIN SYNTHETIC POLYMERS OF AT LEAST 85% BY WEIGHT OF POLYOLEFINS, POLYESTERS OR POLYAMIDES THAT ARE FORMED INTO A NETWORK SUCH THAT THE FILAMENTS OR YARNS RETAIN DIMENSIONAL STABILITY RELATIVE TO EACH OTHER;
 - FREE OF ANY TREATMENT OR COATING WHICH MIGHT ADVERSELY ALTER ITS PHYSICAL AND/OR FILTERING PROPERTIES; AND,
 - HAVE A MINIMUM WIDTH OF 36 INCHES.
- USE ONLY FABRIC APPEARING ON SC DOT'S QUALIFIED PRODUCTS LISTING (QPL), APPROVAL SHEET #34 MEETING THE REQUIREMENTS OF THE MOST CURRENT EDITION OF THE SC DOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
- 12 INCHES OF THE FABRIC SHOULD BE PLACED WITHIN EXCAVATED TRENCH AND TOED IN WHEN THE TRENCH IS BACKFILLED.
- FILTER FABRIC SHALL BE PURCHASED IN CONTINUOUS ROLLS AND CUT TO THE LENGTH OF THE BARRIER TO AVOID JOINTS.
- FILTER FABRIC SHALL BE INSTALLED AT A MINIMUM OF 24 INCHES ABOVE THE GROUND.

TYPE A - INSPECTION & MAINTENANCE

- THE KEY TO FUNCTIONAL INLET PROTECTION IS WEEKLY INSPECTIONS, ROUTINE MAINTENANCE AND REGULAR SEDIMENT REMOVAL.
- REGULAR INSPECTIONS OF INLET PROTECTION SHALL BE CONDUCTED ONCE EVERY CALENDAR WEEK AND, AS RECOMMENDED, WITHIN 24 HOURS AFTER EACH RAINFALL EVEN THAT PRODUCES 1/2 INCH OR MORE OF PRECIPITATION.
- ATTENTION TO SEDIMENT ACCUMULATIONS ALONG THE FILTER FABRIC IS EXTREMELY IMPORTANT. ACCUMULATED SEDIMENT SHOULD BE CONTINUALLY MONITORED AND REMOVED WHEN NECESSARY.
- REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES 1/3 THE HEIGHT OF THE FILTER FABRIC. WHEN A SUMP IS INSTALLED IN FRONT OF THE FABRIC, SEDIMENT SHOULD BE REMOVED WHEN IT FILLS APPROXIMATELY 1/3 THE DEPTH OF THE SUMP.
- REMOVED SEDIMENT SHALL BE PLACED IN STOCKPILE STORAGE AREAS OR SPREAD THINLY ACROSS DISTURBED AREA. STABILIZE THE REMOVED SEDIMENT AFTER IT IS RELOCATED.
- CHECK FOR AREAS WHERE STORM WATER RUNOFF HAS ERODED A CHANNEL BENEATH THE FILTER FABRIC, BENEATH THE FILTER FABRIC, OR WHERE THE FABRIC HAS SAGGED OR COLLAPSED DUE TO RUNOFF OVERTOPPING THE INLET PROTECTION.
- CHECK FOR TEARS WITHIN THE FILTER FABRIC, AREAS WHERE FABRIC HAS BEGUN TO DECOMPOSE, AND FOR ANY OTHER CIRCUMSTANCE THAT MAY RENDER THE INLET PROTECTION INEFFECTIVE. REMOVE DAMAGED FABRIC AND REINSTALL NEW FILTER FABRIC IMMEDIATELY.
- INLET PROTECTION STRUCTURES SHOULD BE REMOVED AFTER ALL THE DISTURBED AREAS ARE PERMANENTLY STABILIZED. REMOVE ALL CONSTRUCTION MATERIAL AND SEDIMENT, AND DISPOSE OF THEM PROPERLY. GRADE THE DISTURBED AREA TO THE ELEVATION OF THE DROP INLET STRUCTURE CREST. STABILIZE ALL BARE AREAS IMMEDIATELY.

IP INLET PROTECTION
 SCALE: N.T.S.

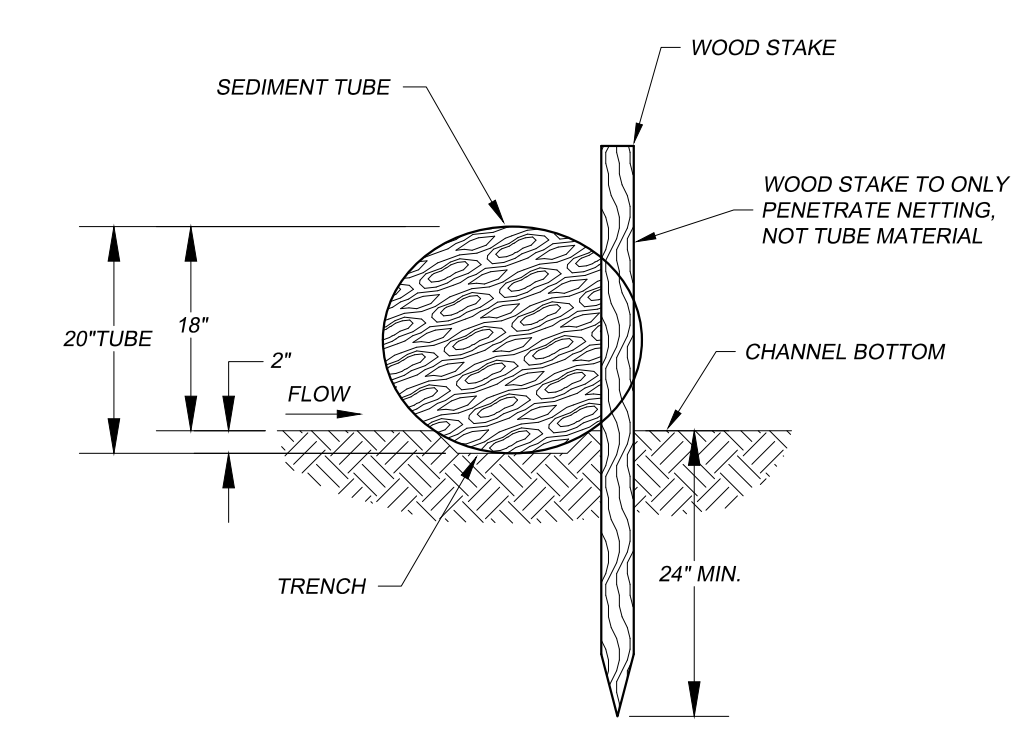


SEDIMENT TUBE CHECK DAM DETAIL (NO BLANKET)

SEDIMENT TUBES - GENERAL NOTES

- SEDIMENT TUBES MAY BE INSTALLED ALONG CONTOURS, IN DRAINAGE CONVEYANCE CHANNELS, AND AROUND INLETS TO HELP PREVENT OFF SITE DISCHARGE OF SEDIMENT LADEN STORM WATER RUNOFF.
- SEDIMENT TUBES ARE ELONGATED TUBES OF COMPACTED GEOTEXTILES, CURLED EXCELSIOR WOOD, NATURAL COCONUT FIBER, OR HARDWOOD MULCH. STRAW, PINE NEEDLE AND LEAF MULCH FILLED SEDIMENT TUBES ARE NOT PERMITTED.
- THE OUTER NETTING OF THE SEDIMENT TUBE SHOULD CONSIST OF SEAMLESS, HIGH DENSITY POLYETHYLENE PHOTODEGRADABLE MATERIALS TREATED WITH ULTRAVIOLET STABILIZERS OR A SEAMLESS, HIGH DENSITY POLYETHYLENE NON DEGRADABLE MATERIAL.
- SEDIMENT TUBES, WHEN USED AS CHECKS WITHIN CHANNELS, SHOULD RANGE BETWEEN 16 INCHES AND 24 INCHES DEPENDING ON CHANNEL DIMENSIONS. DIAMETERS OUTSIDE THIS RANGE MAY BE ALLOWED WHERE NECESSARY WHEN APPROVED.
- CURLED EXCELSIOR WOOD, OR NATURAL COCONUT PRODUCTS THAT ARE ROLLED UP TO CREATE A SEDIMENT TUBE ARE NOT ALLOWED.
- SEDIMENT TUBES SHOULD BE STAKED USING WOODEN STAKES (2" X 2") OR STEEL POSTS (STANDARD "U" OR "T" SECTIONS WITH A MINIMUM WEIGHT OF 1.25 POUNDS PER FOOT) AT A MINIMUM OF 48 INCHES IN LENGTH PLACED ON 2 FOOT CENTERS.
- INSTALL ALL SEDIMENT TUBES TO ENSURE THAT NO GAPS EXIST BETWEEN THE SOIL AND THE BOTTOM OF THE TUBE. MANUFACTURER'S RECOMMENDATIONS SHOULD ALWAYS BE CONSULTED BEFORE INSTALLATION.
- THE ENDS OF ADJACENT SEDIMENT TUBES SHOULD BE OVERLAPPED 6 INCHES TO PREVENT FLOW AND SEDIMENT FROM PASSING THROUGH THE FIELD JOINT.
- SEDIMENT TUBES SHOULD NOT BE STACKED ON TOP OF ONE ANOTHER, UNLESS RECOMMENDED BY MANUFACTURER.
- EACH SEDIMENT TUBE SHOULD BE INSTALLED IN A TRENCH WITH A DEPTH EQUAL TO 1/5 THE DIAMETER OF THE SEDIMENT TUBE.
- SEDIMENT TUBES SHOULD CONTINUE UP THE SIDE SLOPES A MINIMUM OF 1 FOOT ABOVE THE DESIGN FLOW DEPTH OF THE CHANNEL.
- INSTALL STAKES AT A DIAGONAL FACING INCOMING RUNOFF.

ST SEDIMENT TUBE DETAIL
 SCALE: N.T.S.



STAKE DETAIL (WITH TRENCH)

SEDIMENT TUBE SPACING

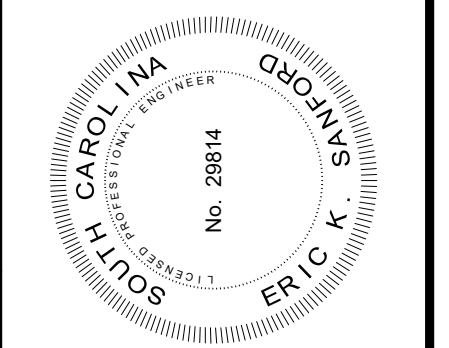
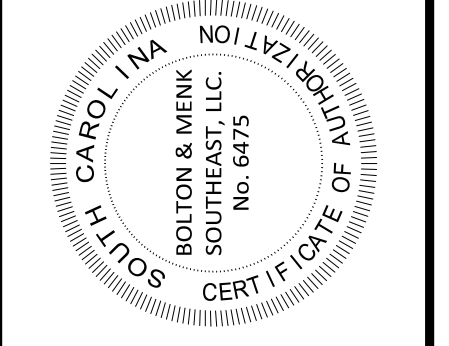
SLOPE	MAX. SEDIMENT TUBE SPACING
LESS THAN 2%	150-FEET
2%	100-FEET
3%	75-FEET
4%	50-FEET
5%	40-FEET
6%	30-FEET
GREATER THAN 6%	25-FEET

SEDIMENT TUBES - INSPECTION & MAINTENANCE

- THE KEY TO FUNCTIONAL SEDIMENT TUBES IS WEEKLY INSPECTIONS, ROUTINE MAINTENANCE AND REGULAR SEDIMENT REMOVAL.
- REGULAR INSPECTIONS OF SEDIMENT TUBES SHALL BE CONDUCTED ONCE EVERY CALENDAR WEEK AND, AS RECOMMENDED, WITHIN 24 HOURS AFTER EACH RAINFALL EVEN THAT PRODUCES 1/2 INCH OR MORE OF PRECIPITATION.
- ATTENTION TO SEDIMENT ACCUMULATIONS IN FRONT OF THE SEDIMENT TUBE IS EXTREMELY IMPORTANT. ACCUMULATED SEDIMENT SHOULD BE CONTINUALLY MONITORED AND REMOVED WHEN NECESSARY.
- REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES 1/3 THE HEIGHT OF THE SEDIMENT TUBE.
- REMOVED SEDIMENT SHALL BE PLACED IN STOCKPILE STORAGE AREAS OR SPREAD THINLY ACROSS DISTURBED AREA. STABILIZE THE REMOVED SEDIMENT AFTER IT IS RELOCATED.
- LARGE DEBRIS, TRASH AND LEAVES SHOULD BE REMOVED FROM IN FRONT OF TUBES WHEN FEARED.
- IF EROSION CAUSES THE EDGES TO FALL TO A HEIGHT EQUAL TO OR BELOW THE HEIGHT OF THE SEDIMENT TUBE, REPAIRS SHOULD BE MADE IMMEDIATELY TO PREVENT RUNOFF FROM BYPASSING TUBE.
- SEDIMENT TUBES SHOULD BE REMOVED AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN COMPLETELY STABILIZED. PERMANENT VEGETATION SHOULD REPLACE AREAS FROM WHICH SEDIMENT TUBES HAVE BEEN REMOVED.



Mead & Hunt
 333 WELLNESS DRIVE
 MYRTLE BEACH, SC 29579
 Phone: (843) 839-1400



NO.	DATE	REVISION DESCRIPTION	BY

SEDIMENT AND EROSION CONTROL DETAILS - KINLAW LANE

HORRY COUNTY ROADS - RIDE 3 - GROUP 2

HORRY COUNTY, SOUTH CAROLINA

PREPARED FOR: HORRY COUNTY

SCALE: NO SCALE

DATE: 6-13-21

DESIGNED BY: EKS

DRAWN BY: PES

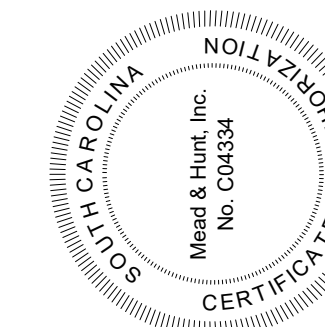
APPROV. BY: EKS

PROJECT NO.: 20087E

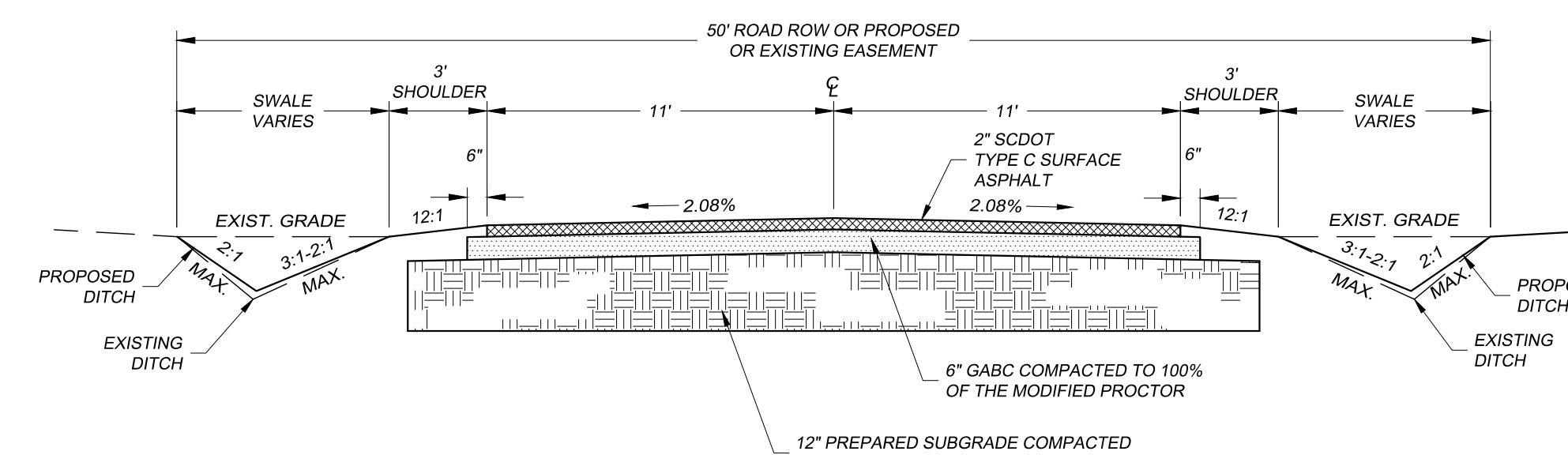
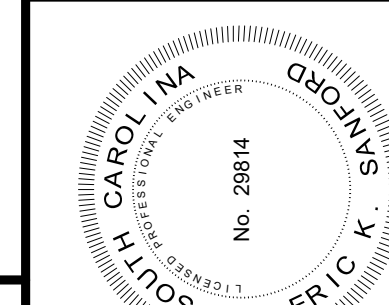
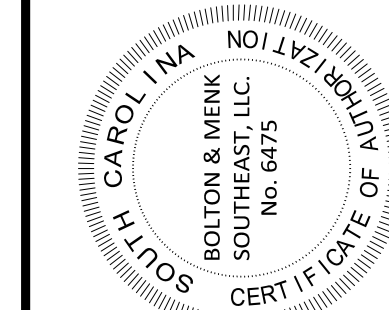
5

FILE NO.: 20087E

NOTIFICATION IS HEREBY GIVEN THAT THIS DOCUMENT IS THE PROPERTY OF EAC ENGINEERS, INC. AND ALL RIGHTS WITH REGARD TO COPYRIGHTS ARE RESERVED AS OF THE DATE OF THIS DOCUMENT. THIS DOCUMENT IS UNLAWFULLY REPRODUCED AND/OR COPIED.



Mead & Hunt
333 WELLNESS DRIVE
MYRTLE BEACH, SC 29579
Phone: (843) 839-1490

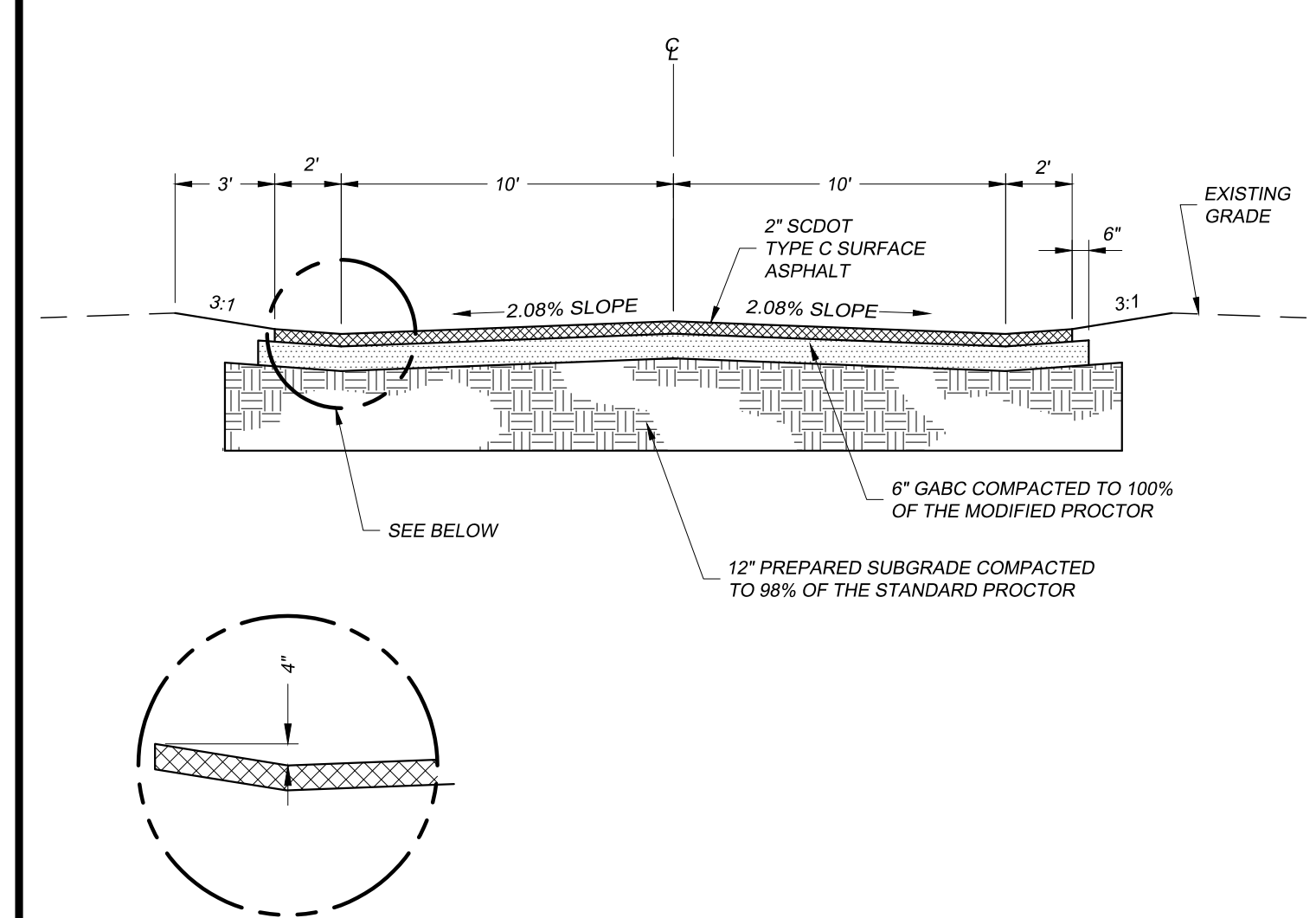


(FROM STA. 0+38 TO STA. 54+04.10)

TYPICAL ROADWAY CROSS SECTION

SCALE: N.T.S.

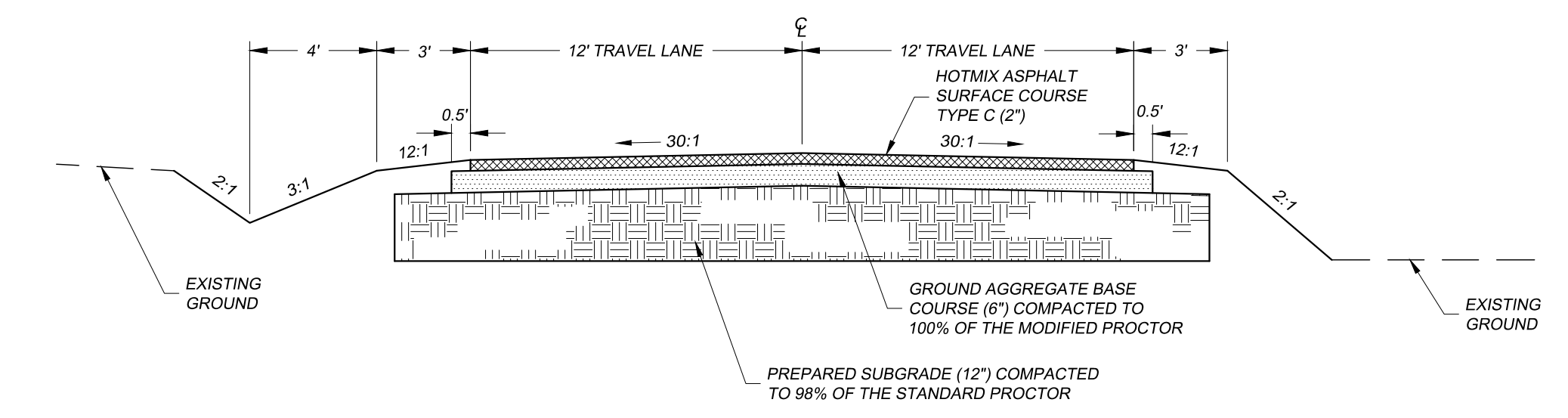
SIGN TABLE			
PROPOSED SIGNS			
Sign Type	Name of Sign	Location of Proposed Sign	
		Station #	Left or Right
W1-2L	CURVE TO LEFT	15+00	R
		29+00	L
W1-2R	CURVE TO RIGHT	21+50	L
		21+50	R
R2-1	SPEED LIMIT	2+00	R
		13+00	R
		15+00	L
		24+00	R
		26+00	L
		35+00	R
		37+50	L
R1-1	STOP	0+32.07	L
		39+54.88	L
W3-1	STOP SIGN AHEAD	4+00	L
		43+00	L
W2-4	T-INTERSECTION	36+50	R
		54+00	R
OTHER	DESCRIPTION	NO OUTLET	R
		END OF ROADWAY	R
SCDOT Bid Item # 6510105	FLAT SHEET, TYPE III, FIXED SZ. & MSG. SIGN		



TYPICAL PAVED VALLEY SWALE DETAIL

SCALE: N.T.S.

- NOTES:
1. MAXIMUM SLOPE MAY BE REDUCED TO ACCOMMODATE FIELD CONDITIONS. PAVEMENT SLOPES, SHOULDER SLOPES, DITCH FORE SLOPES AND DITCH BACK SLOPES MAY VARY FROM THOSE SHOWN ON TYPICAL SECTIONS. (SEE CROSS SECTIONS)
 2. 30:1 IS DESIRED WITHIN SCDOT R/W, HOWEVER, TYPICALLY THE CROSS SLOPE IS IN TRANSITION. Horry COUNTY HAS BEEN AND WILL CONTINUE THE MAINTENANCE OF THE COUNTY ROADS TO THE EDGE OF THE TRAVEL LANE OF SCDOT ROADS.

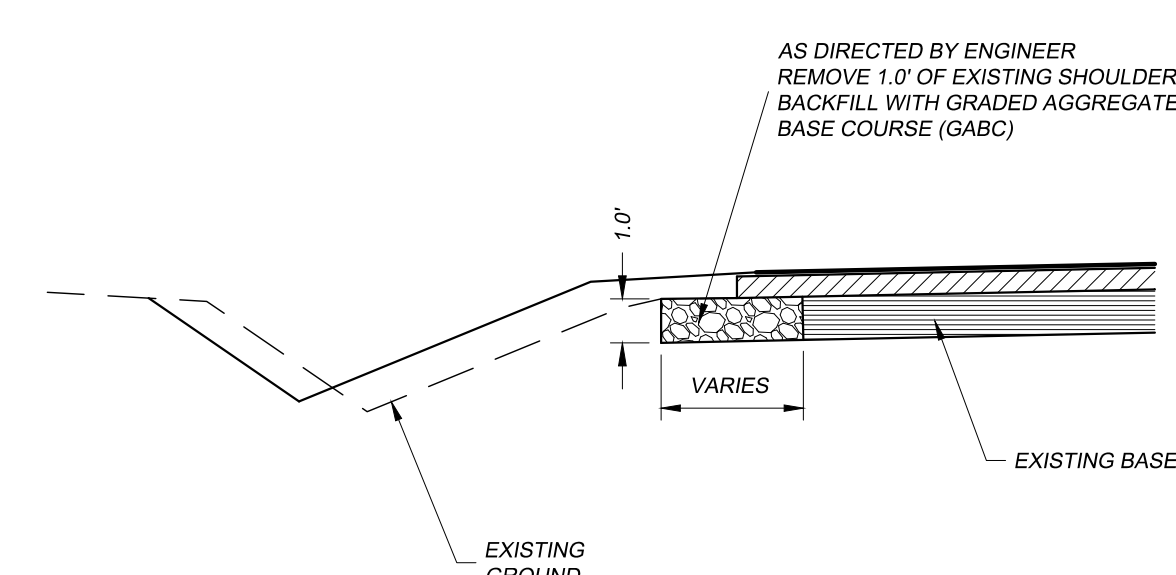


(FROM STA. 0+27.26 TO STA. 0+38)

TYPICAL SCDOT ROADWAY CROSS SECTION

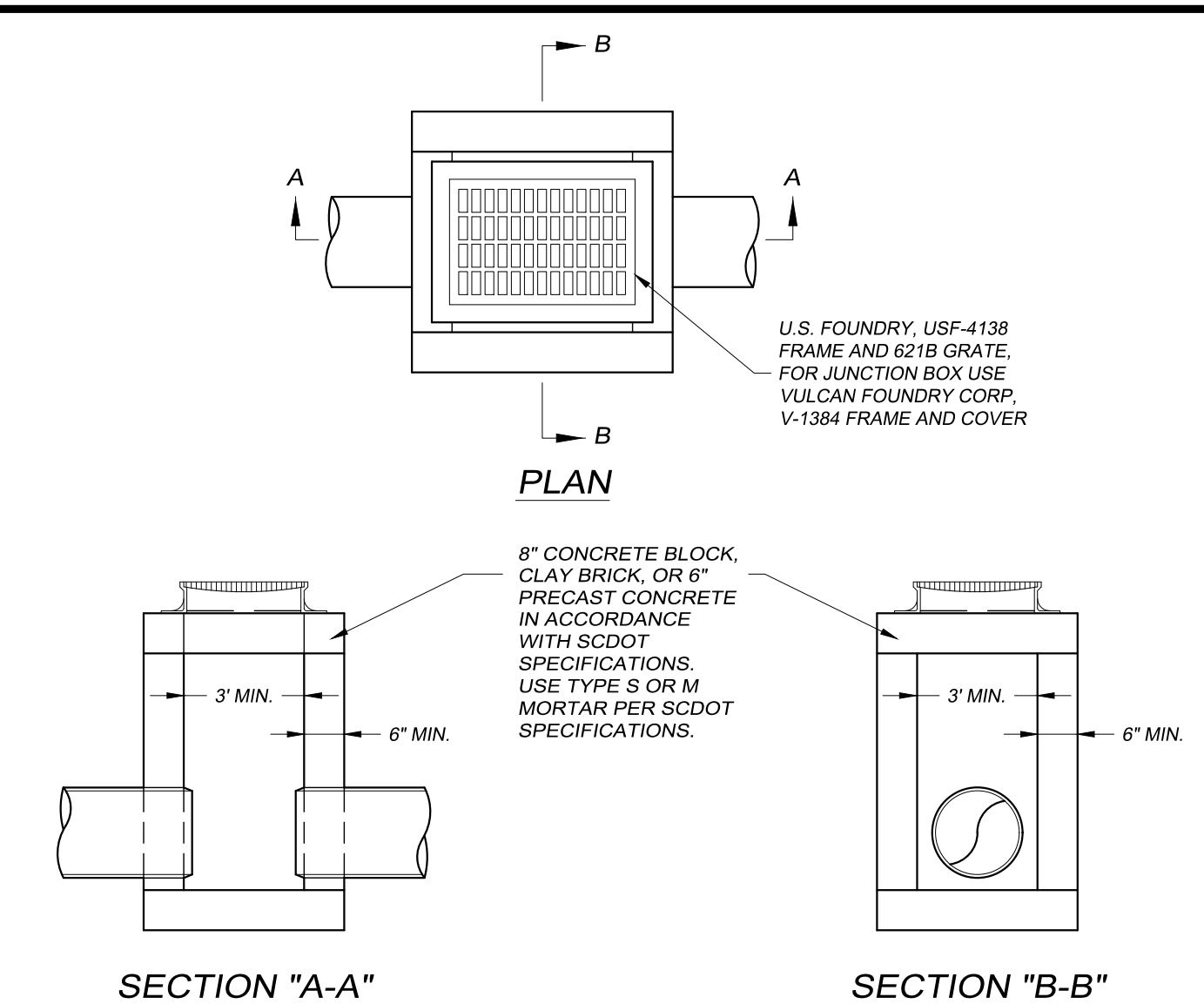
SCALE: N.T.S.

EXISTING SIGNS		
Sign Description	Location of Existing Sign	
	Station #	Left or Right
STOP SIGN	0+32	L
SPEED LIMIT SIGN	38+25	L
STOP SIGN	39+53	L
NO OUTLET	40+68	R



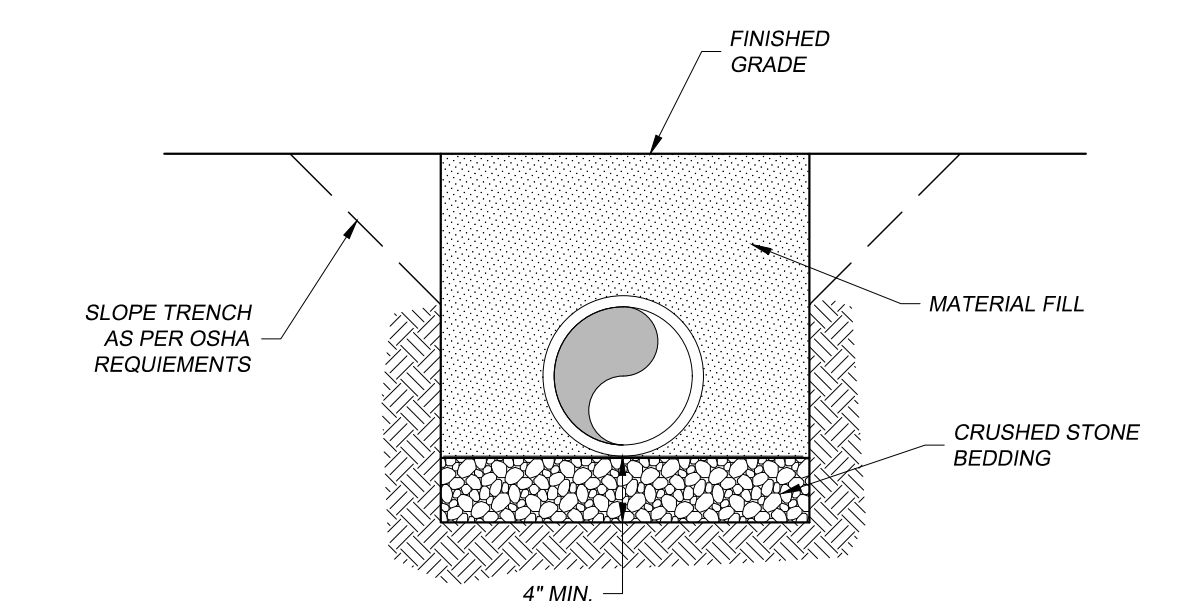
GABC MUCKING DETAIL

SCALE: N.T.S.



TYPICAL CATCH BASIN / JUNCTION BOX DETAIL

SCALE: N.T.S.



REINFORCED CONCRETE PIPE BEDDING DETAIL

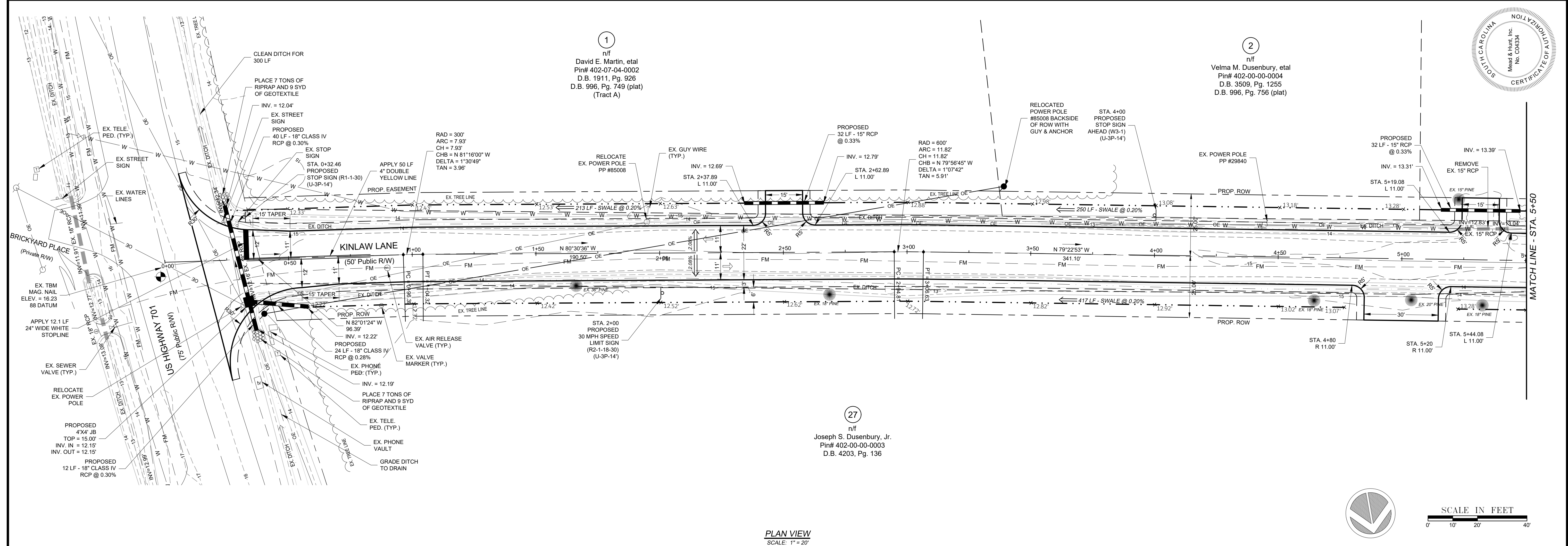
SCALE: N.T.S.

- NOTES:
1. BEDDING IS REQUIRED WHEN TRENCH BOTTOM IS BELOW THE WATER TABLE.
 2. BEDDING SHALL BE COMPACTED CRUSHED STONE (CLASS 1 MATERIAL) SHAPED TO THE BOTTOM OF THE PIPE.
 3. FILL SHALL BE SUITABLE MATERIAL IN NON PAVEMENT AREAS AND AGGREGATE BACKFILL MATERIAL IN PAVEMENT AREAS AND COMPACTED TO 95% OF THE SOILS STANDARD PROCTOR.
 4. FILL SHALL BE NATIVE MATERIAL FREE OF LARGE ROCKS, DEBRIS OR ORGANICS AND COMPACTED TO 95% OF THE SOIL'S STANDARD PROCTOR.
 5. FILTER FABRIC TO BE PLACED AT ALL JOINTS.

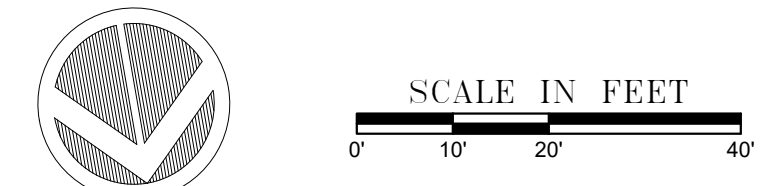
MISCELLANEOUS DETAILS
KINLAW LANE
Horry COUNTY ROADS - RIDE 3 - GROUP 2
Horry COUNTY, SOUTH CAROLINA

PREPARED FOR: Horry COUNTY

SCALE:	NO SCALE
DATE:	5-13-21
DESIGNED BY:	EKS
DRAWN BY:	PES
APPROV. BY:	EKS
PROJECT NO.:	20087E
6	
FILE NO.:	20087E



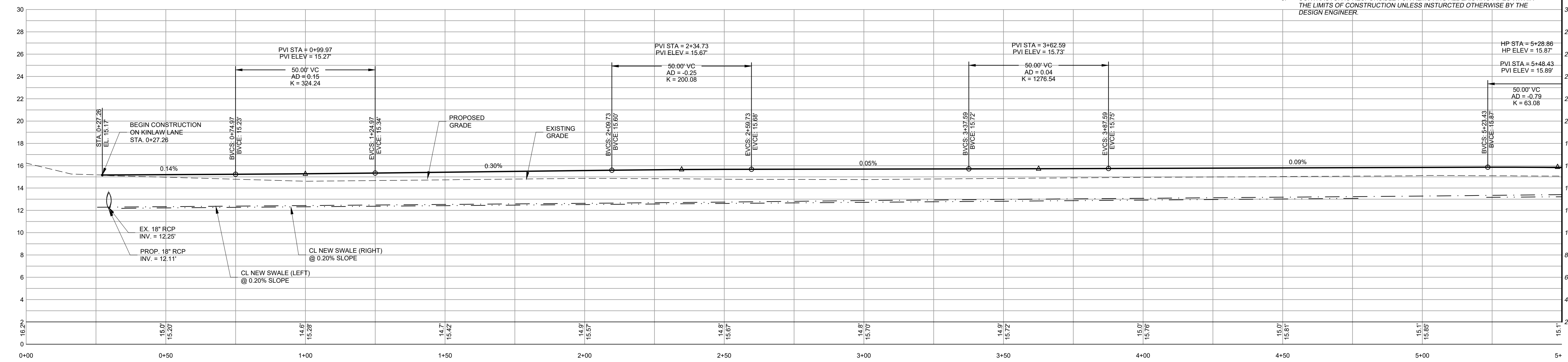
PLAN VIEW
SCALE: 1" = 20'



NOTES:

- ALL EXISTING WATER METERS, CATV, PHONE AND POWER UTILITIES IN ROAD EASEMENT SHALL BE RELOCATED BY THE UTILITY COMPANY AT NO COST TO THE CONTRACTOR.
- CONTRACTOR IS RESPONSIBLE FOR RELOCATING EXISTING MAIL BOXES AS NECESSARY.
- CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL TREES LOCATED IN ROAD EASEMENT, UNLESS OTHERWISE NOTED ON THE PLANS AND IF A TREE REMOVAL IS IN QUESTION, IT SHOULD BE DONE AT THE DISCRETION OF THE RCE. COORDINATION WITH THE RCE BEFORE THE CLEARING PROCESS STARTS IS REQUIRED.
- SEE GENERAL NOTES, LEGEND AND SHEET SCHEDULE, SHEET 2 FOR EROSION CONTROL LEGEND AND SEEDING SCHEDULE.
- ALL DRIVEWAYS TO BE PAVED A MINIMUM WIDTH OF 15' AND A RADII OF 5' UNLESS OTHERWISE NOTED.
- USE TEMPORARY EROSION CONTROL BLANKET (CLASS B) AS NEEDED TO STABILIZE THE DITCH BANKS.
- THE CONTRACTOR IS TO COORDINATE WITH THE EXISTING UTILITIES ON RAISING AND LEVELING THEIR EXISTING INFRASTRUCTURE THAT IS LOCATED WITHIN THE ROADWAY RIGHT OF WAY, WATER AND SEWER VALVE COVERS, AIR RELEASE VALVES AND BOXES, ETC.
- CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL EXISTING PIPES WITHIN THE LIMITS OF CONSTRUCTION UNLESS INSTRUCTED OTHERWISE BY THE DESIGN ENGINEER.

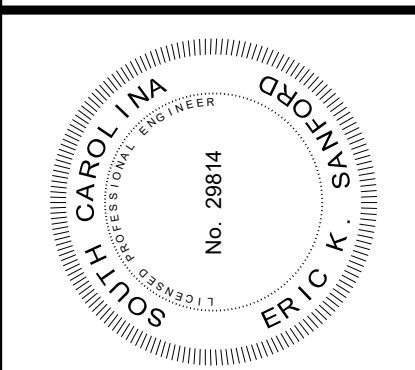
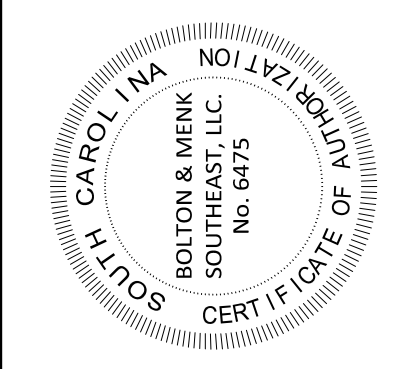
MATCH LINE - STA. 5+50



ROADWAY PROFILE
SCALE: HORIZONTAL: 1" = 20'
VERTICAL: 1" = 5'



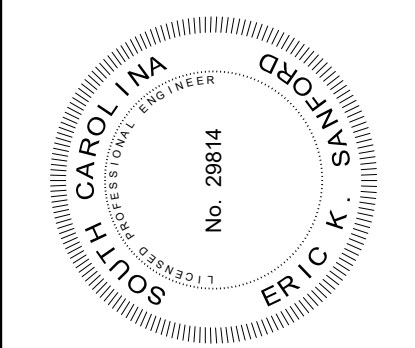
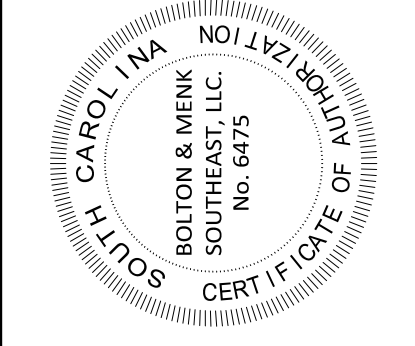
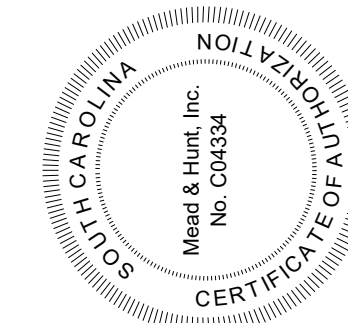
Mead & Hunt
333 WELLNESS DRIVE
MYRTLE BEACH, SC 29579
Phone: (843) 839-1490



NO.	DATE	REVISION DESCRIPTION	BY
3	7-13-22	REVISED PER MEAD & HUNT REVIEW.	PES
2	5-23-22	REVISED PER MEAD & HUNT REVIEW.	PES
1	3-25-22	REVISED PER HORRY COUNTY REVIEW.	PES

PLAN AND PROFILE
KINLAW LANE
HORRY COUNTY ROADS - RIDE 3 - GROUP 2
HORRY COUNTY, SOUTH CAROLINA
PREPARED FOR: HORRY COUNTY

SCALE:	H: 1" = 20'
DATE:	6-13-21
DESIGNED BY:	EKS
DRAWN BY:	PES
APPROV. BY:	EKS
PROJECT NO.:	20087E
FILE NO.:	20087E



NO.	DATE	REVISION DESCRIPTION	BY
3	7-13-22	REVISED PER MEAD & HUNT REVIEW.	PES
2	5-23-22	REVISED PER MEAD & HUNT REVIEW.	PES
1	3-25-22	REVISED PER Horry COUNTY REVIEW.	PES

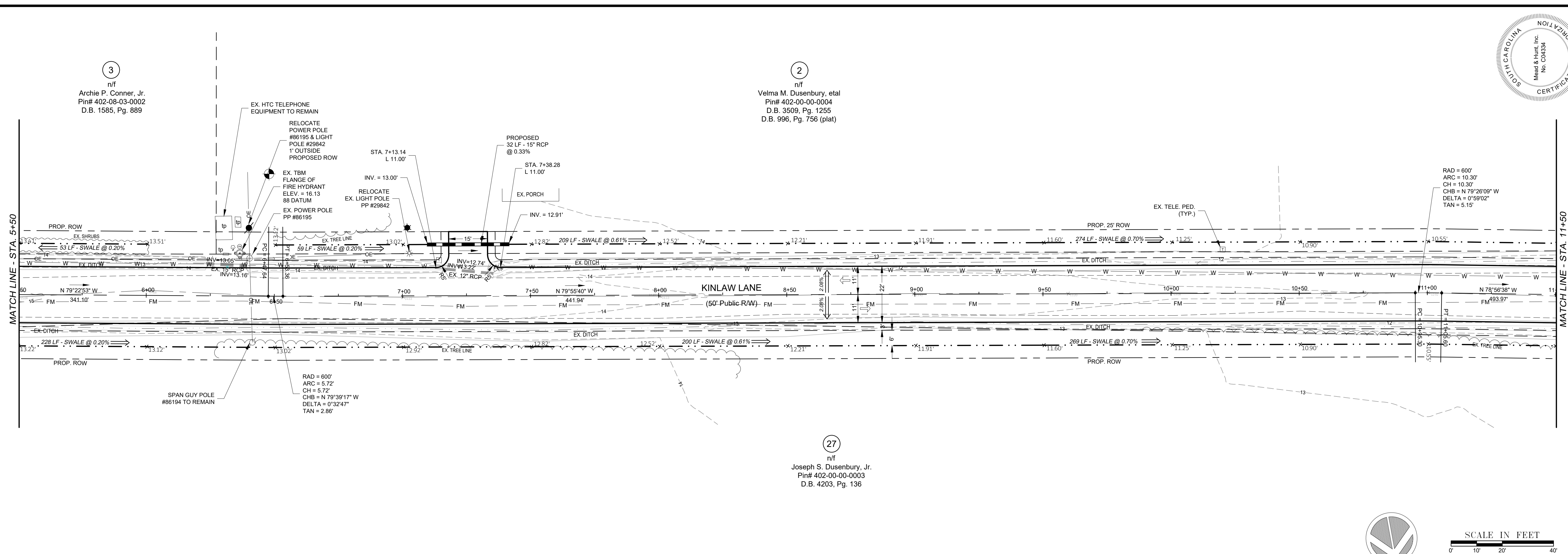
NOTIFICATION IS HEREBY GIVEN THAT THIS DOCUMENT IS THE PROPERTY OF M&H ENGINEERS, INC. AND ALL RIGHTS WITH REGARD TO COPYRIGHTS ARE RESERVED AS OF THE DATE OF THIS DOCUMENT. THIS IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS.

PLAN AND PROFILE KINLAW LANE

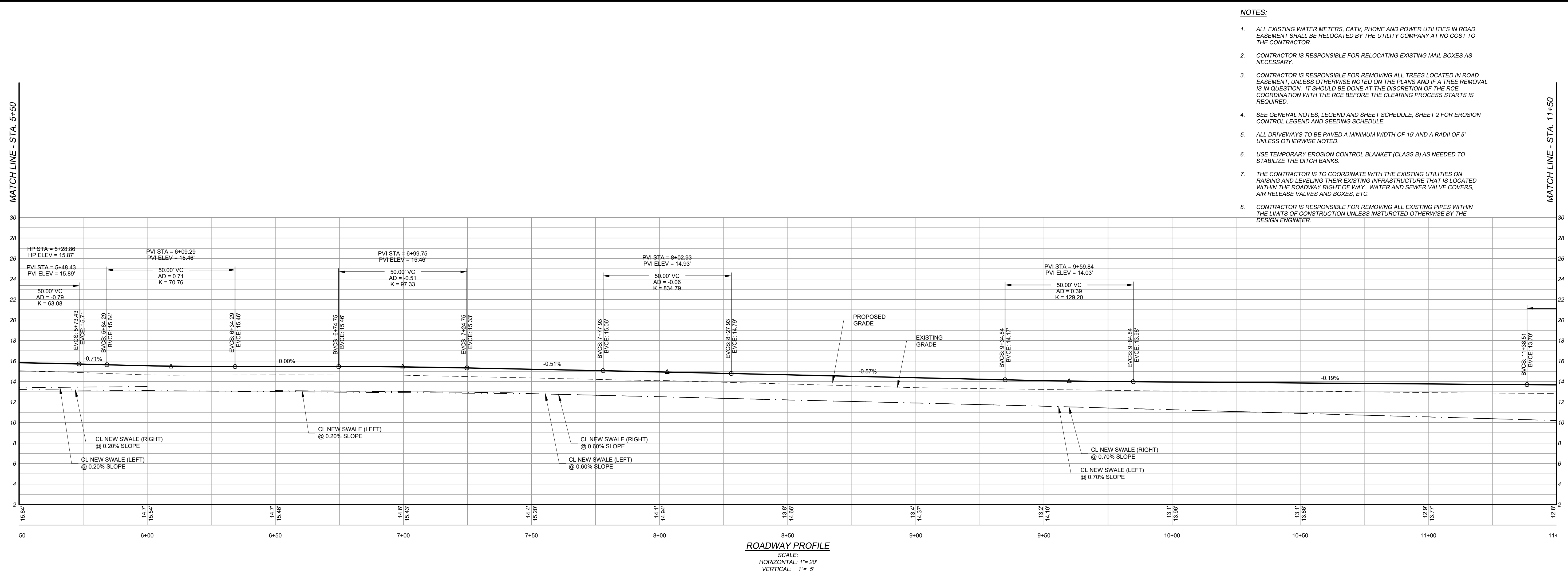
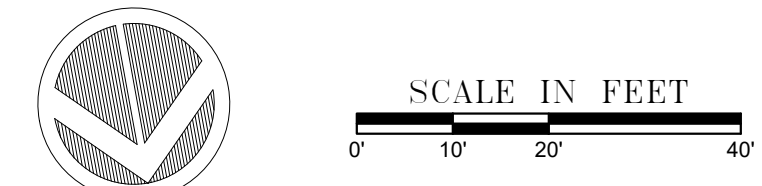
Horry County Roads - Ride 3 - Group 2
Horry County, South Carolina

PREPARED FOR: Horry County

SCALE:	H: 1"=20'
DATE:	6-13-21
DESIGNED BY:	EKS
DRAWN BY:	PES
APPROV. BY:	EKS
PROJECT NO.:	20087E
FILE NO.:	20087E



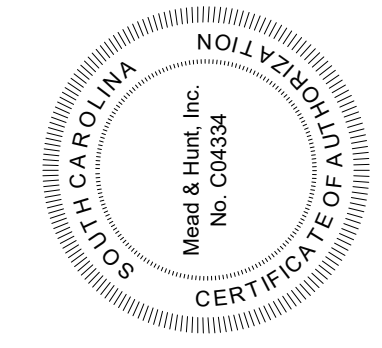
PLAN VIEW
SCALE: 1" = 20'



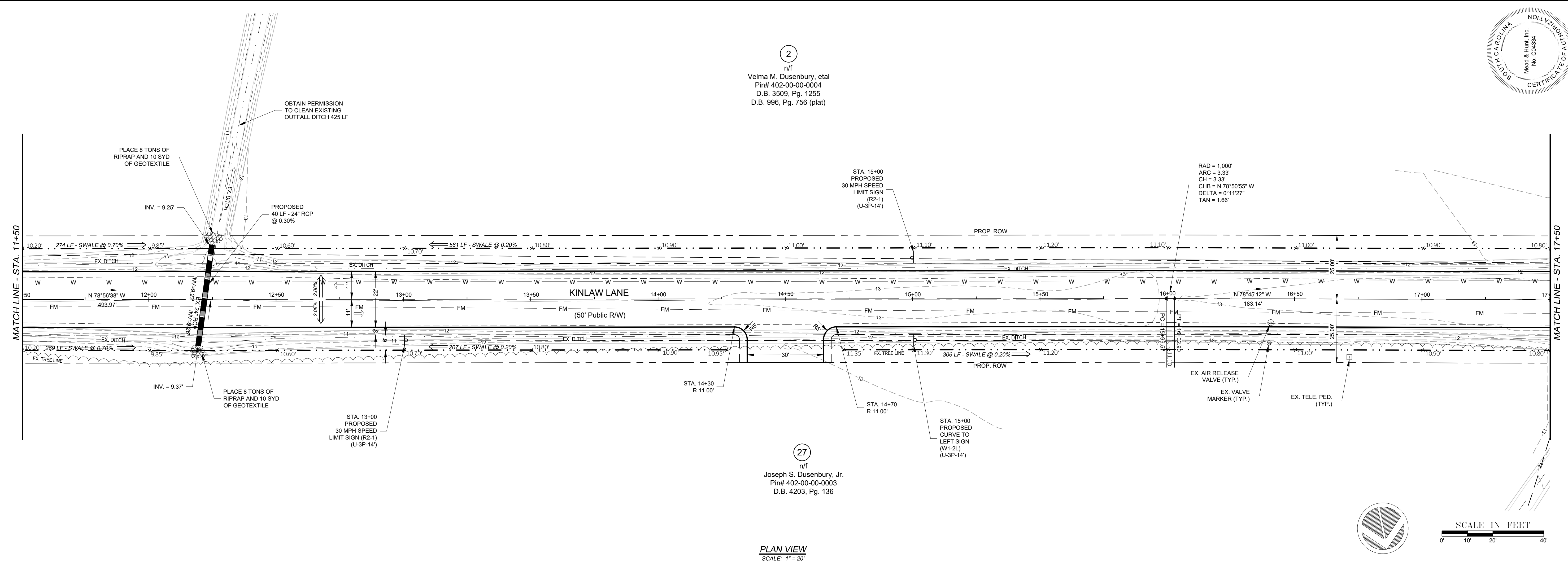
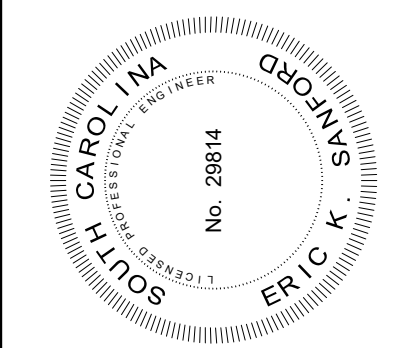
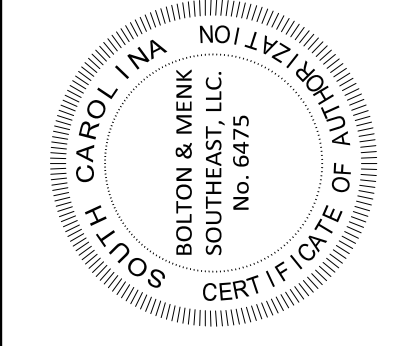
ROADWAY PROFILE
SCALE: HORIZONTAL: 1" = 20'
VERTICAL: 1" = 5'

- NOTES:
- ALL EXISTING WATER METERS, CATV, PHONE AND POWER UTILITIES IN ROAD EASEMENT SHALL BE RELOCATED BY THE UTILITY COMPANY AT NO COST TO THE CONTRACTOR.
 - CONTRACTOR IS RESPONSIBLE FOR RELOCATING EXISTING MAIL BOXES AS NECESSARY.
 - CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL TREES LOCATED IN ROAD EASEMENT, UNLESS OTHERWISE NOTED ON THE PLANS AND IF A TREE REMOVAL IS IN QUESTION, IT SHOULD BE DONE AT THE DISCRETION OF THE RCE. COORDINATION WITH THE RCE BEFORE THE CLEARING PROCESS STARTS IS REQUIRED.
 - SEE GENERAL NOTES, LEGEND AND SHEET SCHEDULE, SHEET 2 FOR EROSION CONTROL LEGEND AND SEEDING SCHEDULE.
 - ALL DRIVEWAYS TO BE PAVED A MINIMUM WIDTH OF 15' AND A RADII OF 5' UNLESS OTHERWISE NOTED.
 - USE TEMPORARY EROSION CONTROL BLANKET (CLASS B) AS NEEDED TO STABILIZE THE DITCH BANKS.
 - THE CONTRACTOR IS TO COORDINATE WITH THE EXISTING UTILITIES ON RAISING AND LEVELING THEIR EXISTING INFRASTRUCTURE THAT IS LOCATED WITHIN THE ROADWAY RIGHT OF WAY, WATER AND SEWER VALVE COVERS, AIR RELEASE VALVES AND BOXES, ETC.
 - CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL EXISTING PIPES WITHIN THE LIMITS OF CONSTRUCTION UNLESS INSTRUCTED OTHERWISE BY THE DESIGN ENGINEER.

RCP FILE: NEW/08/2022



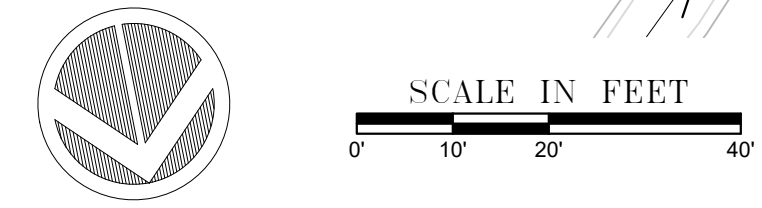
Mead & Hunt
333 WELLNESS DRIVE
MYRTLE BEACH, SC 29579
Phone: (843) 839-1400



②
n/f
Velma M. Dusenbury, etal
Pin# 402-00-00-0004
D.B. 3509, Pg. 1255
D.B. 996, Pg. 756 (plat)

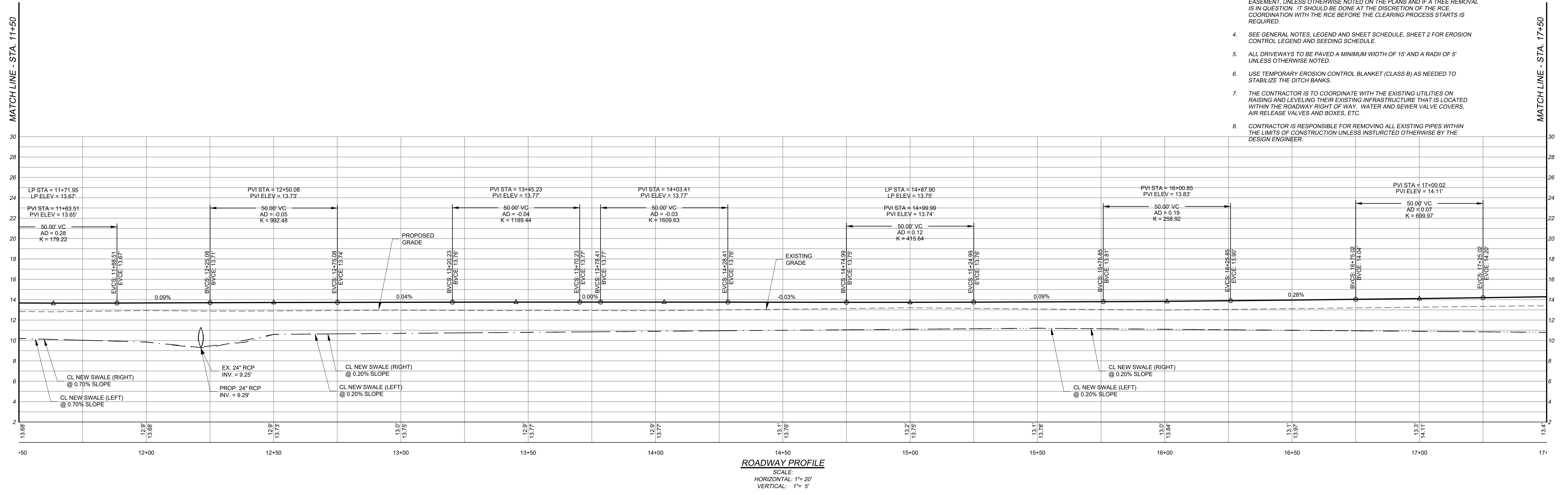
②⑦
n/f
Joseph S. Dusenbury, Jr.
Pin# 402-00-00-0003
D.B. 4203, Pg. 136

PLAN VIEW
SCALE: 1" = 20'



NOTES:

- ALL EXISTING WATER METERS, CATV, PHONE AND POWER UTILITIES IN ROAD EASEMENT SHALL BE RELOCATED BY THE UTILITY COMPANY AT NO COST TO THE CONTRACTOR.
- CONTRACTOR IS RESPONSIBLE FOR RELOCATING EXISTING MAIL BOXES AS NECESSARY.
- CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL TREES LOCATED IN ROAD EASEMENT, UNLESS OTHERWISE NOTED ON THE PLANS AND IF A TREE REMOVAL IS IN QUESTION, IT SHOULD BE DONE AT THE DISCRETION OF THE RCE COORDINATION WITH THE RCE BEFORE THE CLEARING PROCESS STARTS IS REQUIRED.
- SEE GENERAL NOTES, LEGEND AND SHEET SCHEDULE, SHEET 2 FOR EROSION CONTROL LEGEND AND SEEDING SCHEDULE.
- ALL DRIVEWAYS TO BE PAVED A MINIMUM WIDTH OF 15' AND A RADII OF 5' UNLESS OTHERWISE NOTED.
- USE TEMPORARY EROSION CONTROL BLANKET (CLASS B) AS NEEDED TO STABILIZE THE DITCH BANKS.
- THE CONTRACTOR IS TO COORDINATE WITH THE EXISTING UTILITIES ON RAISING AND LEVELING THEIR EXISTING INFRASTRUCTURE THAT IS LOCATED WITHIN THE ROADWAY RIGHT OF WAY, WATER AND SEWER VALVE COVERS, AIR RELEASE VALVES AND BOXES, ETC.
- CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL EXISTING PIPES WITHIN THE LIMITS OF CONSTRUCTION UNLESS INSTRUCTED OTHERWISE BY THE DESIGN ENGINEER.

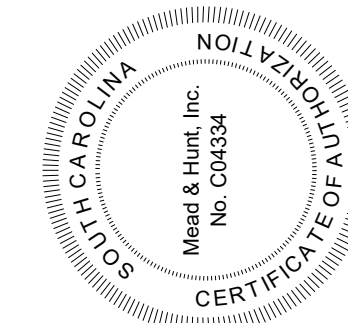


ROADWAY PROFILE
SCALE:
HORIZONTAL: 1" = 20'
VERTICAL: 1" = 5'

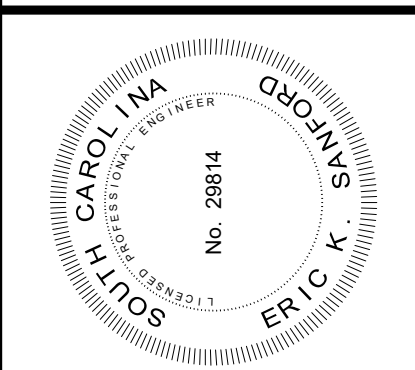
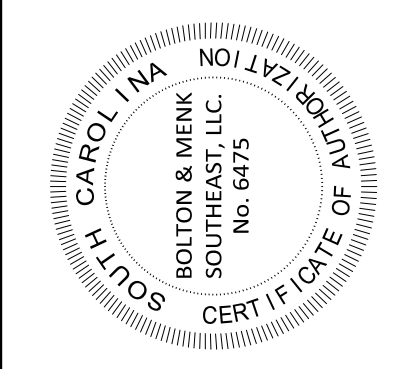
NO.	DATE	REVISION DESCRIPTION	BY
3	7-13-22	REVISED PER MEAD & HUNT REVIEW.	PES
2	5-23-22	REVISED PER MEAD & HUNT REVIEW.	PES

PLAN AND PROFILE
KINLAW LANE
HORRY COUNTY ROADS - RIDE 3 - GROUP 2
HORRY COUNTY, SOUTH CAROLINA
PREPARED FOR: HORRY COUNTY

SCALE:	H: 1" = 20' V: 1" = 5'
DATE:	6-13-21
DESIGNED BY:	EKS
DRAWN BY:	PES
APPROV. BY:	EKS
PROJECT NO.:	20087E
FILE NO.:	20087E



Mead & Hunt
333 WELLNESS DRIVE
MYRTLE BEACH, SC 29579
Phone: (843) 839-1490



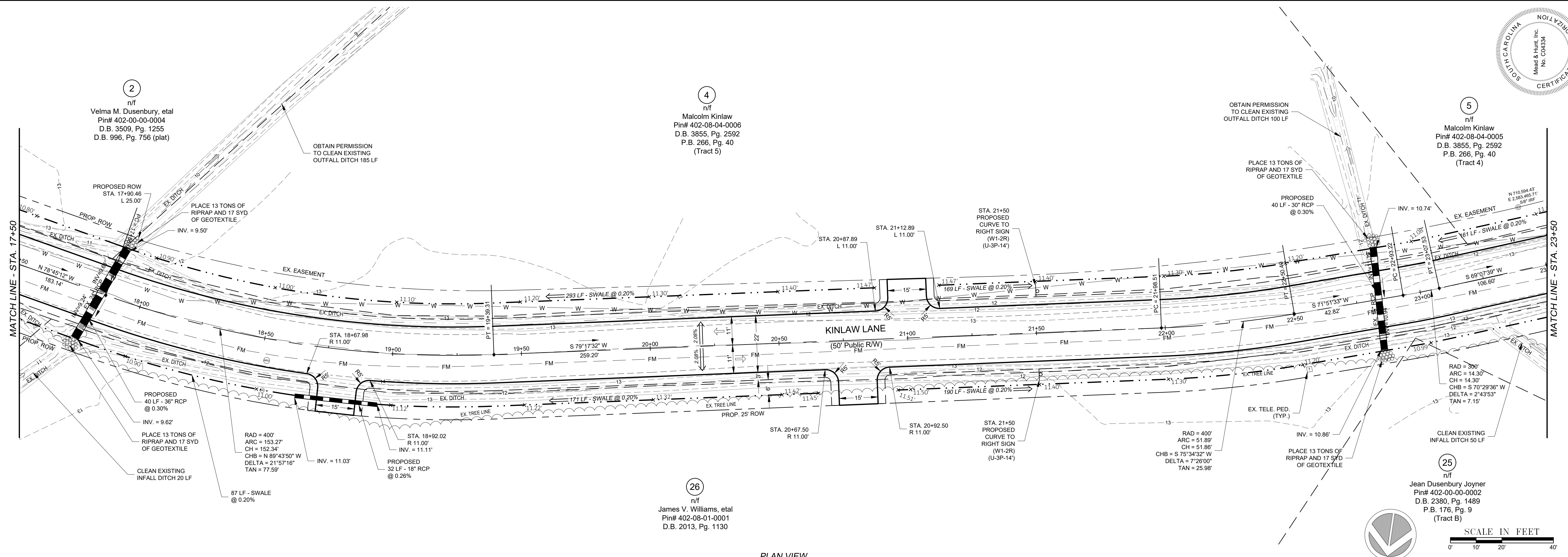
NO.	DATE	REVISION DESCRIPTION	BY
3	7-13-22	REVISED PER MEAD & HUNT REVIEW.	PES
2	5-23-22	REVISED PER MEAD & HUNT REVIEW.	PES

PLAN AND PROFILE KINLAW LANE

HORRY COUNTY ROADS - RIDE 3 - GROUP 2
HORRY COUNTY, SOUTH CAROLINA

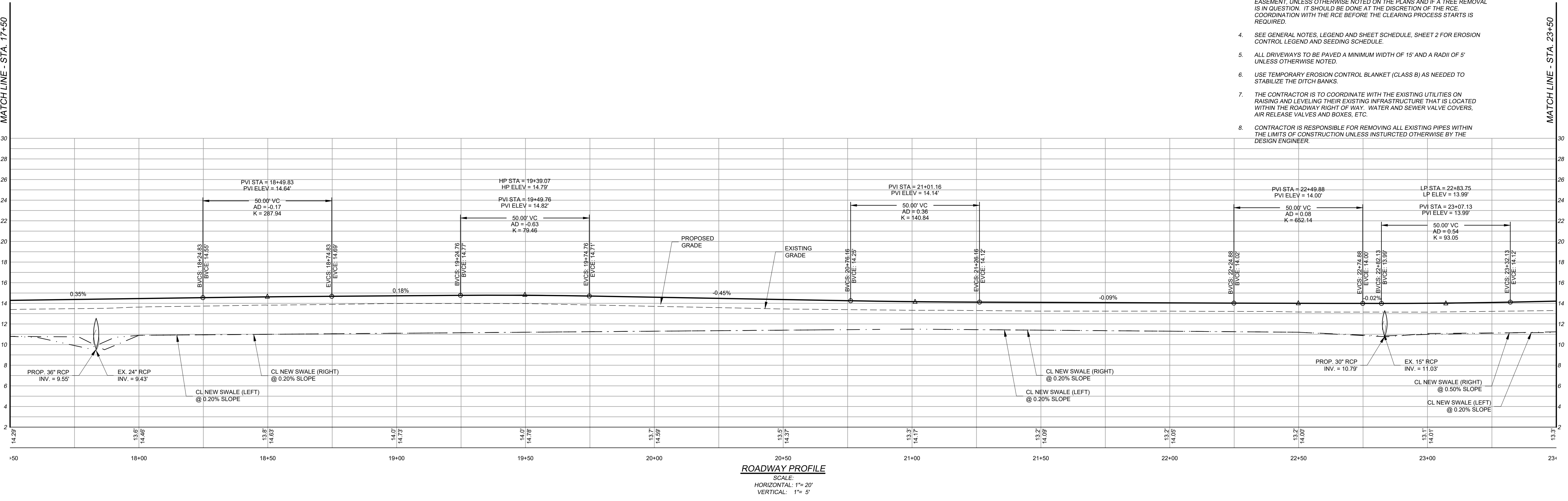
PREPARED FOR: HORRY COUNTY

SCALE:	H: 1"=20'
DATE:	5-13-21
DESIGNED BY:	EKS
DRAWN BY:	PES
APPROV. BY:	EKS
PROJECT NO.:	20087E
FILE NO.:	20087E

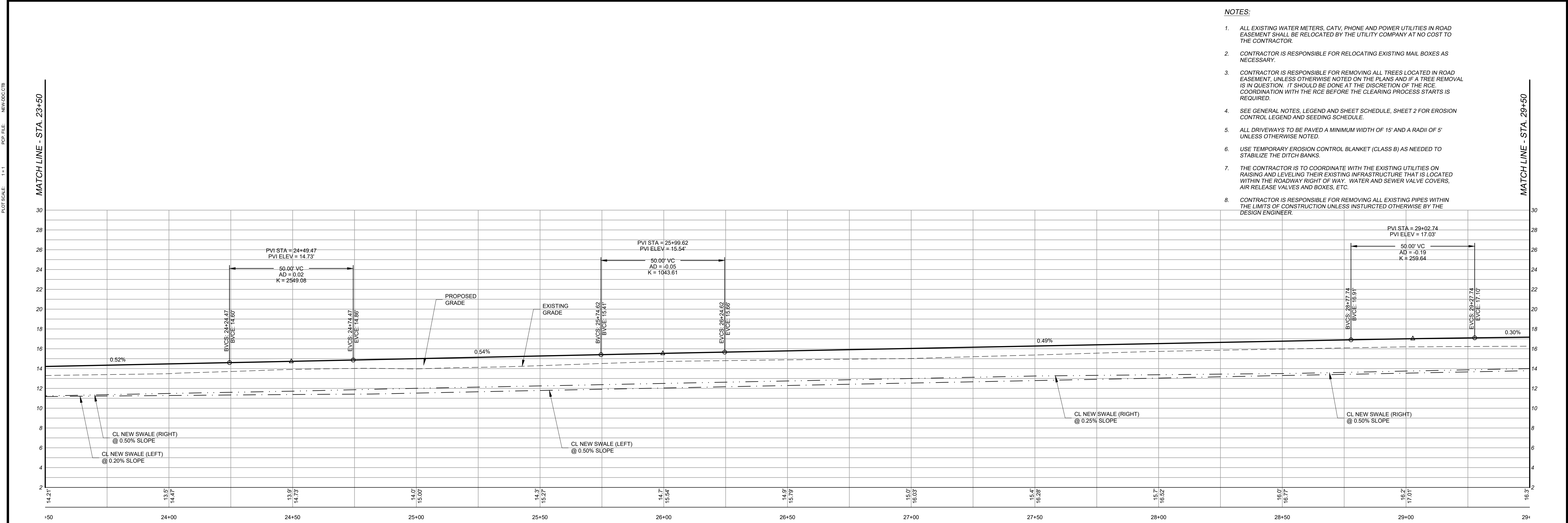
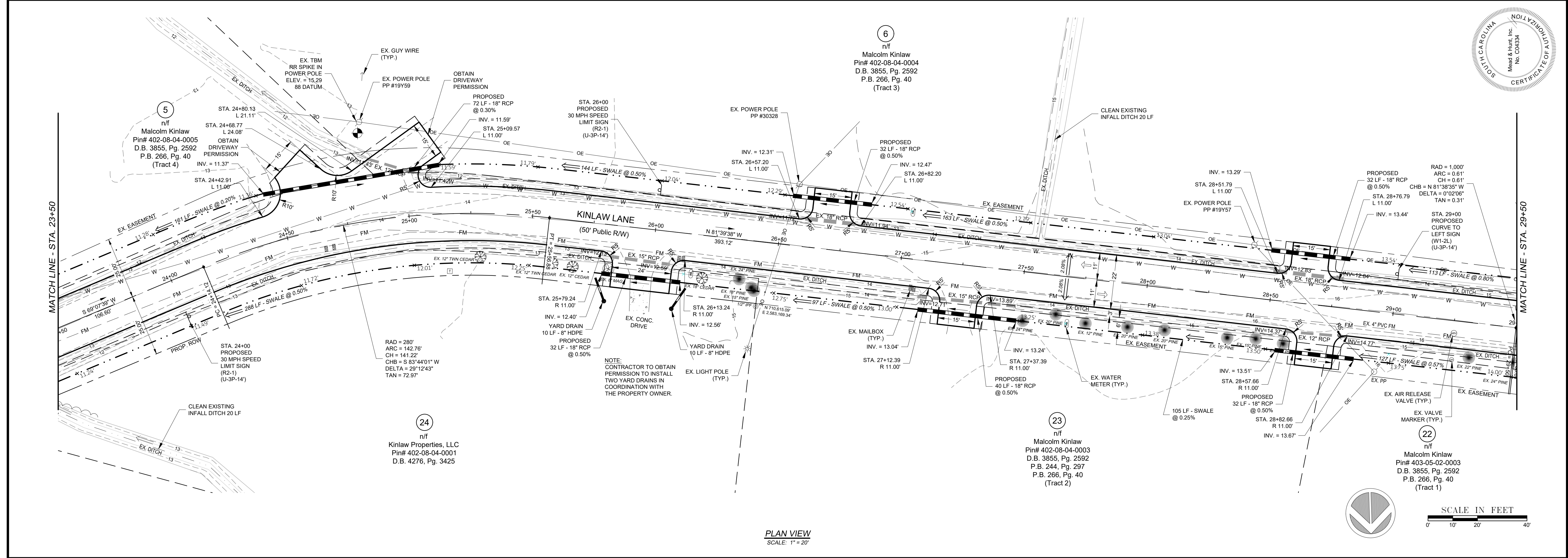


PLAN VIEW
SCALE: 1"=20'

- NOTES:**
- ALL EXISTING WATER METERS, CATV, PHONE AND POWER UTILITIES IN ROAD EASEMENT SHALL BE RELOCATED BY THE UTILITY COMPANY AT NO COST TO THE CONTRACTOR.
 - CONTRACTOR IS RESPONSIBLE FOR RELOCATING EXISTING MAIL BOXES AS NECESSARY.
 - CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL TREES LOCATED IN ROAD EASEMENT, UNLESS OTHERWISE NOTED ON THE PLANS AND IF A TREE REMOVAL IS IN QUESTION, IT SHOULD BE DONE AT THE DISCRETION OF THE RCE COORDINATION WITH THE RCE BEFORE THE CLEARING PROCESS STARTS IS REQUIRED.
 - SEE GENERAL NOTES, LEGEND AND SHEET SCHEDULE, SHEET 2 FOR EROSION CONTROL LEGEND AND SEEDING SCHEDULE.
 - ALL DRIVEWAYS TO BE PAVED A MINIMUM WIDTH OF 15' AND A RADII OF 5' UNLESS OTHERWISE NOTED.
 - USE TEMPORARY EROSION CONTROL BLANKET (CLASS B) AS NEEDED TO STABILIZE THE DITCH BANKS.
 - THE CONTRACTOR IS TO COORDINATE WITH THE EXISTING UTILITIES ON RAISING AND LEVELING THEIR EXISTING INFRASTRUCTURE THAT IS LOCATED WITHIN THE ROADWAY RIGHT OF WAY, WATER AND SEWER VALVE COVERS, AIR RELEASE VALVES AND BOXES, ETC.
 - CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL EXISTING PIPES WITHIN THE LIMITS OF CONSTRUCTION UNLESS INSTRUCTED OTHERWISE BY THE DESIGN ENGINEER.



ROADWAY PROFILE
SCALE:
HORIZONTAL: 1"=20'
VERTICAL: 1"=5'



Mead & Hunt
333 WELLNESS DRIVE
MYRTLE BEACH, SC 29579
Phone: (843) 839-1490

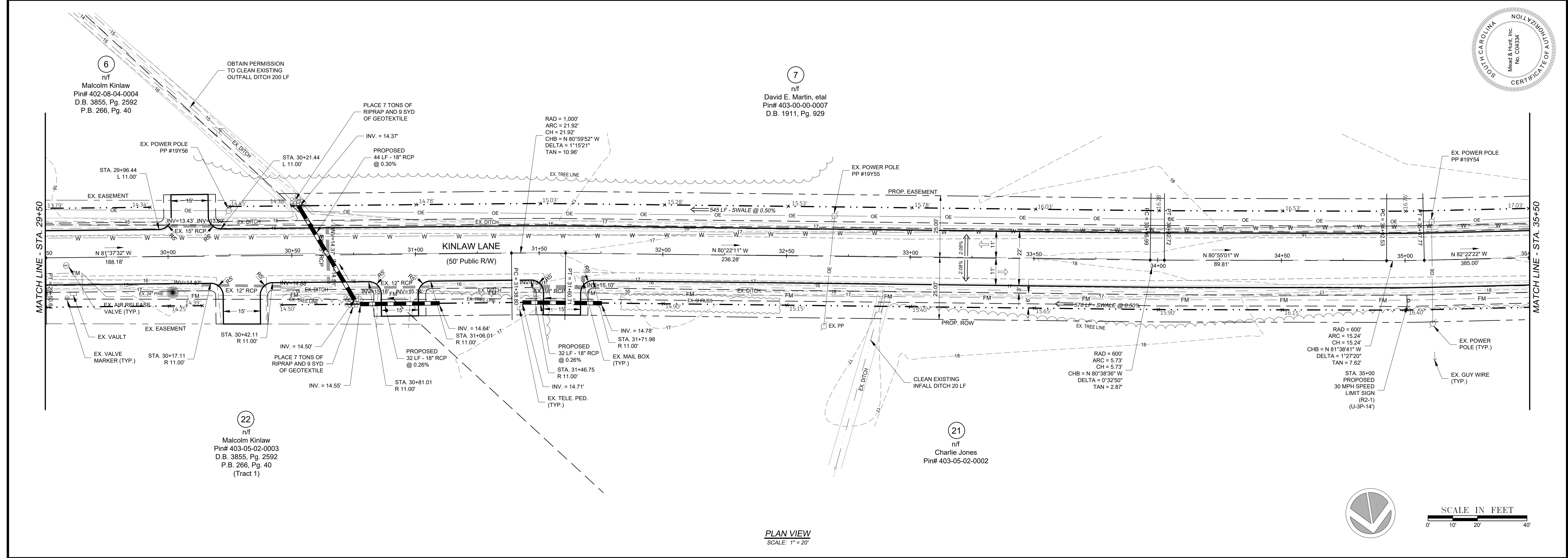
NO.	DATE	REVISION DESCRIPTION	BY
3	7-13-22	REVISED PER MEAD & HUNT REVIEW.	PES
2	5-23-22	REVISED PER MEAD & HUNT REVIEW.	PES

NOTIFICATION IS HEREBY GIVEN THAT THIS DOCUMENT IS THE PROPERTY OF MEAD & HUNT ENGINEERS, INC. AND ALL RIGHTS WITH REGARD TO COPYRIGHTS ARE RESERVED AS OF THE DATE OF THIS DOCUMENT. THIS IS A PRELIMINARY DESIGN AND SHOULD NOT BE USED FOR CONSTRUCTION.

PLAN AND PROFILE
KINLAW LANE
HORRY COUNTY ROADS - RIDE 3 - GROUP 2
HORRY COUNTY, SOUTH CAROLINA

PREPARED FOR: HORRY COUNTY

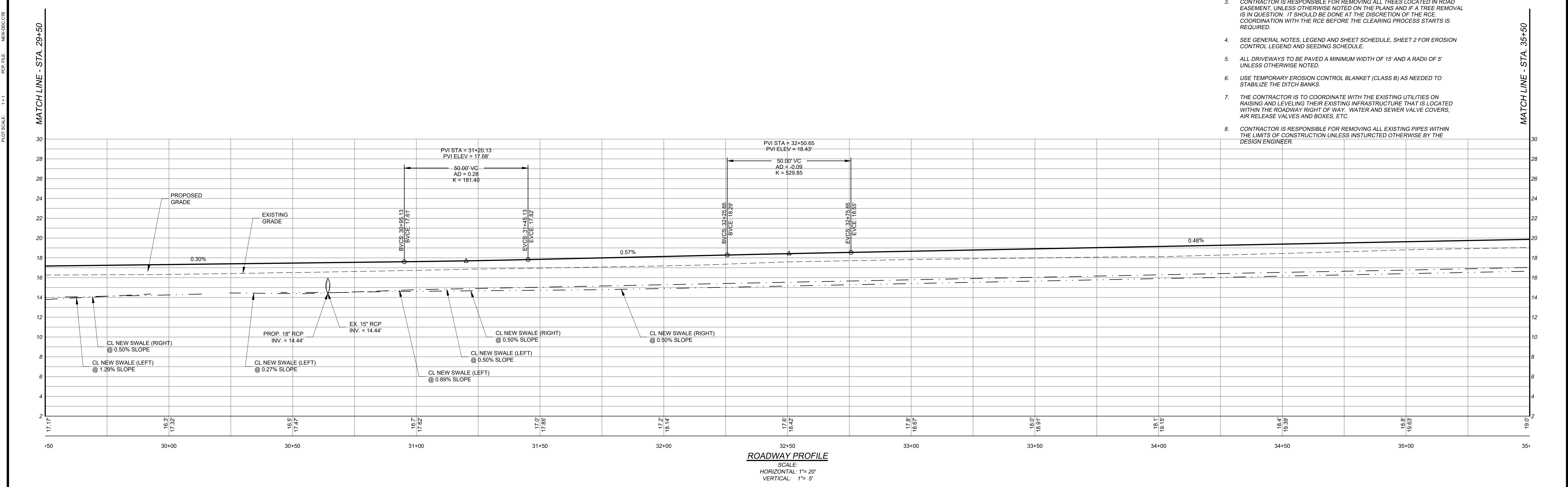
SCALE: H: 1" = 20' V: 1" = 5'
DATE: 6-13-21
DESIGNED BY: EKS
DRAWN BY: PES
APPROV. BY: EKS
PROJECT NO.: 20087E
11
FILE NO.: 20087E



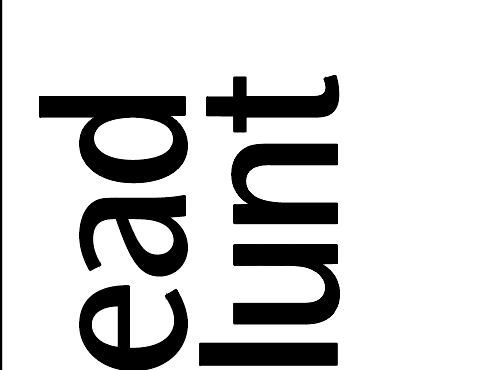
PLAN VIEW
SCALE: 1" = 20'



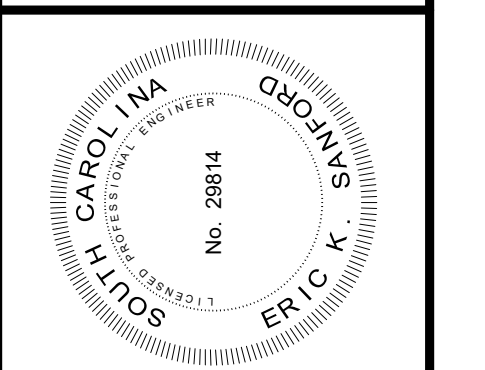
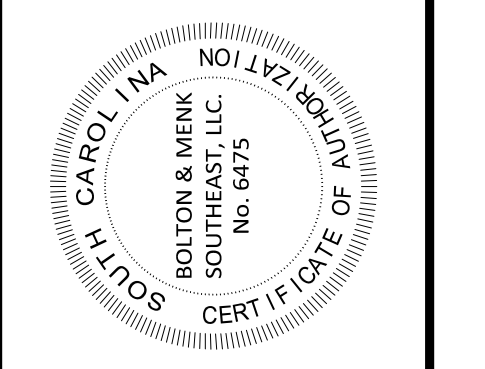
- NOTES:
- ALL EXISTING WATER METERS, CATV, PHONE AND POWER UTILITIES IN ROAD EASEMENT SHALL BE RELOCATED BY THE UTILITY COMPANY AT NO COST TO THE CONTRACTOR.
 - CONTRACTOR IS RESPONSIBLE FOR RELOCATING EXISTING MAIL BOXES AS NECESSARY.
 - CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL TREES LOCATED IN ROAD EASEMENT, UNLESS OTHERWISE NOTED ON THE PLANS AND IF A TREE REMOVAL IS IN QUESTION, IT SHOULD BE DONE AT THE DISCRETION OF THE RCE COORDINATION WITH THE RCE BEFORE THE CLEARING PROCESS STARTS IS REQUIRED.
 - SEE GENERAL NOTES, LEGEND AND SHEET SCHEDULE, SHEET 2 FOR EROSION CONTROL LEGEND AND SEEDING SCHEDULE.
 - ALL DRIVEWAYS TO BE PAVED A MINIMUM WIDTH OF 15' AND A RADII OF 5' UNLESS OTHERWISE NOTED.
 - USE TEMPORARY EROSION CONTROL BLANKET (CLASS B) AS NEEDED TO STABILIZE THE DITCH BANKS.
 - THE CONTRACTOR IS TO COORDINATE WITH THE EXISTING UTILITIES ON RAISING AND LEVELING THEIR EXISTING INFRASTRUCTURE THAT IS LOCATED WITHIN THE ROADWAY RIGHT OF WAY, WATER AND SEWER VALVE COVERS, AIR RELEASE VALVES AND BOXES, ETC.
 - CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL EXISTING PIPES WITHIN THE LIMITS OF CONSTRUCTION UNLESS INSTRICTED OTHERWISE BY THE DESIGN ENGINEER.



ROADWAY PROFILE
SCALE: HORIZONTAL: 1" = 20'
VERTICAL: 1" = 5'



Mead & Hunt
333 WELLNESS DRIVE
MYRTLE BEACH, SC 29579
Phone: (843) 839-1490



NO.	DATE	REVISION DESCRIPTION	BY
3	7-13-22	REVISED PER MEAD & HUNT REVIEW.	PES
2	5-23-22	REVISED PER MEAD & HUNT REVIEW.	PES
1	3-25-22	REVISED PER HORRY COUNTY REVIEW.	PES

NOTIFICATION IS HEREBY GIVEN THAT THIS DOCUMENT IS THE PROPERTY OF EDC ENGINEERS, INC. AND ALL RIGHTS WITH REGARD TO COPYRIGHTS ARE RESERVED AS OF THE DATE OF THIS DOCUMENT. THIS IS UNAUTHORIZED FOR REPRODUCTION, REVISIONS, AND/OR REUSE.

PLAN AND PROFILE
KINLAW LANE
HORRY COUNTY ROADS - RIDE 3 - GROUP 2
HORRY COUNTY, SOUTH CAROLINA

PREPARED FOR: HORRY COUNTY

SCALE: H: 1" = 20'
V: 1" = 5'

DATE: 6-13-21

DESIGNED BY: EKS

DRAWN BY: PES

APPROV. BY: EKS

PROJECT NO.: 20087E

12

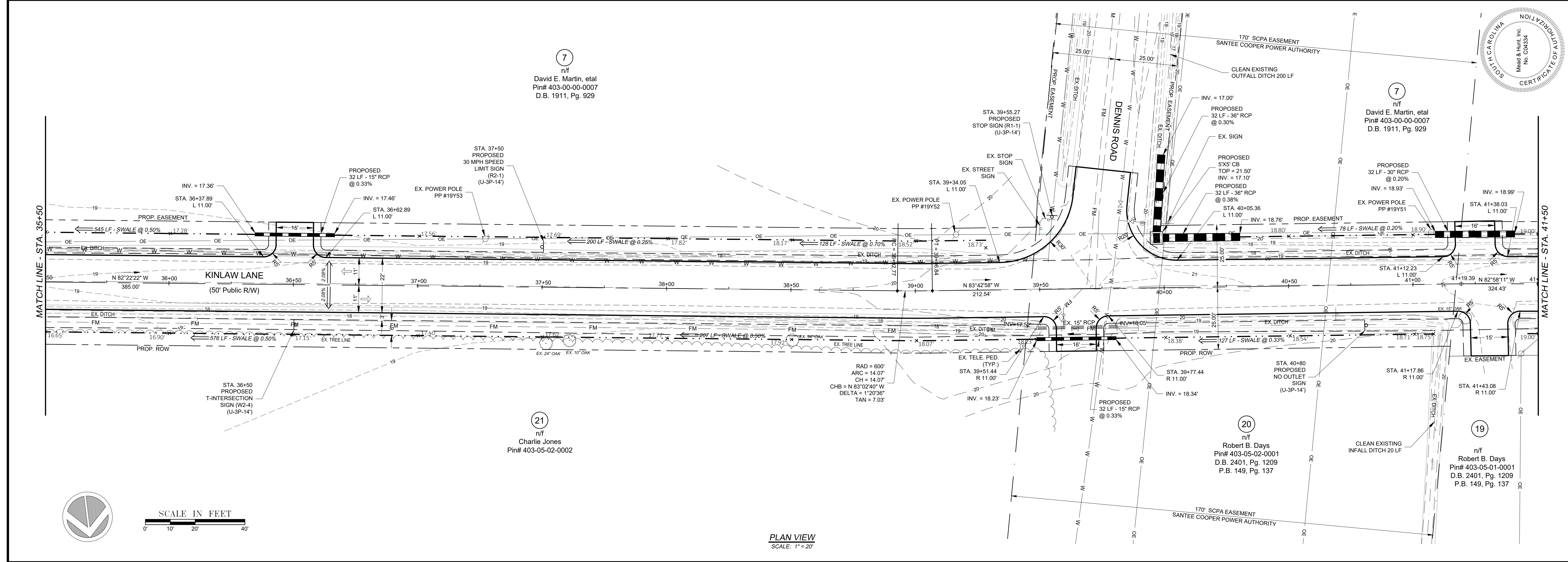
FILE NO.: 20087E

NO.	DATE	REVISION DESCRIPTION	BY
3	7-13-22	REVISED PER MEAD & HUNT REVIEW.	PES
2	5-23-22	REVISED PER MEAD & HUNT REVIEW.	PES
1	3-25-22	REVISED PER Horry COUNTY REVIEW.	PES

PLAN AND PROFILE
KINLAW LANE
HORRY COUNTY ROADS - RIDE 3 - GROUP 2
HORRY COUNTY, SOUTH CAROLINA

PREPARED FOR: HORRY COUNTY

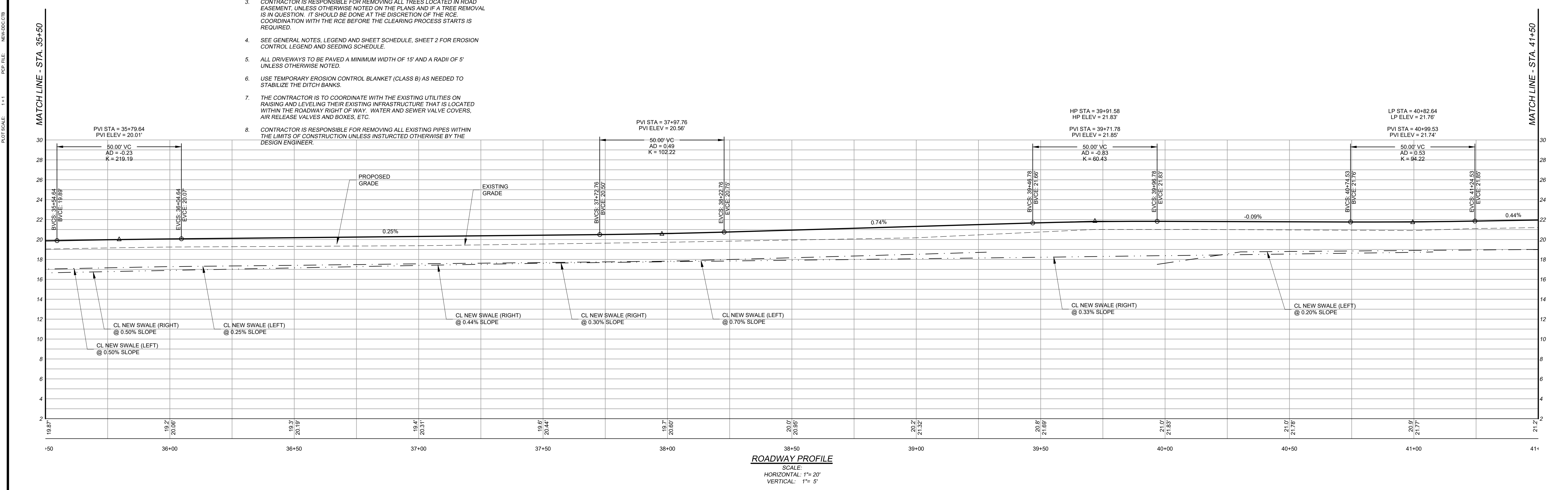
SCALE:	H: 1"=20'
DATE:	5-13-21
DESIGNED BY:	EKS
DRAWN BY:	PES
APPROV. BY:	EKS
PROJECT NO.:	20087E
13	
FILE NO.:	20087E



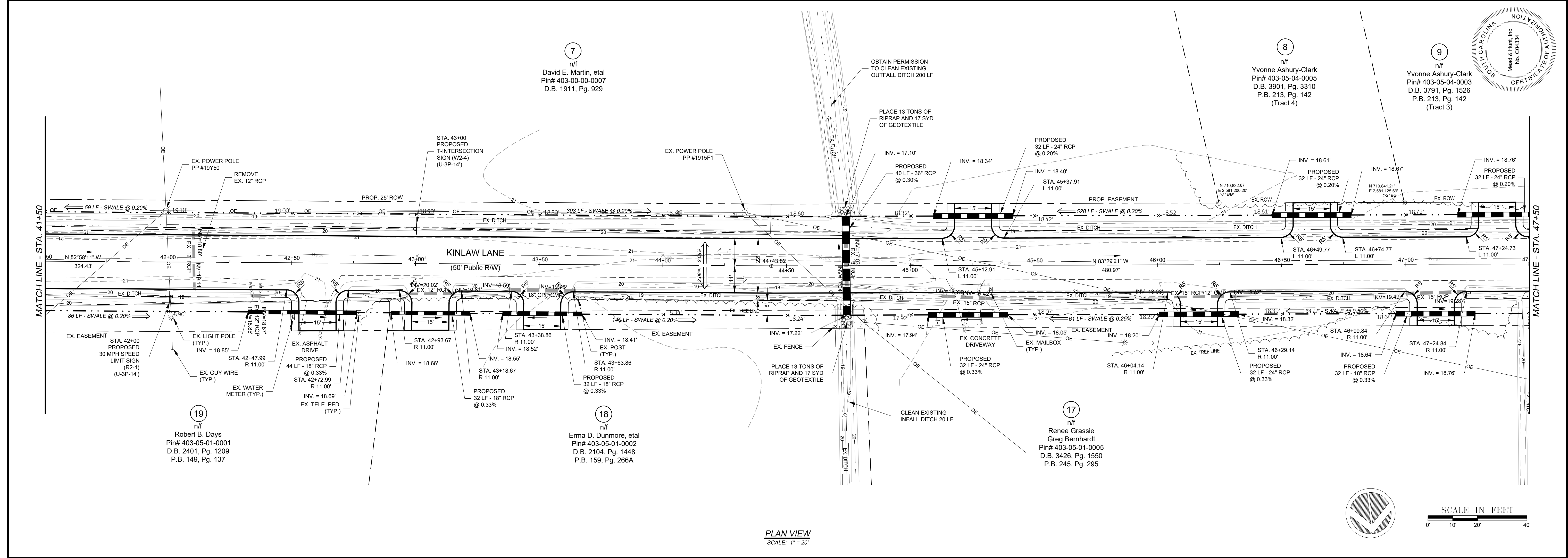
PLAN VIEW
SCALE: 1" = 20'

NOTES:

- ALL EXISTING WATER METERS, CATV, PHONE AND POWER UTILITIES IN ROAD EASEMENT SHALL BE RELOCATED BY THE UTILITY COMPANY AT NO COST TO THE CONTRACTOR.
- CONTRACTOR IS RESPONSIBLE FOR RELOCATING EXISTING MAIL BOXES AS NECESSARY.
- CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL TREES LOCATED IN ROAD EASEMENT, UNLESS OTHERWISE NOTED ON THE PLANS AND IF A TREE REMOVAL IS IN QUESTION, IT SHOULD BE DONE AT THE DISCRETION OF THE RCE. COORDINATION WITH THE RCE BEFORE THE CLEARING PROCESS STARTS IS REQUIRED.
- SEE GENERAL NOTES, LEGEND AND SHEET SCHEDULE, SHEET 2 FOR EROSION CONTROL LEGEND AND SEEDING SCHEDULE.
- ALL DRIVEWAYS TO BE PAVED A MINIMUM WIDTH OF 15' AND A RADII OF 5' UNLESS OTHERWISE NOTED.
- USE TEMPORARY EROSION CONTROL BLANKET (CLASS B) AS NEEDED TO STABILIZE THE DITCH BANKS.
- THE CONTRACTOR IS TO COORDINATE WITH THE EXISTING UTILITIES ON RAISING AND LEVELING THEIR EXISTING INFRASTRUCTURE THAT IS LOCATED WITHIN THE ROADWAY RIGHT OF WAY, WATER AND SEWER VALVE COVERS, AIR RELEASE VALVES AND BOXES, ETC.
- CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL EXISTING PIPES WITHIN THE LIMITS OF CONSTRUCTION UNLESS INSTRUCTED OTHERWISE BY THE DESIGN ENGINEER.



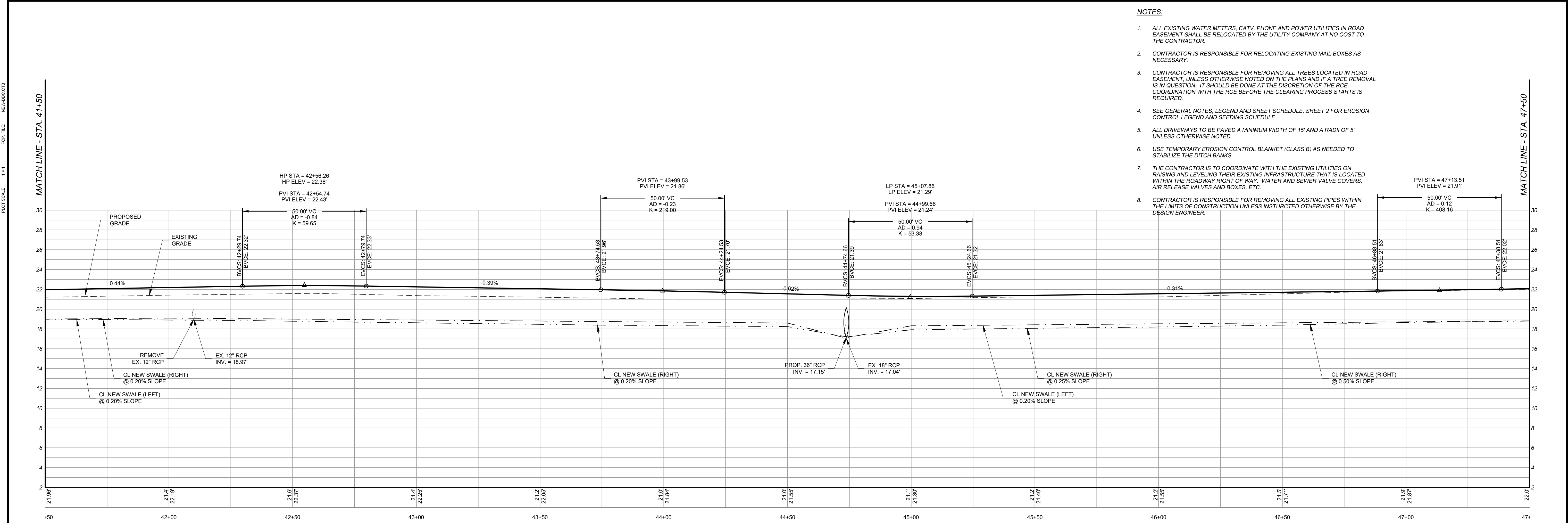
ROADWAY PROFILE
SCALE: HORIZONTAL: 1" = 20'
VERTICAL: 1" = 5'



PLAN VIEW
SCALE: 1" = 20'

NOTES:

- ALL EXISTING WATER METERS, CATV, PHONE AND POWER UTILITIES IN ROAD EASEMENT SHALL BE RELOCATED BY THE UTILITY COMPANY AT NO COST TO THE CONTRACTOR.
- CONTRACTOR IS RESPONSIBLE FOR RELOCATING EXISTING MAIL BOXES AS NECESSARY.
- CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL TREES LOCATED IN ROAD EASEMENT, UNLESS OTHERWISE NOTED ON THE PLANS AND IF A TREE REMOVAL IS IN QUESTION, IT SHOULD BE DONE AT THE DISCRETION OF THE RCE. COORDINATION WITH THE RCE BEFORE THE CLEARING PROCESS STARTS IS REQUIRED.
- SEE GENERAL NOTES, LEGEND AND SHEET SCHEDULE, SHEET 2 FOR EROSION CONTROL LEGEND AND SEEDING SCHEDULE.
- ALL DRIVEWAYS TO BE PAVED A MINIMUM WIDTH OF 15' AND A RADIUS OF 5' UNLESS OTHERWISE NOTED.
- USE TEMPORARY EROSION CONTROL BLANKET (CLASS B) AS NEEDED TO STABILIZE THE DITCH BANKS.
- THE CONTRACTOR IS TO COORDINATE WITH THE EXISTING UTILITIES ON RAISING AND LEVELING THEIR EXISTING INFRASTRUCTURE THAT IS LOCATED WITHIN THE ROADWAY RIGHT OF WAY, WATER AND SEWER VALVE COVERS, AIR RELEASE VALVES AND BOXES, ETC.
- CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL EXISTING PIPES WITHIN THE LIMITS OF CONSTRUCTION UNLESS INSTRUCTED OTHERWISE BY THE DESIGN ENGINEER.



ROADWAY PROFILE
SCALE: HORIZONTAL: 1" = 20'
VERTICAL: 1" = 5'

Mead & Hunt
333 WELLNESS DRIVE
MYRTLE BEACH, SC 29579
Phone: (843) 839-1490

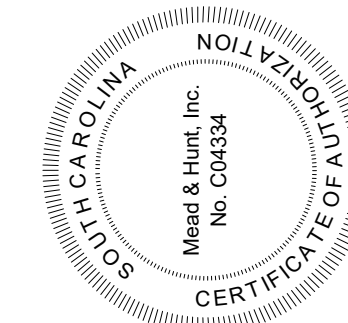
CERTIFIED PROFESSIONAL ENGINEER
CAROLINA
ROBERT B. DAYS
No. 6475

CERTIFIED PROFESSIONAL ENGINEER
CAROLINA
ERIK K. ERICSON
No. 2384

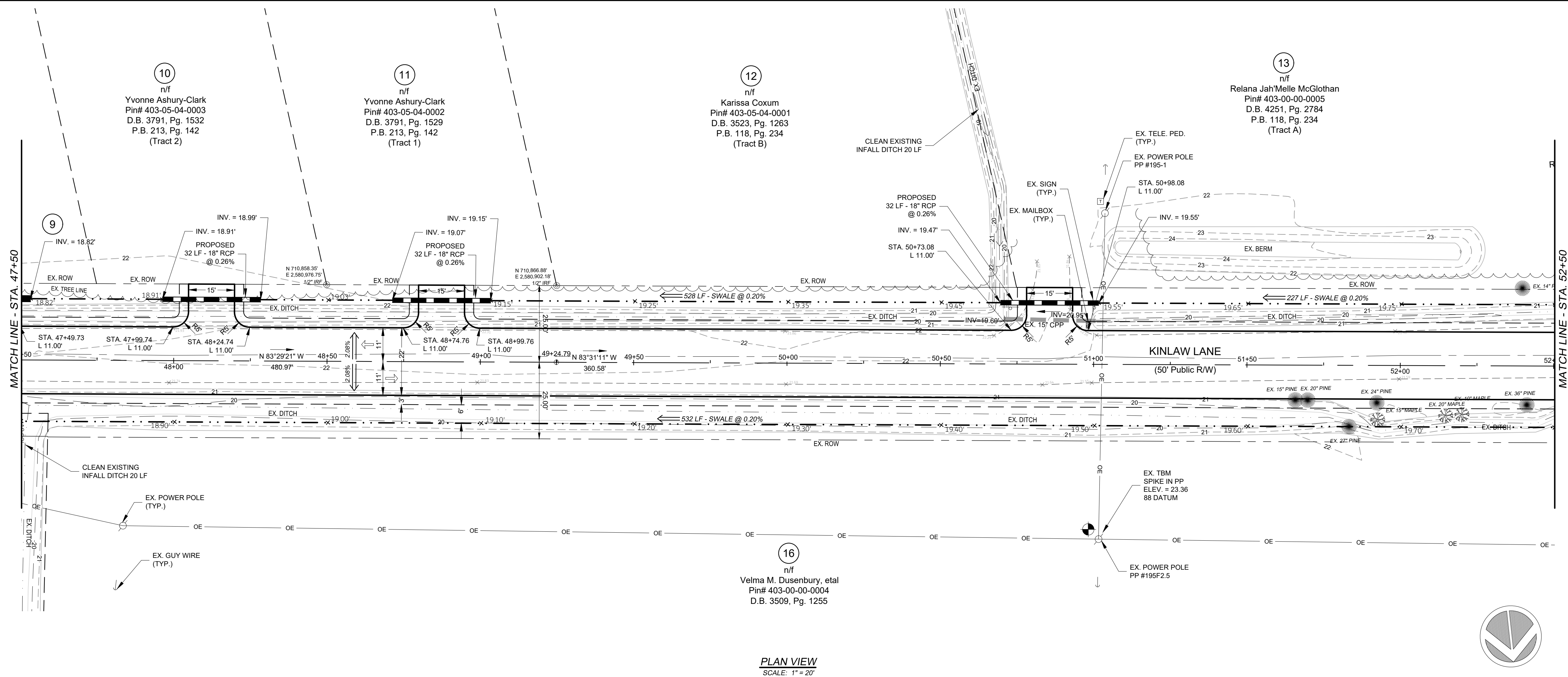
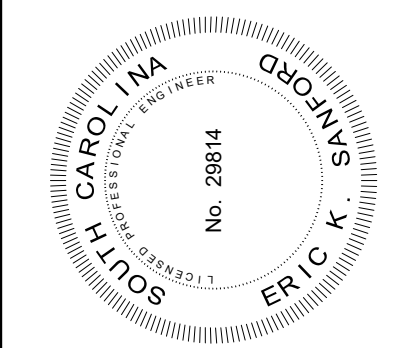
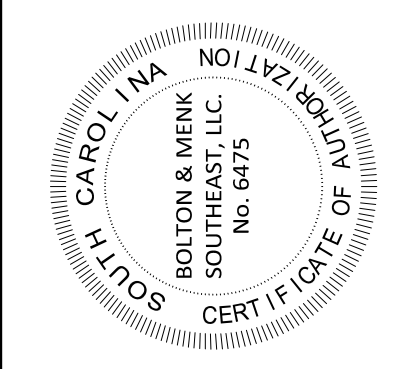
NO.	DATE	REVISION DESCRIPTION	BY
3	7-13-22	REVISED PER MEAD & HUNT REVIEW.	PES
2	5-23-22	REVISED PER MEAD & HUNT REVIEW.	PES
1	3-25-22	REVISED PER HORRY COUNTY REVIEW.	PES

PLAN AND PROFILE
KINLAW LANE
HORRY COUNTY ROADS - RIDE 3 - GROUP 2
HORRY COUNTY, SOUTH CAROLINA
PREPARED FOR: HORRY COUNTY

SCALE:	H: 1" = 20'
DATE:	6-13-21
DESIGNED BY:	EKS
DRAWN BY:	PES
APPROV. BY:	EKS
PROJECT NO.:	20087E
FILE NO.:	20087E



Mead & Hunt
333 WELLNESS DRIVE
MYRTLE BEACH, SC 29579
Phone: (843) 839-1490



PLAN VIEW
SCALE: 1" = 20'

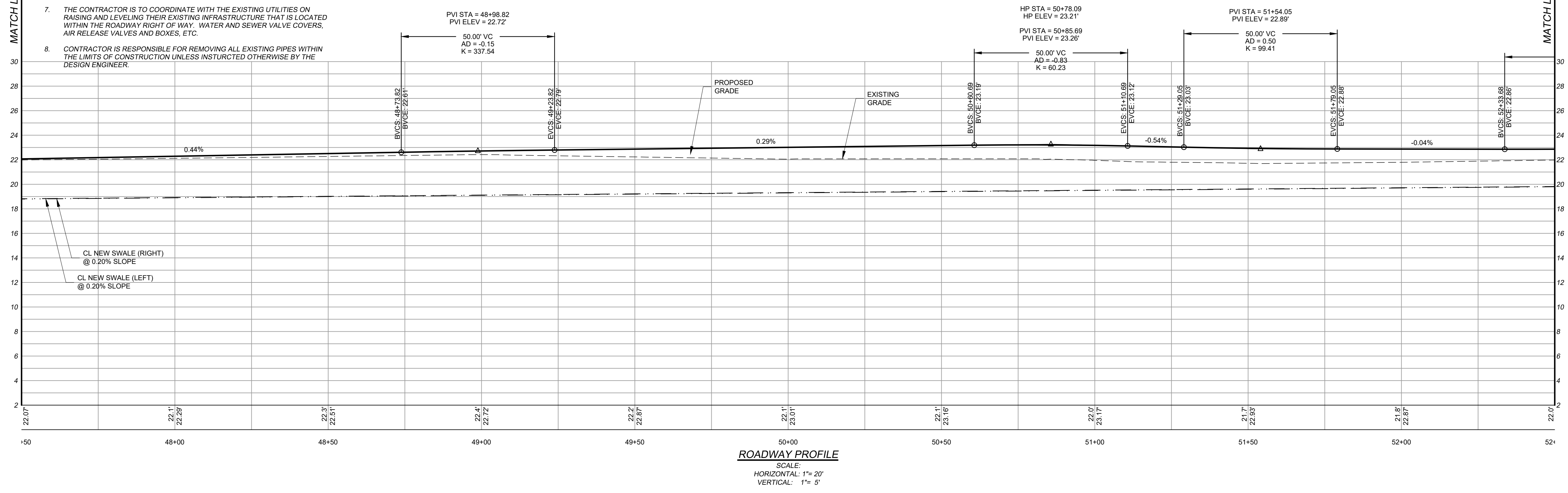


NOTES:

- ALL EXISTING WATER METERS, CATV, PHONE AND POWER UTILITIES IN ROAD EASEMENT SHALL BE RELOCATED BY THE UTILITY COMPANY AT NO COST TO THE CONTRACTOR.
- CONTRACTOR IS RESPONSIBLE FOR RELOCATING EXISTING MAIL BOXES AS NECESSARY.
- CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL TREES LOCATED IN ROAD EASEMENT, UNLESS OTHERWISE NOTED ON THE PLANS AND IF A TREE REMOVAL IS IN QUESTION, IT SHOULD BE DONE AT THE DISCRETION OF THE RCE. COORDINATION WITH THE RCE BEFORE THE CLEARING PROCESS STARTS IS REQUIRED.
- SEE GENERAL NOTES, LEGEND AND SHEET SCHEDULE, SHEET 2 FOR EROSION CONTROL LEGEND AND SEEDING SCHEDULE.
- ALL DRIVEWAYS TO BE PAVED A MINIMUM WIDTH OF 15' AND A RADI OF 5' UNLESS OTHERWISE NOTED.
- USE TEMPORARY EROSION CONTROL BLANKET (CLASS B) AS NEEDED TO STABILIZE THE DITCH BANKS.
- THE CONTRACTOR IS TO COORDINATE WITH THE EXISTING UTILITIES ON RAISING AND LEVELING THEIR EXISTING INFRASTRUCTURE THAT IS LOCATED WITHIN THE ROADWAY RIGHT OF WAY, WATER AND SEWER VALVE COVERS, AIR RELEASE VALVES AND BOXES, ETC.
- CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL EXISTING PIPES WITHIN THE LIMITS OF CONSTRUCTION UNLESS INSTRUCTED OTHERWISE BY THE DESIGN ENGINEER.

MATCH LINE - STA. 47+50

MATCH LINE - STA. 52+50



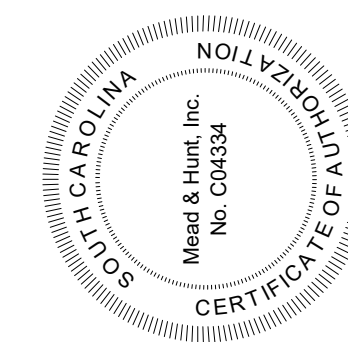
ROADWAY PROFILE
SCALE:
HORIZONTAL: 1" = 20'
VERTICAL: 1" = 5'

NO.	DATE	REVISION DESCRIPTION	BY
3	7-13-22	REVISED PER MEAD & HUNT REVIEW.	PES
2	5-23-22	REVISED PER MEAD & HUNT REVIEW.	PES

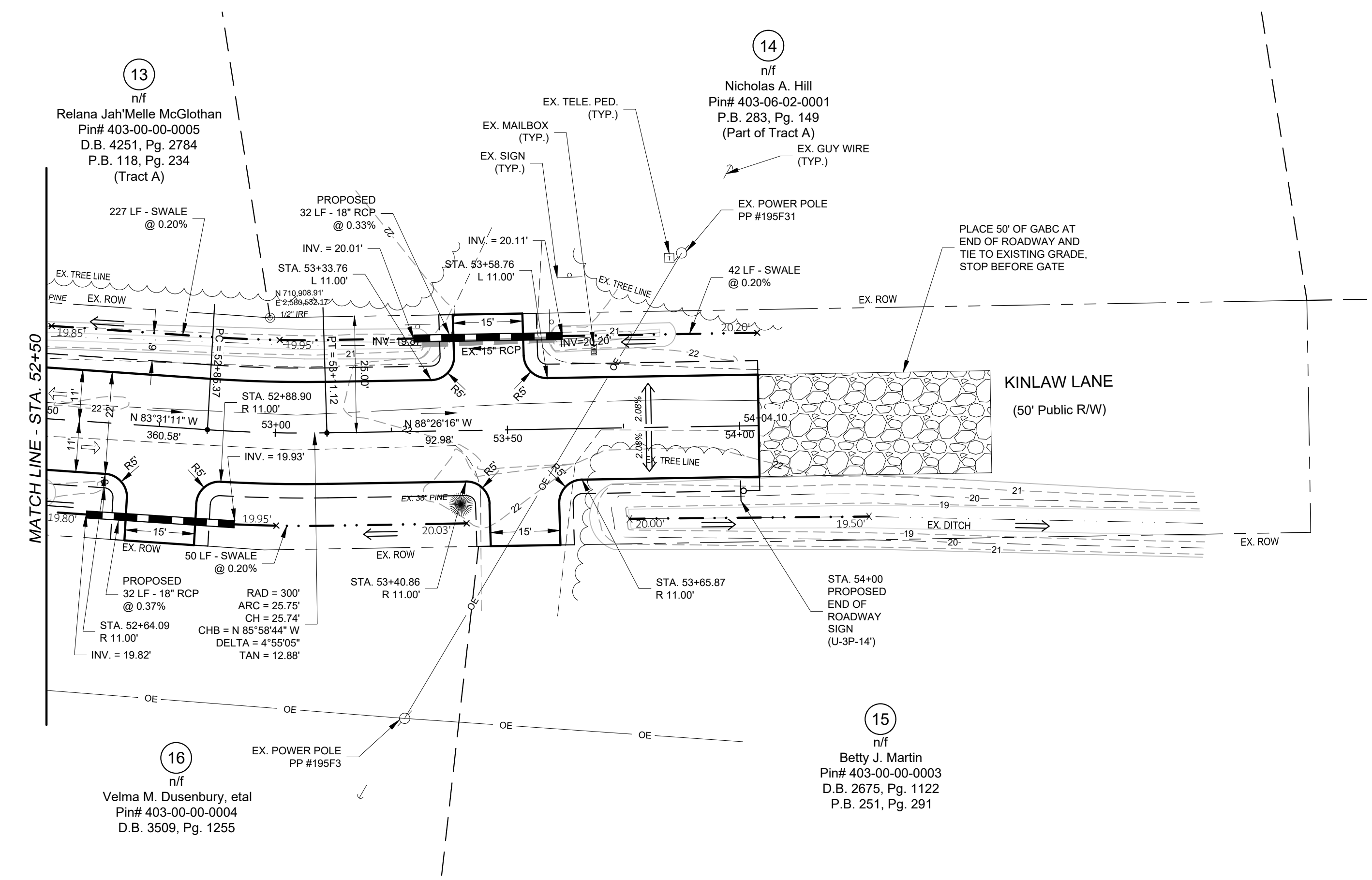
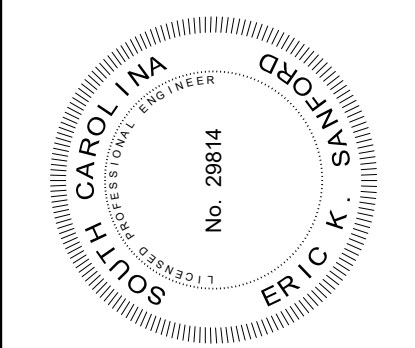
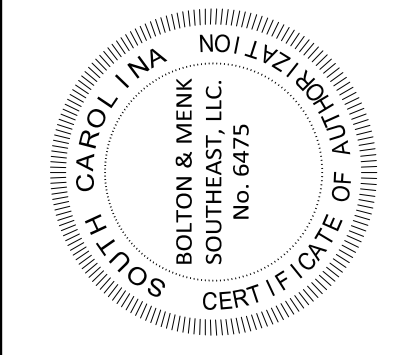
PLAN AND PROFILE
KINLAW LANE
HORRY COUNTY ROADS - RIDE 3 - GROUP 2
HORRY COUNTY, SOUTH CAROLINA
PREPARED FOR: HORRY COUNTY

SCALE:	H: 1" = 20' V: 1" = 5'
DATE:	6-13-21
DESIGNED BY:	EKS
DRAWN BY:	PES
APPROV. BY:	EKS
PROJECT NO.:	20087E
15	
FILE NO.:	20087E

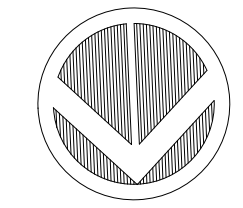
RCP SCALE: 1" = 1'



Mead & Hunt
333 WELLNESS DRIVE
MYRTLE BEACH, SC 29579
Phone: (843) 839-1490



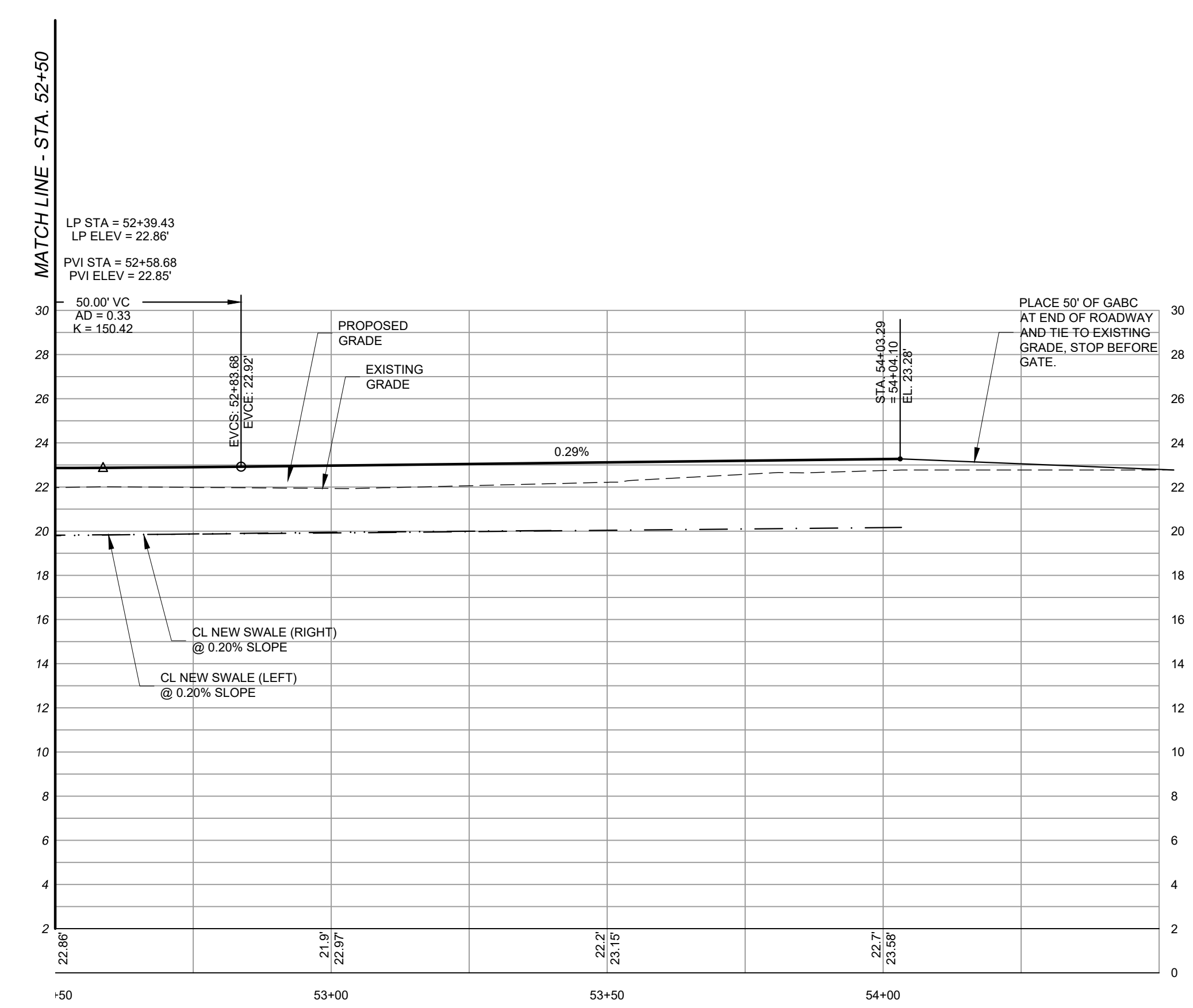
PLAN VIEW
SCALE: 1" = 20'



SCALE IN FEET
0 10 20 40

NOTES:

- ALL EXISTING WATER METERS, CATV, PHONE AND POWER UTILITIES IN ROAD EASEMENT SHALL BE RELOCATED BY THE UTILITY COMPANY AT NO COST TO THE CONTRACTOR.
- CONTRACTOR IS RESPONSIBLE FOR RELOCATING EXISTING MAIL BOXES AS NECESSARY.
- CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL TREES LOCATED IN ROAD EASEMENT, UNLESS OTHERWISE NOTED ON THE PLANS AND IF A TREE REMOVAL IS IN QUESTION, IT SHOULD BE DONE AT THE DISCRETION OF THE RCE. COORDINATION WITH THE RCE BEFORE THE CLEARING PROCESS STARTS IS REQUIRED.
- SEE GENERAL NOTES, LEGEND AND SHEET SCHEDULE, SHEET 2 FOR EROSION CONTROL LEGEND AND SEEDING SCHEDULE.
- ALL DRIVEWAYS TO BE PAVED A MINIMUM WIDTH OF 15' AND A RADII OF 5' UNLESS OTHERWISE NOTED.
- USE TEMPORARY EROSION CONTROL BLANKET (CLASS B) AS NEEDED TO STABILIZE THE DITCH BANKS.
- THE CONTRACTOR IS TO COORDINATE WITH THE EXISTING UTILITIES ON RAISING AND LEVELING THEIR EXISTING INFRASTRUCTURE THAT IS LOCATED WITHIN THE ROADWAY RIGHT OF WAY, WATER AND SEWER VALVE COVERS, AIR RELEASE VALVES AND BOXES, ETC.
- CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL EXISTING PIPES WITHIN THE LIMITS OF CONSTRUCTION UNLESS INSTRUCTED OTHERWISE BY THE DESIGN ENGINEER.



ROADWAY PROFILE
SCALE:
HORIZONTAL: 1" = 20'
VERTICAL: 1" = 5'

NO.	DATE	REVISION DESCRIPTION	BY
3	7-13-22	REVISED PER MEAD & HUNT REVIEW.	PES
2	5-23-22	REVISED PER MEAD & HUNT REVIEW.	PES

PLAN AND PROFILE
KINLAW LANE
HORRY COUNTY ROADS - RIDE 3 - GROUP 2
HORRY COUNTY, SOUTH CAROLINA
PREPARED FOR: HORRY COUNTY

SCALE:	H: 1" = 20' V: 1" = 5'
DATE:	6-13-21
DESIGNED BY:	EKS
DRAWN BY:	PES
APPROV. BY:	EKS
PROJECT NO.:	20087E
16	
FILE NO.:	20087E

Staff Provided Information

- City's Flood Damage Prevention Ord.
- City of Conway Future Land Use Map
 - Horry County Future Land Use Map
- Excerpts from County's Imagine 2040 Comp Plan
 - Excerpts from City's Pathway's & Trails Plan
- Screenshot of FEMA flood map for this property
- Horry County Schools capacity (updated April 2023)
- Map showing developments under review adj. to subject property
- Maps showing properties in area that have been rezoned to a different zoning / land use than specified on County Future Land Use Map
- Dominion Energy – South Conway Phase 3 pipeline project

AND Public Input Received since July 13 PC mtg.

CHAPTER 2 - Flood Damage Prevention

Footnotes:

--- (1) ---

Editor's note— *Ord. No. 2021-12-06(A), adopted Dec. 6, 2021, amended Ch. 2 in its entirety to read as herein set out.*

Former Ch. 2, §§ 5-2-1—5-2-24, pertained to similar subject matter, and derived from Ord. No. 2017-05-15(B), adopted May 15, 2017; and Ord. No. 2020-06-01(C), adopted June 1, 2020.

ARTICLE A - General Standards

Sec. 5-2-1 - Statutory authorization.

The legislature of the State of South Carolina has in S.C. Code Title 5 and Title 6, and amendments thereto, delegated the responsibility to local governmental units to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry. Therefore, the City of Conway, South Carolina does ordain as follows.

(Ord. No. 2021-12-06(A), 12/6/21)

Sec. 5-2-2 - Findings of fact.

The special flood hazard areas of the City of Conway are subject to periodic inundation which results in loss of life, property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures of flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety, and general welfare.

Furthermore, these flood losses are caused by the cumulative effect of obstructions in floodplains causing increases in flood heights and velocities, and by the occupancy in flood hazard areas by uses vulnerable to floods or hazardous to other lands which are inadequately elevated, floodproofed, or otherwise unprotected from flood damages.

(Ord. No. 2021-12-06(A), 12/6/21)

Sec. 5-2-3 - Statement of purpose.

It is the purpose of this chapter to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:

- (1) restrict or prohibit uses which are dangerous to health, safety and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities;

- (2) require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
- (3) control the alteration of natural floodplains, stream channels, and natural protective barriers which are involved in the accommodation of floodwaters;
- (4) control filling, grading, dredging and other development which may increase erosion or flood damage; and
- (5) prevent or regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards to other lands.

(Ord. No. 2021-12-06(A), 12/6/21)

Sec. 5-2-4 - Objectives.

The objectives of this chapter are:

- (1) to protect human life and health;
- (2) to minimize expenditure of public money for costly flood control projects;
- (3) to minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
- (4) to minimize prolonged business interruptions;
- (5) to minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets and bridges located in floodplains;
- (6) to help maintain a stable tax base by providing for the sound use and development of floodprone areas in such a manner as to minimize flood blight areas; and
- (7) to ensure that potential home buyers are notified that property is in a flood area.

(Ord. No. 2021-12-06(A), 12/6/21)

Sec. 5-2-5 - Definitions.

Unless specifically defined below, words or phrases used in this chapter shall be interpreted so as to give them the meaning they have in common usage and to give this chapter its most reasonable application.

- (1) Accessory structure means a structure that is located on the same parcel of property as the principal structure and the use of which is incidental to the use of the principal structure. Accessory structures should constitute a minimal investment, may not be used for human habitation, and be designed to have minimal flood damage potential.
- (2) Addition (to an existing building) means an extension or increase in the floor area or height of a building or structure. Additions to existing buildings shall comply with the requirements for new construction regardless as to whether the addition is a substantial improvement or not.

Where a firewall or load-bearing wall is provided between the addition and the existing building, the addition(s) shall be considered a separate building and must comply with the standards for new construction.

- (3) Agricultural structure [means] a structure used solely for agricultural purposes in which the use is exclusively in connection with the production, harvesting, storage, drying, or raising of agricultural commodities, including the raising of livestock. Agricultural structures are not exempt from the provisions of this chapter.
- (4) Appeal means a request for a review of the local floodplain administrator's interpretation of any provision of this chapter.
- (5) Area of shallow flooding means a designated AO or VO zone on a community's flood insurance rate map (FIRM) with base flood depths of one (1) to three (3) feet where a clearly defined channel does not exist, where the path of flooding is unpredictable and indeterminate, and where velocity flow may be evident.
- (6) Area of special flood hazard means the land in the floodplain within the jurisdiction of City of Conway subject to a one-percent or greater chance of being equaled or exceeded in any given year, as identified on the official FEMA flood maps.
- (7) Base flood [means] the flood having a one-percent chance of being equaled or exceeded in any given year.
- (8) Basement means any enclosed area of a building that is below grade on all sides.
- (9) Building. See "Structure."
- (10) Reserved.
- (11) Critical development means a structure or other improvement that is critical to the community's public health and safety, is essential to the orderly functioning of a community, store or produce highly volatile, toxic or water-reactive materials, or house occupants that may be insufficiently mobile to avoid loss of life or injury. Examples of critical development include jails, hospitals, schools, fire stations, nursing homes, wastewater treatment facilities, water plants, and gas/oil/propane storage facilities.
- (12) Development means any manmade change to improved or unimproved real estate, including, but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavating or drilling operations, or storage of materials.
- (13) Elevated building means a non-basement building built to have the lowest floor elevated above the ground level by means of solid foundation perimeter walls, pilings, columns, piers, or shear walls parallel to the flow of water.
- (14) Executive Order 11988 (Floodplain Management) issued by Presidents Carter in 1977, this order requires that no federally assisted activities be conducted in or have the potential to

affect identifies special flood hazard areas, unless there is no practicable alternative.

- (15) Existing construction means, for the purposes of determining rates, structures for which the start of construction commenced before August 19, 2019.
- (16) Existing manufactured home park or manufactured home subdivision means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed before August 27, 1979.
- (17) Expansion to an existing manufactured home park or subdivision means the preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete slabs).
- (18) Federal Emergency Management Agency (FEMA) means an agency of the United States Department of Homeland Security. The agency's primary purpose is to coordinate the response to a disaster that has occurred in the United States and that overwhelms the resources of local and state authorities. The Mitigation Division within FEMA manages the National Flood Insurance Program and oversees the floodplain management and mapping components of the program.
- (19) Flood means a general and temporary condition of partial or complete inundation of normally dry land areas from the overflow of inland or tidal waters, or the unusual and rapid accumulation of runoff of surface waters from any source.
- (20) Flood hazard boundary map (FHBM) means an official map of a community, issued by FEMA, where the boundaries of the areas of special flood hazard have been defined as zone A.
- (21) Flood insurance rate map (FIRM) means an official map of a community, on which FEMA has delineated both the areas of special flood hazard and the risk premium zones applicable to the community.
- (22) Flood insurance study means the official report provided by FEMA which contains flood profiles, as well as the flood boundary floodway map and the water surface elevation of the base flood.
- (23) Flood-resistant material means any building material capable of withstanding direct and prolonged contact (minimum 72 hours) with floodwaters without sustaining damage that requires more than low-cost cosmetic repair. Any material that is water-soluble or is not resistant to alkali or acid in water, including normal adhesives for above-grade use, is not flood-resistant. Pressure-treated lumber or naturally decay-resistant lumbars are acceptable flooring materials. Sheet-type flooring coverings that restrict evaporation from below and materials that are impervious, but dimensionally unstable are not acceptable. Materials that

absorb or retain water excessively after submergence are not flood-resistant. Please refer to FEMA

Technical Bulletin 2, Flood Damage-Resistant Materials Requirements. Class 4 and 5 materials, referenced therein, are acceptable flood-resistant materials.

- (24) Floodway means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one (1) foot.
- (25) Floor means the top surface of an enclosed area in a building (including basement), i.e., top of slab in concrete slab construction or top of wood flooring in wood frame construction.
- (26) Freeboard means a factor of safety usually expressed in feet above a flood level for purposes of floodplain management. "Freeboard" tends to compensate for the many unknown factors that could contribute to flood heights greater than the height calculated for a selected size flood and floodway conditions, such as wave action, bridge openings, and the hydrological effect of urbanization of the watershed.
- (27) Functionally dependent use means a use which cannot perform its intended purpose unless it is located or carried out in close proximity to water. The term includes only docking facilities, port facilities that are necessary for the loading and unloading of cargo or passengers, and ship building and ship repair facilities, but does not include long-term storage or related manufacturing facilities.
- (28) Highest adjacent grade means the highest natural elevation of the ground surface, prior to construction, next to the proposed walls of the structure.
- (29) Historic structure means any structure that is:
 - a. Listed individually in the National Register of Historic Places (a listing maintained by the U.S. Department of the Interior [DOI]) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;
 - b. Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;
 - c. Individually listed on a state inventory of historic places;
 - d. Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified by an approved state program as determined by the Secretary of Interior, or directly by the Secretary of Interior in states without approved programs.

Some structures or districts listed on the state or local inventories MAY NOT be "historic" as cited above, but have been included on the inventories because it was believed that the structures or districts have the potential for meeting the "historic" structure criteria of the DOI. In order for these

structures to meet NFIP historic structure criteria, it must be demonstrated and evidenced that the South Carolina Department of Archives and History has individually determined that the structure or district meets DOI historic structure criteria.

- (30) Increased cost of compliance (ICC) applies to all new and renewed flood insurance policies effective on and after June 1, 1997. The NFIP shall enable the purchase of insurance to cover the cost of compliance with land use and control measures established under Section 1361. It provides coverage for the payment of a claim to help pay for the cost to comply with state or community floodplain management laws or ordinances after a flood event in which a building has been declared substantially or repetitively damaged.
- (31) Limited storage means an area used for storage and intended to be limited to incidental items that can withstand exposure to the elements and have low flood damage potential. Such an area must be of flood-resistant or breakaway material, void of utilities except for essential lighting and cannot be temperature controlled.
- (32) Lowest adjacent grade means an elevation of the lowest ground surface that touches any deck support, exterior walls of a building or proposed building walls.
- (33) Lowest floor means the lowest floor of the lowest enclosed area (including basement). An unfinished or flood-resistant enclosure, usable solely for parking of vehicles, building access or storage in an area other than a basement area is not considered a building's lowest floor; provided, that such enclosure is not built so as to render the structure in violation of other provisions of this chapter.
- (34) Manufactured home means a structure, transportable in one (1) or more sections, which is built on a permanent chassis and designed to be used with or without a permanent foundation when connected to the required utilities. The term "manufactured home" does not include a "recreational vehicle."
- (35) Manufactured home park or subdivision means a parcel (or contiguous parcels) of land divided into two (2) or more manufactured home lots for rent or sale.
- (36) Mean sea level, for the purpose of this chapter, means the National Geodetic Vertical Datum (NGVD) of 1929, North American Vertical Datum (NAVD) of 1988, or other datum, to which the base flood elevations shown on a community's flood insurance rate maps are shown.
- (37) National Geodetic Vertical Datum (NGVD) of 1929 means national standard reference datum for elevations, formerly referred to as mean sea level (MSL), of 1929. NGVD 1929 may be used as the reference datum on some flood insurance rate maps (FIRMs).
- (38) North American Vertical Datum (NAVD) of 1988 vertical control, as corrected in 1988, used as the reference datum on flood insurance rate maps.
- (39) New construction means structure for which the start of construction commenced on or after

August 27, 1979. The term also includes any subsequent improvements to such structure.

- (40) New manufactured home park or subdivision means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete slabs) is completed on or after August 27, 1979.
- (41) Official FEMA flood maps means current FEMA flood insurance rate maps and current flood insurance study with accompanying maps and other supporting data.
- (42) Recreational vehicle means a vehicle which is:
 - a. Built on a single chassis;
 - b. Four hundred square feet or less when measured at the largest horizontal projection;
 - c. Designed to be self-propelled or permanently towable by a light duty truck; and
 - d. Designed primarily not for use as a permanent dwelling, but as temporary living quarters for recreational, camping, travel, or seasonal use.
- (43) Repetitive loss property [means] a building covered by a contract for flood insurance that has incurred flood-related damages on two (2) occasions during a 10-year period ending on the date of the event for which a second claim is made, in which the cost of repairing the flood damage, on average, equaled or exceeded 25 percent of the market value of the building at the time of each such flood event.
- (44) Required flood protection level means two (2) feet above the base flood elevation shown on official FEMA flood maps. The required flood protection level is the regulatory requirement for the elevation or the floodproofing of structures in the City of Conway.
- (45) Section 1316 of the National Flood Insurance Act of 1968. The act provides that no new flood insurance shall be provided for any property found by the Federal Emergency Management Agency to have been declared by a state or local authority to be in violation of state or local ordinances.
- (46) Start of construction (for other than new construction or substantial improvements under the Coastal Barrier Resources Act P.L. 97-348) includes substantial improvement, and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, or improvement was within 180 days of the permit date. The actual start means the first placement of permanent construction of a structure (including a manufactured home) on a site, such as the pouring of slabs or footings, installation of piles, construction of columns, or any work beyond the stage of excavation or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading, and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for footings, piers or

foundations, or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of the building, whether or not that alteration affects the external dimensions of the building.

- (47) Structure means for floodplain management purposes, a structure is a walled and roofed building, including a gas or liquid storage tank, which is principally above ground, as well as a manufactured home.
- (48) Subdivision [means] a parcel of land divided into two (2) or more lots.
- (49) Substantial damage means damage of any origin sustained by a structure whereby the cost of restoring the structure to its pre-damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred. Such repairs may be undertaken successively and their costs counted cumulatively. Please refer to the definition of "substantial improvement."
- (50) Substantial improvement means any combination of repairs, reconstruction, alteration, rehabilitation, addition, or other improvement of a structure, taking place during the life of a building in which the cumulative cost would equal or exceed 50 percent of the market value of the structure before the damage occurred. This term includes structures that have incurred repeated loss or substantial damage, regardless of the actual repair work performed. The term does not, however, include any project for improvement of a building required to comply with existing health, sanitary, or safety code specifications which have been identified by the code enforcement official and which are solely necessary to assure safe living conditions or any alteration of a historic structure provided that the alteration will not preclude the structure's continued designation as a historic structure. Permits shall be cumulative. If the improvement project is conducted in phases, the total of all costs associated with each phase, beginning with the issuance of the first permit, shall be utilized to determine whether "substantial improvement" will occur.
- (51) Substantially improved existing manufactured home park or subdivision means where the repair, reconstruction, rehabilitation or improvement of the streets, utilities and pads equals or exceeds 50 percent of the value of the streets, utilities and pads before the repair, reconstruction, or improvement commenced.
- (52) Variance is a grant of relief from a term or terms of this chapter which permits construction in a manner otherwise prohibited by this chapter where specific enforcement would result in unnecessary hardship.
- (53) Violation means the failure of a structure or other development to be fully compliant with these regulations.

(Ord. No. 2021-12-06(A), 12/6/21)

Sec. 5-2-6 - Lands to which this chapter applies.

This chapter shall apply to:

- (1) All areas of special flood hazard within the jurisdiction of Conway as identified by the Federal Emergency Management Agency in its insurance study dated December 16, 2021 with accompanying maps and other supporting data that are hereby adopted by reference and declared to be a part of this chapter.

Upon annexation, any special flood hazard areas identified by the Federal Emergency Management Agency in its flood insurance study for the unincorporated areas of Horry County, with accompanying maps and other data, are hereby adopted by reference and declared to be a part of this chapter.

(Ord. No. 2021-12-06(A), 12/6/21)

Sec. 5-2-7 - Establishment of development permit.

A development permit shall be required in conformance with the provisions of this chapter prior to the commencement of any development activities.

(Ord. No. 2021-12-06(A), 12/6/21)

Sec. 5-2-8 - Compliance.

No structure or land shall hereafter be located, extended, converted, or structurally altered without full compliance with the terms of this chapter and other applicable regulations.

(Ord. No. 2021-12-06(A), 12/6/21)

Sec. 5-2-9 - Interpretation.

In the interpretation and application of this chapter all provisions shall be considered as minimum requirements, liberally construed in favor of the governing body, and deemed neither to limit nor repeal any other powers granted under state law. This chapter is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this chapter and another conflict or overlap, whichever imposes the more stringent restrictions, shall prevail.

(Ord. No. 2021-12-06(A), 12/6/21)

Sec. 5-2-10 - Partial invalidity and severability.

If any part of this chapter is declared invalid, the remainder of the chapter shall not be affected and shall remain in force.

(Ord. No. 2021-12-06(A), 12/6/21)

Sec. 5-2-11 - Warning and disclaimer of liability.

The degree of flood protection required by this chapter is considered reasonable for regulatory purposes and is based on scientific and engineering consideration as well as city officials' information and knowledge of areas of known flooding that may not appear on FEMA flood maps. Larger floods can and will occur on rare occasions. Flood heights may be increased by manmade or natural causes. This chapter does not imply that land outside the areas of special flood hazard or uses permitted within such areas will be free from flooding or flood damages. This chapter shall not create liability on the part of the City of Conway or by any officer or employee thereof for any flood damages that result from reliance on this chapter or any administrative decision lawfully made hereunder.

(Ord. No. 2021-12-06(A), 12/6/21)

Sec. 5-2-12 - Penalties for violation.

Violation of the provisions of this chapter or failure to comply with any of its requirements, including violation of conditions and safeguards established in connection with grants of variance or special exceptions, shall constitute a misdemeanor. Any person who violates this chapter or fails to comply with any of its requirements shall, upon conviction thereof, be fined not more than \$500 or imprisoned for not more than 30 days, or both and in addition, shall pay all costs and expenses involved in the case. Each day the violation continues shall be considered a separate offense. Nothing herein contained shall prevent the City of Conway from taking such other lawful action as is necessary to prevent or remedy any violation.

(Ord. No. 2021-12-06(A), 12/6/21)

ARTICLE B - Administration

Sec. 5-2-13 - Designation of local floodplain administrator.

The building official (or his/her designee) is hereby appointed to administer and implement the provisions of this chapter.

(Ord. No. 2021-12-06(A), 12/6/21)

Sec. 5-2-14 - Adoption of letter of map revisions (LOMR).

All LOMRs that are issued in the areas identified in article A, section 5-2-6 of this chapter are hereby adopted.

(Ord. No. 2021-12-06(A), 12/6/21)

Sec. 5-2-15 - Development permit and certification requirements.

- (a) Application stage. Application for a development permit shall be made to the local floodplain administrator on forms furnished by him prior to any development activities. The development permit may include, but not be limited to, plans in duplicate drawn to scale showing: the nature, location, dimensions, and elevations of the area in question; existing or proposed structures; and the location of fill materials, storage areas, and drainage facilities. Specifically, the following information is required:
- (1) A plot plan that shows the 100-year floodplain contour or a statement that the entire lot is within the floodplain must be provided by the development permit applicant when the lot is within or appears to be within the floodplain as identified on the official FEMA flood maps, or identified pursuant to the duties and responsibilities of the local floodplain administrator of section 5-2-16(7), the standards for subdivision proposals of section 5-2-21 or the standards for streams without estimated base flood elevations and floodways of section 5-2-22. The plot plan must be prepared by or under the direct supervision of a registered land surveyor or professional engineer and certified by it. The plot plan must show the floodway, if any, as identified on the official FEMA flood maps, or identified pursuant to the duties and responsibilities of the local floodplain administrator of section 5-2-16(7), the standards for subdivision proposals of section 5-2-21 or the standards for streams without estimated base flood elevations and floodways of section 5-2-22.
 - (2) Where base flood elevation data is provided as set forth in section 5-2-6 or the duties and responsibilities of the local floodplain administrator of section 5-2-16(7), the application for a development permit within the flood hazard area shall show:
 - a. the elevation (in relation to mean sea level) of the lowest floor of all new and substantially improved structures, and
 - b. if the structure will be floodproofed in accordance with the non-residential construction requirements of section 5-2-19(2), the elevation (in relation to mean sea level) to which the structure will be floodproofed.
 - (3) Where base flood elevation data is not provided as set forth in section 5-2-6 or the duties and responsibilities of the local floodplain administrator of section 5-2-16(7), then the provisions in the standards for streams without estimated base flood elevations and floodways of section 5-2-22 must be met.

(4) Alteration of watercourse. Where any watercourse will be altered or relocated as a result of proposed development, the application for a development permit shall include a description of the extent of watercourse alteration or relocation, an engineering study to demonstrate that the flood-carrying capacity of the altered or relocated watercourse is maintained and a map showing the location of the proposed watercourse alteration or relocation.

(b) Certifications.

- (1) Floodproofing certification. When a structure is floodproofed, the applicant shall provide certification from a registered, professional engineer or architect that the nonresidential, floodproofed structure meets the floodproofing criteria in the nonresidential construction requirements of section 5-2-19(2).
- (2) Certification during construction. A lowest floor elevation or floodproofing certification is required after the lowest floor is completed. As soon as possible after completion of the lowest floor and before any further vertical construction commences, or floodproofing by whatever construction means, whichever is applicable, it shall be the duty of the permit holder to submit to the local floodplain administrator a certification of the elevation of the lowest floor, or floodproofed elevation, whichever is applicable, as built, in relation to mean sea level. Said certification shall be prepared by or under the direct supervision of a registered land surveyor or professional engineer and certified by same. Any work done prior to submission of the certification shall be at the permit holder's risk. The local floodplain administrator shall review the floor elevation survey data submitted. The permit holder immediately and prior to further progressive work being permitted to proceed shall correct deficiencies detected by such review. Failure to submit the survey or failure to make said corrections required hereby shall be cause to issue a stop-work order for the project.
- (3) As-built certification. Upon completion of the development a registered professional engineer, land surveyor or architect, in accordance with S.C. law, shall certify according to the requirements of section 5-2-15(a) and (b) that the development is built in accordance with the submitted plans and previous pre-development certifications.

(Ord. No. 2021-12-06(A), 12/6/21)

Sec. 5-2-16 - Duties and responsibilities of the local floodplain administrator.

Duties and responsibilities shall include, but not be limited to:

- (1) Permit review. Review all development permits to assure that the requirements of this chapter have been satisfied.
- (2) Requirement of federal and/or state permits. Review proposed development to assure that all necessary permits have been received from those governmental agencies from which approval is required by federal or state law, including Section 404 of the Federal Water

(3) Watercourse alterations.

- a. Notify adjacent communities and the South Carolina Department of Natural Resources, Land, Water, and Conservation Division, State Coordinator for the National Flood Insurance Program, prior to any alteration or relocation of a watercourse, and submit evidence of such notification to FEMA.
- b. In addition to the notifications required for watercourse alterations per section 5-2-16(3)a., written reports of maintenance records must be maintained to show that maintenance has been provided within the altered or relocated portion of said watercourse so that the flood-carrying capacity is maintained. This maintenance must consist of a comprehensive program of periodic inspections, and routine channel clearing and dredging, or other related functions. The assurance shall consist of a description of maintenance activities, frequency of performance, and the local official responsible for maintenance performance. Records shall be kept on file for FEMA inspection.
- c. If the proposed project will modify the configuration of the watercourse, floodway, or base flood elevation for which a detailed flood insurance study has been developed, the applicant shall apply for and must receive approval for a conditional letter of map revision with FEMA prior to the start of construction.
- d. Within 60 days of completion of an alteration of a watercourse, referenced in the certification requirements of section 5-2-15(b)(3), the applicant shall submit as-built certification, by a registered professional engineer, to FEMA.

(4) Floodway encroachments. Prevent encroachments within floodways unless the certification and flood hazard reduction provisions of section 5-2-19(5) are met.

(5) Adjoining floodplains cooperate with neighboring communities with respect to the management of adjoining floodplains and/or flood-related erosion areas in order to prevent aggravation of existing hazards.

(6) Notifying adjacent communities. Notify adjacent communities proper to permitting substantial commercial developments and large subdivisions to be undertaken in areas of special flood hazard and/or flood-related erosion hazards.

(7) Certification requirements.

- a. Obtain and review actual elevation (in relation to mean sea level) of the lowest floor of all new or substantially-improved structures, in accordance with administrative procedures outlined in section 5-2-15(b)(2).
- b. Obtain the actual elevation (in relation to mean sea level) to which the new or substantially-improved structures have been floodproofed, in accordance with the floodproofing certification outlined in section 5-2-15(b)(1).

- c. When floodproofing is utilized for a particular structure, obtain certifications from a registered professional engineer or architect in accordance with the non-residential construction requirements outlined in section 5-2-19(2).
- (8) Map interpretation. Where interpretation is needed as to the exact location of boundaries of the areas of special flood hazard (for example, where there appears to be a conflict between a mapped boundary and actual field conditions), make the necessary interpretation. The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in this chapter.
- (9) Prevailing authority. Where a map boundary showing an area of special flood hazard and field elevations disagree, the base flood elevations for flood protection elevations (as found on an elevation profile, floodway data table, etc.) shall prevail. The correct information should be submitted to FEMA as per the map maintenance activity requirements outlined in 5-2-20(1).
- (10) Use of best available data. When base flood elevation data and floodway data have not been provided in accordance with section 5-2-6, obtain, review, and reasonably utilize best available base flood elevation data and floodway data available from a federal, state, or other source in order to administer the provisions of this chapter. Data from revised August 19, 2019 preliminary, draft, and final FEMA flood insurance rate maps and flood insurance studies constitutes best available data from a federal, state, or other source.
- (11) SFHA/Topographic boundaries conflict when the exact location of boundaries of the areas special flood hazards conflict with the current, natural topography information at the site; the site information take precedence when the lowest adjacent grade is at or above the BFE, the property owner may apply and be approved for a letter of map amendment (LOMA) by FEMA. The local floodplain administrator in the permit file will maintain a copy of the letter of map amendment issued from FEMA.
- (12) On-site inspections make on-site inspections of projects in accordance with the administrative procedures outlines in 5-2-17.
- (13) Records maintenance. Maintain all records pertaining to the administration of this chapter and make these records available for public inspection.
- (14) Administrative notices. Serve notices of violations, issue stop-work orders, revoke permits and take corrective actions in accordance with the administrative procedures in this chapter.
- (15) Annexations and detachments. Notify the South Carolina Department of Natural Resources Land, Water and Conservation Division, State Coordinator for the National Flood Insurance Program within six (6) months of an annexations or detachments that include special flood hazard areas.
- (16)

Federally funded development. All federally funded development must comply with all applicable Executive Orders. Evidence of compliance with the executive order must be submitted, as part of the permit review process.

- (17) Substantial damage determination. Perform an assessment of damage from any origin to the structure to determine the percent damage, which is based on the market value of the structure before the damage occurred.
- (18) Substantial improvement determinations. Perform an assessment of permit applications for improvements or repairs (to include percent damage) to be made to a building or structure that equals or exceeds 50 percent of the market value of the structure before the start of construction. Cost of work counted for determining if and when substantial improvement to a structure occurs shall be cumulative for the life of the structure. If the improvement project is conducted in phases, the total of all costs associated with each phase, beginning with the issuance of the first permit, shall be utilized to determine whether "substantial improvement" will occur.

The market values shall be determined by one of the following methods:

- a. The current assessed building value as determined by the county's assessor's office or the value of an appraisal performed by a licensed appraiser at the expense of the owner within the past six (6) months.
- b. One (1) or more certified appraisals from a registered professional licensed appraiser in accordance with the laws of South Carolina. The appraisal shall indicate actual replacement value of the building or structure in its pre-improvement condition, less the cost of site improvements and depreciation for functionality and obsolescence.
- c. Real estate purchase contract within six (6) months prior to the date of the application for permit.
- d. Computed actual cash value. This value is based on the average cost of construction per square foot less the depreciation value.

(Ord. No. 2021-12-06(A), 12/6/21)

Sec. 5-2-17 - Administrative procedures.

- (a) Inspections of work in progress. As the work pursuant to a permit progresses, the local floodplain administrator shall make as many inspections of the work as may be necessary to ensure that the work is being done according to the provisions of the local ordinance and the terms of the permit. In exercising this power, the floodplain administrator has a right, upon presentation of proper credentials, to enter on any premises within the territorial jurisdiction at any reasonable hour for the purposes of inspection or other enforcement action.

(b)

Stop-work orders. Whenever a building or part thereof is being constructed, reconstructed, altered, or repaired in violation of this chapter, the floodplain administrator may order the work to be immediately stopped. The stop-work order shall be in writing and directed to the person doing the work. The stop-work order shall state the specific work to be stopped, the specific reasons for the stoppage, and the conditions under which the work may be resumed. Violation of a stop-work order constitutes a misdemeanor.

- (c) Revocation of permits. The local floodplain administrator may revoke and require the return of the development permit by notifying the permit holder in writing, stating the reason for the revocation. Permits shall be revoked for any substantial departure from the approved application, plans, or specifications; for refusal or failure to comply with the requirements of state or local laws; or for false statements or misrepresentations made in securing the permit. Any permit mistakenly issued in violation of an applicable state or local law may also be revoked.
- (d) Periodic inspections. The local floodplain administrator and each member of his/her inspections department shall have a right, upon presentation of proper credentials, to enter on any premises within the territorial jurisdiction of the department at any reasonable hour for the purposes of inspection or other enforcement action.
- (e) Violations to be corrected. When the local floodplain administrator finds violations of applicable state and local laws, it shall be his duty to notify the owner or occupant of the building of the violation. The owner or occupant shall immediately remedy each of the violations of law on the property he owns.
- (f) Actions in event of failure to take corrective action. If the owner of a building or property shall fail to take prompt corrective action, the floodplain administrator shall give him written notice, by certified or registered mail to his last known address or by personal service, that:
 - (1) the building or property is in violation of the flood damage prevention ordinance;
 - (2) a hearing will be held before the local floodplain administrator at a designated place and time, not later than 10 days after the date of the notice, at which time the owner shall be entitled to be heard in person or by counsel and to present arguments and evidence pertaining to the matter; and
 - (3) following the hearing, the local floodplain administrator may issue such order to alter, vacate, or demolish the building; or to remove fill as appears appropriate.
- (g) Order to take corrective action. If, upon a hearing held pursuant to the notice prescribed above, the floodplain administrator shall find that the building or development is in violation of the flood damage prevention ordinance, he shall make an order in writing to the owner, requiring the owner to remedy the violation within such period, not less than 60 days, the floodplain administrator may prescribe; provided that where the floodplain administrator finds that there is imminent danger to life or other property, he may order that corrective action be taken in such lesser period as may be feasible.

- (h) Appeal. Any owner who has received an order to take corrective action may appeal from the order to the construction board of appeals by giving notice of appeal in writing to the floodplain administrator and the clerk within 10 days following issuance of the final order. In the absence of an appeal, the order of the floodplain administrator shall be final. The construction board of appeals shall hear an appeal within a reasonable time and may affirm, modify and affirm, or revoke the order.
- (i) Failure to comply with order. If the owner of a building or property fails to comply with an order to take corrective action from which no appeal has been taken, or fails to comply with an order of the construction board of appeals following an appeal, he shall be guilty of a misdemeanor and shall be punished in the discretion of the court.
- (j) Denial of flood insurance under the NFIP. If a structure is declared in violation of this chapter and after all other penalties are exhausted to achieve compliance with this chapter then the local floodplain administrator shall notify FEMA to initiate a Section 1316 of the National Flood Insurance Act of 1968 action against the structure upon the finding that the violator refuses to bring the violation into compliance with the ordinance. Once a violation has been remedied the local floodplain administrator shall notify FEMA of the remedy and ask that the Section 1316 be rescinded.
- (k) The following documents are incorporated by reference and may be used by the local floodplain administrator to provide further guidance and interpretation of this chapter as found on FEMA's website at www.fema.gov:
 - (1) FEMA 55 Coastal Construction Manual.
 - (2) All FEMA Technical Bulletins.
 - (3) All FEMA Floodplain Management Bulletins.
 - (4) FEMA 348 Protecting Building Utilities from Flood Damage.
 - (5) FEMA 499 Homebuilder's Guide to Coastal Construction Technical Fact Sheets.

(Ord. No. 2021-12-06(A), 12/6/21)

ARTICLE C - Provisions for Flood Hazard Reduction

Sec. 5-2-18 - Provisions for flood hazard reduction; general standards.

Development may not occur in the special flood hazard area (SFHA) where alternative locations exist due to the inherent hazards and risks involved. Before a permit is issued, the applicant shall demonstrate that new structures cannot be located out of the SFHA and that encroachments onto the SFHA are minimized. In all areas of special flood hazard the following provisions are required:

- (1)

Reasonably safe from flooding. Review all permit applications to determine whether proposed building sites will be reasonably safe from flooding.

- (2) Anchoring. All new construction and substantial improvements shall be anchored to prevent flotation, collapse, and lateral movement of the structure.
- (3) Flood-resistant materials and equipment. All new construction and substantial improvements shall be constructed with flood-resistant materials and utility equipment resistant to flood damage in accordance with Technical Bulletin 2, Flood Damage-Resistant Materials Requirements, available from FEMA.
- (4) Minimize flood damage. All new construction and substantial improvements shall be constructed by methods and practices that minimize flood damage.
- (5) Critical development. All new construction and substantial improvements that meet the definition of critical development shall be elevated to the 500-year flood elevation or be elevated to the highest known historical flood elevation (where records are available), whichever is greater. If no data exists establishing the 500-year flood elevation or the highest known historical flood elevation, the applicant shall provide a hydrologic and hydraulic engineering analysis that generates 500-year flood elevation data.
- (6) Utilities. Electrical, ventilation, plumbing, heating and air conditioning equipment (including ductwork), and other service facilities shall be designed and/or located two (2) feet above the base flood so as to prevent water from entering or accumulating within the components during flood conditions.
- (7) Water supply systems. All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the system.
- (8) Sanitary sewage systems. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems and discharges from the systems into floodwaters. On-site waste disposal systems shall be located and constructed to avoid impairment to them or contamination from them during flooding.
- (9) Gas or liquid storage tanks. All gas or liquid storage tanks, located above ground or buried, shall be anchored to prevent flotation and lateral movement.
- (10) Alteration, repair, reconstruction, or improvements. Any alteration, repair, reconstruction, or improvement to a structure that is in compliance with the provisions of this chapter, shall meet the requirements of "new construction" as contained in this chapter. This includes post-FIRM development and structures.
- (11) Non-conforming buildings or uses. Any alteration, repair, reconstruction or improvements to a building which is not in compliance with the provisions of this chapter, shall be undertaken only if said nonconformity is not furthered, extended, or replaced.
- (12)

Americans with Disabilities Act (ADA). A building must meet the specific standards for floodplain

construction outlined in section 5-2-19, as well as any applicable ADA requirements. The ADA is not justification for issuing a variance or otherwise waiving these requirements.

(Ord. No. 2021-12-06(A), 12/6/21)

Sec. 5-2-19 - Specific standards.

Official FEMA flood maps are used to determine the flood protection level for new and substantially improved structures within the City of Conway. In all floodprone areas where base flood elevation data has been provided, as set forth in section 5-2-6 or outlined in the duties and responsibilities of the local floodplain administrator in section 5-2-16, the following provisions are required:

- (1) Residential construction. New construction and substantial improvement of any residential structure (including manufactured homes) shall have the top of the lowest floor elevated no lower than two (2) feet above the base flood elevation shown on official FEMA flood maps. No basements are permitted. Should solid foundation perimeter walls be used to elevate a structure, flood openings sufficient to facilitate the unimpeded movements of floodwaters shall be provided in accordance with standards of section 5-2-19(4).
- (2) Non-residential construction. New construction and substantial improvement of any commercial, industrial, or non-residential structure (including manufactured homes) shall have the top of the lowest floor elevated no lower than two (2) feet above the base flood elevation shown on official FEMA flood maps. Should solid foundation perimeter walls be used to elevate a structure, flood openings sufficient to facilitate the unimpeded movements of floodwaters shall be provided in accordance with standards of section 5-2-19(4). No basements are permitted. Structures located in A zones may be floodproofed in lieu of elevation provided that all areas of the structure below the required elevation are watertight with walls substantially impermeable to the passage of water, using structural components having the capability of resisting hydrostatic and hydrodynamic loads and the effect of buoyancy. A registered, professional engineer or architect shall certify that the standards of this subsection are satisfied. Such certifications shall be provided to the official as set forth in the floodproofing certification requirements in section 5-2-15(b)(1).
- (3) Manufactured homes.
 - a. Manufactured homes that are placed or substantially improved on sites outside a manufactured home park or subdivision, in a new manufactured home park or subdivision, in an expansion to an existing manufactured home park or subdivision, or in an existing manufactured home park or subdivision on which a manufactured home has incurred "substantial damage" as the result of a flood, must be elevated on a permanent foundation such that the top of the lowest floor of the manufactured home is elevated no

lower than two (2) feet above the base flood elevation shown on official FEMA flood maps. In addition, manufactured homes must be securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.

- b. Manufactured homes that are to be placed or substantially improved on sites in an existing manufactured home park or subdivision that are not subject to the provisions for residential construction in section 5-2-19(1) of this chapter must be elevated so that the top of the lowest floor of the manufactured home is elevated no lower than two (2) feet above the base flood elevation shown on official FEMA flood maps.
- c. Manufactured homes shall be anchored to prevent flotation, collapse, and lateral movement. For the purpose of this requirement, manufactured homes must be anchored to resist flotation, collapse, and lateral movement in accordance with section 40-29-10 of the South Carolina Manufactured Housing Board Regulations, as amended. Additionally, when the elevation requirement would be met by an elevation of the chassis 36 inches or less above the grade at the site, the chassis shall be supported by reinforced piers or engineered foundation. When the elevation of the chassis is above 36 inches in height an engineering certification is required.
- d. An evacuation plan must be developed for evacuation of all residents of all new, substantially improved or substantially damaged manufactured home parks or subdivisions located within floodprone areas. This plan shall be filed with and approved by the local floodplain administrator and the local emergency preparedness coordinator.

(4) Elevated buildings. New construction and substantial improvements of elevated buildings that include fully enclosed areas below the lowest floor that are usable solely for the parking of vehicles, building access, or limited storage in an area other than a basement, and which are subject to flooding shall be designed to preclude finished space and be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters.

- a. Designs for complying with this requirement must either be certified by a professional engineer or architect or meet or exceed all of the following minimum criteria:
 - 1. Provide a minimum of two (2) openings on exterior walls having a total net area of not less than one (1) square inch for every square foot of enclosed area subject to flooding.
 - 2. The bottom of each opening must be no more than one (1) foot above the higher of the interior or exterior grade immediately under the opening.
 - 3. Only the portions of openings that are below the base flood elevation can be counted towards the required net open area.
 - 4.

Openings may be equipped with screens, louvers, valves, or other coverings or devices provided they permit the automatic flow of floodwaters in both directions.

5. Fill placed around foundation walls must be graded so that the grade inside the enclosed area is equal to or higher than the adjacent grade outside the building on at least one (1) side of the building.
- b. Hazardous velocities. Hydrodynamic pressure must be considered in the design of any foundation system where velocity waters or the potential for debris flow exists. If flood velocities are excessive (greater than five (5) feet per second), foundation systems other than solid foundation walls should be considered so that obstructions to damaging flood flows are minimized.
- c. Enclosures below lowest floor.
 1. Access to the enclosed area shall be the minimum necessary to allow for parking of vehicles (garage door) or limited storage of maintenance equipment used in connection with the premises (standard exterior door) or entry to the living area (stairway or elevator).
 2. The interior portion of such enclosed area shall not be finished or partitioned into separate rooms, must be void of utilities except for essential lighting as required for safety, and cannot be temperature controlled.
 3. One (1) wet location switch and/or outlet connected to a ground fault interrupt breaker may be installed below the required lowest floor elevation specified in the specific standards outlined in section 5-2-19(1), (2) and (3).
 4. All construction materials below the required lowest floor elevation specified in the specific standards outlined in section 5-2-19(1), (2), (3) and (4) should be of flood-resistant materials.
- (5) Floodways. Located within areas of special flood hazard established in section 5-2-6, are areas designated as floodways. The floodway is an extremely hazardous area due to the velocity of floodwaters that carry debris and potential projectiles and has erosion potential. The following provisions shall apply within such areas:
 - a. Encroachments, including fill, new construction, substantial improvements and other developments are prohibited unless:
 1. Certification (with supporting technical data) by a registered professional engineer is provided demonstrating that encroachments shall not result in any increase in flood levels during occurrence of the base flood discharge. Such certification and technical data shall be presented to the local floodplain administrator; or
 2. A conditional letter of map revision has been approved by FEMA. A letter of map revision must be obtained upon completion of the proposed development.

- b. If section 5-2-19(5)a. is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of section 5-2-19.
- c. No manufactured homes shall be permitted except in an existing manufactured home park or subdivision. A replacement manufactured home may be placed on a lot in an existing manufactured home park or subdivision provided the anchoring and the elevation standards of section 5-2-19(3) and the encroachment standards of section 5-2-19(5)a. are met.
- d. Permissible uses within floodways may include: general farming, pasture, outdoor plant nurseries, horticulture, forestry, wildlife sanctuary, game farm, and other similar agricultural, wildlife, and related uses. Also, lawns, gardens, play areas, picnic grounds, and hiking and horseback riding trails are acceptable uses, provided that they do not employ structures or fill. Substantial development of a permissible use may require a no-impact certification. The uses listed in this subsection are permissible only if and to the extent that they do not cause any increase in base flood elevations or changes to the floodway configuration.

(6) Recreational vehicles.

- a. A recreational vehicle is ready for highway use if it is:
 - 1. on wheels or jacking system;
 - 2. attached to the site only by quick-disconnect type utilities and security devices; and
 - 3. has no permanently attached additions.
- b. Recreational vehicles placed on sites shall either be:
 - 1. on site for fewer than 180 consecutive days; or
 - 2. be fully licensed and ready for highway use; or
 - 3. meet the development permit and certification requirements of section 5-2-15, general standards outlined in section 5-2-18, and manufactured homes standards in section 5-2-19(3) and (4).

(7) Accessory structures. Any detached accessory structures used only for parking of vehicles and storage are permitted at grade if:

- a. In special flood hazard areas other than coastal high hazard areas (zones A, AE, AH, AO, and A1-30), they are not larger than one-story and 600 square feet in area. Walls must have openings in compliance with 5-2-19(4)a.
- b. anchored to resist flotation, collapse, and lateral movement.
- c. Flood damage resistant materials used below the base elevation in accordance with Technical Bulletin 2, Flood Damage Resistant Materials Requirement.
- d.

Mechanical, electrical, and utility equipment comply with the requirements of section 5-2-18(4).

- e. Accessory structures shall be designed to have low flood damage potential.
- f. Accessory structures shall be constructed and placed on the building site so as to offer the minimum resistance to the flow of floodwaters.

(8) Swimming pool utility equipment rooms. If the building cannot be built at or above the BFE, because of functionality of the equipment then a structure to house the utilities for the pool may be built below the BFE with the following provisions:

- a. meet the requirements for accessory structures in 5-2-19(7).
- b. The utilities must be anchored to prevent flotation and shall be designed to prevent water from entering or accumulating within the components during conditions of the base flood.

(9) Fill. An applicant shall demonstrate that fill is the only alternative to raising a building to meet the residential and non-residential construction requirements of section 5-2-19(1) or (2) and that the amount of fill used will not affect the flood storage capacity or adversely affect adjacent properties. The following provisions shall apply to all fill placed in the special flood hazard area:

- a. Fill may not be placed in a floodway unless it is in accordance with section 5-2-19(5)a.
- b. Fill may not be placed in tidal or non-tidal wetlands without the required state and federal permits.
- c. Fill must consist of soil and rock materials only. Dredged material may be used as fill only upon certification of suitability by a registered professional geotechnical engineer. Landfills, rubble fills, dumps and sanitary fills are not permitted in the floodplain.
- d. Fill used to support structures must comply with ASTM Standard D-698, and its suitability to support structures certified by a registered professional engineer.
- e. Fill slopes shall be no greater than two (2) horizontal to one (1) vertical. Flatter slopes may be required where velocities may result in erosion.
- f. The use of fill shall not increase flooding or cause drainage problems on neighboring properties.
- g. Any unauthorized or construction inconsistent with plans approved by the city will be required to return the area to original conditions. This requirement includes existing properties.

(10) Elevators.

- a. Install a float switch system or another system the provided the same level of safety necessary for all elevators where there is a potential for the elevator cab to descend below the BFE during a flood per FEMA's Technical Bulletin 4 Elevator Installation for

Buildings Located in Special Flood Hazard Areas.

- b. All equipment that may have to be installed below the BFE such as counter weight roller guides, compensation cable and pulleys, and oil buffers for traction elevators and the jack assembly for a hydraulic elevator must be constructed using flood-resistant materials where possible per FEMA's technical Bulletin 4 Elevator Installation for Buildings Located in Special Flood Hazard Areas.

(Ord. No. 2021-12-06(A), 12/6/21)

Sec. 5-2-20 - Map maintenance activities.

The National Flood Insurance Program (NFIP) requires flood data to be reviewed and approved by FEMA. This ensures that flood maps, studies and other data identified in section 5-2-6 accurately represent flooding conditions so appropriate floodplain management criteria are based on current data. The following map maintenance activities are identified and shall apply to all areas of special flood hazard:

(1) Requirement to submit new technical data.

- a. For all development proposals that impact floodway/floodplain delineations or base flood elevations, the community shall ensure that a letter of map revision reflecting the impacts be submitted to FEMA as soon as practicable, but no later than six (6) months from the end of construction of the impact. These development proposals include; but not limited to:
 1. Floodway encroachments that increase or decrease base flood elevations or alter floodway boundaries;
 2. Fill sites to be used for the placement of proposed structures where the applicant desires to remove the site from the special flood hazard area;
 3. Alteration of watercourses that result in a relocation or elimination of the special flood hazard area, including stream restoration and the placement of culverts; and
 4. Subdivision or large-scale development proposals requiring the establishment of base flood elevations in accordance with section 5-2-22(1).
- b. It is the responsibility of the applicant to have technical data, required in accordance with section 5-2-20, prepared in a format required for a conditional letter of map revision or letter of map revision, and submitted to FEMA. Submittal and processing fees for these map revisions shall also be the responsibility of the applicant.
- c. The local floodplain administrator shall require a conditional letter of map revision prior to the issuance of a floodplain development permit for:
 1. Proposed floodway encroachments that increase the base flood elevation; or
 - 2.

Proposed development which increases the base flood elevation by more than one (1) foot in areas where

FEMA has provided base flood elevations but no floodway.

d. Floodplain development permits issued by the local floodplain administrator shall be conditioned upon the applicant obtaining a letter of map revision from FEMA for any development proposal subject to section 5-2-20.

(2) Right to submit new technical data. The floodplain administrator may request changes to any of the information shown on an effective map that does not impact floodplain or floodway delineations or base flood elevations, such as labeling or planimetric details. Such a submission shall include appropriate supporting documentation made in writing by the local jurisdiction and may be submitted at any time.

(Ord. No. 2021-12-06(A), 12/6/21)

Sec. 5-2-21 - Standards for subdivision proposals and other development.

(a) All subdivision proposals and other proposed new development shall be consistent with the need to minimize flood damage and are subject to all applicable standards in these regulations.

(b) All subdivision proposals and other proposed new development shall have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize flood damage.

(c) All subdivision proposals and other proposed new development shall have adequate drainage provided to reduce exposure to flood damage.

(d) All residential subdivision proposals having 50 lots or more shall be required to provide an approved evacuation plan.

(Ord. No. 2021-12-06(A), 12/6/21)

Sec. 5-2-22 - Standards for streams without established base flood elevations and floodways.

Located within the areas of special flood hazard established in section 5-2-6, are small streams where no base flood data has been provided and where no floodways have been identified. The following provisions apply within such areas:

(1) In all areas of special flood hazard where base flood elevation data are not available, the applicant shall provide a hydrologic and hydraulic engineering analysis that generates base flood elevations for all subdivision proposals and other proposed developments containing at least 50 lots or five (5) acres, whichever is less.

(2) No encroachments, including fill, new construction, substantial improvements and new development shall be permitted within 100 feet of a stream bank unless certification with supporting technical data by a registered professional engineer is provided demonstrating

that such encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge.

- (3) If section 5-2-22(1) is satisfied and base flood elevation data is available from other sources, all new construction and substantial improvements within such areas shall comply with all applicable flood hazard ordinance provisions of section 5-2-18 and shall be elevated or floodproofed in accordance with elevations established in accordance with section 5-2-16(11).
- (4) Data from revised preliminary, draft, and final FEMA maps and studies, constitutes best available data. Refer to FEMA Floodplain Management Technical Bulletin 1-98 Use of Flood Insurance Study (FIS) Data as Available Data. If an appeal is pending on the study in accordance with 44 CFR Ch. 1, Part 67.5 and 67.6, the data does not have to be used.
- (5) When base flood elevation data is not available from a federal, state, or other source one (1) of the following methods may be used to determine a base flood elevation. For further information regarding the methods for determining base flood elevations listed below, refer to FEMA's manual Managing Floodplain Development in Approximate Zone A Areas:
 - a. Contour interpolation.
 1. Superimpose approximate zone A boundaries onto a topographic map and estimate a BFE.
 2. Add one-half ($\frac{1}{2}$) of the contour interval of the topographic map that is used to the BFE.
 - b. Data extrapolation. A BFE can be determined if a site within 500 feet upstream of a reach of a stream for which a 100-year profile has been computed by detailed methods, and the floodplain and channel bottom slope characteristics are relatively similar to the downstream reaches. No hydraulic structures shall be present.
 - c. Hydrologic and hydraulic calculations. Perform hydrologic and hydraulic calculations to determine BFEs using FEMA approved methods and software.
 - d. Base flood elevation data shall be provided for subdivision proposals and other proposed development (including manufactured home parks and subdivisions) which are greater than the lesser of 50 lots or five (5) acres. All phases of development are to be included and cumulative.

(Ord. No. 2021-12-06(A), 12/6/21)

Sec. 5-2-23 - Standards for streams with established base flood elevations but without floodways.

Along rivers and streams where base flood elevation (BFE) data is provided but no floodway is identified for a special flood hazard area on the FIRM or in the FIS.

No encroachments including fill, new construction, substantial improvements, or other development shall be permitted unless certification with supporting technical data by a registered professional engineer is provided demonstrating that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one (1) foot at any point within the community.

(Ord. No. 2021-12-06(A), 12/6/21)

Sec. 5-2-24 - Standards for areas of shallow flooding (AO zones).

Located within the areas of special flood hazard established in section 5-2-6 of this chapter are areas designated as areas of shallow flooding. These areas have special flood hazards associated with base flood depths of one (1) to three (3) feet where a clearly defined channel does not exist and where the path of flooding is unpredictable and indeterminate; therefore, the following provisions apply:

- (1) All new construction and substantial improvements of residential structures shall have the top of the lowest floor elevated no lower than two (2) feet above the base flood elevation shown on official FEMA flood maps. If no depth number is specified, the lowest floor shall be elevated at least two (2) feet above the highest adjacent grade.
- (2) All new construction and substantial improvements of non-residential structures shall:
 - a. Have the top of the lowest floor elevated no lower than two (2) feet above the base flood elevation shown on official FEMA flood maps. If no depth number is specified, the lowest floor shall be elevated at least two (3) feet above the highest adjacent grade.
 - b. Be completely floodproofed together with attendant utility and sanitary facilities to or above that level so that any space below that level is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. Certification is required as stated in section 5-2-16.
- (3) All structures on slopes must have drainage paths around them to guide water away from the structures.

Required drainage paths around structures**

(Ord. No. 2021-12-06(A), 12/6/21)

ARTICLE D - Variances and Legal Status Provisions

Sec. 5-2-25 - Variance procedures.

- (a) Establishment of appeal board. The construction board of appeals as established by the City of Conway City Council, shall hear and decide requests for variances from the requirements of this chapter.
- (b) Right to appeal. Any person aggrieved by the decision of the appeal board or any taxpayer may appeal such decision to the court.
- (c) Historic structures. Variances may be issued for the repair or rehabilitation of historic structures upon the determination that the proposed repair or rehabilitation will not preclude the structure's continued designation as a historic structure and the variance is the minimum necessary to preserve the historic character and design of the structure.
- (d) Functionally dependent uses. Variances may be issued for development necessary for the conduct of a functionally dependent use, provided the criteria of this chapter are met, no reasonable alternative exist, and the development is protected by methods that minimize flood damage and create no additional threat to public safety.
- (e) Considerations. In passing upon such applications, the appeal board shall consider all technical evaluations, all relevant factors, all standards specified in other sections of this chapter; and:
 - (1) The danger that materials may be swept onto other lands to the injury of others;
 - (2) The danger to life and property due to flooding or erosion damage, and the safety of access to the property in times of flood for ordinary and emergency vehicles;
 - (3) The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
 - (4) The importance of the services provided by the proposed facility to the community;
 - (5) The necessity to the facility of a waterfront location, where applicable;
 - (6) The availability of alternative locations, not subject to flooding or erosion damage, for the proposed use;
 - (7) The compatibility of the proposed use with existing and anticipated development, and the relationship of the proposed use to the comprehensive plan and floodplain management program for that area;
 - (8) The expected heights, velocity, duration, rate of rise, and sediment transport of the floodwaters and the effects of wave action, if applicable, expected at the site; and
 - (9) The costs of providing governmental services during and after flood conditions including maintenance and repair of public utilities and facilities such as sewer, gas, electrical and water systems, and streets and bridges.
- (f) Findings. Findings listed above shall be submitted to the appeal board, in writing, and included in the application for a variance. Additionally, comments from the department of natural resources, land, water and conservation division, state coordinator's office, must be taken into account and

included in the permit file.

- (g) Floodways. Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result unless a CLOMR is obtained prior to issuance of the variance. In order to ensure the project is built in compliance with the CLOMR for which the variance is granted the applicant must provide a bond for 100 percent of the cost to perform the development.
- (h) Conditions. Upon consideration of the factors listed above and the purposes of this chapter, the appeal board may attach such conditions to the granting of variances as it deems necessary to further the purposes of this chapter. The following conditions shall apply to all variances:
 - (1) Variances may not be issued when the variance will make the structure in violation of other federal, state, or local laws, regulations, or ordinances.
 - (2) Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
 - (3) Variances shall only be issued upon a showing of good and sufficient cause, a determination that failure to grant the variance would result in exceptional hardship, and a determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisance, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances.
 - (4) Any applicant to whom a variance is granted shall be given written notice specifying the difference between the base flood elevation and the elevation to which the structure is to be built and a written statement that the cost of flood insurance will be commensurate with the increased risk. Such notification shall be maintained with a record of all variance actions.
 - (5) The local floodplain administrator shall maintain the records of all appeal actions and report any variances to FEMA upon request.
 - (6) Variances shall not be issued for unpermitted development or other development that is not in compliance with the provisions of this chapter. Violations must be corrected in accordance with section 5-2-17(e) of this chapter.

(Ord. No. 2021-12-06(A), 12/6/21)

Sec. 5-2-26 - Legal status provisions.

- (a) Effect on rights and liabilities under the existing flood damage prevention ordinance. This chapter in part comes forward by re-enactment of some of the provisions of the flood damage prevention ordinance enacted on November 4, 2013 and it is not the intention to repeal but rather to re-enact and continue to enforce without interruption of such existing provisions, so that all rights and liabilities that have accrued thereunder are reserved and may be enforced. The enactment of

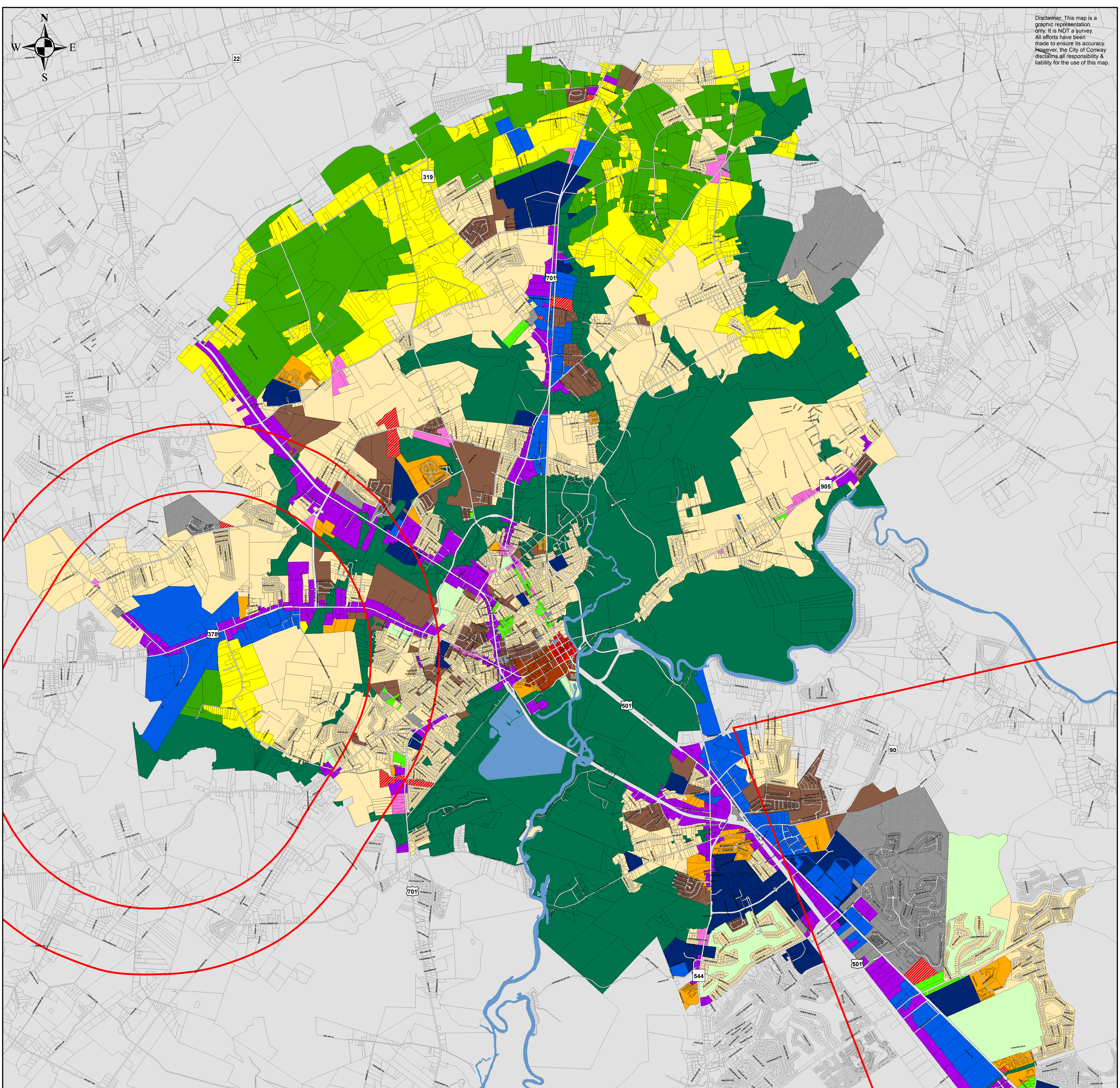
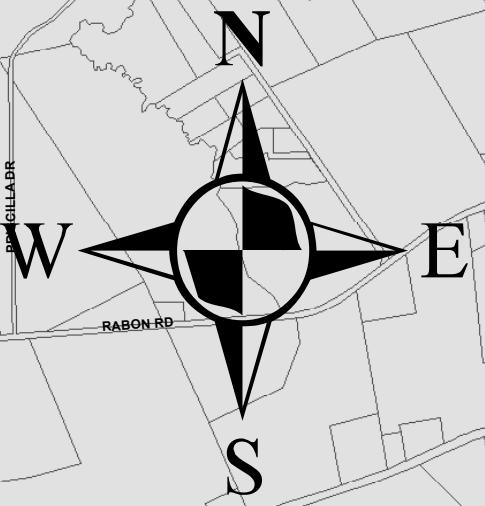
this chapter shall not affect any action, suit or proceeding instituted or pending. All provisions of the flood damage prevention ordinance of the City of Conway enacted on November 4, 2013, as amended, which are not reenacted herein, are repealed.

(b) Effect upon outstanding building permits. Nothing herein contained shall require any change in the plans, construction, size or designated use of any building, structure or part thereof for which a building permit has been granted by the chief building inspector or his authorized agents before the time of passage of this chapter; provided, however, that when start of construction has not occurred under such outstanding permit within a period of six (6) months subsequent to passage of this chapter, construction or use shall be in conformity with the provisions of this chapter.

(c) Effective date. This chapter shall become effective upon adoption.

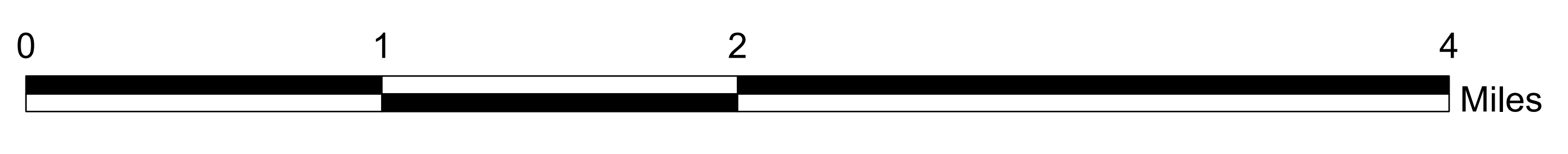
(Ord. No. 2021-12-06(A), 12/6/21)

Disclaimer: This map is a graphic representation only. It is NOT a survey. All efforts have been made to ensure its accuracy. However, the City of Conway disclaims all responsibility & liability for the use of this map.

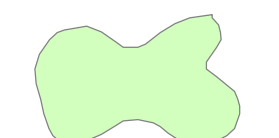




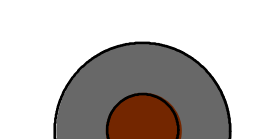
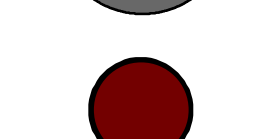

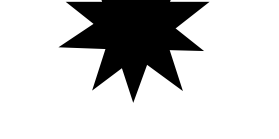







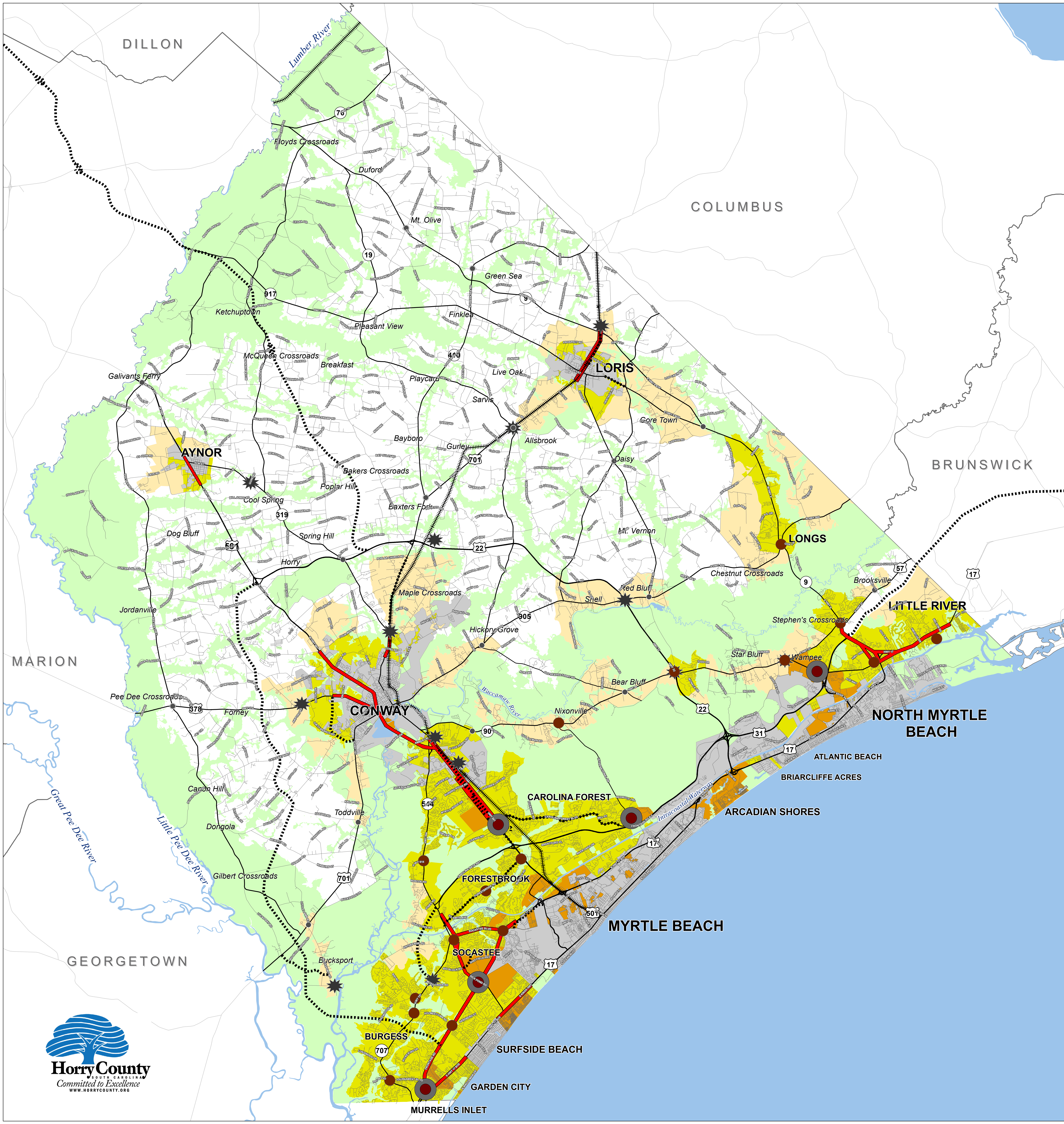
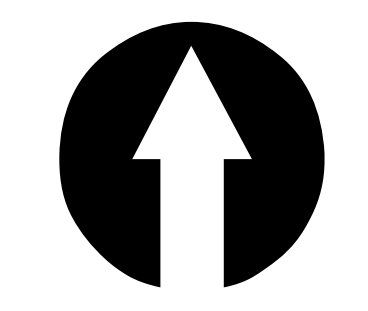
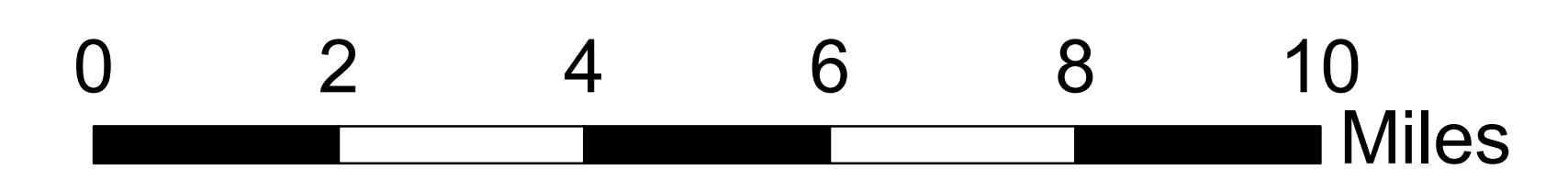
FUTURE LAND USE 2029

CONSERVATION PRESERVATION	HIGH DENSITY RESIDENTIAL	INSTITUTIONAL	MIXED USE	PROFESSIONAL	AIRPORT OVERLAY
DOWNTOWN HISTORIC DISTRICT	HIGHWAY COMMERCIAL	LOW DENSITY RESIDENTIAL	NEIGHBORHOOD COMMERCIAL	RECREATIONAL	WACCAMAW RIVER & LAKE BUSBEE
FOREST AGRICULTURE	INDUSTRIAL	MEDIUM DENSITY RESIDENTIAL	PLANNED DISTRICT	RURAL RESIDENTIAL	PARCELS
			UTILITY		



FUTURE *Land Use*

-  SCENIC & CONSERVATION
-  RURAL
-  RURAL COMMUNITIES
-  SUBURBAN
-  MIXED USE
-  COMMERCIAL CORRIDORS
-  COMMUNITY ACTIVITY CENTER
-  NEIGHBORHOOD ACTIVITY CENTER
-  RURAL ACTIVITY CENTER
-  ECONOMIC DEVELOPMENT CENTER
(not to scale)
-  MAJOR ROAD PROJECTS
-  RAILROAD
-  MUNICIPALITIES
-  WATERBODIES





Scenic & Conservation Areas

LAND USE AND CHARACTER

Environmentally sensitive and scenic areas, such as Carolina Bays, estuarine and forested wetlands, undeveloped beachfront, forestlands, floodplains, agricultural lands, and natural recreational and open spaces. Example properties include the Waccamaw National Wildlife Refuge, South Carolina Department of Natural Resources Heritage Preserves, and numerous privately preserved lands. These areas are important for the ecosystem services (flood control, stormwater filtration, clean air), educational and research opportunities, and for nature-based recreation. Many of these areas are either flood or wildfire prone, so development within and adjacent to these areas should take these hazards into consideration.

DESIRED DEVELOPMENT PATTERN

Limited development. If developed, design should use low-impact designs principles to support environmental preservation and avoid natural hazards. Subdivision of land into lots less than 5 acres in size for new development is discouraged. In suburban and urbanizing areas of the County, these areas should be considered for dedication as open space in new development.

RECOMMENDED LAND USES

Primary Land Uses: Open space, nature-based recreation, timberland, agriculture and agricultural/forestry support uses.

Secondary Land Uses: Permanent and temporary educational and research facilities, eco-tourism and agritourism operations.

Conditional Uses: Outdoor shooting ranges, campgrounds.

TRANSPORTATION

These areas have limited opportunities for alternative transportation, unless an identified project within a transportation plan or integrated as open space within a major residential subdivision or public recreation facility.

POLICY GUIDANCE

1. If Scenic & Conservation Areas make up a portion of a property, it should not prohibit the remaining portion of the property from being developed.
2. These areas should be considered to meet or mitigate open space criteria within major residential subdivisions, as defined within the Land Development Regulations.
3. If the County pursues the development of a Density Bonus Program, Scenic & Conservation Areas should be identified as "sending" areas for transferring out development rights to higher density "receiving" areas.
4. If outdoor shooting ranges are pursued, an evaluation of the surrounding natural resources and communities should strongly be taken into consideration.
5. If campgrounds are pursued, an evaluation of the surrounding natural resources and communities should strongly be taken into consideration. Tree canopy and natural assets should be incorporated into the design. Full-time residency should not be supported.
6. In cases where more site specific information, such as wetland delineations and soil data, is available to show that a property or a portion of a property is not environmentally constrained, that information may be presented to the Planning Commission to be considered for uses other than those defined within the recommended land use list or described development pattern. The proposed development would need to be consistent with character of the community and not adversely impact the surrounding landscape. Development would need to address natural hazards, stormwater, public safety, access management,

and wildlife through design, mitigation measures, capital improvements, or other necessary tools.

7. If development is deemed appropriate, it should incorporate best management practices for protecting environmentally sensitive areas and water quality, in addition to avoiding natural hazards and addressing public safety issues.

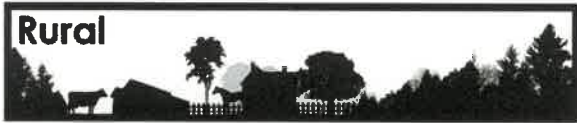
RELEVANT PLANS

Horry County Parks and Open Space Plan

EXAMPLE ZONING DISTRICTS OF SIMILAR CHARACTER

CP, CO1, AG1, AG4, AG5





LAND USE AND CHARACTER

Rural areas should support the preservation of farmland and prime agricultural soils, in addition to the preservation of other natural resources, scenic views, and cultural and historic resources. Land development should retain the rural character by retaining large tracts of land, preserving wide natural buffers between differing land uses, and discouraging land uses that are incompatible to adjacent agricultural uses. Commercial development and services are allowable in Rural Activity Centers, primarily located at historic rural cross-roads.

DESIRED DEVELOPMENT PATTERN

Active working lands, such as farms and forests, and large single family lots or family subdivisions with a minimum lot size of ½ an acre or maximum of 2 net units per acre.

RECOMMENDED LAND USES

Primary Land Uses: Agriculture, timberland, and their support uses and services, including, but not limited to crop and livestock processing facilities, stables, veterinary services and farm equipment sales. Single-family detached houses, including mobile homes, on individual large lots.

Secondary Land Uses: Agritourism and eco-tourism uses.

Conditional Land Uses: Rural amusement, outdoor shooting ranges, campgrounds.

TRANSPORTATION

These areas have limited opportunities for alternative transportation, unless an identified project within a transportation plan.

POLICY GUIDANCE

1. Protect active agricultural and forestry operations, prime farmland, and erodible soils, in addition to other important natural features.
2. Major residential subdivisions are discouraged to minimize the impact on public services and infrastructure.
3. If rural amusement, outdoor shooting ranges, or campgrounds are pursued, an evaluation of the surrounding natural resources and communities should strongly be taken into consideration.
4. If the County pursues the development of a Density Bonus Program, Rural Areas should be identified as "sending" areas for transferring out development rights to higher density "receiving" areas.

RELEVANT PLANS

Highway 319 Rural Heritage Area Plan, Mount Vernon Rural Area Management Plan, Northeast Area Transportation Plan

EXAMPLE ZONING DISTRICTS OF SIMILAR CHARACTER

AG1, AG2, AG4-7, RE, CP, CO1, SF/MSF40, SF/MSF 20





LAND USE AND CHARACTER

Rural communities that have historically grown at a higher density than surrounding rural areas due to land being subdivided for relatives. Many of these communities are experiencing transition because they are located in close proximity to municipalities, high growth areas, and/or major road corridors. Individual single family lots and subdivisions are allowable as long as they do not adversely impact the existing character of the community. Neighborhood commercial and services are located along major arterial roadways and within historic Rural Activity Centers and at new highway interchanges.

DESIRED DEVELOPMENT PATTERN

Single-family residential developments, including minor and major subdivisions, with lot sizes greater than 14,500 sq ft or with a maximum of 3 net units per acre. New master planned subdivisions are allowable, but should minimize impacts to natural and aesthetic resources, avoid natural hazards, and provide large buffers between differing land uses. Neighborhood commercial and services are allowable along major arterial roadways and SCDOT designated business routes if compatible with the community and the property can adequately support the proposed use and development requirements. Otherwise, commercial development and services should be located in designated Activity Centers to minimize sprawling development patterns.

RECOMMENDED LAND USES

Primary Land Uses: Single-family detached housing, including mobile homes, individual lots or within subdivisions.

Secondary Land Uses: Neighborhood commercial uses and services, including tradeshops.

Conditional Land Uses: Rural amusement, campgrounds, mobile home parks.

TRANSPORTATION

These areas have limited opportunities for alternative transportation; however, projects specified within adopted transportation plans should be incorporated into future projects.

POLICY GUIDANCE

1. Subdivision of land for single-family detached housing units are allowable, as long as it coincides with existing residential development patterns and do not impede on adjacent farming operations.
2. Infill residential neighborhoods should provide large natural buffers between differing land uses and along collector and arterial roadways to limit the visual impact on the existing community, agricultural lands, and other surrounding natural, historical, and cultural assets.
3. Infill residential neighborhoods preserve substantial open space, natural features and buffers, and viewsheds, as opposed to developing a conventional suburban neighborhood in a rural setting. Infill development utilizing MRD1 zoning may allow for slightly increased density and lot sizes, as small as 10,000 sq ft lots, in exchange for the protection of large, contiguous open spaces and other sustainable development criteria.
4. New residential subdivisions, lots, and new accessory dwellings should be served by public water and sanitary sewer service to protect water quality and minimize impacts to those still utilizing wells and septic tanks.
5. The availability of adequate public infrastructure and services, especially in regards to public safety and schools,

should be taken into account prior to the approval of rezoning requests.

6. Housing rehabilitation and redevelopment is encouraged within these areas to address properties in need of reinvestment.
7. Neighborhood commercial and tradeshops should be allowable along arterial roadways and business routes when the parcel is deep enough to support the use, can meet development requirements without variances, and does not impact existing residential uses, historic and cultural resources, and nearby farming operations.
8. If rural amusement, campgrounds, or mobile home parks are pursued, an evaluation of the surrounding natural resources and natural hazards, historic and cultural resources, and communities should strongly be taken into consideration.

RELEVANT PLANS

Bennett Loop Neighborhood Revitalization Plan, Northeast Area Transportation Plan

EXAMPLE ZONING DISTRICTS OF SIMILAR CHARACTER

AG1-AG7, RE, SF/MSF 14.5-40, MRD1



Traditional Development Pattern

Infill Neighborhood

Executive Summary

VISION STATEMENT

The Conway Pathways and Trails Plan offers a vision for a trail system that connects Conway residents to each other and their natural environment. The plan is more than “lines on a map” – it demonstrates how a citywide system of pathways and trails can promote quality of life, economic development and resilience.

The Pathways and Trails Plan is a blueprint, informed by public priorities, that will guide the City and its partners as they design, fund, build and maintain a high-quality system of pathways and trails over time.

The City will use the Plan to guide the detail-oriented work – identifying specific land opportunities, designing the pathways and trails, leveraging funds and partnerships, applying for permits – of getting the trails built.

About the Plan

The Plan lays out the process for locating and prioritizing opportunities for pathways and trails. It proposes a citywide, and in some instances county-wide, trail network that will be built out over time.

The Plan identifies pathway and trail corridors within which the City and its partners – through future phases of work – will pursue detailed trail alignments, access, appropriate design and construction. The draft trail corridors in this plan currently identify 54.4 miles of pathway and trail opportunities within Conway and over 71 miles of county-wide connectivity opportunities from the city limits to other Horry County destinations.

The Plan establishes shared goals and principles that are informed by a public process. It acts as a reference to aid internal and external coordination of pathway and trail projects. And it helps the City allocate the resources needed to pursue future phases of analysis and implementation.

Public Process and Key Takeaways

The City and planning team developed an engagement strategy that included:

- » **9** virtual focus group and stakeholder discussions
- » **1** [Storymap](#) introducing the Plan process
- » **2** online surveys
- » **2** public workshops – offered in the evenings, seeking community feedback on the process and the plan
- » **2** public "pop-up" events seeking community feedback on the plan

Additionally, the consultant team met with the City throughout the process for insight and guidance on the direction of the plan.

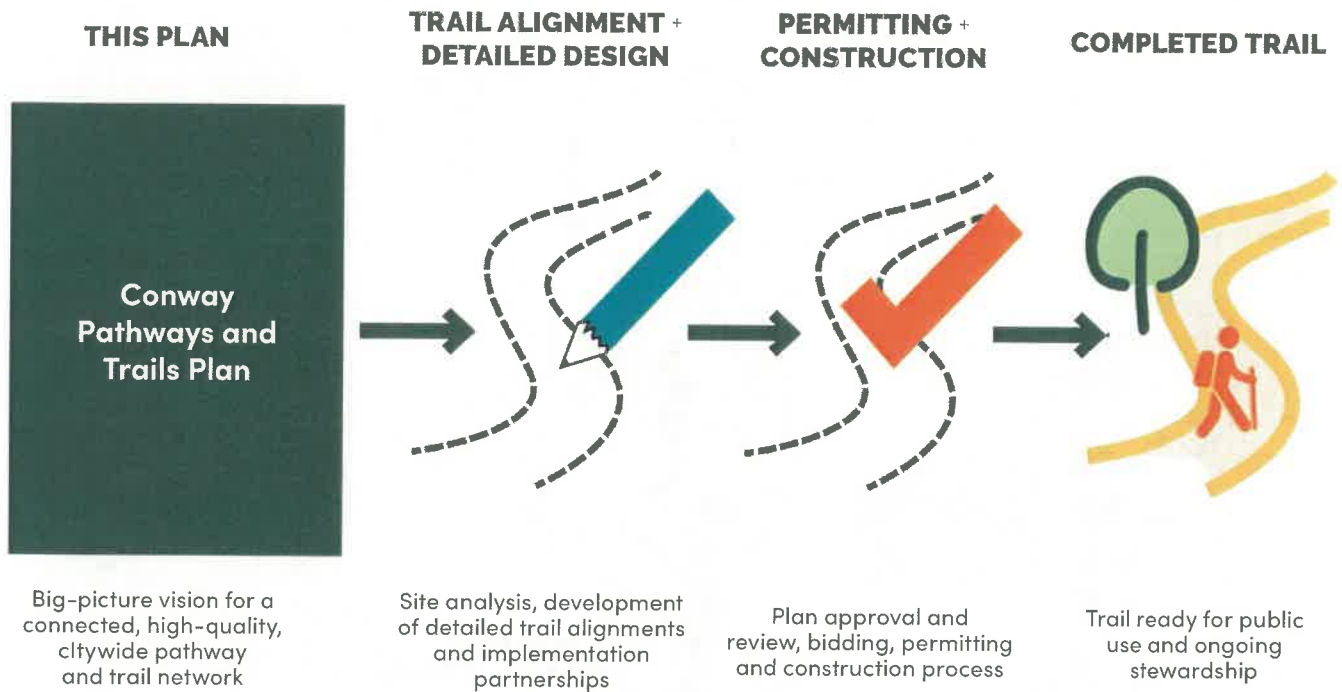


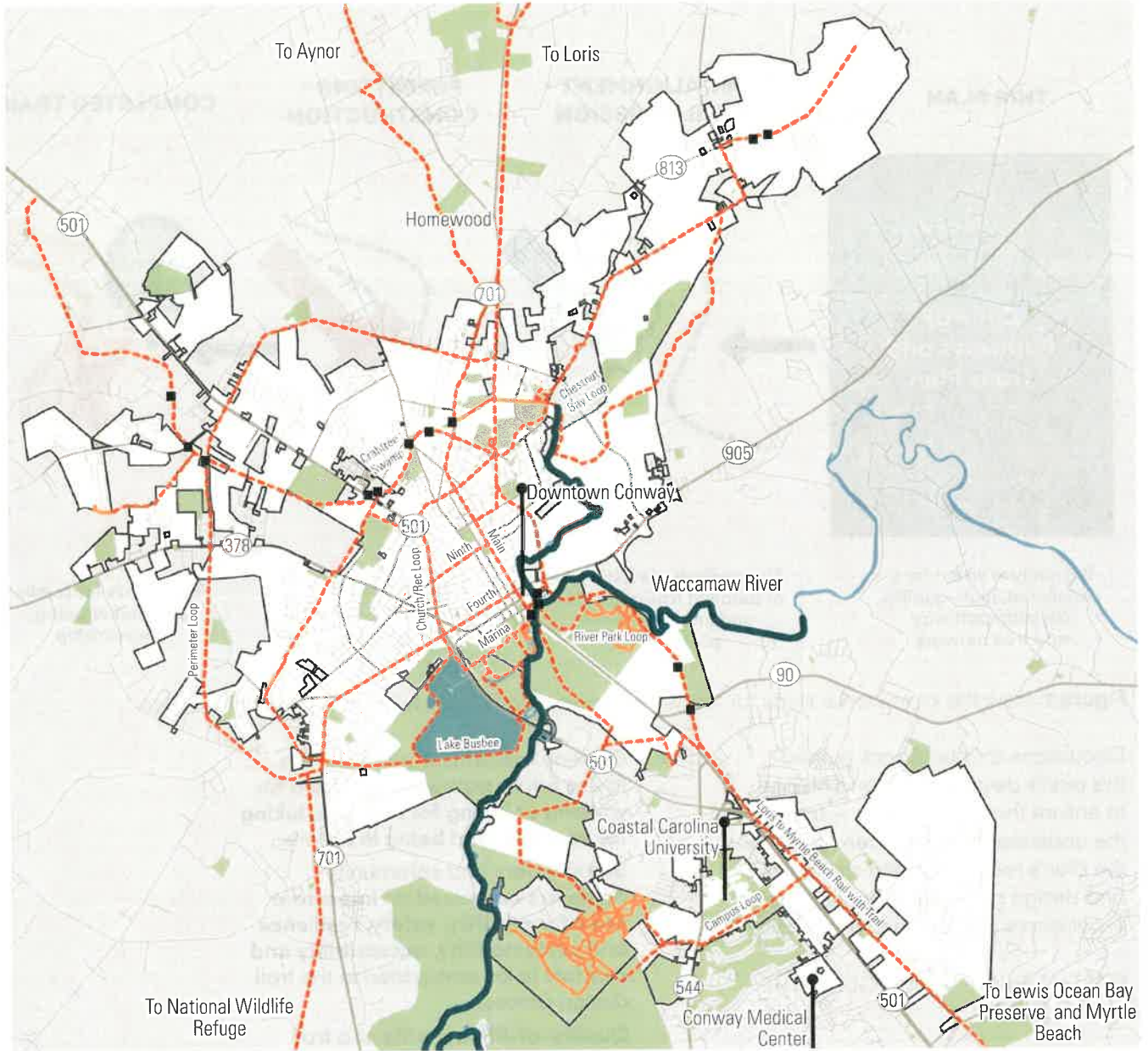
Figure 1: How this plan works: steps for Implementation of the Conway Pathways and Trails Plan

Discussions and feedback guided this plan’s development and helped to ensure that all elements — from the understanding of system gaps to the plan’s recommended strategies and design guidelines — reflect the experiences and vision of the public.

KEY TAKEAWAYS WHICH GUIDE THE PLAN'S FOCUS:

- » Conway residents said **protecting and building new connections to Conway’s natural resources** should be the greatest focus of the Plan.
- » Top obstacles that prevent community members from using Conway's trails are an **overall lack of trails, lack of connections to desired destinations, and lack of available information on existing trails.**
- » Pathways and trails should be **equitable and far-reaching** into the community.
- » Conway residents would most like to use future pathways and trails for **walking or hiking for exercise, biking for exercise, and being in nature.**
- » Stakeholders and community members expressed an **important need for security, safety, resilience and sustainability, accessibility and comfort** to be embedded in the trail design process.
- » **Quality-of-life benefits** of a trail system that are **most important** to community members are: **recreation and health, improving Conway’s competitive edge to attract employers and retailers, and conservation of and access to nature.**
- » Conway residents **prioritize** pathways and trails that provide citywide connectivity with an emphasis on **connection of institutional, historic and natural places.**

CONWAY PATHWAYS & TRAILS PLAN



Pathway and Trail Corridors

The Conway Pathways and Trails system will offer a variety of experiences, with new pathways and trails designed to suit their specific environmental, cultural and development contexts. The strategies, design guidelines, and prioritization in this Plan document should be referenced to ensure consistent and sustainable trails and a high-quality system that serves multiple users.

LEGEND

- | | |
|--|---------------------------------|
| CITY OF CONWAY BOUNDARY | DRAFT TRAIL CORRIDORS |
| MAJOR ROADS | PATHWAYS AND TRAILS |
| ROADS | BLUEWAYS/PADDLE TRAILS |
| EXISTING TRAIL | PEDESTRIAN/BIKE WATER CROSSINGS |
| WATER BODY | |
| PUBLIC LANDS AND UTILITY CORRIDORS (LIGHT GREEN) | |

COMPARISON OF LEVELS OF SERVICE	Existing Mileage	Proposed Mileage	Existing + Proposed	Mi/1,000 Residents from Existing	Mi/1,000 Residents from Proposed
Trails and Multi-Use Paths	16	54.4	70.4	0.7	2.9
Blueways	4	15	19	0.2	0.8
TOTALS	20	69.4	93.4	0.9	3.7

Figure 2: This table compares metrics for Conway's existing trails and Level of Service (miles per 1,000 people) with the new trail mileages proposed in the Conway Pathways and Trails Plan. In addition, the Plan also identifies 71 miles of county-wide trail opportunities not factored into the Level of Service calculations.

Plan Principles

1. **Enhance quality of life in Conway by connecting communities and destinations across the city.**
2. **Provide a high-quality pathway and trail experience.**
3. **Connect Conway to other communities and destinations in Horry County.**
4. **Protect natural resources and make trail corridors resilient.**
5. **Promote economic development and tourism.**
6. **Provide safe, equitable and inclusive access to pathways and trails.**
7. **Ensure the plan is implemented.**

the City will establish Level of Service (LOS) standards, starting with a **goal of maximizing public access within a 10 minute walk of pathways and trails.**

In coordination with Horry County and SCDOT, neighboring municipalities, and landholders, implementation of additional county-wide trail opportunities would significantly increase LOS along major commuter corridors such as Highways 701 and 501. By including connections to county-wide trail service, Conway's population of 24,000 and neighboring county residents will have expansive access to employment centers, commercial destinations, natural open space, residential land use areas, historic places, and Horry County's waterways.

Trail Typologies, Design and Maintenance

The approach to planning Conway's pathway and trail corridors and typologies is found in the Pathways and Trails Plan and Design and Maintenance Guidelines chapters of this document. The following trail typologies were determined with respect to Conway's community and environmental context. They inform experiential qualities and detailed design of trails, as well as elements of project prioritization in the Implementation Plan.

Level of Service

Implementation of the Pathways and Trails Plan will more than double the size of Conway's trail system, setting an ambitious target of around **2.9 miles of trails and mutli-use paths and 0.8 miles of blueway trail per 1,000 residents.** To track the impact of pathway and trail improvements on measures such as overall system access and connectivity,

TRAIL TYPOLOGIES



**Multi-Use Trail
(Urban/Suburban)**



**Historic, Boulevard &
Main St. Trails**



**Multi-Use Trail
(Rural)**



**Swamp, Levee &
Canal Trails**



**Wetland or Sensitive
Lands Trails**



**Loris to Myrtle Beach
Rail with Trail**



**Blueway/ Paddle
Trails**

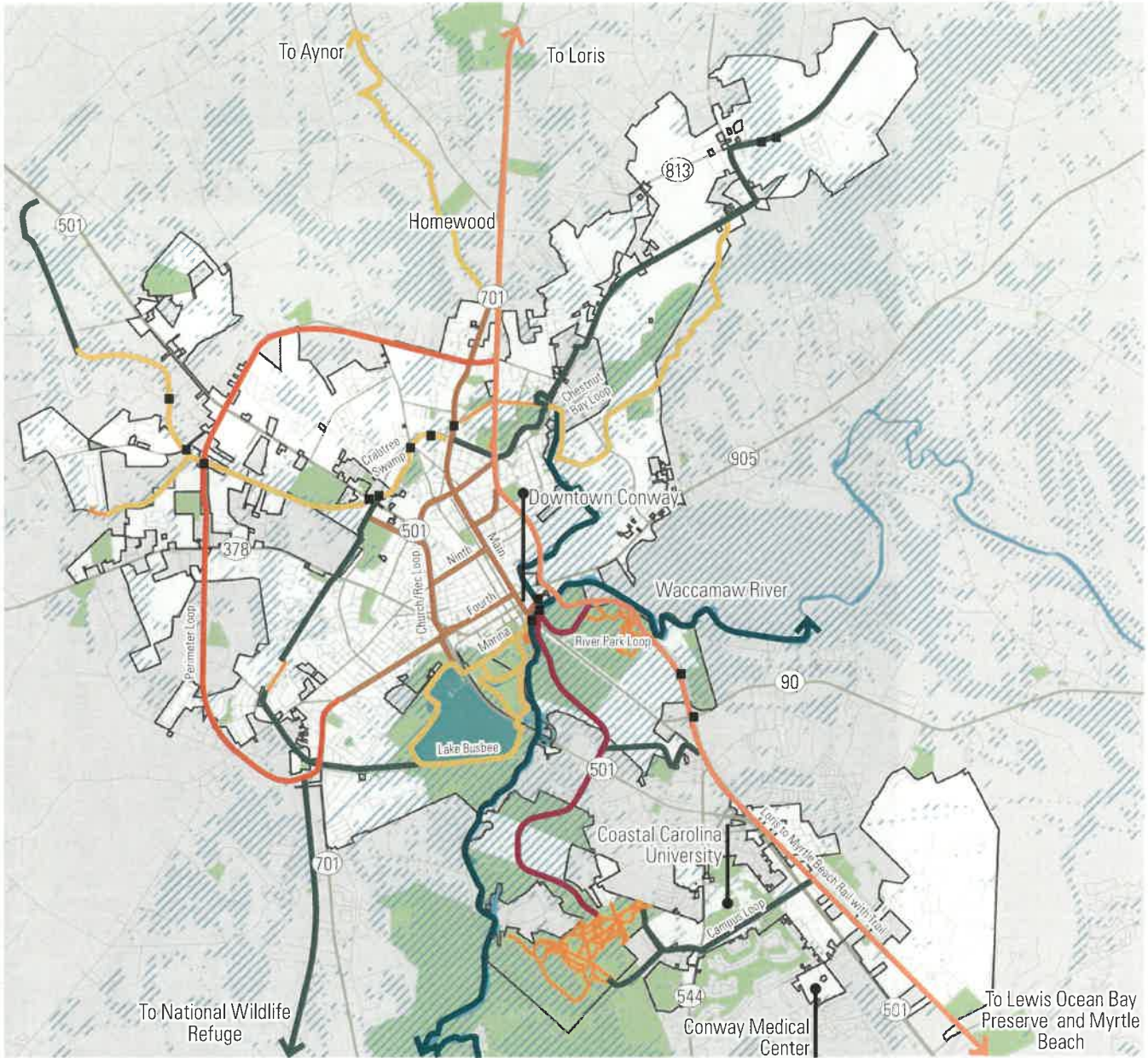


**Pedestrian and
Bicycle Water
Crossings**

Public Input

Over 60% of Survey 2 respondents chose Multi-Use Trail (Urban/Suburban), Typical Multi-Use Trail (Rural), Swamp, Levee & Canal Trails as their highest priority trail types, and over 50% said Loris to Myrtle Beach Rail with Trail, and Blueways/Paddle Trails were second-highest priority trail types.

Trail typology precedent photo credit: Top Row: Alta, DowntownPhoenix.org, NCDOT; Middle Row: East Coast Greenway, Mecklenburg County, Mountain Division Alliance; Bottom Row: Design Workshop



Trail Typologies

By stitching together a citywide system of pathways and trails that follow canals, the railroad, stream corridors and road corridors – and further imagining spurs and loops through a diversity of natural and cultural landscapes – the plan can satisfy residents' vision for an interconnected system of natural, urban and suburban trails with distinct experiential qualities.

LEGEND

- | | |
|--|---------------------------------------|
| CITY OF CONWAY BOUNDARY | MULTI-USE TRAIL (URBAN/SUBURBAN) |
| MAJOR ROADS | MULTI-USE TRAIL (RURAL) |
| ROADS | SWAMP, LEVEE & CANAL TRAILS |
| EXISTING TRAIL | HISTORIC, BOULEVARD & MAIN ST. TRAILS |
| WATER BODY | LORIS TO MYRTLE BEACH RAIL WITH TRAIL |
| PUBLIC LANDS AND UTILITY CORRIDORS (LIGHT GREEN) | WETLAND OR SENSITIVE LANDS TRAIL |
| WETLANDS | BLUEWAYS/PADDLE TRAILS |
| PEDESTRIAN/BIKE WATER CROSSINGS | |

IMPLEMENTATION PLAN

Prioritizing Pathway and Trail Projects

The Pathways and Trails prioritization model offers clear immediate action items and a long-term blueprint for the City, its partners and developers to reference and coordinate efforts. The model also identifies short- and long-term funding and partnership recommendations. Cost estimates and design and maintenance guidelines will help the City and its partners establish clear expectations for initial and ongoing costs and maintenance needs. Project prioritization and phasing recommendations are driven by community priorities and grounded in physical and economic realities.

PROJECT TYPE	ESTIMATED PLANNING AND CONSTRUCTION COST
Tier 1	\$19.3 m - \$72.8 m
Tier 2	\$9.5 m - \$36 m
County-wide	varies
Blueways	\$1.3 m - \$7 m
Existing	-

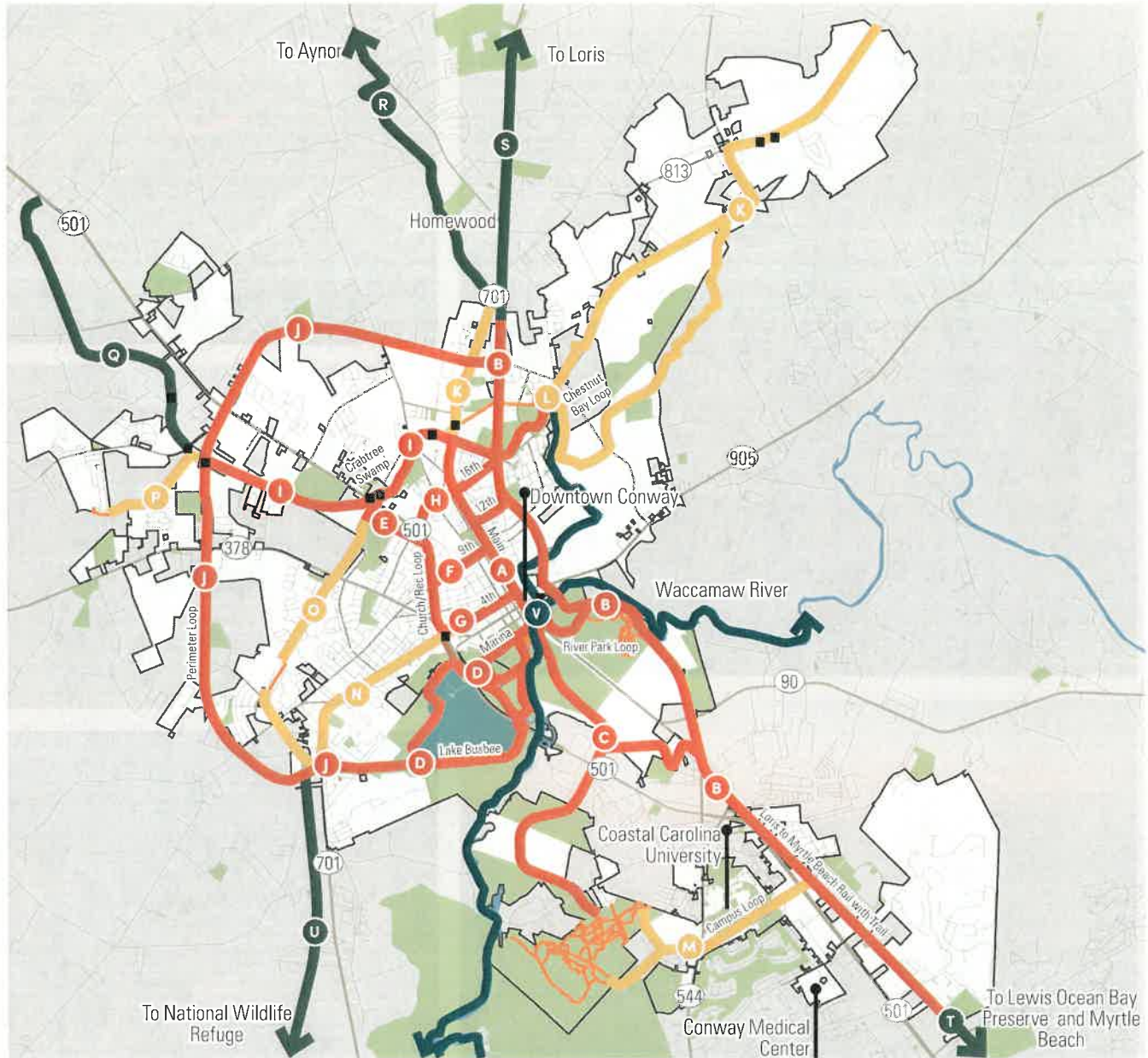
Key Takeaways

- » The Principles, Objectives and Strategies of the Plan informed the distribution of pathway and trail projects into tiers.
- » Tier 1 is the highest priority for short-term projects that promote equity in the system while building important connections.
- » The prioritization model (Table 1 on page 11) lists the projects by tier. The higher the project's place in the table, the higher it scored according to the equity-oriented system goals of connectivity and public interest. Each project is shown with its estimated range of planning and construction costs.
- » The plan recommends a staggered budgeting approach whereby higher-tier projects are budgeted at a higher per-mile cost and lower-tier projects at a lower per-mile cost.
- » The result will be an emphasis on funding high-quality pathways, trails and blueways within those corridors that are most important for building a system that serves residents equitably, while ensuring progress is made on the trail projects that are lower-priority but still critical for realizing city and county-wide connectivity.



Figure 3: Priority pathways and trails identified by the Conway community are closely tied to the connection of institutional, historic and environmental place-anchors which can be leveraged to bolster economic development and tourism. Examples of these anchors include: (clockwise from top left) Conway's Downtown and River Park, the Sports and Fitness Center, educational institutions such as Coastal Carolina University, nearby Horry County destinations such as Myrtle Beach; existing waterside trails such as Lake Busbee, Crabtree Swamp, and the Santee Cooper Ash Ponds, and the Waccamaw National Wildlife Refuge. Credit: Design Workshop

PATHWAYS AND TRAILS PRIORITIZATION TIERS



Project Prioritization

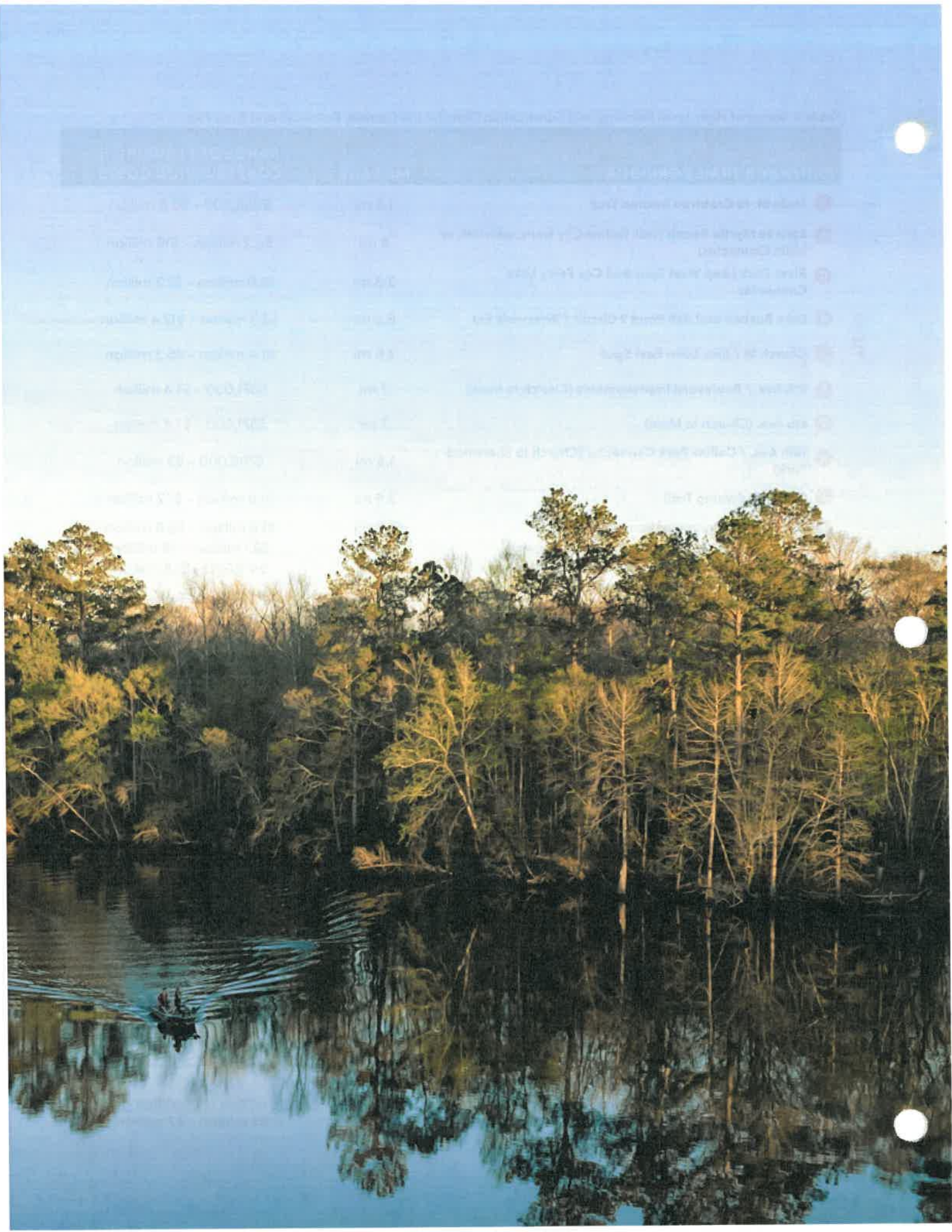
The Implementation Plan is an important resource to help Conway develop its financing, staffing and partnership approach for an expanded pathways and trails system. It is also an important tool for engaging the public, showing progress, and demonstrating the positive impact of an expanded system.

LEGEND

CITY OF CONWAY BOUNDARY	TIER 1 TRAILS
MAJOR ROADS	TIER 2 TRAILS
ROADS	COUNTY-WIDE TRAILS
EXISTING TRAIL	BLUEWAYS
WATER BODY	
PUBLIC LANDS AND UTILITY CORRIDORS (LIGHT GREEN)	
PEDESTRIAN/BIKE WATER CROSSINGS	

Table 1: Range of High-Level Planning and Construction Costs for the Conway Pathways and Trails Plan

	PATHWAY & TRAIL CORRIDOR	MILEAGE	RANGE OF PLANNING & CONSTRUCTION COSTS
TIER 1	A Main St. to Crabtree Swamp Trail	1.8 mi	\$954,000 - \$3.6 million
	B Loris to Myrtle Beach Trail (within City limits, with 12th to Main Connector)	8 mi	\$4.2 million - \$16 million
	C River Park Loop West Spur and Cox Ferry Lake Connector	3.6 mi	\$1.9 million - \$7.2 million
	D Lake Busbee and Ash Pond 2 Circuit / Riverwalk Ext.	6.2 mi	\$3.3 million - \$12.4 million
	E Church St / Rec. Loop East Spur	2.6 mi	\$1.4 million - \$5.2 million
	F 9th Ave. / Boulevard Improvements (Church to Main)	.7 mi	\$371,000 - \$1.4 million
	G 4th Ave. (Church to Main)	.7 mi	\$371,000 - \$1.4 million
	H 16th Ave. / Collins Park Connector (Church to Sherwood Park)	1.5 mi	\$795,000 - \$3 million
	I Crabtree Swamp Trail	3.6 mi	\$1.9 million - \$7.2 million
	J Outer Belt - (Perimeter Road Segment) (Ultra Road to Hwy 378 Segment) (Perimeter Road to Lake Segment)	2.8 mi 4 mi .9 mi	\$1.5 million - \$5.6 million \$2.1 million - \$8 million \$477,000 - \$1.8 million
	36.4 mi	\$19.3 million - \$72.8 million	
TIER 2	K Homewood Connector	1 mi	\$530,000 - \$2 million
	L Chestnut Bay Loop and Collins Jolly Spur	9.1 mi	\$4.8 million - \$18.2 million
	M Campus Loop Connector	2.4 mi	\$1.3 million - \$4.8 million
	N 4th Ave. to Outer Belt	2.2 mi	\$1.2 million - \$4.4 million
	O Rec Loop West Spur and Outer Belt Connector	2.4 mi	\$1.3 million - \$4.8 million
	P Dunn Short Cut Road to Crabtree Swamp Trail / Oakey Swamp	.9 mi	\$477,000 - \$1.8 million
	18 mi	\$9.5 million - \$36 million	
CITYWIDE TOTALS		54.4 miles	\$28.8 million - \$108.8 million
BLUEWAYS COUNTY-WIDE	Q Crabtree Swamp to 501	3.3 mi	\$1.7 million - \$6.6 million
	R Homewood to Aynor	15+ mi	\$530,000 - \$1.2 million per mile
	T S Loris to Myrtle Beach Rail with Trail	18.5+ mi	\$530,000 - \$2 million per mile
	U Wildlife Refuge Trail (Easement Trails)	22.4+ mi	\$340,000 - \$530,000 per mile
	V Waccamaw River Crossing (Bike/Ped Ferry with Landings or Pedestrian Bridge)	-	\$1.3 million - \$3 million (ferry), \$5 million - \$7 million



Project Introduction

- » Project Vision
- » Planning Context
- » Definitions
- » Process and Methods

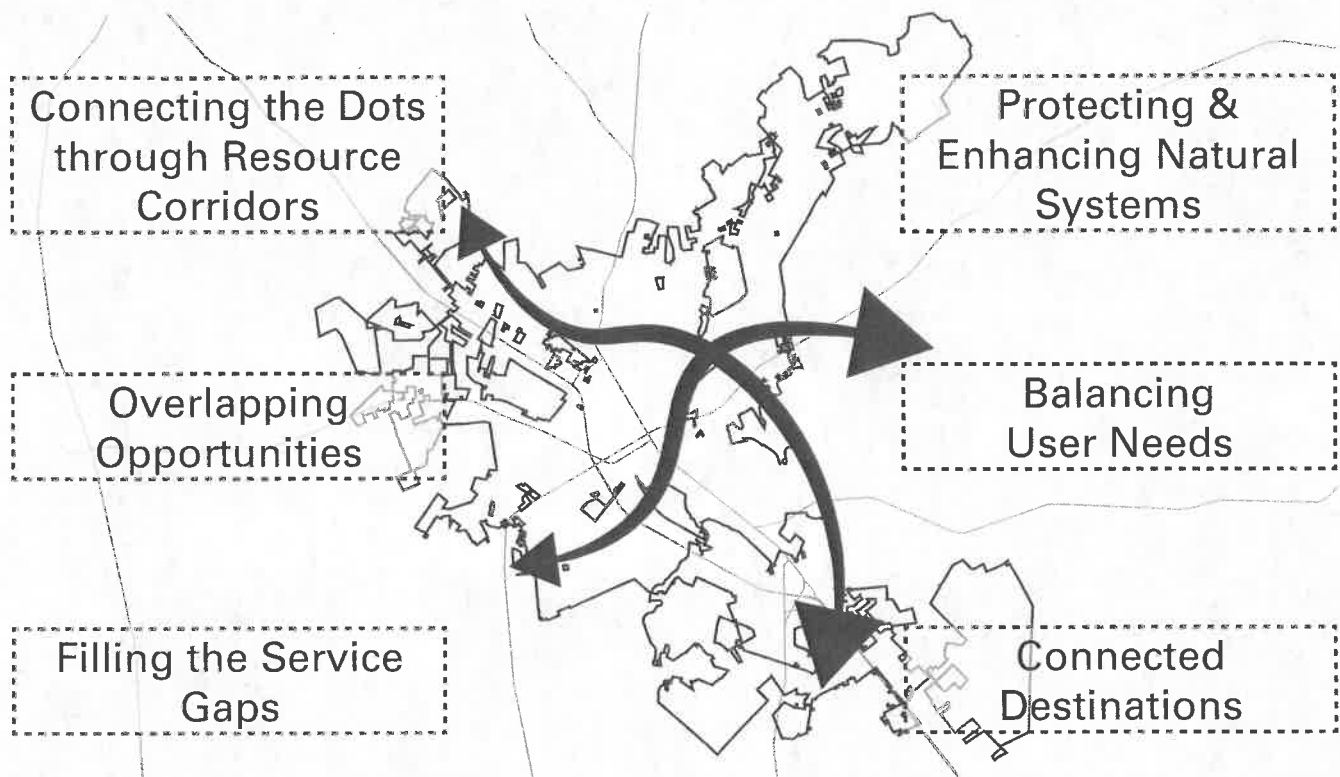


Figure 1: Goals of the Conway pathways and trails planning process

Project Vision

The Conway Pathways and Trails Plan offers a vision for a trail system that connects Conway residents to each other and their natural environment. The plan is more than “lines on a map” – it demonstrates how a citywide system of pathways and trails can promote quality of life, economic development and resilience. The Pathways and Trails Plan is a blueprint, informed by public priorities, that will guide the City and its partners as they design, fund, build and maintain a high-quality system of pathways and trails over time.

The City will use the Plan to guide the detail-oriented work – identifying specific land opportunities, designing the pathways and trails, leveraging funds and partnerships, applying for permits – of getting the trails built.

The planning process itself lays the groundwork for future implementation, helping the City build critical public and stakeholder support for short- and long-term buildout of a citywide system of pathways and trails.

Planning Context

Conway currently has 16 miles of trails that are largely isolated within parks, or “trail islands,” and 4 miles of dedicated blueways, or paddle trails. Only about 1,300 residents, or 5% of the City's population, live within a 10-minute walk of those trails' access points.

This planning process was launched at an exciting time, poised to take advantage of public support for more and better connected pathways and trails; to coordinate with recent trail planning efforts; and to unify city,

CONWAY'S PATHWAYS AND TRAILS	Existing Mileage	Miles per 1,000 Residents	City Residents within 10-Minute Walk of Trail Access	% of Population within 10-Minute Walk of Trail Access
	16	0.7	1,300	5%

Figure 2: Conway's existing pathways and trails.

county and regional trail enthusiasts behind a common vision and plan of implementation.

Among the previous or ongoing plans and efforts that the Conway Pathways and Trails Plan can build upon:

- » The City of Conway 2016-17 Recreation Needs Assessment and Planning Report showed great public support for new trails and greenways. When asked which recreation facilities they wanted greater access to, the largest proportion of survey respondents (55%) selected more hiking/walking trails/paths, followed by 49% who said they wanted more bike lanes/paths. When asked how they would want the City of Conway to spend \$100, trails and greenways were the top priority of survey respondents. The report recommendations align with those of this planning effort, including:
 - Build connections across the Waccamaw River.
 - Develop a branding and communications plan to promote awareness of pathways and trails.
 - Plan for and fund ongoing maintenance to ensure the long-term quality and usability of the system.
 - Extend partnerships with Horry County to expand multi-modal trail networks throughout and beyond town.
 - Create more places for outdoor recreation and nature-based activities in Conway.
- Increase funding for recreational facilities, including trails, through measures that could include support from non-profit Friends' groups and a park and recreation foundation.
- » The downtown Conway master plan update was underway at the beginning of this planning process and generated excitement about possible new connections to Conway's historic and vibrant downtown.
- » The 2005 City of Conway Greenway Master Plan was consulted by the planning team. It provides recommendations for multi-use trails, bike lanes and sidewalks, largely within existing road corridors, and makes important observations about the potential for trail corridors to preserve natural resources and the opportunity to build new trail connections to and within future residential development.
- » The City of Conway Unified Development Ordinance, updated in September 2021, is a valuable tool in future pathway and trail development. It specifies design standards, incentives and payment-in-lieu programs to encourage the buildout of pathways and trails in pace with Conway's future development.
- » The City of Conway has participated in the FEMA Hazard Mitigation Grant Program since 1999, following Hurricane Floyd. This program provides federal funds for the voluntary buyout of flood-prone properties by the City. Projects such



Figure 3: Definitions of pathways and trails. Photo credit: Design Workshop

as the Sherwood Forest Masterplan, funded by a resilience project of The Nature Conservancy, demonstrate the potential for such buyout properties to form contiguous pieces of land that can be used for parks and trails in addition to providing flood resilience.

- » The Horry County Trail Summit, held in May 2022, brought together people from across the county to discuss the possibilities for new local and regional connections by way of pathways and trails, including a proposed rail-to-trail from Myrtle Beach to Aynor. This event, organized by the Bicycle Advisory Council of Coastal Carolina University, and others like it present a significant opportunity to engage with people who may act as advocates and stewards of a future pathway and trail system.

Definitions

Pathways and trails can be used for recreation, for getting from one place to another, or just enjoying Conway's natural and cultural resources. Conway's Pathway and Trails will traverse a variety of urban, suburban, rural and natural contexts and serve many different user types. The primary purpose of the pathway and trail network is to provide connectivity throughout the City through recreational routes for walkers, bicycle users, hikers, and paddlers.

Figure 3 illustrates how pathways and trails are broadly defined for the purposes of this plan. The approach to planning Conway's trail corridors and specific trail typologies is explained in further detail in the Pathways and Trails Plan and Design and Maintenance Guidelines sections of this document.

Process and Methods

Conway residents have expressed a desire for more trail experiences in Conway's natural landscapes and for more trail connections to other trails, to downtown, to natural landscapes and to parks. Because of the complex nature of land ownership and geographical constraints, the plan must rely on a variety of "resource corridors" to provide that diversity of trail experiences and to build out citywide connectivity. The Plan recommends different approaches to identifying feasible locations for pathways and trails, as well as appropriate trail types in corridors that meet the needs of Conway's infrastructure and environment.

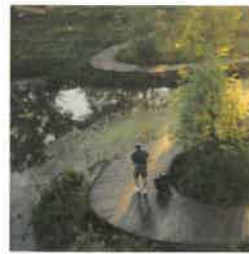
The planning team studied different types of land that represent the greatest opportunities for stitching together a high-quality and continuous pathway and trail system throughout Conway and other destinations in Horry County. This recipe for potential new pathway and trail alignments includes:

- » Land that is already publicly owned or accessible, or slated to join Conway's future park and public lands system, such as Hawthorne wetland park and bike paths at Chestnut Bay
- » Land that is privately owned but already protected by environmental regulations or a conservation easement
- » Land that is privately owned by a potential organizational partner, such as a utility or homeowners association
- » Land considered a likely site for future development, which could be planned to include open space protection and public trail amenities
- » Areas where future pathway and road improvements are funded and/or formally planned to take place, such as a new road behind Chick-fil-a that will include sidewalks and a round-about, a redesign of 9th Ave from Hwy 501 to 378 to create a boulevard

condition, and widening of Hwy 701 to Loris (the fastest growing area in the region)

- » Maintenance easement areas along City ditches where access is needed to main pathway and trail corridors
- » Safer connections in scenic areas where cyclist activity is already high, such as Highway 813 and existing informal natural surface pathways or roads
- » Limited use of existing and planned future sidewalks in order to create safer connections in urban, historic or high-traffic areas, and where vehicle and pedestrian activity are constrained (i.e. in areas Downtown and near the future expansion of the Riverwalk)
- » Connections based on Community input, including desired destinations and informal yet well-loved routes.

The planning approach for locating the trail corridors builds on this recipe and categorically maps it within a series of overlay opportunities, found in the Conway Pathways and Trail Plan chapter of this document.



Multi-use paved paths

separated from road traffic wherever possible and connecting destinations, sidewalks, and road and water crossings.

Shared-use paths through parks and natural areas

paved paths for park and trail system connectivity

Gravel or other natural surface trails

through natural environments, for walking, hiking, off-road biking and exploration

Boardwalk trails and other wetland trail structures

for low-impact access to sensitive natural areas

Blueway trails

along Conway's waterbodies, for paddlers and non-motorized watercrafts

Figure 3: Definitions of pathways and trails. Photo credit: Design Workshop

as the Sherwood Forest Masterplan, funded by a resilience project of The Nature Conservancy, demonstrate the potential for such buyout properties to form contiguous pieces of land that can be used for parks and trails in addition to providing flood resilience.

- » The Horry County Trail Summit, held in May 2022, brought together people from across the county to discuss the possibilities for new local and regional connections by way of pathways and trails, including a proposed rail-to-trail from Myrtle Beach to Aynor. This event, organized by the Bicycle Advisory Council of Coastal Carolina University, and others like it present a significant opportunity to engage with people who may act as advocates and stewards of a future pathway and trail system.

Definitions

Pathways and trails can be used for recreation, for getting from one place to another, or just enjoying Conway's natural and cultural resources. Conway's Pathway and Trails will traverse a variety of urban, suburban, rural and natural contexts and serve many different user types. The primary purpose of the pathway and trail network is to provide connectivity throughout the City through recreational routes for walkers, bicycle users, hikers, and paddlers.

Figure 3 illustrates how pathways and trails are broadly defined for the purposes of this plan. The approach to planning Conway's trail corridors and specific trail typologies is explained in further detail in the Pathways and Trails Plan and Design and Maintenance Guidelines sections of this document.

Protecting and building new connections to Conway's natural resources

Building new or better connections to local destinations – such as parks, schools, campuses and Downtown

Building new or better connections between Conway communities – including those separated by the river

Building new or better connections across Horry County – such as other towns, state parks, other trail systems and the beach

Greatest Focus

Figure 6: Ranked response summary to the preferred focus of the future Conway trail system. (Survey 1)

to increase the amount of freight that can be transported. The rail line between Waccamaw River Park and Intracoastal Waterway was highlighted as a critical link for Conway's ongoing destination tourism planning.

- » It is important to plan for consistent right-of-way use for bicycles.

Community Feedback

Feedback gathered from the public during the stakeholder and focus group discussion, surveys, workshop and pop-up events revealed several common threads which drove the focus of the plan.

Key Takeaways

- » **Conway residents said protecting and building new connections to Conway's natural resources should be the greatest focus of the Plan.**
- » **Top obstacles that prevent community members from using**

Conway's trails are an overall lack of trails, lack of connections to desired destinations, and lack of available information on existing trails.

- » **Pathways and trails should be equitable and far-reaching into the community.**
- » **Conway residents would most like to use future pathways and trails for walking or hiking for exercise, biking for exercise, and being in nature.**
- » **Stakeholders and community members expressed an important need for security, safety, resilience and sustainability, accessibility and comfort to be imbedded in the trail design process.**
- » **Quality-of-life benefits of a trail system that are most important to community members are: recreation and health, improving Conway's competitive edge to attract employers and retailers, and conservation of and access to nature.**
- » **Conway residents prioritize pathways and trails that provide citywide connectivity with an emphasis on connection of institutional, historic and natural places.**

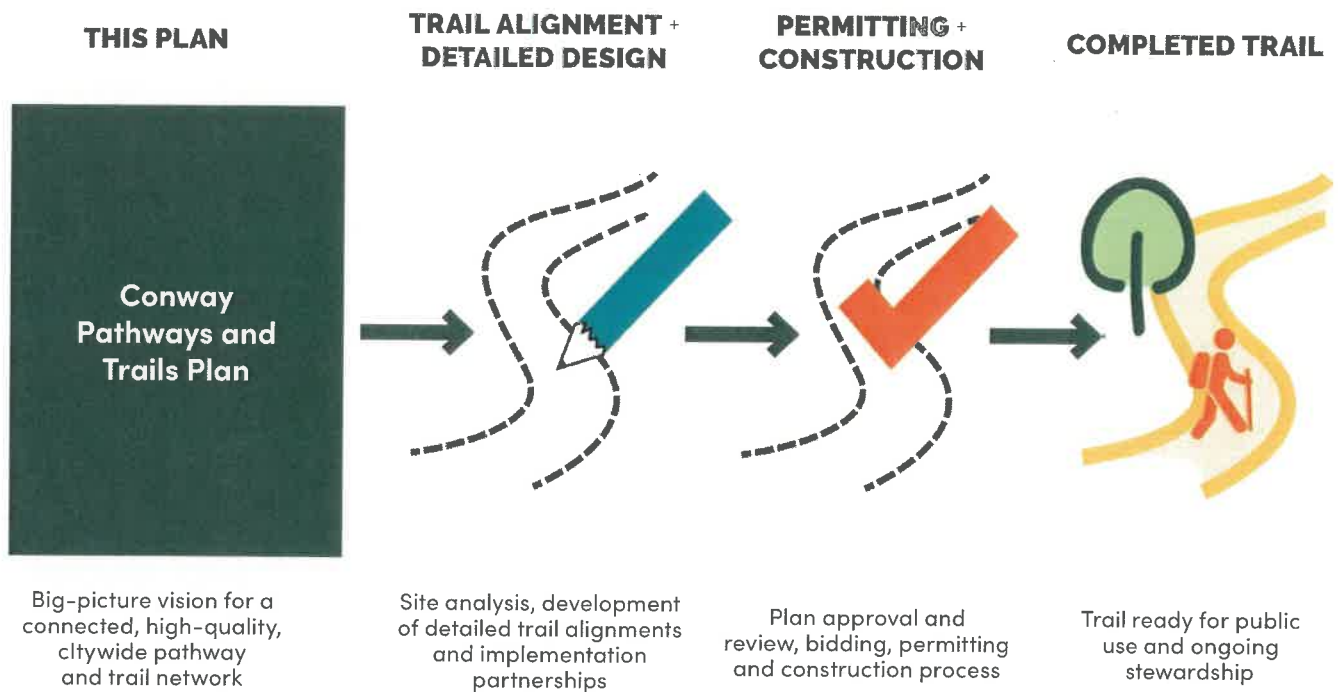


Figure 7: How this plan works: steps for Implementation of the Conway Pathways and Trails Plan

About the Plan

The Conway Pathways and Trails Plan lays out the process for locating and prioritizing opportunities for pathways and trails. It proposes a citywide, and in some instances county-wide, trail network that will be built out over time.

The Plan identifies pathway and trail corridors within which the City and its partners – through future phases of work – will pursue detailed trail alignments, access, appropriate design and construction.

The draft trail corridors in this plan currently identify 54.8 miles of pathway and trail opportunities within Conway and over 71 miles of county-wide connectivity opportunities from the city limits to other Horry County destinations.

The Plan establishes shared goals and principles that are informed by a public

process. It acts as a reference to aid internal and external coordination of pathway and trail projects. And it helps the City allocate the resources needed to pursue future phases of analysis and implementation.

Planning Approach

The Conway Pathways and Trails Plan outlines potential pathway and trail locations that are based on overlays of environmental data, cultural destinations and landscapes, ongoing planning efforts, and feedback from the community. The planning team identified different types of land that represent the greatest opportunities for a trail system throughout Conway, listed in the Process and Methods section of the Project Introduction chapter in this document.

Primary opportunities for potential new pathway and trail alignments include

PLANNING APPROACH

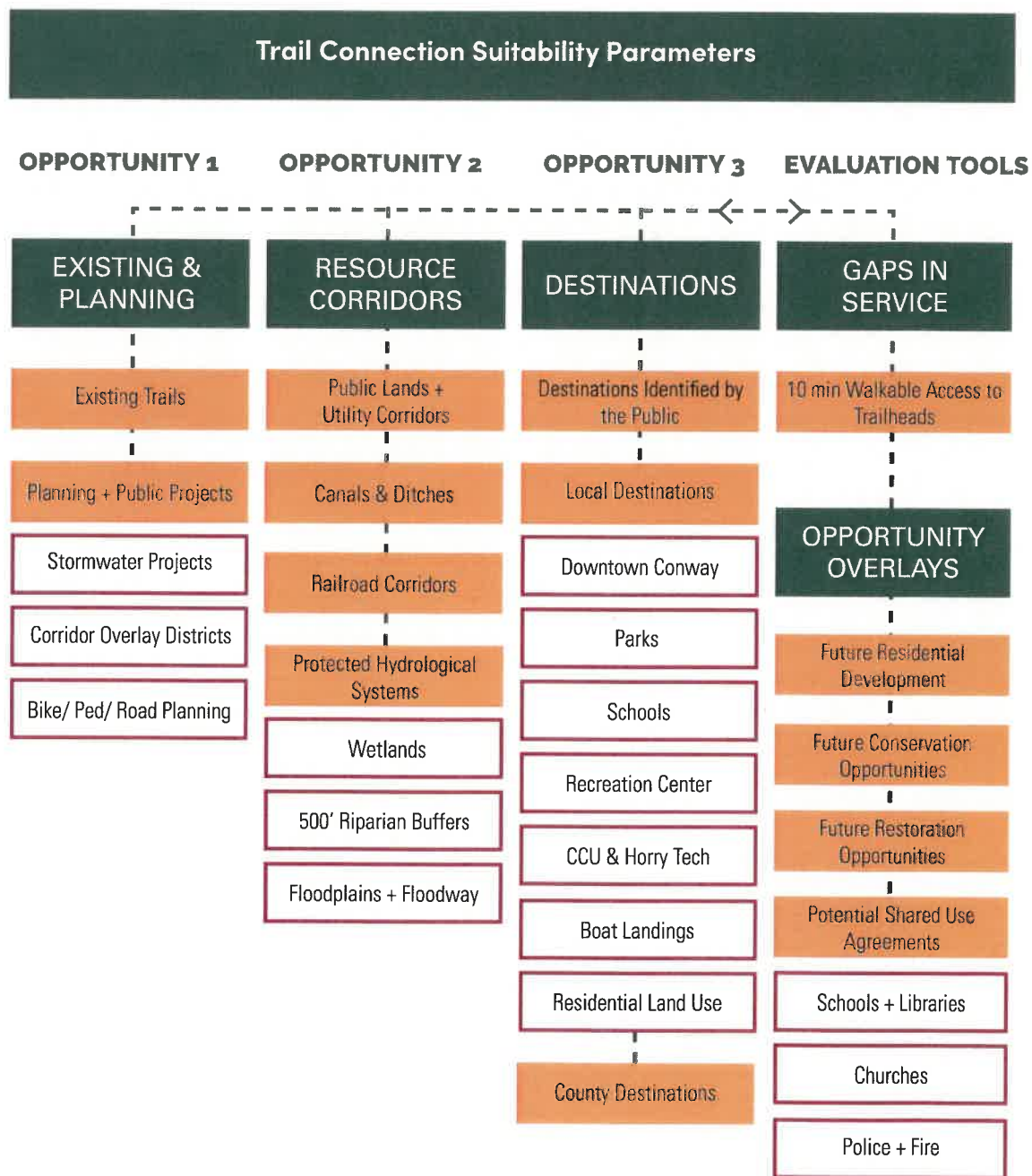
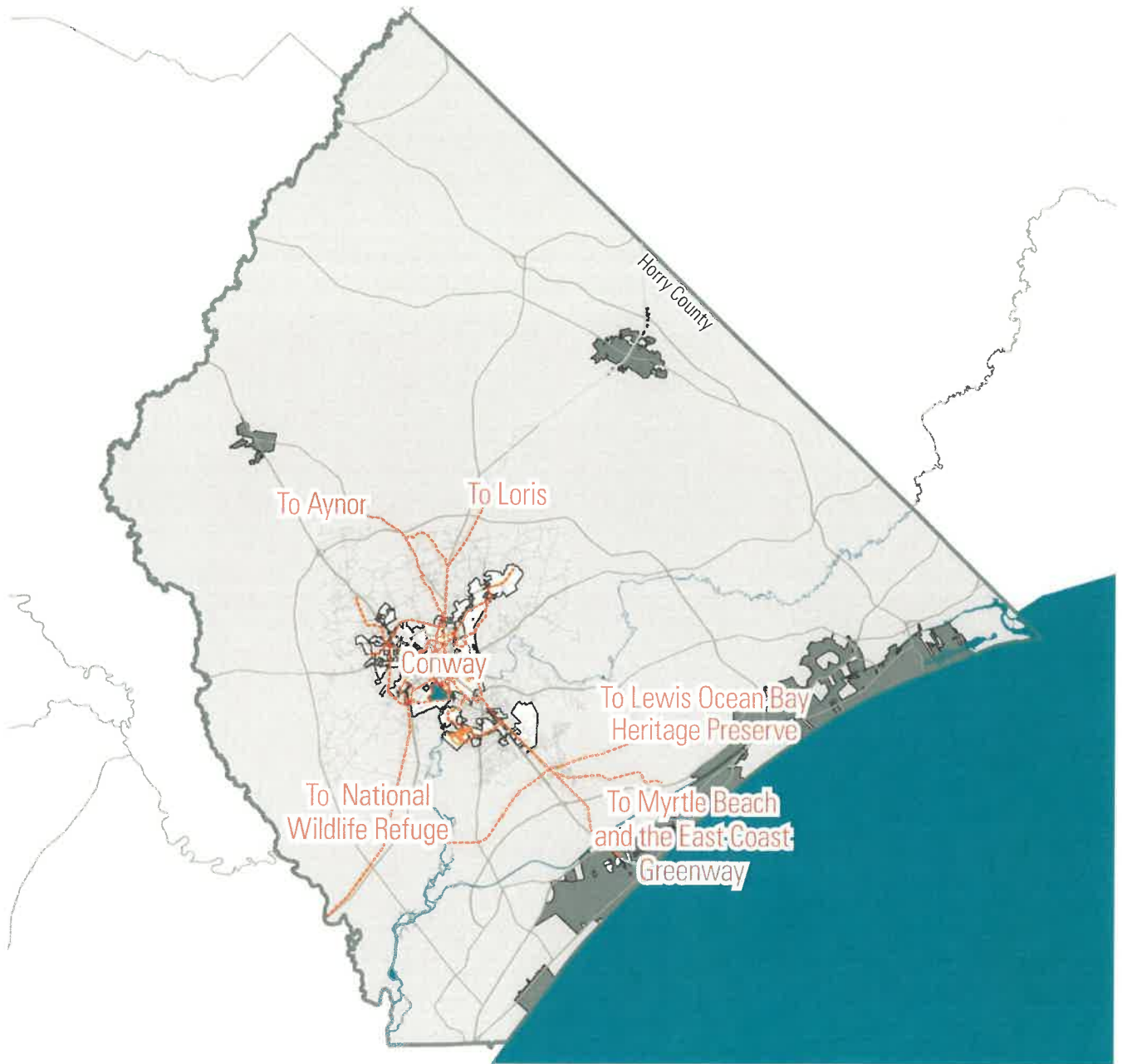


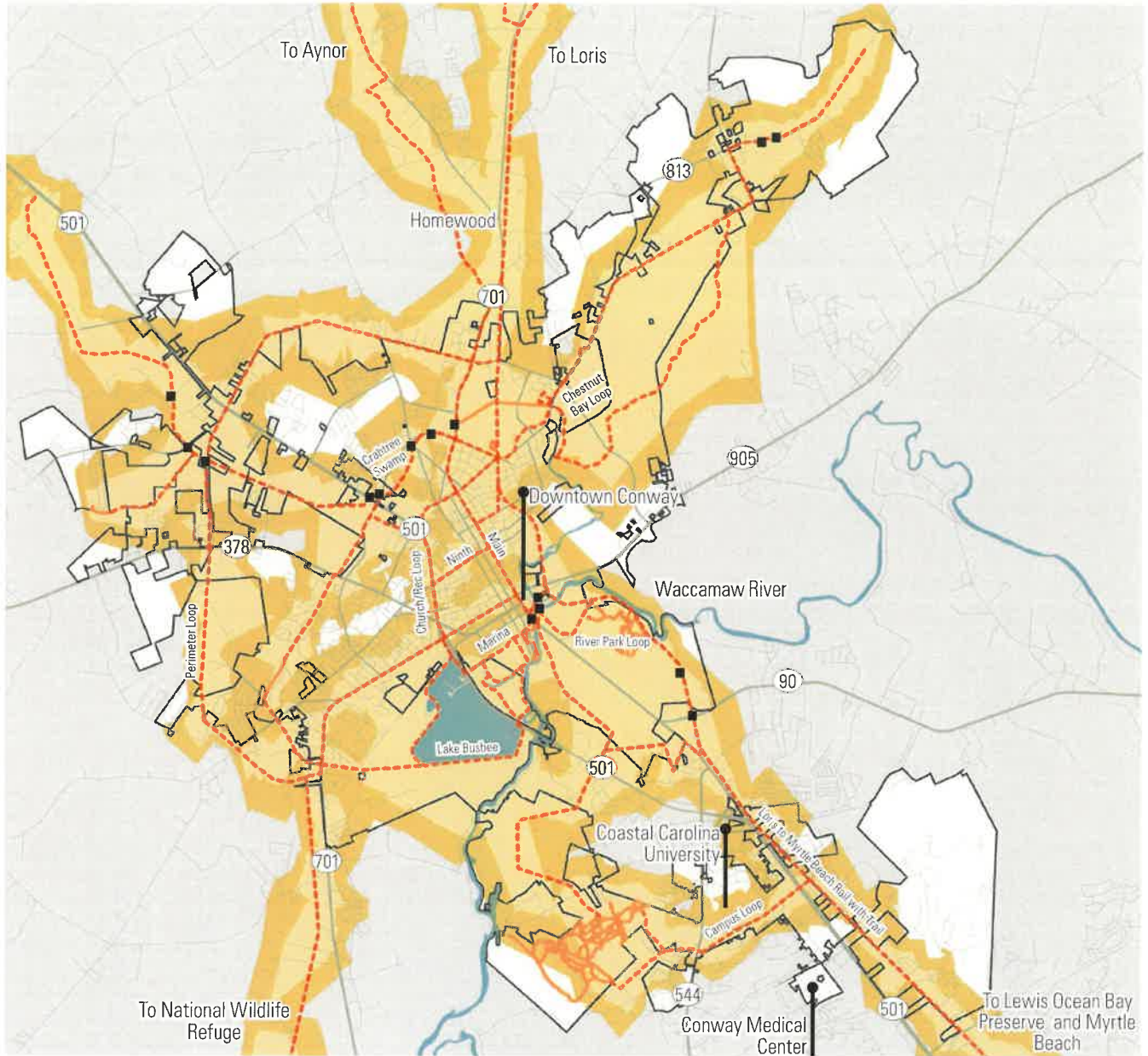
Figure 9: Throughout the planning process, feedback from the City and Conway Community helped inform opportunities for potential trail corridors and connections within the City and County. Data layers used for mapping trail corridors are shown above, weighted evenly, and in groups of location suitability opportunities.



County-wide Connectivity

Though the Plan prioritizes potential pathway and trail projects within the City's jurisdiction, the Conway Pathways and Trails system also identifies opportunities for connectivity at a county-wide level. Major opportunities for these connections include, and will require coordination with SCDOT, Utility entities, and the Towns of Aynor and Loris, and City of Myrtle Beach.

LEVEL OF SERVICE



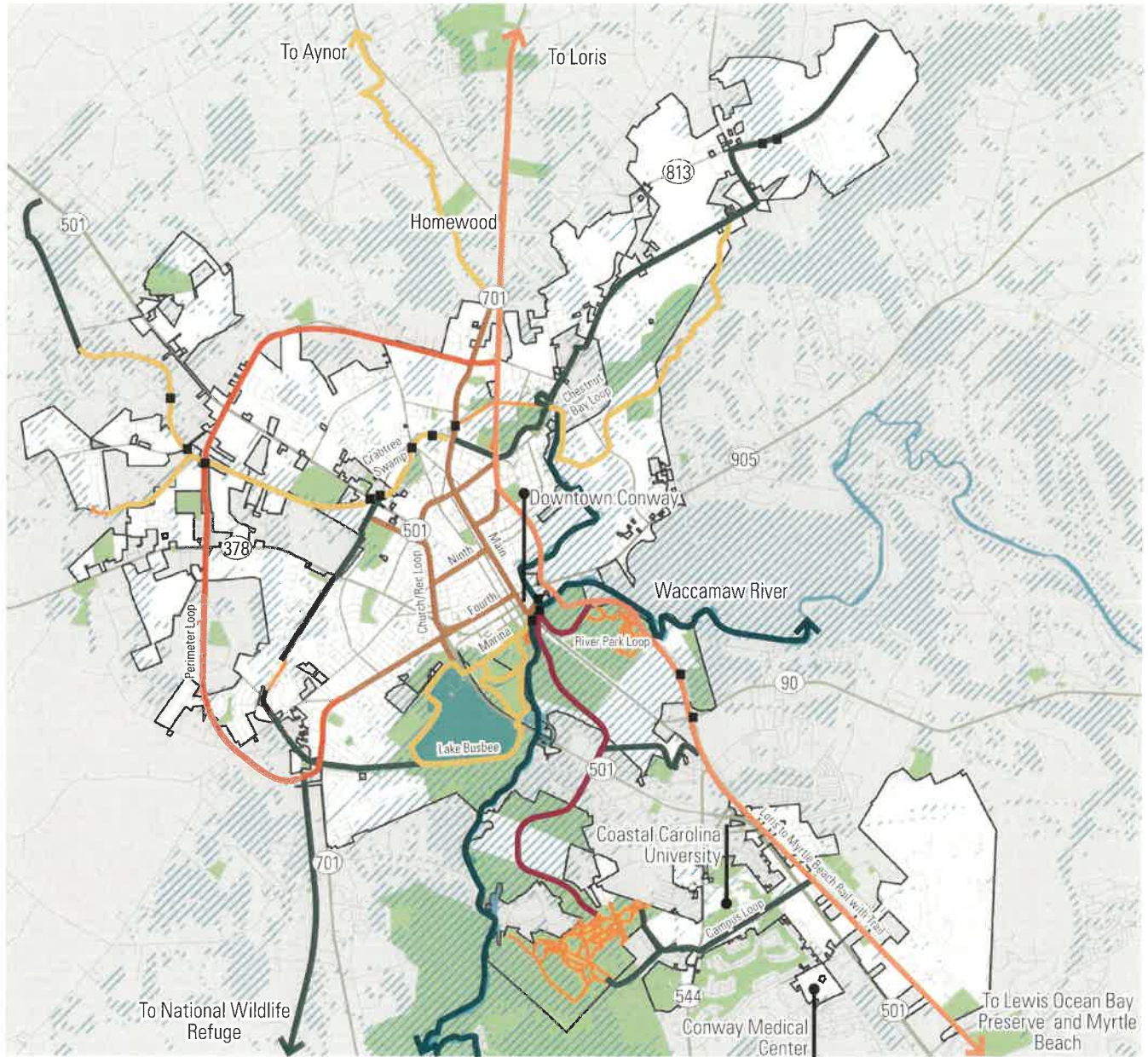
Access to Conway's Pathways and Trails

To track the impact of pathway and trail improvements on measures such as overall system access and connectivity, the City will establish Level of Service (LOS) standards, starting with a goal of **maximizing public access within a 10 minute walk of pathways and trails.**

LEGEND

- | | |
|-------------------------|---------------------------------|
| CITY OF CONWAY BOUNDARY | DRAFT TRAIL CORRIDORS |
| MAJOR ROADS | PATHWAYS AND TRAILS |
| ROADS | PEDESTRIAN/BIKE WATER CROSSINGS |
| EXISTING TRAIL | |
| WATER BODY | WALKSHEDS |
| | 5 MINUTE WALK TO TRAILS |
| | 10 MINUTE WALK TO TRAILS |

TRAIL TYPOLOGIES



Trail Typologies

By stitching together a citywide system of pathways and trails that follow canals, the railroad, stream corridors and road corridors – and further imagining spurs and loops through a diversity of natural and cultural landscapes – the plan can satisfy residents’ vision for an interconnected system of natural, urban and suburban trails with distinct experiential qualities.

LEGEND

- | | |
|--|---------------------------------------|
| CITY OF CONWAY BOUNDARY | MULTI-USE TRAIL (URBAN/SUBURBAN) |
| MAJOR ROADS | MULTI-USE TRAIL (RURAL) |
| ROADS | SWAMP, LEVEE & CANAL TRAILS |
| EXISTING TRAIL | HISTORIC, BOULEVARD & MAIN ST. TRAILS |
| WATER BODY | LORIS TO MYRTLE BEACH RAIL WITH TRAIL |
| PUBLIC LANDS AND UTILITY CORRIDORS (LIGHT GREEN) | WETLAND OR SENSITIVE LANDS TRAIL |
| WETLANDS | BLUEWAYS/PADDLE TRAILS |
| PEDESTRIAN/BIKE WATER CROSSINGS | |

RURAL TRAILS - TYPE A

SCENIC ROUTE

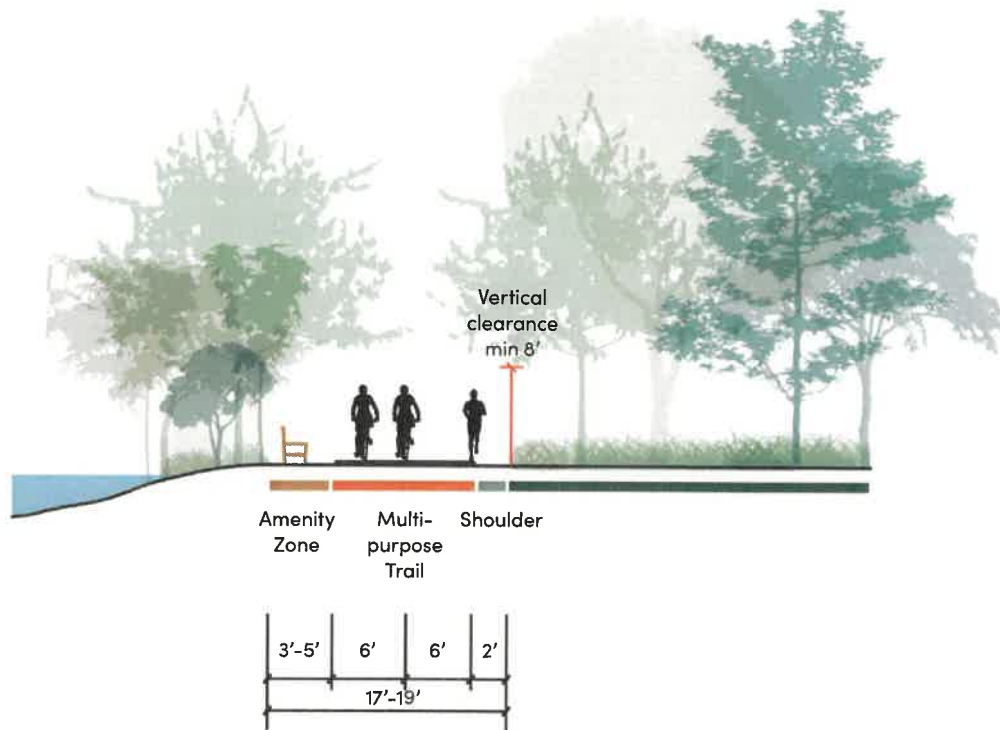


Table 8: Design Guidelines table

Users	Pedestrians and bicycle users
Contexts	Suburban, rural areas
Typical Tread Widths	12'
Materials	Compacted aggregate (prohibited in floodplain), resin stabilized aggregate (prohibited in floodplain), natural soil surface, wood mulch, sand
Maintenance	Every 5 to 10 years
Slopes	Target 5% or less for ADA paths / Cross slope 2% max
Buffers and Clearance	Min 8' vertical clearance
Amenities, Safety and Other Design Features	Railing or fence 54" tall when adjacent to a drop-off of 1' or greater / Resting places every 200' for slopes less than 8.33%, every 30' for slopes 8.33% to 10%, and every 10' for slopes greater than 10%

RURAL TRAILS - TYPE B

ADJACENT TO ROADS

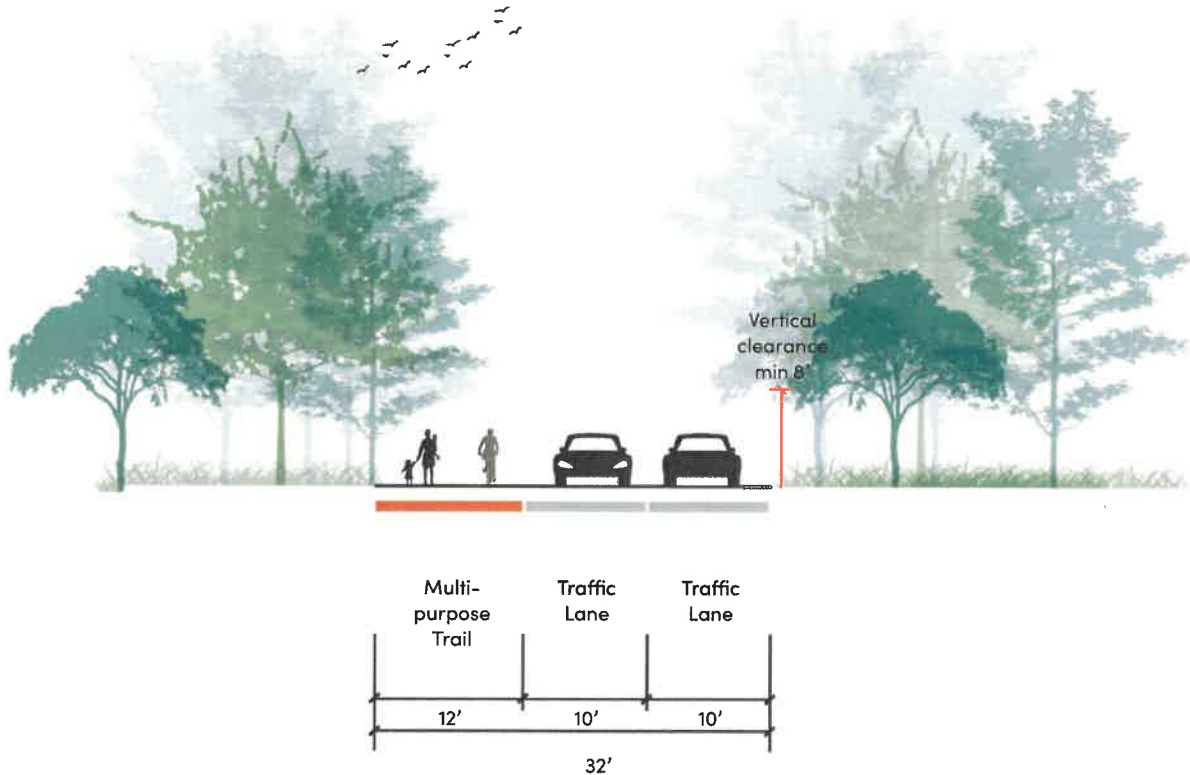


Table 9: Design Guidelines table

Users	Pedestrians and bicycle users
Contexts	Suburban, rural areas
Typical Tread Widths	12'
Materials	Compacted aggregate (prohibited in floodplain), resin stabilized aggregate (prohibited in floodplain), natural soil surface, wood mulch, sand
Maintenance	Every 5 to 10 years
Slopes	Target 5% or less for ADA paths / Cross slope 2% max
Buffers and Clearance	Min 8' vertical clearance
Amenities, Safety and Other Design Features	Railing or fence 54" tall when adjacent to a drop-off of 1' or greater / Resting places every 200' for slopes less than 8.33%, every 30' for slopes 8.33% to 10%, and every 10' for slopes greater than 10%

RURAL TRAILS - TYPE C (UTILITY EASEMENTS)

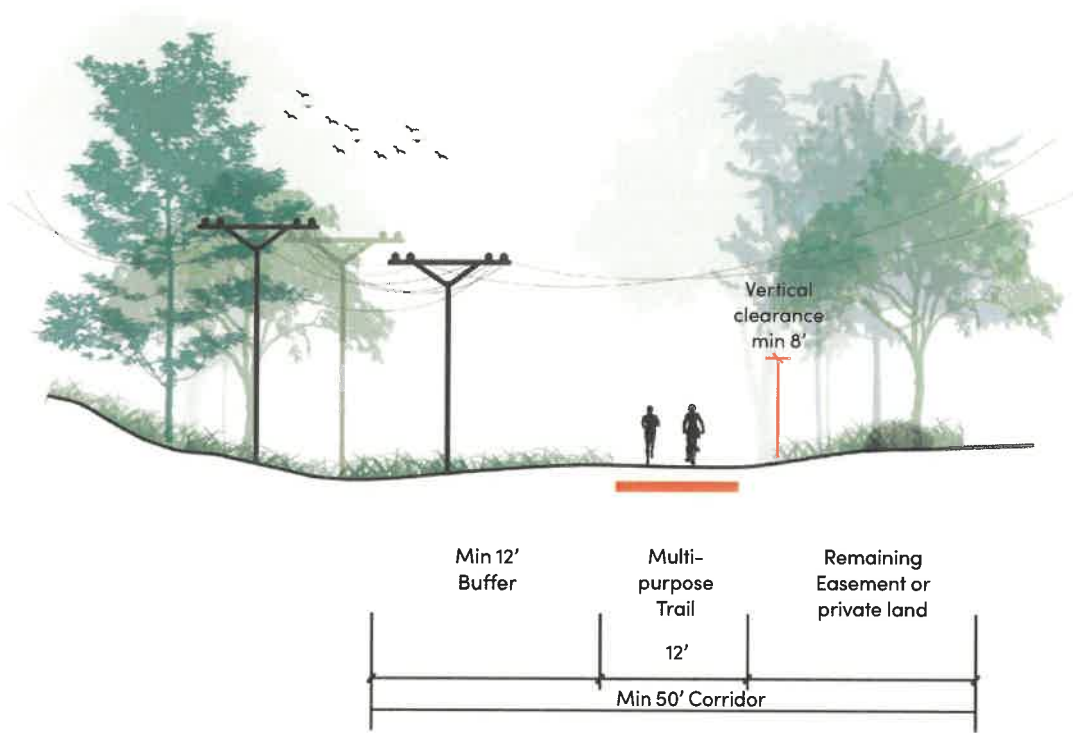


Table 10: Design Guidelines table

Users	Pedestrians and bicycle users
Contexts	Rural, suburban
Typical Tread Widths	12'
Materials	Compacted aggregate (prohibited in floodplain), resin stabilized aggregate (prohibited in floodplain), natural soil surface, wood mulch, sand
Buffers and Clearance	Min 8' vertical clearance, minimum 25' away from power structures, perpendicular trail crossings and approved use of existing utility roads for parallel trails only

SWAMP, LEVEE OR CANAL TRAILS

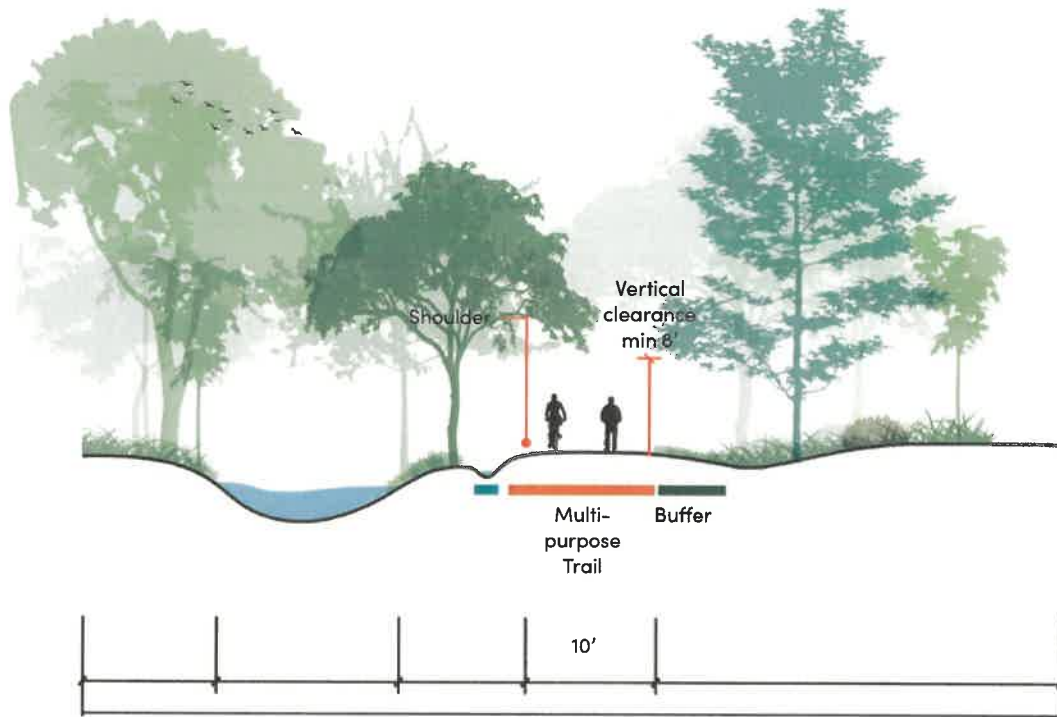


Table 11: Design Guidelines table

Users	Pedestrians and bicycle users
Contexts	Floodplains
Typical Tread Widths	10'
Materials	Natural soil surface, wood mulch, sand
Buffers and Clearance	Min 8' vertical clearance, railing or fence 54" tall when adjacent to a drop-off of 1' or greater / Resting places every 200' for slopes less than 8.33%, every 30' for slopes 8.33% to 10%, and every 10' for slopes greater than 10%

WETLAND TRAILS

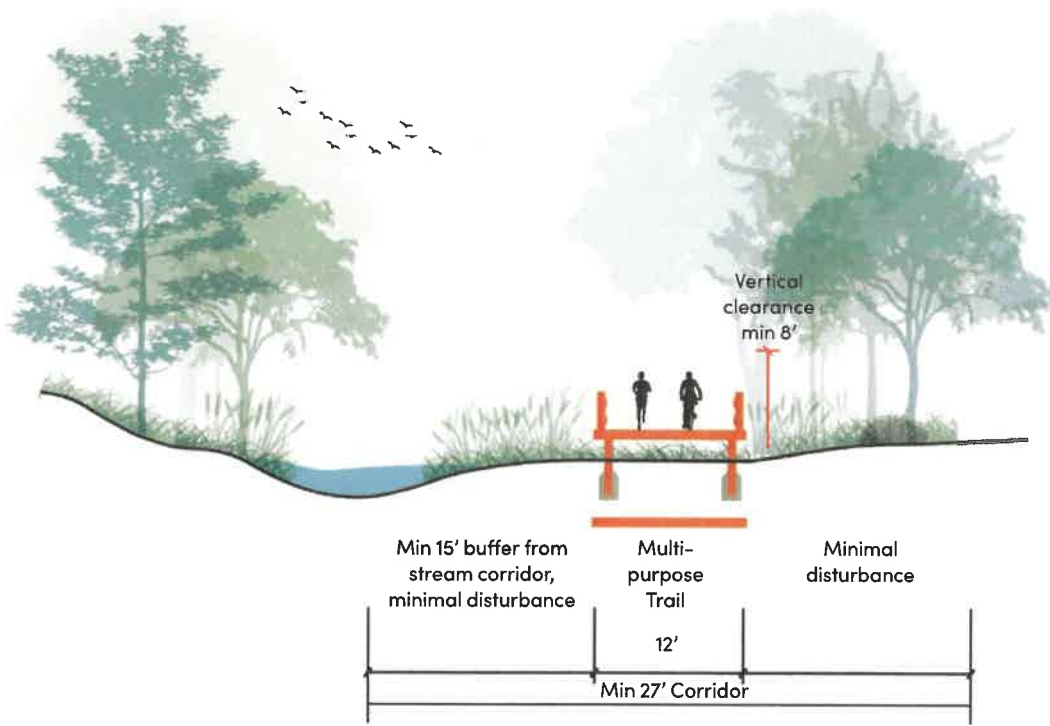


Table 12: Design Guidelines table

Users	Pedestrians and bicycle users
Contexts	Wetland Areas
Typical Tread Widths	12'
Materials	Wood, reinforced precast concrete
Maintenance	Every 15 years for wood, every 50 to 75 years for concrete
Slopes	
Buffers and Clearance	Min 8' vertical clearance, min 15' from stream corridors / top of bank
Amenities, Safety and Other Design Features	54" railing when surface is 30" above grade / 6" curb when surface is less than 30" above grade / Surface 12" above 10-year storm elevation

WETLAND TRAILS

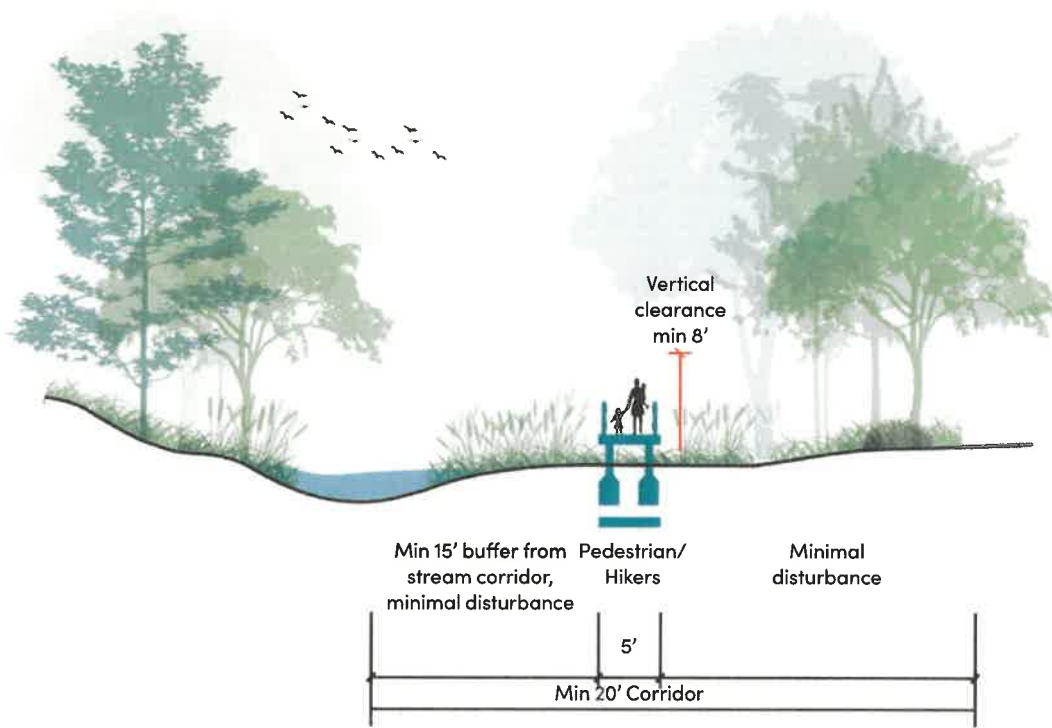


Table 13: Design Guidelines table

Users	Pedestrians
Contexts	Wetland Areas
Typical Tread Widths	5'
Materials	Wood, reinforced precast concrete
Maintenance	Every 15 years for wood, every 50 to 75 years for concrete
Slopes	
Buffers and Clearance	Min 8' vertical clearance, min xx' from stream corridors / top of bank
Amenities, Safety and Other Design Features	54" railing when surface is 30" above grade / 6" curb when surface is less than 30" above grade / Surface 12" above 10-year storm elevation

SENSITIVE LANDS TRAILS - TYPE A

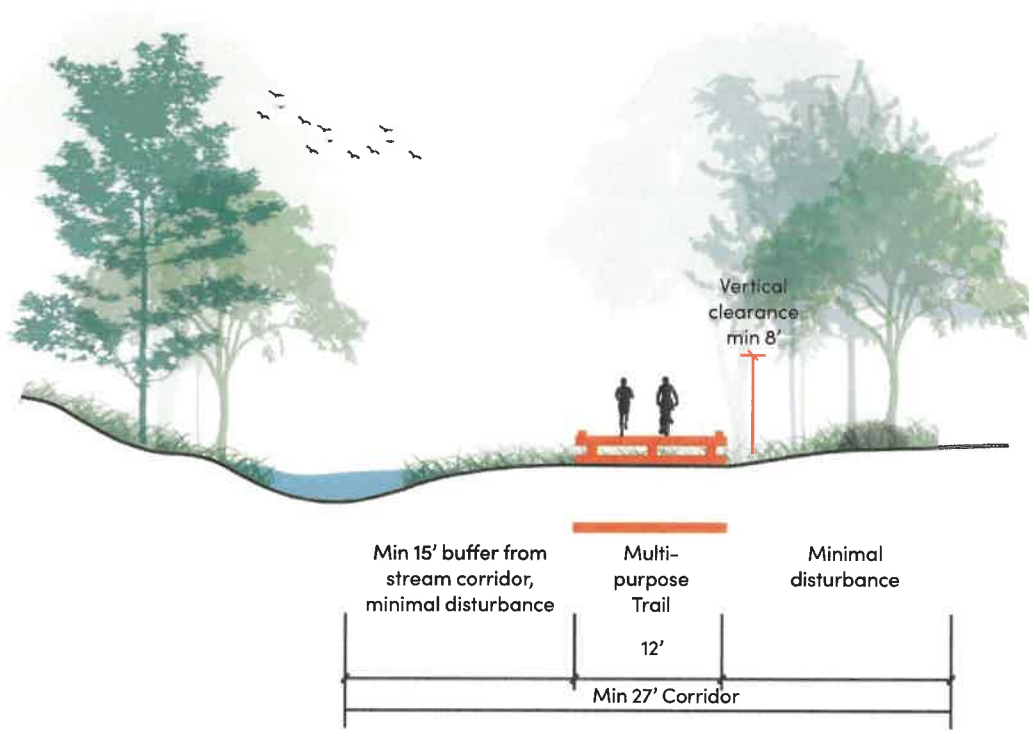


Table 14: Design Guidelines table

Users	Pedestrians and bicycle users
Contexts	Sensitive lands
Typical Tread Widths	12'
Materials	Wood
Maintenance	Every 15 years
Slopes	
Buffers and Clearance	Min 8' vertical clearance, min 15' from stream corridors / top of bank
Amenities, Safety and Other Design Features	6" curb at trail edges

SENSITIVE LANDS TRAILS - TYPE B

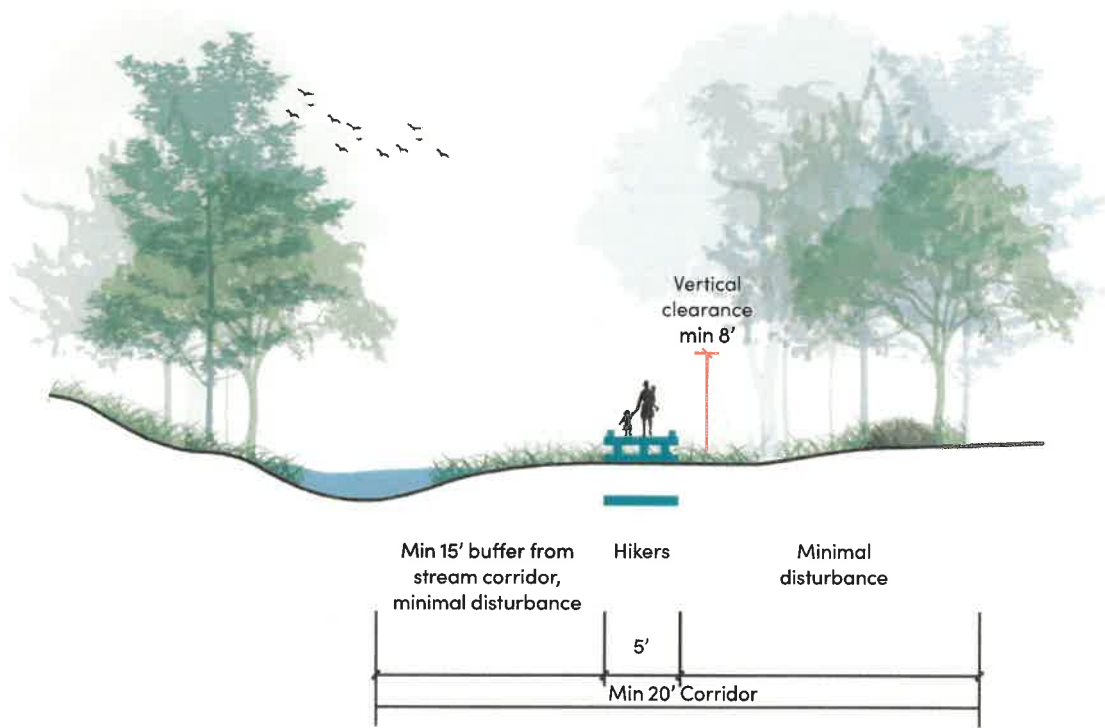
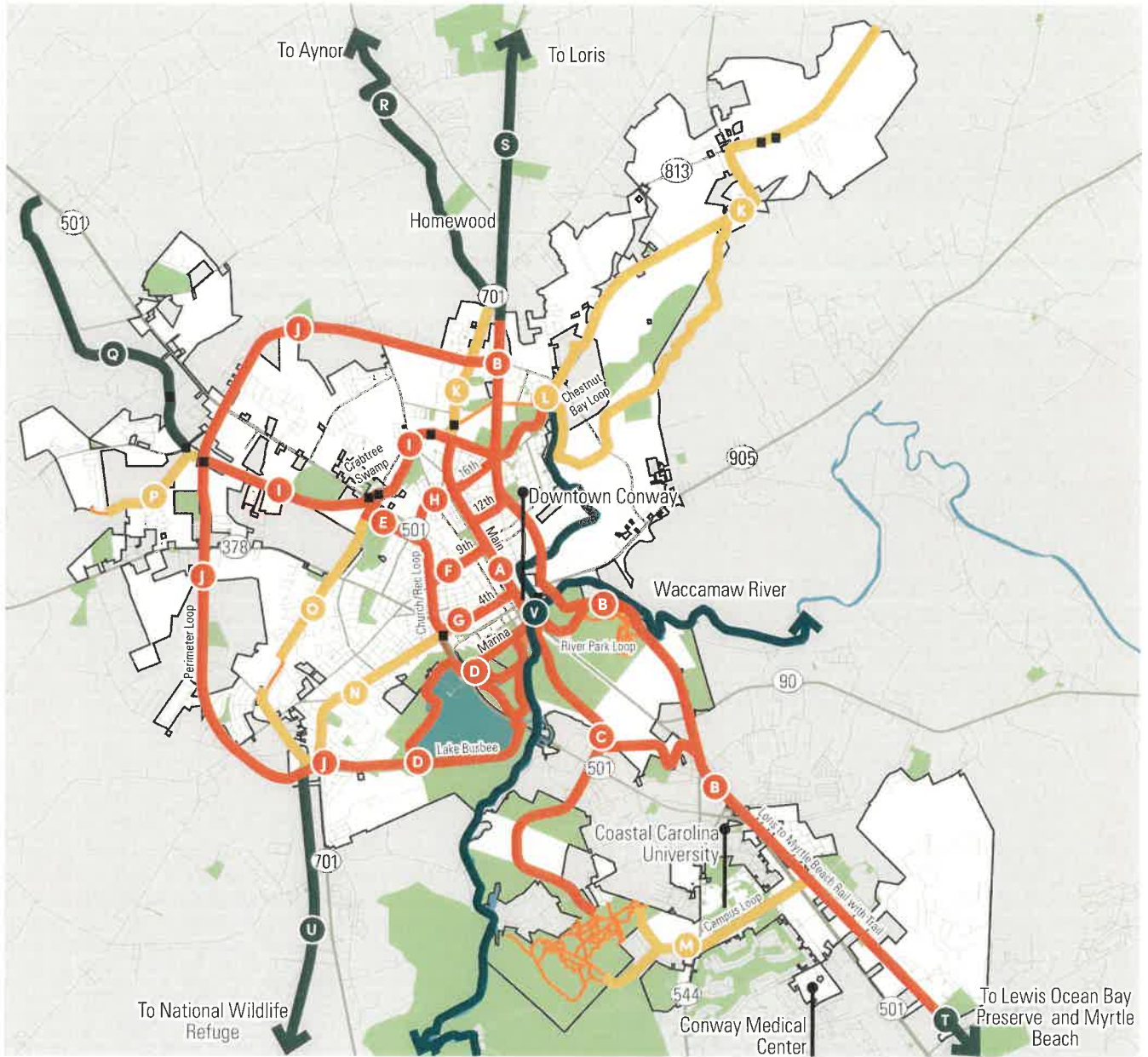


Table 15: Design Guidelines table

Users	Pedestrians
Contexts	Sensitive lands
Typical Tread Widths	5'
Materials	Wood
Maintenance	Every 15 years
Slopes	
Buffers and Clearance	Min 8' vertical clearance, min 15' from stream corridors / top of bank
Amenities, Safety and Other Design Features	6" curb at trail edges

PATHWAYS AND TRAILS PRIORITIZATION TIERS



Project Prioritization

The Implementation Plan is an important resource to help Conway develop its financing, staffing and partnership approach for an expanded pathways and trails system. It is also an important tool for engaging the public, showing progress, and demonstrating the positive impact of an expanded system.

LEGEND

- CITY OF CONWAY BOUNDARY
- MAJOR ROADS
- ROADS
- EXISTING TRAIL
- WATER BODY
- PUBLIC LANDS AND UTILITY CORRIDORS (LIGHT GREEN)
- PEDESTRIAN/BIKE WATER CROSSINGS
- TIER 1 TRAILS
- TIER 2 TRAILS
- COUNTY-WIDE TRAILS
- BLUEWAYS

Development Policies

The following tools should be considered as part of future updates to the City's Unified Development Ordinance.

OPEN SPACE AND FACILITY REQUIREMENTS

There are several tools that allow Conway to offset the impact of new development by requiring certain levels of open space protection and investments in new public facilities. These requirements are spelled out in the City's Unified Development Ordinance.

Open space requirements acknowledge the importance of preserving significant tracts of open space to offset the environmental impacts of new development. The tracts of open space protected under these requirements should be contiguous and a minimum width of 300' wherever possible in order to accommodate meaningful habitat protection along with the provision of new public pathway or trail access. The Pathways and Trails Plan can help the City work with private developers to identify the ideal location of protected open space and trail alignments on any given parcel, such that a connected system is built out over time.

The Conway Unified Development Ordinance calls for minimum open space requirements in Institutional Campus Districts, and also requires new development to provide publicly accessible open space. As they are with active transportation facilities called out on the City's Comprehensive Transportation Plan, development plans should be required to include the public pathway and trail facilities and public access easements for corridors called out in the Pathways and Trails Plan.

The City could seek authority from the state legislature to establish residential development impact fees, whereby

developers provide a cash contribution to fund infrastructure or public facility improvements that offset the identified impact of the new development. This impact fee would apply even in areas of the City where rezonings are not anticipated or restricted. The City should use this additional measure to fund build-out of the pathway and trail system and meet the service demands of a growing population.

The City could also incentivize the use of cluster, or conservation, developments, whereby new development is clustered at a higher density while large areas of open space—typically at least 30% of the site and located to protect sensitive or high-quality environments—are set aside for permanent protection. Public pathway and trail facilities should be required or incentivized within the resulting open space corridors.

PURCHASE OF DEVELOPMENT RIGHTS

Purchase of Development Rights (PDR) programs are similar to Transfer of Development Rights (TDR) programs; however they do not create a marketplace to facilitate the transfer of development rights. According to Wetlands Watch, public bodies can use PDR programs to "preserve open space by purchasing future development rights in ecologically valuable areas and place the land in a conservation easement to preserve as open space. Property owners retain use of the land and the easements and land-use restrictions convey if the property is sold."

Partnerships

To pursue the strong public support, funding and land acquisition necessary for buildout of the pathway and trail system, Conway should leverage strategic partnerships with both public and private organizations. Examples of potential partners include the following entities.

PUBLIC/PRIVATE UTILITIES

Coordinating trail development with public and private utility companies can be both an efficient use of space and a cost-effective way to develop a trail network.

According to Rails-to-Trails Conservancy, utilities such as “water, sewer, natural gas, electric and fiber optic, can have their lines buried or encased near or beneath a trail, while telecommunications, cable and electric utilities can run above a corridor using air rights.” This presents an opportunity to develop surface level trails without disrupting or inhibiting the utility.

In most cases, utility providers enter into a utility easement agreement with private landowners to gain access to their property. In cases where there is an established utility easement in place on a property, Conway should engage the landowner to request an additional access easement in exchange for covering costs associated with improvements and maintenance. In addition to the landowner, the City should coordinate with the utility company holding the easement to ensure that trail development will not negatively impact or prohibit the utility.

To improve the likelihood of obtaining an access easement within a utility corridor, Conway should proactively engage area utility providers to better understand the planned utility projects that require the acquisition of a utility easement from a landowner. Once identified, the City should approach the landowner in tandem with the utility company to increase the probability of successfully obtaining the access easement while coordinating and sharing improvements to the easement area with the utility provider.

HOMEOWNERS ASSOCIATIONS

Homeowners associations (HOAs) often own significant and often contiguous tracts of open space that surround and weave through their respective

communities. These HOA lands are typically unbuildable and in riparian or drainage corridors – set aside as open space or improved with recreational facilities, including trail systems.

Conway should continue to seek partnerships with HOAs in order to:

- » Allow for public access to existing trail amenities on private HOA land, or
- » Allow for the construction and/or maintenance of public trail facilities on private HOA land, or
- » Convince HOAs to build new trail facilities, even if restricted only to residents, in cases where those facilities would provide those community members with off-road access to the public pathway and trail system.

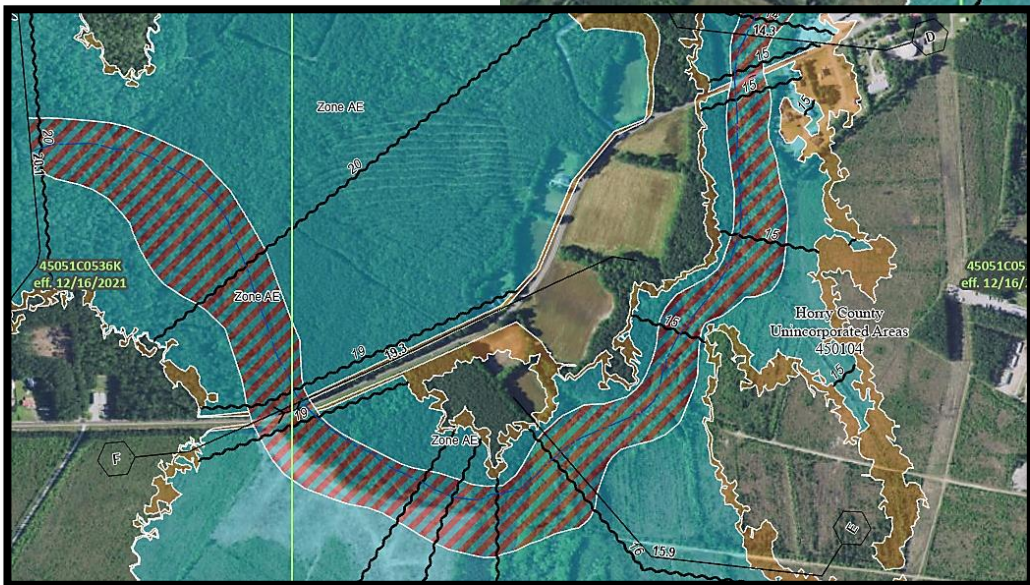
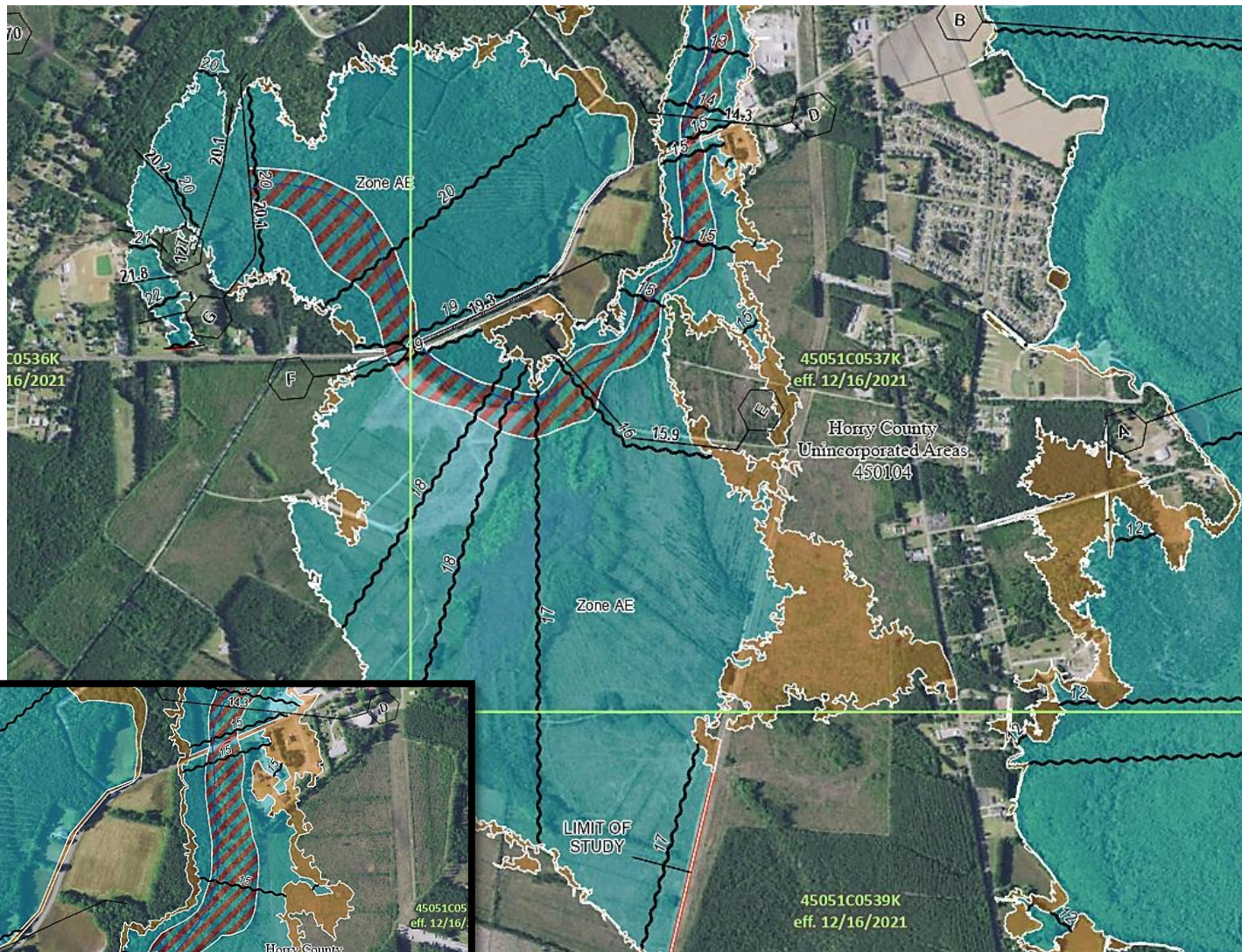
The City should also work to communicate to its HOA partners the benefits of having a public trail corridor in neighborhood open space – in terms of resident health and wellbeing, easy access to an interconnected Citywide system of pathways and trails, and the demonstrated impact of trails in increasing neighboring property values.

DEDICATED FOUNDATIONS, NON-PROFITS, AND LAND TRUSTS

Conway should build and leverage relationships with area non-governmental organizations (NGOs), such as foundations, nonprofits and land trusts. NGOs can be valuable partners in the development of a pathway and trail network by advocating for the system, helping to facilitate planning and design efforts, coordinating volunteer trail maintenance, and educating the public about the benefits of pathways and trails.

NGOs can also hold and help to negotiate lease agreements, easements and fee simple purchases, and are able to function as a diplomatic, intermediary party between the City and private landowners. NGOs are especially useful when

FEMA's National Flood Hazard Area (NFHL) Viewer



HORRY COUNTY SCHOOLS FUNCTIONAL CAPACITY

2023-2024 Forecasted 45-Day Modified Average Daily Membership*

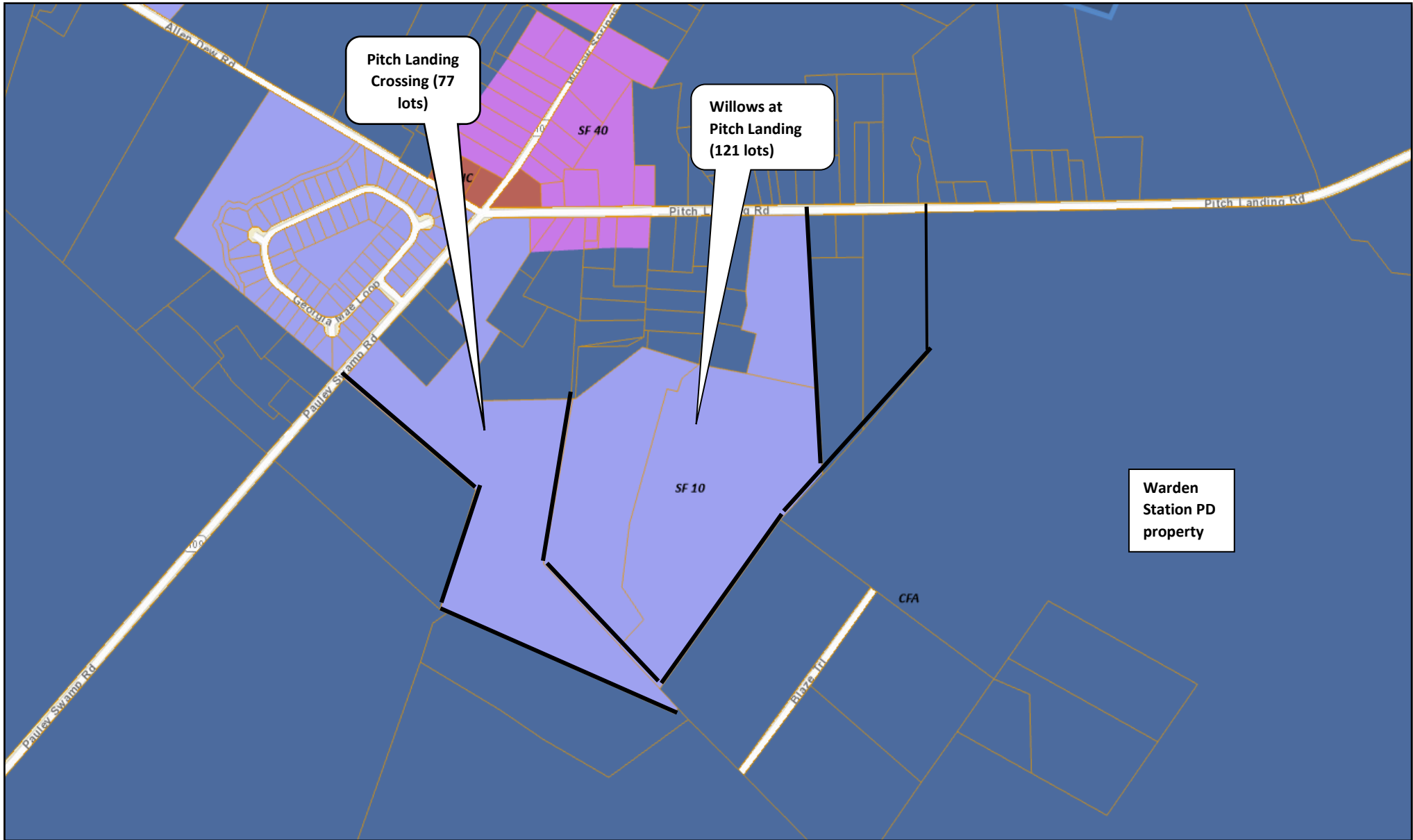
	School	Facility Type	Functional Capacity	2022-23 45-Day Modified ADM *	2022-23 Utilization	2023-24 45-Day Modified ADM *	2023-24 Utilization
AYNOR	Aynor Elementary School	CD-5	714	784	110%	790	111%
	Midland Elementary School	CD-5	735	610	83%	618	84%
	Aynor Middle School	6-8	707	757	107%	717	101%
	Aynor High School	9-12	1,059	794	75%	816	77%
CAROLINA FOREST	Carolina Forest Elementary School	CD-5	971	1,211	125%	1,220	126%
	Ocean Bay Elementary School	CD-5	783	1,032	132%	1,037	132%
	River Oaks Elementary School	CD-5	870	1,286	148%	1,305	150%
	Palmetto Bays Elementary School	CD-5	685	574	84%	577	84%
	Waccamaw Elementary School	CD-5	863	967	112%	951	110%
	Black Water Middle School	6-8	960	784	82%	821	86%
	Ocean Bay Middle School	6-8	1,010	707	70%	744	74%
	Ten Oaks Middle School	6-8	1,200	1,120	93%	1,191	99%
Carolina Forest High School	9-12	2,388	2,825	118%	3,040	127%	
CONWAY	Conway Elementary School	CD-5	661	557	84%	534	81%
	Homewood Elementary School	CD-5	639	661	103%	660	103%
	Kingston Elementary School	CD-5	639	444	69%	452	71%
	Pee Dee Elementary School	CD-5	827	842	102%	869	105%
	South Conway Elementary School	CD-5	661	571	86%	592	90%
	Conway Middle School	6-8	657	586	89%	598	91%
	Whittemore Park Middle School	6-8	985	877	89%	911	92%
Conway High School	9-12	2,095	1,557	74%	1,581	75%	
GREEN SEA	Green Sea Floyds Elementary School	CD-5	681	580	85%	572	84%
	Green Sea Floyds High School (6-12)	9-12	819	621	76%	633	77%
LORIS	Daisy Elementary School	CD-5	682	614	90%	626	92%
	Loris Elementary School	CD-5	874	759	87%	762	87%
	Loris Middle School	6-8	859	714	83%	724	84%
	Loris High School	9-12	1,059	788	74%	804	76%
MYRTLE BEACH	Myrtle Beach Early Childhood School	CD-1	594	487	82%	479	81%
	Myrtle Beach Primary School	2-3	710	653	92%	648	91%
	Myrtle Beach Elementary School	4-5	1,101	1,019	93%	1,023	93%
	Myrtle Beach Middle School	6-8	1,200	1,096	91%	1,079	90%
	Myrtle Beach High School	9-12	1,329	1,527	115%	1,535	116%
N. MYRTLE BEACH	Ocean Drive Elementary School	CD-5	827	813	98%	783	95%
	Riverside Elementary School	CD-5	664	679	102%	685	103%
	Waterway Elementary School	CD-5	823	794	96%	808	98%
	North Myrtle Beach Middle School	6-8	1,200	1,280	107%	1,307	109%
	North Myrtle Beach High School	9-12	1,464	1,471	100%	1,509	103%
SOCASTEE	Forestbrook Elementary School	CD-5	1,030	844	82%	827	80%
	Lakewood Elementary School	CD-5	1,006	854	85%	827	82%
	Socastee Elementary School	CD-5	849	803	95%	803	95%
	Forestbrook Middle School	6-8	1,086	826	76%	798	73%
	Socastee Middle School	6-8	909	544	60%	557	61%
	Socastee High School	9-12	1,644	1,591	97%	1,659	101%
ST JAMES	Burgess Elementary School	CD-4	714	677	95%	651	91%
	Seaside Elementary School	CD-4	661	417	63%	398	60%
	St. James Elementary School	CD-4	758	829	109%	859	113%
	St. James Intermediate School	5-6	1,092	848	78%	851	78%
	St. James Middle School	7-8	985	901	91%	887	90%
St. James High School	9-12	1,577	1,753	111%	1,799	114%	

School is Considered Category 1 (Red Zone) - 95% Capacity Threshold Reached

Functional Capacity: Functional Capacity better reflects the actual space constraints a school may be experiencing and helps in planning for individual facility needs, such as additional support spaces. This number can fluctuate depending on how a facility is programmed and when various support programs change.

***Modified ADM:** The number does not include students in certain special education classes and students attending various academic programs such as Academy for Arts, Science & Technology, Academy for Technology & Academics, or the Therapeutic Learning Center.

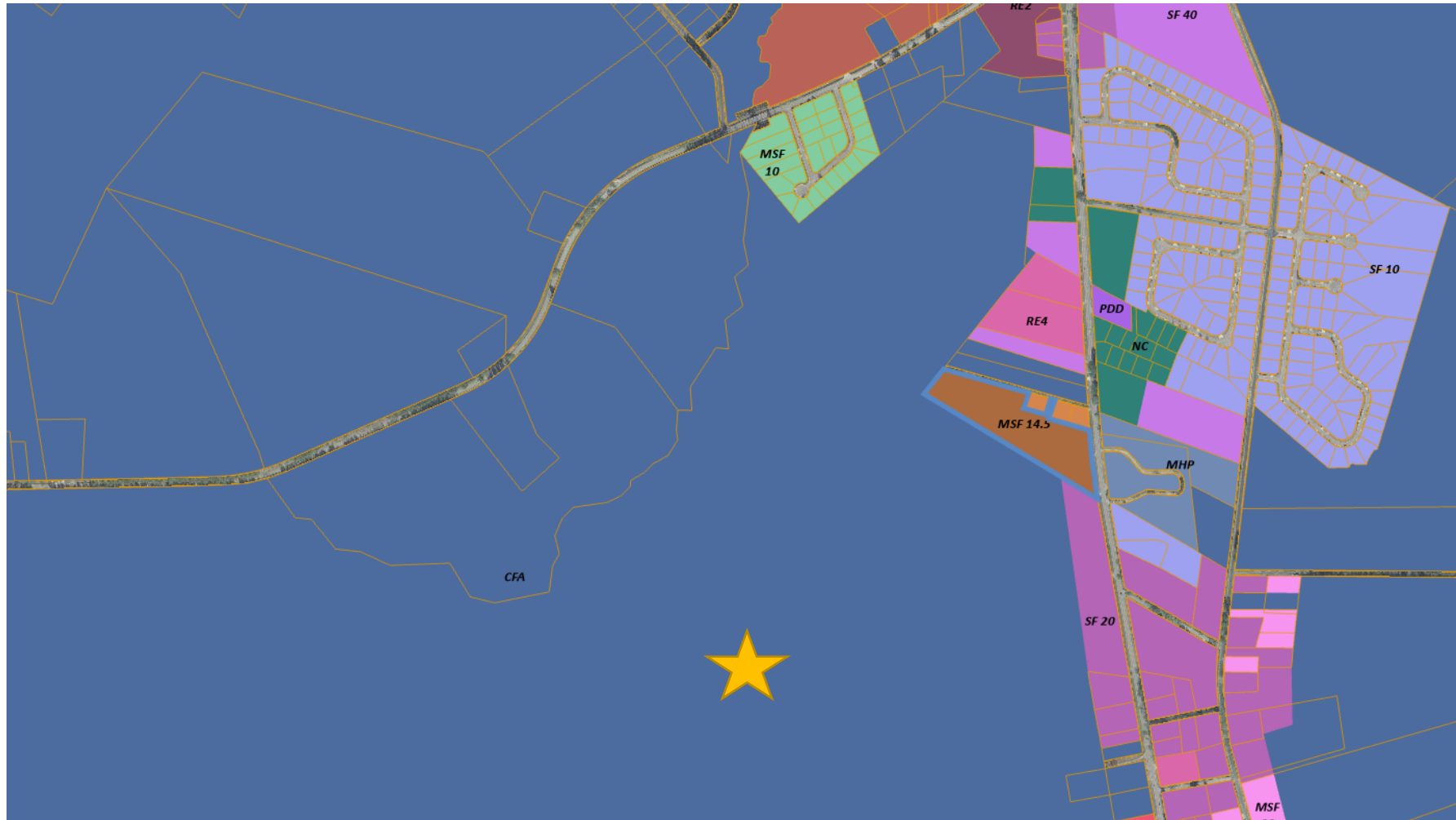
Adjacent Development (under review) in Horry County Jurisdiction



SF 10

Single-family, no mobile homes allowed, with a minimum lot size of 10,000 sq. ft.

PIN 381-09-01-0007: rezoned to MSF14.5 in 2021 to allow additional (3) manufactured homes on property (8.48 acres)



MSF14.5: residential, mobile homes allowed with a min. lot size of 14,500 sq. ft.

PIN 405-00-00-0004 (portion): rezoned to MRD 1 in 2021 to develop 169 single-family lots on 75 acres with min. lot sizes of 10,000 sq. ft.

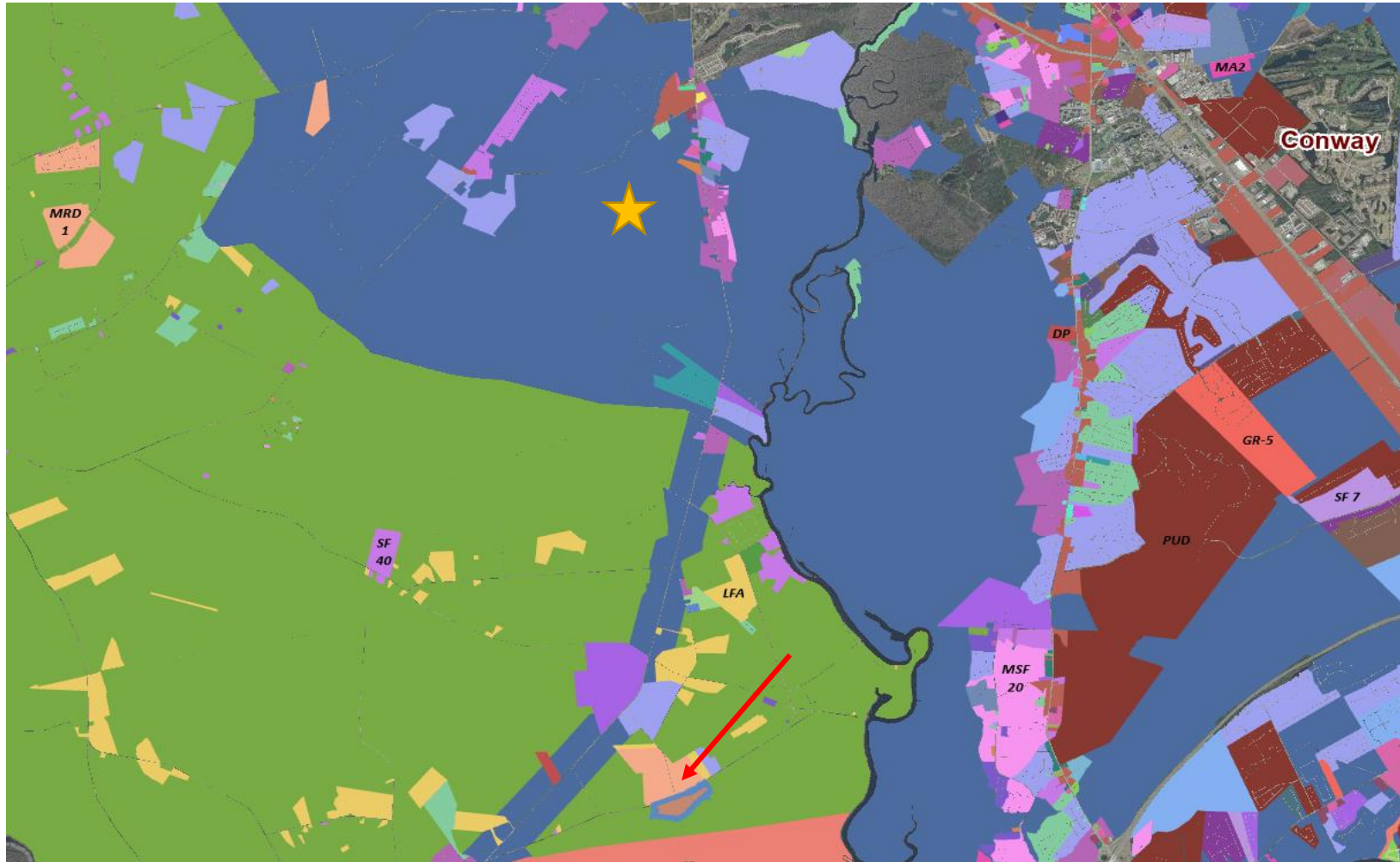


Future land use map also had to be amended from Rural and Scenic & Conservation to Rural Communities.

MRD1 (multi-residential one): allows for mixed residential development in *rural* areas of the county as specified on the future land use maps. Per *Sec. 207 of the Horry Co. Zoning Ord.*, permitted uses include (but are not limited to) single-family detached (no mobile homes), duplex dwellings, semi-detached dwellings, patio homes, quadruplex, townhomes, multifamily, in common development of any of the aforementioned dwelling types. Boarding houses are also permitted as a “conditional” use in the MRD districts.

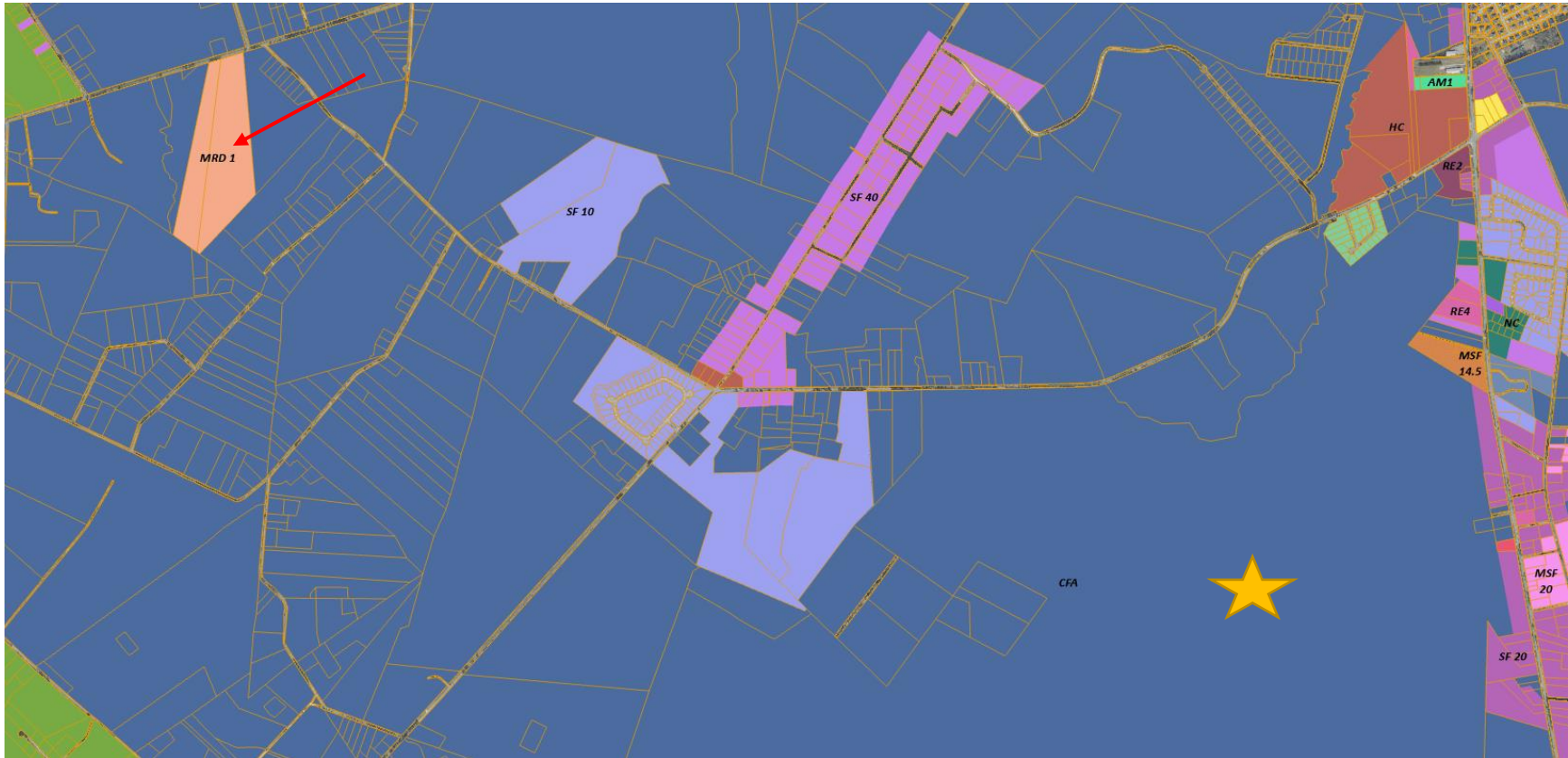
Min. lot sizes vary in the MRD districts (MRD-1, MRD-2, and MRD-3) and there are standard lot sizes (14,500 sq. ft. for single-family in MRD1) to lot sizes for “sustainable development areas” (7,000 sq. ft. for single family in MRD1).

PIN's 431-00-00-0030, 430-00-00-0028 & 430-00-00-0029: rezoned from FA to MRD1 to allow the development of 385 single family lots with an approx. min. lot size of 10,000 sq. ft. Gross density: 2.19 du per acre (per county records). These parcels are between 3-4 miles (south) from Warden Station PD.



Future land use map also amended from Rural and Scenic & Conservation to Rural Communities

PIN's 379-00-00-0006 & -0007: rezoned in 2022 from CFA/SF10 to MRD1 to develop 100 single-family lots on 43.85 acres. Approx. min. lot size is half-acre (1/2) and gross density is 2.28 du/acre (per county records).





South Conway Project: Phase Three

Project Overview



HARNESSING RELIABLE ENERGY

Dominion Energy South Carolina’s (DESC) South Conway Project—Phase Three will ensure the availability of safe, reliable and affordable natural gas service in the Horry County region.

The South Conway Project—the third phase of enhancement to the DESC natural gas infrastructure system—will include the installation of approximately 16 miles of 12-inch natural gas line from the west side of the Waccamaw River to Highway 501 in Myrtle Beach, SC. The natural gas line will be installed underground, and one regulating station will be added on the west side of the Waccamaw River.

The project will enable DESC to provide the additional capacity and flexibility needed to meet current and anticipated customer demand for natural gas.

SAFETY & ENVIRONMENTAL STEWARDSHIP

Dominion Energy is committed to safe operations, safe facilities, and safety-minded employees. From construction through operations, safety is the top priority. Dominion Energy maintains operating policies and procedures that adhere to United States Department of Transportation (USDOT) safety requirements and we operate and maintain our system in accordance with all associated regulations.

Responsible stewardship of natural resources is also one of the essentials of our daily business. Our work before, during, and after construction will adhere to or exceed all applicable federal, state, and local laws and regulations. The route was chosen to minimize potential impacts to the environment by utilizing existing utility corridors where possible. During construction, we protect sensitive resources by utilizing timber mats to protect the ground and using trenchless installation practices where feasible. We also protect the surrounding soil and water by exceeding state requirements for erosion and sediment control. After construction, disturbed areas will be re-vegetated to ensure long-term environmental protection.



Harnessing reliable, affordable American energy for residential, commercial and industrial customers



Providing economic benefits for the Horry County region



Producing jobs during construction



Keeping property owners informed

Proposed Project Timeline

MILESTONE	TARGET DATE
Outreach	Ongoing
Construction Begins	March 2023
In-Service	December 2023

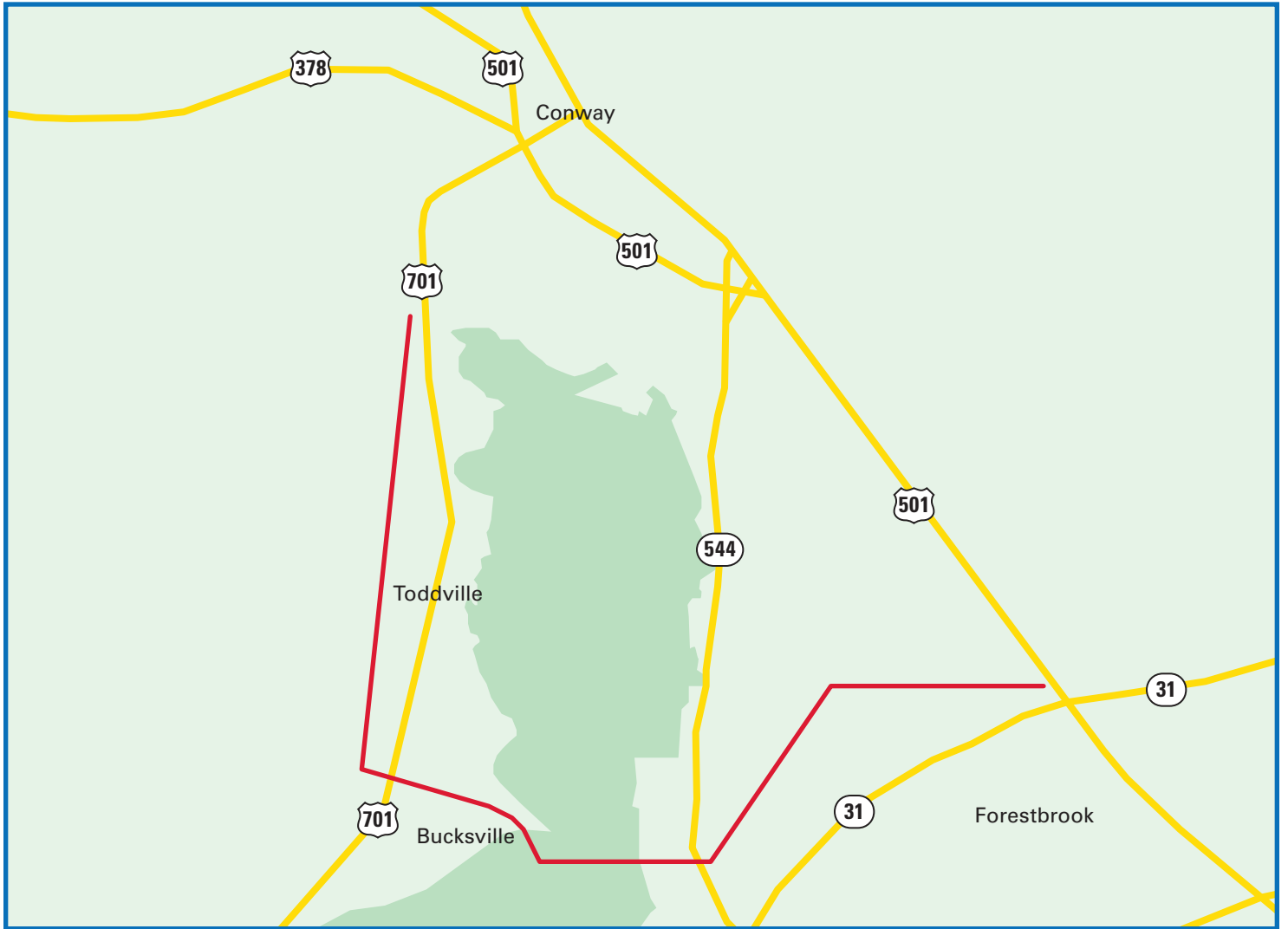
CONTACT INFORMATION

EMAIL: SouthConwayProject@dominionenergy.com

WEBSITE: DominionEnergySC.com/SouthConwayProject

South Conway

PROJECT LOCATION



From: [Julie Dexter](#)
To: [Planning](#); [Mayor](#)
Subject: 701 S Development
Date: Friday, July 21, 2023 9:08:35 AM

CAUTION-External Email: This email originated from outside of the City of Conway. Do not click on links or open attachments unless you recognize the sender and know the content is safe.

Regarding the proposed development on 701 S.

This development is far too large to be sustainable without upgrades to services such as fire, medical, school, grocery stores and other services including transportation.

These items should be addressed and resolved prior to the development being started. There are no guarantees that the developer will follow through on all of the promises made. Too many times, money has run out or markets have changed and all that is left is a half finished project.

This creates an environmental and potential health issue. The road bridge over the Waccamaw from 701 should be a priority as it is necessary to move traffic now without adding a potential 6,000 more vehicles. During the busy times it is a traffic disaster trying to get on 501 from 701 with the current situation.

The schools have problems retaining teachers currently. How can they propose to accommodate a potential 2,000 to 3,000 more students. Not even considering classrooms to put them in.

As far as Conway city is concerned, many upgrades are necessary to accommodate the population there is now. Parking is a serious problem for anyone wanting to go downtown to wander and shop.

Another concern are the current bridges to get to Myrtle Beach. They seriously need repairs and upgrades.

These are just some of the items to be considered prior to approving any large projects in the near future.

I hope the city and planning board will take the above concerns under advisement prior to approving any large projects.

Thank you
Julie Dexter

From: [Roger Colby](#)
To: [Planning](#)
Subject: Fwd: New development on 701S
Date: Friday, July 21, 2023 9:08:32 AM

CAUTION-External Email: This email originated from outside of the City of Conway. Do not click on links or open attachments unless you recognize the sender and know the content is safe.

Get [Outlook for iOS](#)

From: Roger Colby <rcolby8304@hotmail.com>
Sent: Tuesday, July 18, 2023 9:51 AM
To: mayor@cityofconway.com <mayor@cityofconway.com>
Subject: New development on 701S

Mayor I've spoken to many many people recently and not a single one is in favor of this development. People aren't apposed to development, but it has to be done responsibly. This is not.

There are a myriad of problems.

Can Bucksport or Grand Strand water provide water without impacting existing customers.

Can the sewage treatment plant handle this size increase? During major storms will run off water be mixed with sewage? Other places I've lived it did and the plant couldn't handle it so all the water and sewage was simply dumped into the river.

It's estimated that 12,000 people will live here. That's 50% more than the 2020 population of Conway. It's estimated that there will be 6400 cars entering and leaving the development every day. Where are the going to go? If they try to enter 501S from Church street it will back up. It will then backup from the other direction to 378, which will then backup to the 501 intersection. The roads simply cannot handle this increase.

One of the engineers at the planning meeting said there's been talk of us building so many homes in the first 5 years and so many the next 5 years. Then he said we are NOT going to do that, we are going to build them all at once.

Does this developer have the experience and finances to do that? Or are we going to have 1000 homes half built sitting there rotting for years?

There is an estimate 5000 children in this development. Where are they going to school?

Where are the teachers coming from?

Can Santee Cooper handle the increase power needs during peak usage?

The list goes on and on. With the traffic backed up, home how many people will die because they can't get across the river to a hospital?

Can 701S be widened to 4 lanes down to the county line?

I have never heard the answers to any of these question.

I am definitely opposed to this development until the infrastructure is in place. Not planned on, in place.

Thanks for reading this and knowing no one is in favor of this and are counting on you and others to stop it.

Thanks
Roger C

Get [Outlook for iOS](#)

From: [Diane J Collett](#)
To: [Planning](#)
Subject: Stop the madness
Date: Friday, July 21, 2023 9:08:30 AM

CAUTION-External Email: This email originated from outside of the City of Conway. Do not click on links or open attachments unless you recognize the sender and know the content is safe.

To whom it may concern

Please listen to the people.

We moved here to get away from the over development happening in Murrells Inlet. We don't want to live in the Northeast anymore because of the over development.

More homes being built means a need for more schools which are not built yet. Will you really be able to staff those schools when and if they ever get built?

Fire and Police needs and staffing.

Do something with 501 before allowing anymore home building. 501 is a death trap. Accidents daily on that road. Please please put attention to this area for everyone's safety.

Evacuation routes will be gridlock if needed with only a two lane bridge to leave town.

Stop the madness, no more large community development. Keep your small town feel.

When I see all this new development in Horry County when tax payers clearly say STOP, makes me think that someone is being paid to allow this. Do you want that to be your legacy??

Diane Collett

Sent from my iPhone

Date: August 3, 2023

Agenda Item: IV.B.1

ISSUE:

Previously Deferred: Request by G3 Engineering (applicants), to enter into a development agreement with the City of Conway for the Warden Station Planned Development, for property located on Hwy 701 South & Pitch Landing Rd, containing approximately 1,763.28 acres (+/-) (PIN's 381-00-00-0003, 381-08-04-0009, 381-08-04-0010, 380-00-00-0038, 381-08-01-0006, 403-00-00-0001, 403-00-00-0002, and 403-00-00-0022).

BACKGROUND:

The applicants are seeking to enter into a development agreement for development known as the Warden Station, also proposed to be annexed into the City as a Planned Development (PD).

DEVELOPMENT AGREEMENTS.

Per *Title 6, Chapter 31, § 6-31-10* of the SC Code (SC Local Government Development Agreement Act, 1993), authorizes binding agreements between local governments and developers for long-term development of large tracts of land. A development agreement gives a developer a vested right for the term of the agreement to proceed according to land use regulations in existence on the execution date of the agreement. Principal among the General Assembly's statement of findings for the Act was the desire to provide some measure of certainty as to applicable land development law for developers who made financial commitments for planned developments. The Act also expresses the intent to encourage a stronger commitment to comprehensive and capital facilities planning, ensure the provision of adequate public facilities, encourage the use of resources and reduce the economic cost of development (*Comprehensive Planning Guide, 2018*).

The length of the development agreement varies, and depends on the size of the property to be included in the agreement. The minimum size for a property to be included in any development agreement is 25 acres of highland – which is determined by local ordinance (*i.e.* land above the 100-year flood plain).

Property with 1,000 to 2,000 acres of highland is limited to a term of 20 years.

PUBLIC HEARINGS REQUIRED. Prior to adoption of a development agreement, the governing body must hold at least two (2) public hearings, which if authorized by the governing body, can be conducted by Planning Commission (per SC Code § 6-31-50(A)). Notice of the intent to consider a development agreement must be published in a newspaper of general circulation, which should include the property location, proposed uses, and a place where a copy of the agreement can be obtained. The date, time and place of the second hearing must be announced at the first hearing (SC Code § 6-31-50(B)).

Additional information regarding development agreements can be provided if needed.

NEXT STEPS AND DATES (ESTIMATES):

The second public hearing is currently scheduled for the August 21st City Council mtg. Public notice of that meeting was advertised in the Horry Independent on July 20th. The second public hearing date was also announced at the July 13th Planning Commission meeting.

RECOMMENDATION:

Staff recommends that Planning Commission give a thorough review of the request and make an informed recommendation to City Council after said review.

ATTACHMENTS:

Draft of proposed Development Agreement with staff comments/notes (in red);

Copy of ad that ran in the Horry Independent on June 8 for Public Hearing at July 13th PC mtg.;

Copy of ad that ran in the Horry Independent on July 20 for 2nd Public Hearing at Aug 21st Council mtg.

STATE OF SOUTH CAROLINA)
)
COUNTY OF HORRY)

**DEVELOPMENT AGREEMENT FOR
WARDEN STATION**

THIS DEVELOPMENT AGREEMENT (“Agreement”) is made and entered this ___ day of _____, 2023, by and between **BRD LAND & INVESTMENT, LP**, a South Carolina limited partnership, its affiliates, subsidiaries, successors and assigns (“*Developer*”), and the governmental authority of the **CITY OF CONWAY**, a body politic under the laws of the State of South Carolina (“*City*”).

WHEREAS, the legislature of the State of South Carolina has enacted the “South Carolina Local Government Development Agreement Act”, as set forth in Sections 6-31-10 through 6-31-160 of the South Carolina Code of Laws (1976), as amended; and

WHEREAS, Section 6-31-10(B)(1) of the Act, as defined below, recognizes that “[t]he lack of certainty in the approval of development can result in a waste of economic and land resources, can discourage sound capital improvement planning and financing, can cause the cost of housing and development to escalate, and can discourage commitment to comprehensive planning”; and

WHEREAS, Section 6-31-10(B)(6) of the Act, as defined below, also states that “[d]evelopment agreements will encourage the vesting of property rights by protecting such rights from the effect of subsequently enacted local legislation or from the effects of changing policies and procedures of local government agencies which may conflict with any term or provision of the development agreement or in any way hinder, restrict, or prevent the development of the project. Development agreements will provide a reasonable certainty as to the lawful requirements that must be met in protecting vested property rights, while maintaining the authority and duty of government to enforce laws and regulations which promote the public safety, health, and general welfare of the citizens of our State”; and

WHEREAS, the Act, as defined below, further authorizes local governments, including municipal governments, to enter into development agreements with developers to accomplish these and other goals as set forth in Section 6-31-10 of the Act; and

WHEREAS, the City seeks to protect and preserve the natural environment and to secure for its citizens quality, well planned and designed development and a stable and viable tax base; and

WHEREAS, Developer is, or will be, the legal owner of the Property hereinafter defined and is authorized to enter into this Agreement with the City; and

WHEREAS, the City finds that the program of development for this Property (as hereinafter

defined) proposed by Developer over approximately the next Twenty (20) years or as extended as provided herein is consistent with the City’s comprehensive land use plan and land development regulations, and will further the health, safety, welfare and economic wellbeing of the City and its residents; and

WHEREAS, the development of the Property and the program for its development presents an opportunity for the City to secure quality planning and growth, protection of the environment, and to strengthen the City’s tax base; and

WHEREAS, the City, at the request of the Developer, has annexed the real property more particularly shown and depicted on **Exhibit “B”** attached hereto (the “**Property**”), and simultaneously approved under an amendment to the zoning ordinances of the City to create the Warden Station Planned Development (“**PD**”) under the ordinances of the City of Conway, together with this Agreement, on or about the ____ day of _____, 2023; and

WHEREAS, this Agreement is being made and entered into between Developer and the City, under the terms of the Act, for the purpose of providing assurances to Developer that it may proceed with its development plan under the terms hereof, consistent with its annexation and approved zoning (as hereinafter defined) without encountering future changes in law which would materially affect the Developer’s ability to develop the Property under its approved zoning, and for the purpose of providing important protection to the natural environment and long term financial stability and a viable tax base to the City;

NOW THEREFORE, in consideration of the terms and conditions set forth herein, and other good and valuable consideration, including the potential economic benefits to both the City and Developer by entering this Agreement, and to encourage well planned development by Developer, the receipt and sufficiency of such consideration being hereby acknowledged, the City and Developer hereby agree as follows:

1. **INCORPORATION**. The above recitals are hereby incorporated into this Agreement, together with the South Carolina General Assembly findings as set forth under Section 6-31-10(B) of the Act.

2. **DEFINITIONS**. As used herein, the following terms mean:

“**Act**” means the South Carolina Local Government Development Agreement Act, as codified in Sections 6-31-10 through 6-31-160 of the Code of Laws of South Carolina (1976), as amended; attached hereto as **Exhibit “A”**.

“**Code of Ordinances**” means the Code of Ordinances for the City, as amended and in effect

as of the date hereof, as the same may be amended from time to time, a complete copy of which is on file in the City's office.

“Commercial Unit” means a parcel, lot or building, or multiple units within the same building, within the Property, used for commercial purposes, as shown and depicted on the Master Site Plan, as the same may be amended.

“Developer” means BRD Land & Investment, LP, a South Carolina limited partnership, all of its permitted assignees, and all successors in title or lessees who undertake development of the Property as a Developer or who are transferred Development Rights and Obligations.

“Developer Default” for purposes of this Agreement, Developer Default shall mean that (i) Developer has breached the specific obligations of this Agreement, and, following prior written notice from the City, has failed to cure such breach within Thirty (30) days of the date of written notice from the City; or (ii) once commenced, Developer has failed to continue with Development Work, as defined in this Agreement, on the Property for a period of more than Six (6) months, and, following prior written notice from the City, has failed to cure such breach within Thirty (30) days of the date of written notice from the City.

“Developer Default Remedy” notwithstanding any other remedy that may be available to the City at law, or in equity, as a result of a Developer Default, Developer and the City agree that the City may elect to (i) withhold issuance of building permits until such Developer Default is cured; (ii) seek injunctive relief to stop any such continuing Developer Default, or (iii) any other remedy available at law or in equity.

“Development Rights and Obligations” means the rights, obligations, benefits and approvals of the Developer(s) under the PD and this Agreement.

“Development Work” means the periodic operation of development activities on the Property, which include, but are not limited to clearing, grading, erosion control, site work, and landscaping under the terms of a written contract with the Developer.

“Effective Date” means the date on which the last of the parties has executed this Agreement.

“Jurisdictional and Non-Jurisdictional Waters of the State of South Carolina and the United States” means those areas identified by the United States Army Corps of Engineers (“Corps”) and/or the South Carolina Department of Health and Environmental Control (“DHEC”) or any other applicable governmental authority as wetland areas subject to the regulation of the Corps and/or DHEC.

“Land Development Regulations” means the Land Development Regulations **contained with**

the **Unified Development Ordinance (UDO)** for the City of Conway, as amended and in effect as of the date hereof, a complete copy of which is attached hereto as **Exhibit “D”**, or further amended from time to time pursuant to this Agreement.

“**Master Site Plan**” means that certain master site plan prepared by Developer, which Master Site Plan depicts the portion of the Property, for purposes of showing the density, site arrangement, and responsibilities for off-site roadway improvements, and a copy of such Master Site Plan being attached to the PD, and also being attached hereto as **Exhibit “C”**.

“**Owners Association**” means a legal entity formed by Developer pursuant to South Carolina statutes which is responsible for the enforcement of neighborhood restrictions and covenants, and for the maintenance and upkeep of any common areas and/or community infrastructure developed under this Agreement, but not accepted by the City for perpetual ownership and maintenance, to include but not be limited to: private drives and alleyways, common areas, **landscape buffers**, neighborhood parks and recreational facilities, wetlands, and stormwater management systems not otherwise conveyed to the City or its designee.

“**PD**” means the Warden Station Planned Development, under the Code of Ordinances for the City, as amended.

“**Project**” means a master planned community to include single family detached lots, single family attached lots, single family attached condominiums, single family in common, multi-family and various commercial and recreational uses, in a single project envisioned by the Master Site Plan and approved by the City pursuant to this Agreement and the Code of Ordinances, as the same may be amended from time to time pursuant to this Agreement.

“**Property**” means those parcels of land more particularly shown and depicted on **Exhibit “B”** attached hereto.

“**Residential Unit**” means a single-family home, whether attached or detached, or a multi-family home, within the Property, as shown and depicted on the Master Site Plan, as the same may be amended.

“**Term**” means the duration of this Agreement as set forth in **Section 3** hereof.

3. **TERM**. The Developer represents and warrants that the Property consists of a total of not less than 1,000 acres and not more than 2,000 acres of “highland” within the meaning given that term by the Act. The term of this Agreement shall commence on the date on which this Agreement is executed by the City and the Developer and shall terminate on the date which is Twenty (20) years from the date of execution. Notwithstanding such termination date, provided that the

Developer is not in default (after being provided with notice and opportunity to cure as set forth below) of this Agreement, Developer has diligently pursued development of the Property, and the Project has not been completed, at the conclusion of the initial Twenty-year term, the termination date of this Agreement shall automatically be extended for up to Three (3) additional Five (5) year term. At the conclusion of the initial Five (5) year extension of the Term, provided that the Developer is not in default (after being provided with notice and opportunity to cure as set forth below) of this Agreement, Developer has diligently pursued development of the Property, and the Project has not been completed, at the conclusion of the initial five-year extension of the Term, the termination date of this Agreement shall automatically be extended for up to Two (2) additional Five (5) year terms. Notwithstanding the terms and provisions in this Section or elsewhere in this Agreement to the contrary, if a court of competent jurisdiction hereafter determines that the length of the Term, or the provision for extension of the Term set forth above, exceeds the maximum term allowed under the Act and if all applicable judicial appeal periods have expired without such determination being overturned, then the Term of this Agreement relative to all or specific affected portions of the Property shall be reduced to the maximum permissible term under the Act, as determined by a court of competent jurisdiction.

4. **DEVELOPMENT OF THE PROPERTY.** The Property shall be developed in accordance with this Agreement, the PD, including the Code of Ordinances, and other applicable land development regulations required by the City, State, and/or Federal Government. The City shall, throughout the Term, maintain or cause to be maintained a procedure for the processing of reviews as contemplated by this Agreement and the Code of Ordinances. The City shall review applications for development approval based on the development standards adopted as a part of the Code of Ordinances, unless such standards are superseded by the terms of this Agreement, in which case the terms of this Agreement shall govern.

5. **CONVEYANCES OF PROPERTY AND ASSIGNMENT OF DEVELOPMENT RIGHTS AND OBLIGATIONS.** The City agrees with Developer, for itself and its successors and assigns, including successor Developer(s), as follows:

(A) **Conveyance of Property.** In accordance with the Act, the burdens of this Agreement shall be binding on, and the benefits of this Agreement shall inure to, all successors in interest and assigns of all parties hereto, except for Excluded Property, as such term is defined below. For the purposes of this Agreement, “*Excluded Property*” means property that is conveyed by the Developer to a third party and is: (i) a single-family residential lot for which a certificate of occupancy has been issued; (ii) a parcel for which certificates of occupancy have been issued and on which no additional residential structures can be built under local ordinances governing land development; (iii) any other type of lot for which a certificate of occupancy has been issued and

which cannot be further subdivided into one or more unimproved lots or parcels under local ordinances governing land development; or (iv) a single-family residential lot which has been subdivided and platted and is not capable of further subdivision without the granting of a variance. Excluded Property shall at all times be subject to the Code of Ordinances of the City, and those incorporated in this Agreement. The conveyance by a Developer of Excluded Property shall not excuse that Developer from its obligation to provide infrastructure improvements within such Excluded Property in accordance with this Agreement.

(B) **Assignment of Development Rights and Obligations.** The Developer, or any subsequent developer, shall be entitled to assign and delegate the Development Rights and Obligations to a subsequent purchaser of all or any portion of the Property with the consent of the City, provided that such consent shall not be unreasonably withheld or delayed. The City understands that any such assignment or transfer by the Developer of the Development Rights and Obligations shall be non-recourse as to the assigning Developer. Upon the assignment or transfer by Developer of the Development Rights and Obligations, then the assigning Developer shall not have any responsibility or liability under this Agreement. For purposes of this Section 5, the following activities on the part of Developer shall not be deemed “development of the Property”: (i) the filing of this Agreement, the Master Site Plan and the petitioning for or consenting to any amendment of this Agreement or the Code of Ordinances, including the PD; (ii) the subdivision and conveyance of any portions of the Property to the City as contemplated under this Agreement; (iii) the subdivision and conveyance of the portion of the Property designated as “*Open Space*” on the Master Site Plan to any person or entity so long as the same shall be restricted in use to “open space”; (iv) the subdivision and conveyance of portions of the Property, not to exceed in the aggregate one (1) acre, more or less, provided that such conveyances shall be deed-restricted to single-family residential use; (v) the conveyance of easements and portions of the Property for public utility purposes; (vi) the conveyance of portions of the Property to public entities in the case of any road realignments or grants of road rights of way; (vii) the marketing of the Property as contemplated under this Agreement; and (viii) any other activity which would not be deemed “development” under the Act.

6. **DEVELOPMENT SCHEDULE.** The Property shall be developed in accordance with the development schedule, attached as **Exhibit “E”** (the “*Development Schedule*”). Developer shall keep the City informed of its progress with respect to the Development Schedule as a part of the required Compliance Review process set forth in Section 13 below. Pursuant to the Act, the failure of the Developer to meet the development schedule shall not, in and of itself, constitute a material breach of this Agreement. In such event, the failure to meet the development schedule shall be judged by the totality of circumstances, including but not limited to any change in economic conditions, the occurrence of an act of God (including natural disasters), an act of war, an act of terrorism, civil disturbance, strikes, lockouts, fire, flood, hurricane, unavoidable casualties, a health

crisis which results in a limitation on business activities in the City extending for a period of more than Thirty (30) days, or any other cause or causes beyond the reasonable control of the Developer (collectively “*Force Majeure*”), and the Developer’s good faith efforts made to attain compliance with the development schedule. As further provided in the Act, if the Developer requests a modification of the dates set forth in the development agreement and is able to demonstrate that there is good cause to modify those dates, such modification shall not be unreasonably withheld or delayed by the City.

7. **EFFECT OF FUTURE LAWS.** Developer shall have vested rights to undertake development of any or all of the Property in accordance with the Code of Ordinances and the Land Development Regulations, as amended and in effect at the time of this Agreement, for the entirety of the Term. Future enactments of, or changes or amendments to the Code of Ordinances and the Land Development Regulations, which conflict with this Agreement shall apply to the Property only if permitted pursuant to the Act, and agreed to in writing by the Developer and the City. The parties specifically acknowledge that building moratoria or permit allocations enacted by the City during the Term of this Agreement or any adequate public facilities ordinance as may be adopted by the City shall not apply to the Property except as may be allowed by the Act or otherwise agreed to in writing by the Developer and the City.

The parties specifically acknowledge that this Agreement shall not prohibit the application of any present or future building, housing, electrical, plumbing, gas or other standard codes, of any tax or fee of general application throughout the City, provided such fees are applied consistently and in the same manner to all single-family properties within the City. Notwithstanding the above, the City may apply subsequently enacted laws to the Property only in accordance with the Act and this Agreement.

8. **INFRASTRUCTURE AND SERVICES.** The City and Developer recognize that the majority of the direct costs associated with the development of the Property will be borne by the Developer. Subject to the conditions set forth herein, the parties make specific note of and acknowledge the following:

Notwithstanding the provisions referenced above, nothing in this Agreement shall preclude the City and Developer from entering into a separate utility agreement for cost-sharing of water transmission systems or sewer transmission systems when such agreement may be of mutual benefit to both parties. Nothing herein shall be construed as precluding the City from providing potable water to its residents in accordance with applicable provisions of laws.

Comment: Bucksport Water will be providing water to the development, not City of Conway.

(A) **Public Roads.** All roads within the Project serving the Residential Units and Commercial Units shall be public roads, unless otherwise indicated on the Master Site Plan. All

public roadways shall be constructed to City standards, will be approved by the City Planning Commission as part of the subdivision plat approval process, and will be dedicated to, conveyed, maintained and repaired by the City.

Comment: you may want to add an exception, “except in cases where a design modification from city standards has been included in the PD documents. See Exhibit ___”.

(B) **Storm Drainage System.** All stormwater runoff, drainage, retention and treatment improvements within the Property shall be designed in accordance with the **City of Conway Stormwater Ordinance, and shall meet or exceed such standards provided in the ordinance that is in effect at the time of plan submittal and/or permit application. Code of Ordinances. Further, stormwater design will exclude the use of compensatory storage.** All stormwater runoff and drainage system structural improvements, including culverts and piped infrastructure, will be constructed by the Developer and dedicated to the City. Upon final inspection and acceptance by the City, the Developer shall provide a one-year warranty period for all drainage system structural improvements within the Project. Retention ponds, ditches and other stormwater retention and treatment areas will be constructed and maintained by the Developer and/or an Owners Association, as appropriate, and will not be accepted or maintained by the City.

(C) **Solid Waste and Recycling Collection.** The City shall provide solid waste and recycling collection services to the Property on the same basis as is provided to other residents and businesses within the City. Payment for such services to the City by Developer, an Owners Association or each individual purchaser or owner of any portion of the Property is required in return for such service for each owner within the Property. The City reserves the right to contract with a third party, which may include another governmental entity, **in order to collect payments/fees associated with the collection of solid waste and recycling,** and the City reserves the right to terminate or discontinue such service(s) to any owner of any portion of the Property until such payment(s) have been made.

Add: Stormwater Fee Collection. There is also a stormwater fee that is collected each month (with the sanitation fees bills). Please provide a paragraph (like the one above) for stormwater fee collection.

(D) **Police Protection.** The City shall provide police protection services to the Property on the same basis as is provided to other residents and businesses within the City.

(E) **Fire Services.** The City shall provide fire services to the Property on the same basis as is provided to other residents and businesses within the City, which services may be provided by way of a mutual services agreement with Horry County, if the City is unable to provide such services directly.

(F) **Emergency Medical Services.** The City shall provide emergency medical services to the Property, on the same basis as it provided to other residents and businesses within the City, which services may be provided by way of a mutual services agreement with Horry County, if the City is unable to provide such services directly.

(G) **School Services.** The City neither provides nor is authorized by law to provide public education facilities or services. Such facilities and services are now provided by the Horry County School District. The person or entity, whether it be homebuilder or another assignee of Developer, who actually initiates the building permit shall be responsible for paying all impact fees levied by the School District for each residential unit constructed prior to the issuance of a certificate of occupancy.

(H) **Private Utility Services.** Private utility services, including electric, natural gas, and telecommunication services (including telephone, cable television, and internet/broadband) shall be provided to the site by the appropriate private utility providers based upon designated service areas. All utilities on the Property shall be located underground, and shall be placed in locations approved by the City so as to reduce or eliminate potential conflicts within utility rights-of-way.

(I) **Streetlights.** Developer shall install or cause to be installed streetlights within the Project. To the extent that the City provides the same benefit to other similarly-situated neighborhoods within the City, the City shall contribute toward the monthly cost for each streetlight in an amount equal to the costs for the base street light fixture offered by the utility provider. The remaining monthly cost for each streetlight, including additional charges associated with an enhancement street light fixture, if any, shall be borne by the Developer and/or Owners Association.

(J) **No Donation of Acreage for Sewer Plant Expansion.** The City shall not require, mandate or demand that, or condition approval(s) upon a requirement that the Developer donate, use, dedicate or sell to the City or any other party for public purposes any portion of the Property or any other property owned by the Developer or any affiliate of the Developer for sewer plant expansion by the City, provided, however, that this provision shall not be deemed to preclude the City from requiring additional sewer pump station facilities, to subsequently be dedicated and conveyed to the City.

Comment: This development will be serviced by GSWSA. You may want to inquire whether they require dedication of land for any sewer facilities, including pump stations. They may require a separate agreement.

(K) **No Required Donations for Civic Purposes.** The City shall not require, mandate or demand that, or condition approval(s) upon a requirement that, the Developer donate, use, dedicate or sell to the City or any other party for public purposes any portions of the Property or

any other property owned by the Developer (or any of the entities or parties comprising the Developer) or any affiliate of the Developer, except to the extent parks, recreational areas and athletic facilities for public use are shown on the Master Site Plan.

(L) **Easements**. Developer shall be responsible for obtaining, at Developer's cost, all easements, access rights, or other instruments that will enable the Developer to tie into current or future water and sewer infrastructure on adjacent properties.

(M) **Ponds and Lakes**. As an obligation, Developer shall install pond(s) or lake(s) as shown on the approved Master Site Plan for the Property. The City agrees to cooperate with the Developer in the permitting process for such pond(s) and lake(s), it being understood that the City will not accept maintenance responsibility or any other liability for such pond(s) and lake(s), and that such pond(s) and lake(s) shall either be maintained by the Developer or conveyed to an Owners Association for on-going maintenance following completion of the Project.

9. **IMPACT FEES**. The Property shall be subject to all development impact fees imposed by the City at the time of this Agreement, or following the date of this Agreement, provided such fees are applied consistently and in the same manner to all similarly-situated property within the City limits. All such impact fees shall not be due and payable until an application of any person or entity for a building permit for the vertical development of any subdivided lot or portion of the Property. In particular, the Developer agrees that it shall not seek any exemptions for any portions of the Property from any current development impact fees (so long as such development impact fees are applied consistently and in the same manner to all similarly-situated property within the City limits) for any reason.

10. **ADDITIONAL FEES, OBLIGATIONS AND PUBLIC BENEFITS**. The Developer, and its respective successors and assigns agree that the then current owner of the Property or any portion thereof, shall pay to the City, the enhancement fees, as set forth below (collectively the "***Enhancement Fees***"). Developer further agrees that the Enhancement Fees shall be subject to an annual increase, beginning on January 1, 2025, in an amount equal to the lesser of (i) the increase in the Consumer Price Index, published by the U.S. Bureau of Labor Statistics ("***CPI***") between the beginning and end of the most recent calendar year; or (ii) Two (2%) percent per annum, which increase is intended to ensure that the Enhancement Fees continue to reflect the City's on-going increases in the costs of services provided. Developer will provide the Enhancements Fees, together any additional public benefits, as follows:

(A) **Sanitation Services Enhancement Fee**. As a public benefit, for the Property, the Developer, or the then current owner, shall pay to the City, as to each Residential Unit and each Commercial Unit within the Property, a sanitation services enhancement fee (the "***Sanitation Services***

Enhancement Fee”) in an amount equal to \$_____ for each Residential Unit, and \$_____ for each Commercial Unit, to be paid at the time of issuance of the building permit for each such Residential Unit and Commercial Unit within the Property. *(appropriate fee still be considered)*

(B) **Public Safety Enhancement Fee.** As a public benefit, for the Property, the Developer, or the then current owner, shall also pay to the City, as to each Residential Unit and each Commercial unit within the Property, a public safety enhancement fee (the “*Public Safety Enhancement Fee*”) in an amount equal to \$_____ for each Residential Unit, and \$_____ for each Commercial Unit, to be paid at the time of issuance of the building permit for each such Residential Unit and Commercial Unit within the Property. *(appropriate fee still being considered)*

Other Public Safety Enhancements:

- **License Plate Readers (LPR’s) / Cameras.** Install at each residential entrance within the development at the developer’s expense. **LPR’s** are an annual rental agreement at the rate of \$4,000 each (per year, per LPR). Conway Police would be granted access to the data, and they are maintained by the company that installs them. **Cameras** are an initial cost of approx. \$4,000 each, with a monthly cellular cost of \$30 per camera.
 - At minimum, LPR’s / Cameras should be installed at each access into the development. There are 3 main access points.
- **Speed control:** install roundabouts along the spine road(s) within the development in lieu of 3 or 4-way stop signs.

Add: **Park Enhancement Fee.** As a public benefit, for the Property, the Developer, or then current owner, shall also pay to the City, as to each Residential Unit, a Park enhancement fee (the “*Park Enhancement Fee*”) in an amount equal to \$_____ for each Residential Unit, to be paid at the time of issuance of the building permit for each such Residential Unit within the Property. *(appropriate fee still being considered)*

- Fee(s) may be reduced with the installation of the park improvements on Tract K. Appropriate fees to be discussed and determined further.

Add: **Planning & Development Enhancement Fee.** As a public benefit, for the Property, the Developer, or then current owner, shall also pay to the City, as to each Residential Unit and each Commercial Unit within the property, a Planning & Development Enhancement Fee (the “*Planning & Development Enhancement Fee*”), in an amount equal to \$_____ for each Residential Unit, and \$_____ for each Commercial Unit, to be paid at the time of issuance of a building permit for each Residential Unit and Commercial Unit within the property.

All appropriate fees are still being reviewed and discussed.

Add: **Wildlife Refuge Trail connection / installation**, in accordance with the City of Conway Pathways & Trails Plan. Add a trigger for which the trail must be installed (*i.e.* on or before “X” number of permits have been issued).

- Determine area and length (how many feet) the connection will be on this tract.
- Determine types of trails (*i.e.* trail material, will vary depending on where installed).
The following types of trails would be ideal for this project (per the Pathway’s & Trails Plan):
 - **Rural Trails – Type A (Scenic Route)**. Min. corridor width of 17-19’ and 12’ typical tread width. Materials include: compacted aggregate (*prohibited in floodplain*), resin stabilized aggregate (*prohibited in floodplain*), natural soil surface, wood mulch (*this material is not preferred – too costly and difficult to maintain*), sand.
 - **Rural Trails – Type B (Adjacent to Roads)**. Min. corridor width of 32’ and 12’ typical tread width. Same materials as listed above.
 - **Rural Trails – Type C (Utility Easements)**. Min. corridor width of 50’ and 12’ typical tread width. Same materials as others above. This would be ideal for under the SCPSA easement, as that is where the trail is identified in the plan. However, there are other factors to consider, such as the materials that would be permitted in wetlands or floodplains, if encroachment permits can be issued, and possible connections with adjacent properties (including the commercial tracts / areas within the PD).
 - **Swamp, Levee, or Canal Trails**. 10’ typical tread width. Materials include natural soil surface, mulch, or sand. (*mulch is not preferred – too costly and difficult to maintain*). Min. corridor width of 20’.
 - **Wetland Trails**. Min. corridor width of 27’ and 12’ typical tread width. Materials include wood (such as boardwalks), reinforced precast concrete. Developer responsible for obtaining necessary permits from DHEC/Army Corp and ensuring that such materials are permitted.
 - **Sensitive Lands Trails – Type A**. Min. corridor width of 27’ and 12’ typical tread width. Wood is the only identified material (*i.e.* boardwalks).
 - **Sensitive Lands Trails – Type B**. Min. corridor width of 20’ and 5’ typical tread width. Wood is the only identified material.

Add: **public benefit of the City Park Area** (identified as Appendix A, Exhibit B in the PD Document) as well as amenities/improvements proposed here, to include:

- Four (4) pickle ball courts;

- Playground area (with playground equipment with flood proof design), a size adequate enough to support the number of children that will utilize the playground upon project buildout.
- Trails/pathways connection(s).

Improvements / amenities may be stepped; preferably that the property is conveyed to the city on or before the issuance of 500 permits, OR a financial guarantee may be submitted in lieu of having the improvements installed. However, they must be installed before property is conveyed. They must also be shown on Master Site Plan.

See PD document for other staff comments.

(C) **Uses and Density**. As a public benefit, Development of the Property shall be determined in accordance with the **City of Conway Unified Development Ordinance (UDO)** and Code of Ordinances, as the same may be amended from time to time pursuant to this Agreement, provided that the Property and the applicable approved Master Plan shall provide for not more than **3,318** total Residential Units, to include single-family detached dwellings, duplex/townhome dwellings, and multifamily dwellings, and nor more than [redacted] total Commercial Units (the table in the PD document specifies commercial sq. footage, not units, *i.e.* “no more than 1,368,000 sq. ft. in commercial space”), each at a maximum height not to exceed 60 feet. *Comment: does the 60’ height match the PD dimensional standards for commercial? I saw a 52’ height for commercial.*

(D) **Road Standards and Traffic Impact**. As an obligation, all public roads within the Project shall be constructed to City specifications, **except where a design modification has been specified in the PD documents and/or approved by Planning Commission**. The exact location, alignment, and name of any public road within the Project, shall be subject to review and approval by the City Planning Commission as part of the subdivision platting process. The Developer shall be responsible for maintaining all public roads until such roads are offered to, and accepted by, the City for ownership and maintenance. **Upon inspection and acceptance, the Developer shall provide a three (3) year warranty period with a financial guarantee equal to that of the City’s contracted price per linear foot of roadway that is in effect at the time in which the roadways are proposed to be dedicated to the City.**

Notwithstanding any provision herein to the contrary, this Agreement does not obligate the City to expend any funds of the City or borrow any sums in connection with improvements to the roads subject to this **Section 10.E**.

Offsite Road Improvements. Developer shall be obligated to install offsite improvements, in accordance with the Traffic Impact Study recommendations, which include the following: (refer to PD documents / exhibits for specifics to include below)

- i. Improvement 1: Pitch Landing & Willow Springs Rd intersection.
 - Required on or before the issuance of *X* number of permits.
- ii. Improvement 2 at Access #3: Pitch Landing Rd.
 - Required on or before the issuance of *X* number of permits.
- iii. Improvement 3: US HWY 701 & Pitch Landing Rd intersection.
 - Required on or before the issuance of *X* number of permits.
- iv. Improvement 4 at Access #1: US HWY 701
 - Required on or before the issuance of *X* number of permits.
- v. Improvement 5 at Access #2: US HWY 701 & Kinlaw Lane intersection.
 - Required on or before the issuance of *X* number of permits.

Staff comments on required / recommended traffic improvements: The developer has no rights to invoke eminent domain. If additional right of way is necessary, the appropriate governmental entity would have to invoke eminent domain to acquire additional right-of-way so that the required improvements can be completed.

(E) **Stormwater and Drainage.** As an obligation, Developer shall provide stormwater conveyance and retention facilities sufficient in capacity to accommodate the storm water generated from the Property, and provide the City with evidence of the necessary and required permanent and perpetual easements necessary to facilitate such drainage from the Property. **All stormwater shall be designed to meet or exceed the City's Stormwater Ordinance that is in effect at the time of plan submittal / permit application.**

(F) **Jurisdictional and Non-Jurisdictional Waters.** As an obligation, Jurisdictional and Non-Jurisdictional Waters of the State of South Carolina and the United States within the Project which are not mitigated, filled or otherwise modified, shall be surrounded by an undisturbed water quality buffer of not less than Twenty-Five (25) feet in width. Developer will convey all Jurisdictional and Non-Jurisdictional Waters of the State of South Carolina and the United States located within the Project to the Owner's Association for maintenance and operation not later than the date on which the Project is complete.

(G) **Recording.** Pursuant to Title 6, Chapter 31, Section 120 of the Code of Laws for the State of South Carolina, this Agreement shall be recorded in the public records of Horry County, South Carolina, on or before the date which is Fourteen (14) days following the date on which the City enters into this Agreement.

11. **PROTECTION OF ENVIRONMENT AND QUALITY OF LIFE.** The City and Developer recognize that development can have negative as well as positive impacts. Specifically, the City considers the protection of the natural environment and nearby waters, and the preservation

of the character and unique identity of the City, to be important goals. Developer shares this commitment and therefore agrees to abide by all provisions of federal, state and local laws and regulations for the handling of stormwater, **and all stormwater will be designed to meet or exceed the City of Conway's Stormwater Ordinance that is in effect at the time of plan submittal / permit application.**

*Add: **FLOOD DAMAGE PREVENTION.** The Property / Development will comply with the City of Conway's Flood Damage Prevention Ordinance that is in effect at the time of plan submittal / permit application.*

*Add: **TREE PRESERVATION.** Property included in the development agreement / PD shall comply with the City of Conway Tree Preservation Ordinance that is in effect at the time of plan submittal. Protected trees, per the Tree Preservation Ordinance, shall not be removed without a Protected Tree Removal Permit and the submission of a Tree Survey.*

12. **COMPLIANCE REVIEWS.** Developer, or its assigns, shall meet with the City, or its designee, at least once per year during the Term to review development completed in the prior year and the development anticipated to be commenced or completed in the ensuing year as compared to the Development Schedule. The City shall provide written notice to the Developer of the date for such compliance review not less than Five (5) business days in advance, provided such notice shall not be applicable to standard reviews and inspections otherwise performed by the City as to the improvement of the Property. The Developer must demonstrate good faith compliance with the terms of this Agreement. The Developer, or its designee, shall be required to provide such information as may reasonably be requested by the City. The Development Schedule attached to this Agreement is only a projection, and Developer's obligation at each respective Compliance Review shall be to reconcile the projected Development Schedule attached to this Agreement with the actual schedule of development for the Project at each respective Compliance Review. Failure to meet the Development Schedule attached to this Agreement shall not constitute a default hereunder.

13. **DEFAULTS.** Notwithstanding the provisions of Section 6 above, Developer shall continuously and diligently proceed with Development Work on the Property. Developer's failure to proceed with Development Work on the Property for a period of more than Six (6) months, other than as a result of Force Majeure, as defined in Section 6 above, shall constitute a default hereunder on the part of Developer. In the event of a default, the City shall provide written notice to Developer of such default, and Developer shall have a period of Thirty (30) days in which to cure a default by commencement of Development Work with regards to the next portion of the Property to be developed in accordance with phasing plan of the Project. The failure of the Developer to comply with the terms of this Agreement shall constitute a default, entitling the City to pursue such remedies

as deemed appropriate, including withholding the issuance of building permits in accordance with the provisions of this Agreement, specific performance and the termination or modification of this Agreement in accordance with the Act; provided however no termination of this Agreement may be declared by the City absent its according the Developer the notice and opportunity to cure in accordance with the Act.

14. **MODIFICATION OF AGREEMENT.** This Agreement may be modified or amended only by the written agreement of the City and the Developer. No statement, action or agreement hereafter made shall be effective to change, amend, waive, modify, discharge, terminate or effect an abandonment of this Agreement in whole or in part unless such statement, action or agreement is in writing and signed by the party against whom such change, amendment, waiver, modification, discharge, termination or abandonment is sought to be enforced except as otherwise provided in the Act.

15. **RESTRICTIVE COVENANTS.** The obligations and public benefits agreed to and accepted by Developer set forth in this Agreement (collectively the “*Restrictive Covenants*”) shall survive and continue in full force and effect without regard to the termination of this Agreement for a period ending on the earlier of (i) Fifty (50) years after the Term of this Agreement; or (ii) such time as the parties hereto, or their respective successors and assigns, have recorded a fully executed and effective termination of the Restrictive Covenants in the Office of the Register of Deeds for Horry County. Developer further covenants and agrees that, to the extent the Property is encumbered by covenants, conditions and restrictions (the “*CCRs*”), whether administered by an Owners Association or not, such CCRs shall include the Restrictive Covenants, the effect of which shall be to extend the term of the Restrictive Covenants, the same thereafter running with the Property as continuing obligations, public benefits and restrictions.

16. **NOTICES.** Any notice, demand, request, consent, approval or communication which a signatory party is required to or may give to another signatory party hereunder shall be in writing and shall be delivered or addressed to the other at the address below set forth or to such other address as such party may from time to time direct by written notice given in the manner herein prescribed, and such notice or communication shall be deemed to have been given or made when communicated by personal delivery or by independent courier service or by facsimile or if by mail on the fifth (5th) business day after the deposit thereof in the United States Mail, postage prepaid, registered or certified, addressed as hereinafter provided. All notices, demands, requests, consents, approvals or communications to the City shall be addressed to the City at:

City of Conway

Attention: City ~~Manager~~
Administrator

With a copy to:

And to the Developer at:

BRD Land & Investments, LP

Attention: _____

With a copy to:

Robert S. Guyton, Esq.
Robert S. Guyton, P.C.
4605 B Oleander Drive, Suite 202
Myrtle Beach, SC 29577

17. **GENERAL.**

(A) **Subsequent Laws.** In the event state or federal laws or regulations are enacted after the execution of this Agreement or decisions are issued by a court of competent jurisdiction which prevent or preclude compliance with the Act or one or more provisions of this Agreement (“*New Laws*”), the provisions of this Agreement shall be modified or suspended as may be necessary to comply with such New Laws. Immediately after enactment of any such New Law, or court decision, a party designated by Developer and the City shall meet and confer in good faith in order to agree upon such modification or suspension based on the effect such New Law would have on the purposes and intent of this Agreement. During the time that these parties are conferring on such modification or suspension or challenging the New Laws, the City may take reasonable action to comply with such New Laws. Should these parties be unable to agree to a modification or suspension, either may petition a court of competent jurisdiction for an appropriate modification or suspension of this Agreement.

(B) **Estoppel Certificate.** The City or any Developer may, at any time, and from time to time, deliver written notice to the other applicable party requesting such party to certify in writing, within Thirty (30) days of such written notice, that this Agreement is in full force and effect, that this Agreement has not been amended or modified, or if so amended, identifying the

amendments, whether, to the knowledge of such party, the requesting party is in default or claimed default in the performance of its obligations under this Agreement, and, if so, describing the nature and amount, if any, of any such default or claimed default, and whether, to the knowledge of such party, any event has occurred or failed to occur which, with the passage of time or the giving of notice, or both, would constitute a default and, if so, specifying each such event.

(C) **Entire Agreement.** This Agreement sets forth, and incorporates by reference all of the agreements, conditions and understandings between the City and the Developer relative to the Property and its development and there are no promises, agreements, conditions or understandings, oral or written, expressed or implied, among these parties relative to the matters addressed herein other than as set forth or as referred to herein.

(D) **No Partnership or Joint Venture.** Nothing in this Agreement shall be deemed to create a partnership or joint venture between the City or any Developer or to render such party liable in any manner for the debts or obligations of another party.

(E) **Exhibits.** All exhibits attached hereto and/or referred to in this Agreement are incorporated herein as though set forth in full.

(F) **Construction.** The parties agree that each party and its counsel have reviewed and revised this Agreement and that any rule of construction to the effect that ambiguities are to be resolved against the drafting party shall not apply in the interpretation of this Agreement or any amendments or exhibits hereto.

(G) **Transfer of Title.** Transfers of title to the Property, in whole or in part, may be made, at any time and to any person or entity, without the consent of the City.

(H) **Binding Effect.** The parties hereto agree that this Agreement shall be binding upon their respective successors and/or assigns.

(I) **Governing Law.** This Agreement shall be governed by the laws of the State of South Carolina, and the parties further agree that venue shall be proper, without regards to any conflict of law principals, in a court of competent jurisdiction in Horry County, or such other jurisdiction in South Carolina as is appropriate and necessary under the circumstances.

(J) **Counterparts.** This Agreement may be executed in several counterparts, each of which shall be deemed an original, and such counterparts shall constitute but one and the same instrument.

(K) **Eminent Domain.** Nothing contained in this Agreement shall limit, impair or restrict the City's right and power of eminent domain under the laws of the State of South Carolina.

(L) **No Third-Party Beneficiaries.** The provisions of this Agreement may be enforced only by the City and the Developer. No other persons shall have any rights hereunder, unless specified in this Agreement.

(M) **Release of Developer.** Subject to Section 5.B, in the event of conveyance of all or a portion of the Property, the Developer shall be released from any obligations and liabilities with respect to this Agreement as to the portion of Property so transferred, and the transferee shall be substituted as the Developer under the Agreement as to the portion of the Property so transferred; provided, however, the transferee(s) of the one acre contemplated for subdivision and conveyance under Section 5.B shall not be deemed to succeed to any Development Rights and Obligation of Developer under this Agreement.

(N) **Add: Periodic Review Provisions section.** If you have referred to this somewhere else in this document, please specify where.

18. **DESCRIPTION OF LOCAL DEVELOPMENT PERMITS NEEDED.** The development of the Property shall be pursuant to this Agreement, the Land Development Regulations, **the Unified Development Ordinance (UDO)**, and Code of Ordinances, as amended; provided, however, in the event of any conflict between this Agreement and the Land Development Regulations, **the Unified Development Ordinance (UDO)**, and/or the Code of Ordinances, the provisions of this Agreement shall control. Necessary permits include, but may not be limited to, the following: building permits, zoning compliance permits, sign permits (permanent and temporary), temporary use permits, accessory use permits, driveway/encroachment/curb cut permits, clearing/grading permits, and land disturbance permits. Notwithstanding the foregoing, the City acknowledges that **final approval of subdivision plats will be provided by the** City Planning and **Zoning Development** Director **(or their designee)**, and/or the City Planning Commission ~~approval of plats will be given if any~~ such plats are materially consistent with the Master Site Plan of the Project, subject to any Master Site Plan Revisions. It is specifically understood that the failure of this Agreement to address a particular permit, condition, term or restriction does not relieve the Developer of the necessity of complying with the law governing the permitting requirements, conditions, terms or restrictions. It is expressly understood and acknowledged by all parties to this Agreement that any portions of the Property donated or sold by any Developer to the City shall not be subject to any private declaration of restrictions or property owners association(s) created by any Developer for any subsequent subdivision of the Property.

19. **STATEMENT OF REQUIRED PROVISIONS.** In compliance with Section 6-31-60(A) of the Act, the Developer represents that this Agreement includes all of the specific mandatory provisions required by the Act, addressed elsewhere in this Agreement.

[Signature Pages Follow]

DRAFT

IN WITNESS WHEREOF, the parties have entered into this Agreement as of the day and year first above written.

DEVELOPER:

WITNESSES:

BRD LAND & INVESTMENT, LP, a South Carolina limited partnership

Witness #1

By: _____

Name: _____

Witness #2

Title: _____

STATE OF _____)

)

COUNTY OF _____)

The foregoing instrument was acknowledged before me this ____ day of _____, 2023, by _____, as _____ of BRD LAND & INVESTMENT, LP, a South Carolina limited partnership. He or she personally appeared before me and is personally known to me.

Notary Public

Name: _____

My Commission Expires: _____

EXHIBIT “A”

South Carolina Local Government Development Agreement
Act as Codified in Sections 6-31-10 through 6-31-160
of the Code of Laws of South Carolina (1976), as amended

[TO BE ATTACHED]

EXHIBIT “B”

Survey of Property (Properties)

[TO BE ATTACHED]

EXHIBIT “C”

Master Site Plan

[TO BE ATTACHED]

EXHIBIT “D”

Land Development Regulations (is this the PD narrative?)

[TO BE ATTACHED]

EXHIBIT “E”

Development Schedule

Construction will begin following receipt of permits from the City of Conway and from other regulatory bodies. The nature of this Project, together with the current economic conditions, prevents the Developer from providing exact dates for commencement of future phases or exact completion dates. Although the timing of completion of any particular Phase of the Project is subject to then current market demands, the Developer anticipates starting the installation of the infrastructure within a period of approximately Twenty-four (24) months from approval of this Agreement to allow for design, permitting and mobilization. The Project would be complete within Twenty-Five (25) years of approval of this Agreement.

Chapter 7 - Development Agreements

The General Assembly adopted the South Carolina Local Government Development Agreement Act in 1993. S.C. Code Title 6, Chapter 31, § 6-31-10, et seq. The Act authorizes binding agreements between local governments and developers for the long-term development of large tracts of land. A development agreement gives a developer a vested right for the term of the agreement to proceed according to land use regulations in existence on the execution date of the agreement. See Appendix J.

Purpose

The General Assembly included a lengthy statement of findings, purpose and intent in the text of the Development Agreement Act. See S.C. Code § 6-31-10. Principal among these was the desire to provide some measure of certainty as to applicable land development law for developers who made financial commitments for planned developments. The Act also expresses the intent to encourage a stronger commitment to comprehensive and capital facilities planning, ensure the provision of adequate public facilities, encourage the efficient use of resources and reduce the economic cost of development.

Development Permits

Development permits include a building permit, zoning permit, subdivision approval, rezoning certification, special exception, variance or any other official action having the effect of permitting property development. S.C. Code § 6-31-20(4).

Minimum Requirements

A development agreement may not be used for every land development. Two threshold requirements must be met before an agreement is authorized. S.C. Code § 6-31-40.

1. **Size of property.** The property must contain a minimum of 25 acres of highland. The Act does not define the term "highland." The local ordinance authorizing agreements could define the term (for example, land above the 100-year flood plain).
2. **Development time.** The length of the development agreement varies with the size of the property. Property containing up to 250 acres of highland is limited to an agreement term of up to five years. Property of 250 to 1000 acres of highland is limited to a term of up to 10 years. Property of 1000 to 2000 acres of highland is limited to a term of up to 20 years. Agreements for property of more than 2000 acres (and for developments under the Military Facilities Redevelopment Law regardless of size) may have terms as to length of the agreement as agreed upon by the local government and developer. The local ordinance could set standards for calculating development time.

Contents of Agreement

A development agreement must include the following: S.C. Code § 6-31-60.

1. **Description and owners.** A legal description of the property and the names of its legal and equitable owners. (A purchaser holding a written contract of sale is an equitable owner and should be a party to the agreement.)
2. **Duration.** Development must be projected to take place over a period authorized by S.C. Code §6-31-40. The termination date may be extended by agreement.
3. **Uses.** Permitted land uses, including population densities, building intensities and building heights.
4. **Public facilities.** Description of "public facilities" (a term defined in S.C. Code § 6-31-20(12)) that will service the development, including who provides the facilities, the date any new facilities will be constructed, and a schedule of availability. S.C. Code § 6-31-60(A)(4). (Requirements for easements and underground utilities could be included.) If the local government is to provide public facilities, the agreement must provide that the delivery date of the facilities will be tied to defined completion percentages or other defined performance standards to be met by the developer. S.C. Code § 6-31-50(C).
5. **Dedication.** Description of any reservation or dedication of land for public purposes and any required or permitted environmental protection provisions. (An environmental impact study may be appropriate.)
6. **Permits.** Description of all local development permits needed or approved. A statement should be included that failure to list a permit does not relieve developer from complying with the law.
7. **Comprehensive plan.** A finding that the proposed development is consistent with the comprehensive plan and land development regulations. The requirement for such consistency is set out in S.C. Code § 6-31-70.
8. **Conditions.** Conditions, terms, restrictions or requirements necessary for public health, safety or welfare.
9. **Historic preservation.** Description of any provisions for preservation and restoration of historic structures. (Cite local regulations for historic districts and structures.)
10. **Time.** Specify time and schedule for completion of entire development or any phase. (Local government may extend time upon request and upon a showing of good cause by the developer.) See S.C. Code § 6-31-60(B).

11. Responsible government. If more than one local government is a party to the agreement, specify which is responsible for overall administration of agreement.

12. Other matters. Include any other matter not inconsistent with law. A provision should be included for application of new laws. See S.C. Code § 6-31-80(B)(3). (Maps and plans could be required at appropriate stages of development.)

A development agreement may be amended or terminated by consent of the parties. S.C. Code § 6-31-100.

Adoption of Agreement

The following steps are required for approval of a development agreement:

- 1. Hearing.** Before entering into a development agreement, the governing body must hold at least two public hearings. The governing body may authorize the planning commission to conduct the hearings. S.C. Code § 6-31-50(A).
- 2. Notice.** Notice of intent to consider a development agreement must be published in a newspaper of general circulation in the county. The notice must specify the location of the property, proposed uses and a place where a copy of the proposed agreement may be obtained. (No time for publication of the notice is prescribed. The time should be set in the general ordinance authorizing development agreements.) The date, time and place of the second hearing must be announced at the first hearing. S.C. Code § 6-31-50(B).
- 3. Ordinance.** The governing body must approve each development agreement by adoption of an ordinance. S.C. Code § 6-31-30.

Applicable Laws

- 1. Existing law.** Unless otherwise provided by the development agreement, the land development laws in force at the time the agreement is executed will apply to the development of the property. S.C. Code § 6-31-80(A). The rights of electricity and gas suppliers may not be altered or amended. The Development Agreement Act gives no extraterritorial authority to local governments. S.C. Code § 6-31-140.
- 2. Subsequent law.** A local government may apply subsequently adopted laws to a development that is subject to a development agreement if it is determined after a public hearing that one of the following conditions is met. S.C. Code § 6-31-80(B):
 - a. No conflict.** The new laws are not in conflict with laws governing the development agreement and do not prevent the development.
 - b. Essential.** The new laws are essential to public health, safety or welfare and expressly state that they apply to a development, subject to a development agreement.

- c. **Anticipated.** The new laws were specifically anticipated and provided for in the development agreement.
- d. **Changes.** Substantial changes in pertinent conditions have occurred which would pose a serious threat to public health, safety or welfare if not addressed.
- e. **Inaccuracy.** The development agreement is based on substantially and materially inaccurate information supplied by the developer.

Periodic Review

Procedures established by ordinance for development agreements must include a provision for periodic review by the zoning administrator or other appropriate officer at least every 12 months. The developer must be required to demonstrate good faith compliance with the terms of the agreement. S.C. Code § 6-31-90.

When a review reveals a material breach of the agreement, the following steps are taken:

1. **Notice of breach.** A notice of breach (setting out with particularity the nature of the breach, the evidence supporting the determination, and providing a reasonable time to cure the breach) must be sent to the developer within a reasonable time after the review.
2. **Termination.** Upon failure of the developer to cure the breach within the time given, the local governing body unilaterally may terminate or modify the agreement. However, the developer must have an opportunity to rebut the determination or to consent to amend the agreement to meet the concerns raised by the findings and determination of breach.

Effect of Subsequent Annexation or Incorporation

A development agreement remains effective for a newly annexed or newly incorporated area for the duration of the agreement, or for eight years from the date of annexation or incorporation, whichever is earlier. However, this continued validity and duration of the agreement is subject to two preconditions: (1) the application for the agreement was submitted to the government of the unincorporated area before the first signature was affixed to the petition for incorporation or annexation, and (2) a development agreement was entered into prior to any election for the incorporation or annexation or, if no annexation election was required, prior to the date the municipality ordered the annexation. The agreement may be extended by consent of the parties to the agreement and the municipality for up to 15 years. The municipality may amend or suspend the provisions of the agreement when the provisions produce a danger to the public health or safety of residents. S.C. Code § 6-31-110.

Recording Agreement

The developer is required to record a development agreement in the land records office of the county where the property is located within 14 days after the agreement is executed. The agreement is binding on successors in interest. S.C. Code § 6-31-120.

Subsequent State and Federal Laws

Development agreement provisions must be modified or suspended to comply with state or federal laws or regulations enacted after the agreement is executed, if the new laws or regulations prevent or preclude compliance with one or more provisions of the development agreement. S.C. Code § 6-31-130.

Checklist for Development Agreements

No form for a development agreement can be drafted to encompass all of the various local considerations to be addressed in a specific agreement. The following checklist should be of assistance in meeting the minimum requirements of the Act:

- Adopt general ordinance authorizing development agreements and establishing procedures and requirements.
(Include provision setting time for advance notice of public hearings - S.C. Code § 6-31-50.) (Include procedures for periodic review of agreement - S.C. Code § 6-31-90.)

Agreement provisions:

- Tract contains _____ acres of highland
- Time for development is ____ years
- Legal description of property
- Names of legal and equitable owners
- Permitted uses, including population density, building intensities and heights
- Public facilities available and to be provided, including who will provide, when and schedule of availability. If local government is to provide, set out delivery dates tied to defined completion percentages or other defined performance standards to be met by developer.
- Reservation or dedication of land for public use
- Environmental protection provisions
- Specify local permits needed. State that failure to list a permit does not relieve developer from complying with law
- Development is consistent with comprehensive plan and land development regulations
- Conditions for public health, safety and welfare
- Historic preservation provisions
- Times for developer 's completion of phases
- If more than one local government involved, specify which is responsible for overall administration of the agreement
- Provision for application of anticipated new laws
- Procedures for periodic review by zoning administrator or official
- Procedures for notice of breach and termination

Ordinance approving specific agreement:

- Draft ordinance approving agreement
- Publish newspaper notice of intent to consider agreement and public hearings (S.C. Code § 6-31-50)
- Make copy of proposed agreement available for public inspection
- Hold public hearings (council or planning commission)
- Adopt ordinance approving agreement and authorizing mayor to sign

Execution and Recording:

- Execute agreement
- Developer records agreement in county register of deeds office
- Executed copy placed in local government public records
- Record deed if lands are dedicated for public use

How and where to vote in the city of Conway's special election Tuesday

Conway City Council will hold a special election June 13 to elect a council member to fill the vacancy of an unexpired term left by the resignation of Alex Hyman.

The term will expire Dec. 31. Voters must have been registered 30 days before the election and the last day of early voting is June 9 at the Horry County Registration and Election Office, 1515 Fourth Avenue. Voting will be held at the following precincts June 13 from 7 a.m.-7 p.m.:

Coastal Carolina, Red Hill and Wild Wing
Christ the Servant Lutheran Church

East Conway
Conway Library

Four Mile
Bethany Bible Chapel

Homewood
Homewood Elementary School

Jamestown
South Conway Elementary School

Maple
Maple Baptist Church

North Conway #1
Mary Thompson Building at Collins Park

North Conway #2
Conway Elementary School

Racepath #1
Conway Senior Center

Racepath #2
Whittemore Park Middle School

Red Hill #1
Christ the Servant Lutheran Church

West Conway
Horry County Government & Justice Center

Wild Wing
Christ the Servant Lutheran Church

Certification of Election: The Municipal Election Commission will hold a hearing June 14 at 10 a.m. for the purpose of determining the validity of all provisional ballots and certifying the election results. The certification will be held in the conference room at Conway City Hall, 229 Main St., Conway.

Foster moms share stories about providing loving homes in Conway

BY HANNAH STRONG OSKIN
HANNAH.OSKIN@MYHORRYNEWS.COM

Sara Moody had just received confirmation she was officially licensed to be a foster parent.

She could foster up to two teenage girls at a time. And in her mind, she imagined the first placement would be one child.

Moody thought it may be easier than starting with two.

But God had other plans.

Thirty minutes after she learned about becoming licensed, the first call came.

Two teenage sisters needed a home.

"I was shocked at how quickly they called," Moody said. "It was a lot of fear but excitement at the same time."

The sisters were with her for less than a month.

"They were like the most perfect kids you could ask for... We formed such a strong bond," she said of her first placement.

The 30-year-old Conway resident is a single foster mother, though she recently became engaged. She has fostered youth from ages 12 to 17 over the past year.

National Foster Care Month was in May, and the South Carolina Department of Social Services says it works year-round to recruit and retain foster parents.

In Horry County, the greatest need is foster parents who are willing to take older youth, including teenagers, sibling groups and foster children with complex medical needs.

As of Tuesday, Horry County had 178 children in foster care, a DSS spokesperson said. There were about 3,772 children in foster care statewide on Tuesday.



PHOTO PROVIDED
Sara Moody reads to Keiston who was fostered and adopted by Kristin and Craig Bourque.

Of the 178 children in Horry County, 101 are between the ages of seven and 17.

Moody credits Kristin Bourque for inspiring her to become a foster parent. But Bourque said she can't take the credit.

"For me, I don't think it was me that inspired Sara. I think it was all God's work," Bourque said.

She said Moody supported her when she and her family moved to the area - a place where they knew nobody and had no family. The friends met while attending The Rock Church in Conway. And Keiston, one of Bourque's foster children who she and her husband later adopted, stole Moody's heart. Bourque and her husband Craig have three

biological children and five adopted children. And they also foster children of all ages who have special needs or complex medical needs.

"We wanted [to foster] the kids that nobody else wanted to take, the kids that were more difficult to place," she said.

That means a lot of trips back and forth to the Medical University of South Carolina.

Bourque said it's a common misconception for people to think that fostering is a long-term commitment.

"There's a piece that you can do," she said. "There's a piece for everybody."

And if that piece isn't becoming a foster parent, it might be volunteering as a guardian ad litem or in respite care.

Children in the foster care system are assigned a guardian ad litem to represent them in the court setting.

Respite care is a type of care that offers a "temporary break from caring for a foster child" during placement, according to SCSSS.

Now, after a year as a foster parent, Moody has fostered nine children.

She has gotten used to the routine after she gets the call.

"I could get a phone call at 3 o'clock in the afternoon...if you say yes, they will work with you as best as they can... but it's usually within a couple of hours," she said of when the children arrive. "You get home, you make a bed really quick and you get

some dinner started and you anticipate when they will show up."

Moody said she began the process thinking she would bless the lives of children who needed a home. But it has been more than that.

"It didn't take very long before I realized how much of a blessing these kids could be," Moody said.

For more information about becoming a foster parent, visit <https://heartfeltcalling.org/>. For more information about foster care in South Carolina, visit <https://dss.sc.gov/child-well-being/foster-care/>.



Notice of Public Hearing on Development Agreement

The City of Conway Planning Commission will hold a public hearing at 5:30 p.m. on **Thursday, July 13th, 2023** in the conference room of the City of Conway Planning & Building Dept. at 196 Laurel Street, Conway, SC 29526, on the land development agreement proposed by G3 Engineers (applicant) for development of property located on Pitch Landing Road and Hwy 701 South, known as the Warden Station, containing +/-1763.28 acres, (PINs 381-00-00-0003, 381-08-04-0009, 381-08-04-0010, 380-00-00-0038, 381-08-01-0006, 403-00-00-0001, 403-00-00-0002, and 403-00-00-0022), which will allow the subsequent annexation and rezoning of a Planned Development on said properties.

The (draft) agreement is available for public inspection and copying in the office of Planning & Building Dept. at 196 Laurel Street, Conway, SC 29526.

THE PUBLIC IS INVITED TO ATTEND

PO #10139

HCS BUDGET: Fiscal year begins July 1 for \$1.04B budget

FROM A1

have accrued.

IN OTHER BOARD NEWS

The board unanimously approved the 2023-24 comprehensive annual budget of just over \$1.04 billion Monday night, which was the last board meeting until August.

District 11 member Shanda Allen voted yes for the budget, but made a statement before the vote saying that while she was in favor of the budget as a whole, she was not in agreement with the decision to spend \$2.3 million

on contracting out substitute teacher services.

This budget does not include any tax increases. Here's a breakdown:

- Total budget: \$1.04 billion (\$1,043,321,786)
- All regular school district employees, including teachers, receives a STEP (longevity) increase or a 2% raise (\$6,991,293 from General Fund)
- \$2,500 salary increase to teacher/nurse salaries (\$11,367,744 from General Fund)

- Hourly rate increase of \$1.48/hour for support staff employees, a minimum of \$15/hour (\$5,196,909 from General Fund)
- Bus driver salary increase (\$699,215 from General Fund)
- Staff to allow for elementary teachers' unencumbered time (\$2,839,936 from General Fund)
- Special needs bus monitors (\$325,000 from General Fund)
- Paid parental leave (\$1,371,726 from General Fund)

- Additional staffing for student enrollment changes of approximately 660 new students (\$5,828,180 General Fund)
- 8 additional ESOL teachers (\$766,908 General Fund)
- Substitute Staffing Services (\$2.3 million from General Fund)



Public Notice: Application of Hazard Mitigation Grant Program

Joint Federal, State, Local Public Notice

The Federal Emergency Management Agency (FEMA) and South Carolina Emergency Management Division (SCEMD) have received Horry County's application for Federal grant funding through the Hazard Mitigation Grant Program (HMGP). Notice is hereby given of FEMA's consideration to provide funding in the form of a Hazard Mitigation Grant.

This application was created to provide funding for permanent generators to power critical public safety infrastructure within Horry County during storm, wind, and/or flood events when power outages are possible. In order to alleviate loss of function during natural disasters and allow key Horry County Public Safety to be self-sustaining in times of disaster, generators will be needed for six Horry County Fire Rescue (HCFR). Currently, during a power outage, these locations use smaller generators that can only provide power for limited portions of the station infrastructure.

The proposal is designed to provide permanent generators for the following locations: Horry County Fire Rescue (HCFR) Station 01, Battalion 2, located at 5083 LaFon Lane in Myrtle Beach, SC; HCFR Station 8, Battalion 3, located at 6700 Juniper Bay Road, Galivants Ferry, SC; HCFR Station 15, Battalion 4, located at 4368 South Green Sea Road, Aynor, SC; HCFR Station 20, Battalion 2, located at 9620 Scipio Lane, Myrtle Beach, SC; HCFR Station 40, Battalion 1, located at 3316 Old Reaves Ferry Road, Conway, SC; HCFR Station 46, Battalion 3, located at 1720 Pitch Landing Road, Conway, SC.

Horry County will be responsible for facilitating and monitoring the proposed project. Interested persons may direct any comments or questions to Elizabeth Tranter at 843.915.7036 or tranter.elizabeth@horrycountysc.gov. Comments must be received within 15 days of this notice.

The statement of activities is available for review and comment online at <https://www.horrycountysc.gov/departments/community-development/public-notices>.

PUBLIC NOTICE

Pursuant to Section 6-1-80 of the S.C. Code of Laws, public notice is hereby given that the Aynor Town Council will hold a Public Hearing on the municipal budget for the 2023-24 fiscal year.

DATE: June 27, 2023

TIME: 6:30 PM

LOCATION: Aynor Town Hall
600 S. Main Street
Aynor, SC 29511

Current General Fund Revenue & Other Financing Sources* 2022-2023	Proposed General Fund Revenue & Other Financing Sources* 2023-2024	Percentage Change in Revenue & Other Financing Sources*
\$ 1,365,511	\$ 1,411,253	3.35%
Current General Fund Expenditures 2022-2023	Proposed General Fund Expenditures 2023-2024	Percentage Change in Expenditures
\$ 1,365,511	\$ 1,411,253	3.35%

General Fund Millage – Current Year 65.8 mills
Debt Service Millage – Current Year 0.0 mills
Total Millage – Current Year 65.8 mills

General Fund Millage – 2023-2024 Fiscal Year (proposed) 65.8 mills
Debt Service Millage – 2023-2024 Fiscal Year (proposed) 0.0 mills
Total Millage – 2023-2024 Fiscal Year 65.8 mills

Millage equals \$65.80 per \$1000 of assessed property value for real property (home and land) and personal property (i.e. car, boat).

*Other Financing Sources include the utilization of unassigned Fund Balance

June market updates show decrease in new single-family home, condo sales

Editor's note: Seth June is the broker-in-charge of S.H. June & Associates, LLC in Myrtle Beach. His new column with MyHorryNews.com will bring you the latest news in the Myrtle Beach area real estate market, trends and information about the home-buying process.



June

Welcome to your monthly Horry County Market Statistics and Trends update. In this monthly update, we will explore the real estate market in Horry County and provide valuable insights into the latest trends and statistics. By staying informed about the local market, residents, homebuyers, and sellers can make more informed decisions. Let's dive into the facts and shed some light on our local market from June.

HORRY COUNTY SINGLE-FAMILY HOMES

In June, there were 1,010 new single-family home listings, representing a 16% decrease compared to June 2022, which saw 1,195 new listings.

The median list price of new single-family home listings last month was \$375,000, indicating a marginal increase of \$100 compared to June 2022. Although the percentage increase seems small, it signifies a steady and stable pricing trend in the market.

The median asking price of all single-family homes sold in June was \$369,990, while the median sales price was \$360,000. Sellers received 97.3% of their asking price, indicating a slight negotiation between buyers and sellers.

In June 2022, the median asking price and sales price for single-family homes were \$357,275 and \$355,697, respectively. Sellers received 99.55% of their asking price in June 2022. Comparatively, the median selling price increased by 1.21% in June 2023, demonstrating a positive trend in the market.

Total single-family home sales in June 2023 amounted to 849 homes sold, experiencing a 16.79% decrease compared to June 2022, which saw 1,020 single-family homes sold.

HORRY COUNTY CONDOS/TOWNHOMES

Last month, there were 665 new condo and/or townhome listings, reflecting a 16.24% decrease compared to June 2022, which recorded 794 new listings. This decline in new listings suggests a similar trend to that of single-family homes.

The median list price of new condo and/or townhome listings in June was \$355,000, showing a 6.29% increase compared to June 2022. This upward shift in median asking price indicates growing demand or rising costs associated with these property types.

The median asking price of all condo and/or townhomes sold in June was \$250,000, with a median sales price of \$249,000. Sellers received 99.6% of their asking price, indicating a strong market where sellers are able to achieve their desired prices.

In June 2022, the median asking price and sales price for these property types were \$239,900 and \$235,000, respectively. Sellers received 97.95% of their asking price in June 2022. The median selling price increased by 6% in June 2023.

Total condo and/or townhome sales in June 2023 amounted to 463 homes sold, experiencing a significant 26.74% decrease compared to June 2022, which saw 632 units sold.

TOTAL SALES BY CITIES/TOWNS WITHIN HORRY COUNTY

"It's important to note that waiting for interest rates to drop again may not be the best strategy."

Seth June

Broker-in-charge, S.H. June & Associates, LLC

Now, let's take a look at the total sales within cities and towns in Horry County in June:

- Myrtle Beach: 376 residential properties sold and 264 condos sold
- North Myrtle Beach: 52 residential properties sold and 111 condos sold
- Little River: 94 residential properties sold and 31 condos sold
- Surfside Beach: 24 residential properties sold and 15 condos sold
- Garden City: 5 residential properties sold and 3 condos sold (in the Horry County section of Garden City)
- Longs: 69 residential properties sold and 9 condos sold
- Conway: 143 residential properties sold and 8 condos sold
- Aynor: 12 residential properties sold
- Loris: 16 residential properties sold
- Galivants Ferry: 5 residential properties sold
- Green Sea: 1 residential property sold
- Atlantic Beach: No properties sold.
- Nichols: No properties sold.

increased.

In the past, lower interest rates created a frenzy in the market, attracting large numbers of buyers and resulting in sellers receiving multiple offers, which drove up sales prices. However, with the slight increase in interest rates over the last couple of years, some buyers have become more cautious and are choosing to "watch" the market before making a purchase. Additionally, higher interest rates and sales prices have pushed some potential buyers out of the market, particularly those who were waiting for prices to drop.

It's important to note that waiting for interest rates to drop again may not be the best strategy. If rates do decrease, it's likely that the market will once again be flooded with buyers, leading to competitive multiple-offer situations and rising prices yet again.

Furthermore, the nation as a whole is still facing a significant housing shortage, and the demand for housing remains high, which contributes to the stability of prices.

My advice is to stop waiting and take action. The chances of interest rates dropping back to the levels seen in the 4% range or lower are highly unlikely.

Additionally, with the ongoing housing shortage, it would take a major event to significantly decrease sales prices. Therefore, it's essential to make informed decisions based on the current market conditions rather than hoping for dras-

WHAT DOES ALL OF THIS MEAN?

Well, it appears that the real estate market in Horry County is experiencing some interesting dynamics in 2023 compared to the previous year. With a decrease in new listings and a general lack of inventory, sales prices have remained steady and, in fact, have even

WHITTEMORE: City administrator sending letter of intent to Horry County Schools about Whittemore Park Middle

FROM A1

The timeline is unclear as far as what's next after the city sends an intention letter to the school district. HCS spokesperson Lisa Bourcier said Wednesday that the board has not had a public discussion regarding the future use of what will become of the former Whittemore Park Middle School.

David Cox, Horry County Schools Board of Education chairman, said the new Whittemore Park Middle School is set to be complete in June 2024, and it's currently two months ahead of schedule.

The process - if the board of education votes to transfer the property to the city of Conway - will be similar to how the city acquired the old Whittemore Elementary School site.

Council leaders have said that the future of the Whittemore Park Middle School is an important key to the next plans for the now-vacant property where the Whittemore Elementary School once stood.

The former Whittemore Elementary School building - located on 10 acres off U.S. 378 directly behind Whittemore Park Middle

School - caught fire early March 7. The building was later demolished.

The city was given the property from Horry County Schools for \$1 in 2018 with the intention of renovating it into a community center. But that didn't happen.

There are currently no plans for the property at this time, though city administrator Adam Emrick said staff will be planting wildflowers on the property to reduce some of the maintenance burden and improve the appearance of the area.

Blain Bellamy said the city is confident in the state of the building.

"This time, we have a building that we believe, if it were given to us, the day it is left vacant, we could start moving in. It is in very good shape," she said.

For now, city officials are looking at the history of maintenance of the building, Blain-Bellamy said.

"We'd be taking on a huge responsibility as well," she said.

Councilman Larry White said he is glad the city is letting the school district know it is interested in the property.

"We haven't agreed to accept the building yet, but we wanted to put our name in the pot in case there were others trying to get the property as well," White said. "I'm just hoping it will work out."

But, he said, a plan needs to be put into place.

"We need to have a plan before we accept it," he said. "There are a number of things the city would love to do with the property, but we haven't given a concentrated thought of what we would do on the property."

And the community's input is important in determining how to best utilize the property, if the city acquires it, White said.

"I just pray everything comes out good and all interested parties will give their input," he said.

HCS to offer free meals for all students this year

FROM STAFF REPORTS
INFO@MYHORRYNEWS.COM

All students in Horry County Schools will receive free breakfast and lunch during the 2023-24 school year as part of the Community Eligibility Provision (CEP) program, the district announced last week.

CEP is a non-pricing meal service option for qualifying schools and school districts, which allows breakfast and lunch to be offered to all enrolled students for free. Schools and school districts that qualify are reimbursed for meals using a formula based on the percentage of students that are categorically eligible for free meals based on their participation in other state assistance programs, HCS said in a release.

This year, CEP in South Carolina has expanded to include students who receive Medicaid benefits, enabling all HCS schools to qualify for the upcoming academic year. Participation in this program also eliminates the requirement for parents/guardians to fill out free and reduced meal applications, according to HCS.

Students will still have the option to purchase additional meals, food and snack items, and beverages at à la carte prices. A la carte items can be paid for in cash or by prepayment on the student's cafeteria account.

Charging for à la carte sales is not allowed. Prepayments

can be made by cash or check at your child's school cafeteria or with a debit card by setting up an account at myschoolbucks.com.

Any charges remaining on a student's cafeteria account

from a prior school year are still the parent's responsibility, according to HCS.

If needed, payment arrangements for larger balances can be made by contacting the school cafeteria manager.

AVAILABLE NOW FOR 2023!
BUTTERBEANS • NEW POTATOES • CATFISH
TOMATOES • OKRA • CORN • PECANS • CUKES
SQUASH • PEACHES & MUCH MORE

AVAILABLE IN JULY:
PEAS - SEVERAL VARIETIES

Mount Vernon Farm Market
843-756-0104

We Accept EBT/Credit & Debit and Senior Farm and WIC Vouchers

City of CONWAY SOUTH CAROLINA

Notice of Public Hearing on Development Agreement

The Conway City Council will hold a public hearing at **4:00 p.m. on Monday, August 21st, 2023**, in City Council Chambers, located at 229 Main Street, Conway, SC 29526, on a proposed land development agreement by G3 Engineers (applicant) for development of property located on / near Hwy 701 South and Pitch Landing Road, also known as the Warden Station, containing approximately 1,765 acres (+/-), (PINs 381-00-00-0038, 403-00-00-0001, 403-00-00-0002, 403-00-00-0022, 381-00-00-0003, 381-08-01-0006, 381-08-04-0009, and 381-08-04-0010), which will allow the subsequent annexation and rezoning of a Planned Development (PD), proposed to include single-family detached, single-family attached, and multi-family residential, as well as commercial development, on said properties.

The (draft) agreement is available for public inspection and copying in the office of Planning & Building Dept. at 196 Laurel Street, Conway, SC 29526.

THE PUBLIC IS INVITED TO ATTEND.

PO #10139

LIFE'S JUST MORE FUN ON THE WATER!

SHARK WAKE PARK

ONE PARK. TWO ATTRACTIONS. UNLIMITED AWESOMENESS

BIRTHDAY PARTIES
GROUP EVENTS
SUMMER CAMP

(843) 399-9253
@SharkWakePark843
www.sharkwakepark.com/843/
150 Citizens Cir • North Myrtle Beach, SC 29566

MY HORRY NEWS

YOUR LOCAL LEADER IN COMMUNITY NEWS FOR OVER 40 YEARS

MYRTLE BEACH HERALD
CAROLINA FOREST CHRONICLE
THE HORRY INDEPENDENT
THE LORIS SCENE
NORTH STRAND NEWS

DATE: AUGUST 3, 2023

AGENDA ITEM: V.A.1

ISSUE:

Request by GHG Investments, Inc. to annex approximately 4.48 acres located at 1136 HWY 501 Business, and rezone from the Horry County Highway Commercial (HC) district to the City of Conway Highway Commercial (HC) district (PIN 367-11-03-0003).

BACKGROUND:

On July 6, the applicant submitted an annexation and rezoning application for the subject property, located on HWY 501 Business. The property is currently in Horry County's jurisdiction, zoned Highway Commercial (HC). The proposed use of the property has not yet been disclosed.

Per *Section 3.2.10* of the UDO, the intent of the Highway Commercial (HC) district is to *provide compatible locations to serve the automobile-oriented commercial activities in harmony with major highway developments, reduce traffic congestions and to enhance the aesthetic atmosphere of the City.*

Surrounding Uses / Zoning Districts:

The property abuts parcels (behind the subject property) zoned City of Conway Forest Agriculture (FA). Other adjacent uses include a gas station (zoned County HC), a vacant parcel (zoned County CFA), and a dental office (zoned County HC), all of which are currently in the county's jurisdiction.

CITY OF CONWAY COMPREHENSIVE PLAN:

The future land use map of the *Comprehensive Plan* also identifies the subject property as Highway Commercial (HC).

NEXT STEPS AND DATES/ESTIMATES:

August 4-6, 2023 Staff forwards PC recommendation to City Clerk for inclusion on next available Council meeting agenda for first reading; *tentatively* August 21, 2023.

STAFF RECOMMENDATION:

Staff recommends that Planning Commission give a thorough review of the request and make an informed recommendation to City Council.

ATTACHMENTS:

Application;

GIS Maps;

Wetland Determination & Maps



PETITION FOR ANNEXATION

Staff Use Only
Received: _____
BS&A #: _____

City of Conway Planning
 Department 196 Laurel Street, 29526

Phone: (843) 488-9888
 Conway, South Carolina

www.cityofconway.com

Instructions:

- Fill out all 3 pages
- Submit signed forms to City of Conway Planning Department

STATE OF SOUTH CAROLINA)
)
 COUNTY OF HORRY)

PETITION FOR ANNEXATION

TO THE HONORABLE MAYOR AND CITY COUNCIL OF CONWAY

WHEREAS, § 5-3-150 (3) of the Code of Laws of South Carolina provides for the annexation of an area or property which is contiguous to a City by filing with the municipal governing body a petition signed by all persons owning real estate in the area requesting annexation; and

WHEREAS, the undersigned are all persons owning real estate in the area requesting annexation; and

WHEREAS, the area requesting annexation is described as follows, to wit:

NOW, THEREFORE, the undersigned petition the City Council of Conway to annex the below described area into the municipal limits of the City of Conway.

PROPERTY LOCATION/SUBDIVISION: Approximately 0.13 miles SE of Hwy 90 & Hwy 501 (on Hwy 501)

PIN: 36711030003 ACREAGE: 4.48

PROPERTY ADDRESS: U.S. Hwy 501 Business

PROPERTY OWNER MAILING ADDRESS: GHG Investments LLC, P.O. Box 1549, Conway, SC 29528

PROPERTY OWNER TELEPHONE NUMBER: 843-241-2356

PROPERTY OWNER EMAIL: ngasphalt@yahoo.com

APPLICANT: GHG Investments, LLC (Nick Godwin)

APPLICANT'S EMAIL: permit@g3engineering.org & ngasphalt@yahoo.com

IS THE APPLICANT THE PROPERTY OWNER? CIRCLE: YES NO

IF NOT: PLEASE INCLUDE A LETTER OF AGENCY OR POWER OF ATTORNEY FROM THE OWNER ADDING RESPONSIBILITY TO THE APPLICANT.

PROPERTY OWNERS (Attach additional sheets if necessary)

Nick Godwin
 (Print)

(Signature)

DATE: 7/6/23

 (Print)

 (Signature)

DATE: _____



PETITION FOR ANNEXATION

Staff Use Only
Received: _____
BS&A #: _____

Is there a structure on the lot: No Structure Type: _____

Current Use: Vacant land

Are there any wetlands on the property?

CIRCLE: YES NO

If yes, please include valid wetland delineation letter from army corps of engineers.

Is the property restricted by any recorded covenant that is contrary to, conflicts with, or prohibits the permitted or proposed use of the land?

CIRCLE: YES NO

If yes, please explain and provide a copy of covenant and/or restriction.

Is the city a party to any deed restrictions or easements existing on the property?

CIRCLE: YES NO

If yes, please describe.

Are there any building permits in progress or pending for this property?

CIRCLE: YES NO

If yes, please provide permit number and jurisdiction.

FEEES ARE DUE AT SUBMITTAL.

RI ZONING DISTRICT – NO FEE ALL OTHER ZONING DISTRICTS - \$ 250

PLEASE SUBMIT TO THE PLANNING & DEVELOPMENT DEPARTMENT

planning@cityofconway.com



Zoning Map Amendment Application

Incomplete applications will not be accepted.

Staff Use Only

Received: _____
BS&A #: _____

City of Conway Planning Department
196 Laurel Street, 29526

Phone: (843) 488-9888
Conway, South Carolina

www.cityofconway.com

Notice

All zoning map amendments shall follow the procedures set forth in Section 13.1.7 of the City of Conway Unified Development Ordinance. Amendments to the Official Zoning Map shall be initiated by members of City Council, the Planning Commission, the Planning Director, or owner(s) of the subject property. In order to partially defray the administrative cost of zoning map amendments, the applicant shall pay a filing fee to the City of Conway in the amount of \$250.00 at the time this application is submitted. Planned Development rezonings are \$2,500.00 and Planned Development Amendments are \$500.00, and due at the time of submission. A plat of the property to be rezoned may be required with this application.

PHYSICAL ADDRESS OF PROPERTY: Approximately 0.13 miles SE of Hwy 90 & Hwy 501 (on Hwy 501) FEE PAID () YES () NO

AREA OF SUBJECT PROPERTY (ACREAGE): 4.48 PIN: 36711030003

CURRENT ZONING CLASSIFICATION: HC

COMPREHENSIVE PLAN 2035 FUTURE LAND USE: _____

REQUESTED ZONING CLASSIFICATION: HC

NAME OF PROPERTY OWNER(S):

GHG Investments LLC, Nick Godwin PHONE # 843-241-2356

PHONE # _____

MAILING ADDRESS OF PROPERTY OWNER(S):

P.O Box 1549, Conway, SC. 29528

I (we) the owner(s) do hereby certify that all information presented in this Zoning Map Amendment Application is correct.

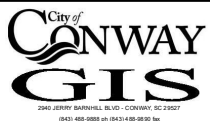
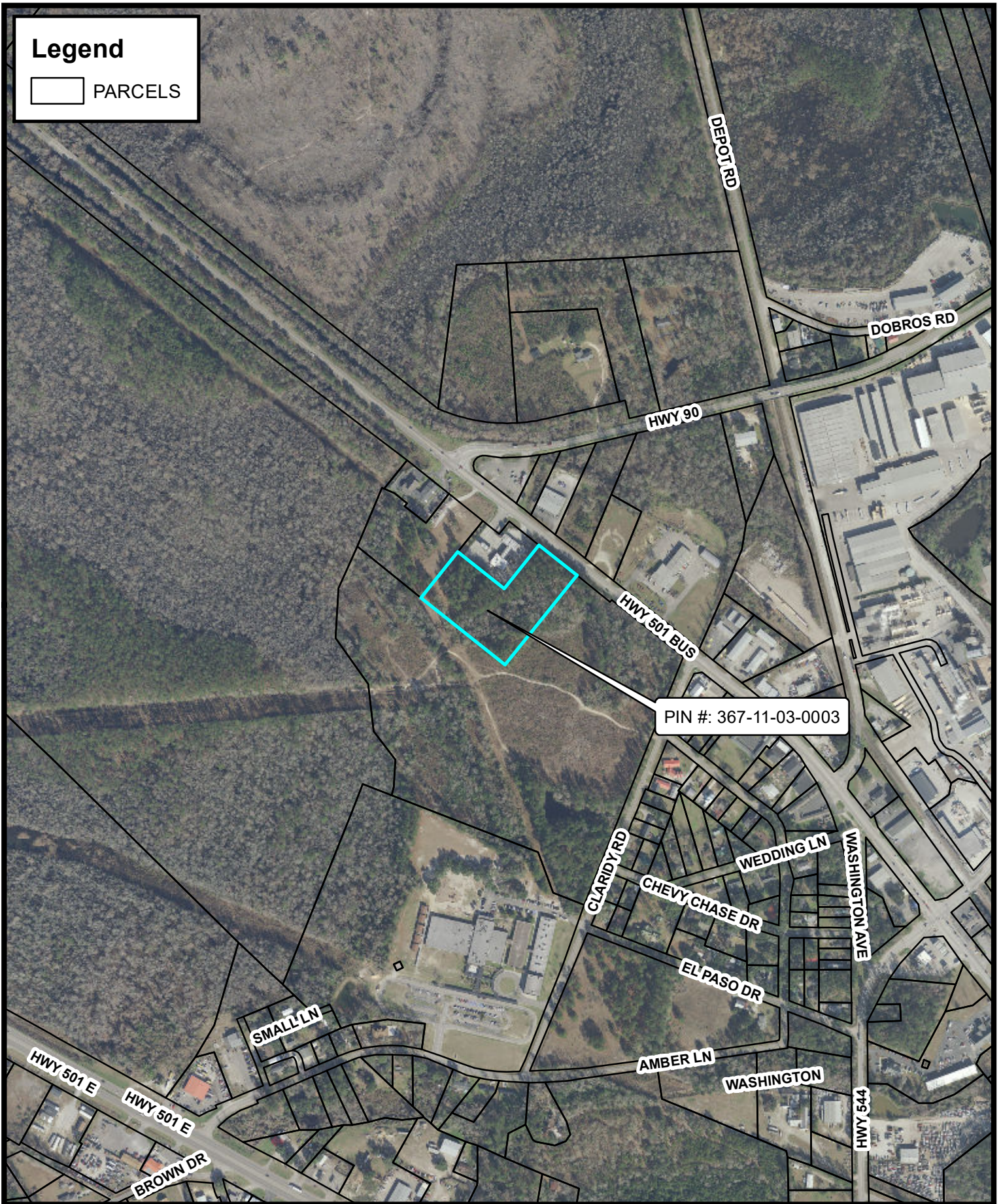
[Signature] PROPERTY OWNER'S SIGNATURE(S) 7/6/23 DATE

PROPERTY OWNER'S SIGNATURE(S) DATE

THE APPLICANT OR A REPRESENTATIVE MUST BE PRESENT AT THE MEETING.

Legend

▭ PARCELS



Disclaimer: This map is a graphic representation only. It is NOT a survey. All efforts have been made to ensure its accuracy. However, the City of Conway disclaims all responsibility & liability for the use of this map.



PIN #: 367-11-03-0003
TMS #: 137-00-02-088
1136 HWY 501 BUSINESS

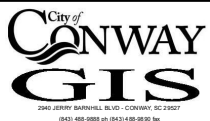


Legend

▭ PARCELS



PIN #: 367-11-03-0003



Disclaimer: This map is a graphic representation only. It is NOT a survey. All efforts have been made to ensure its accuracy. However, the City of Conway disclaims all responsibility & liability for the use of this map.

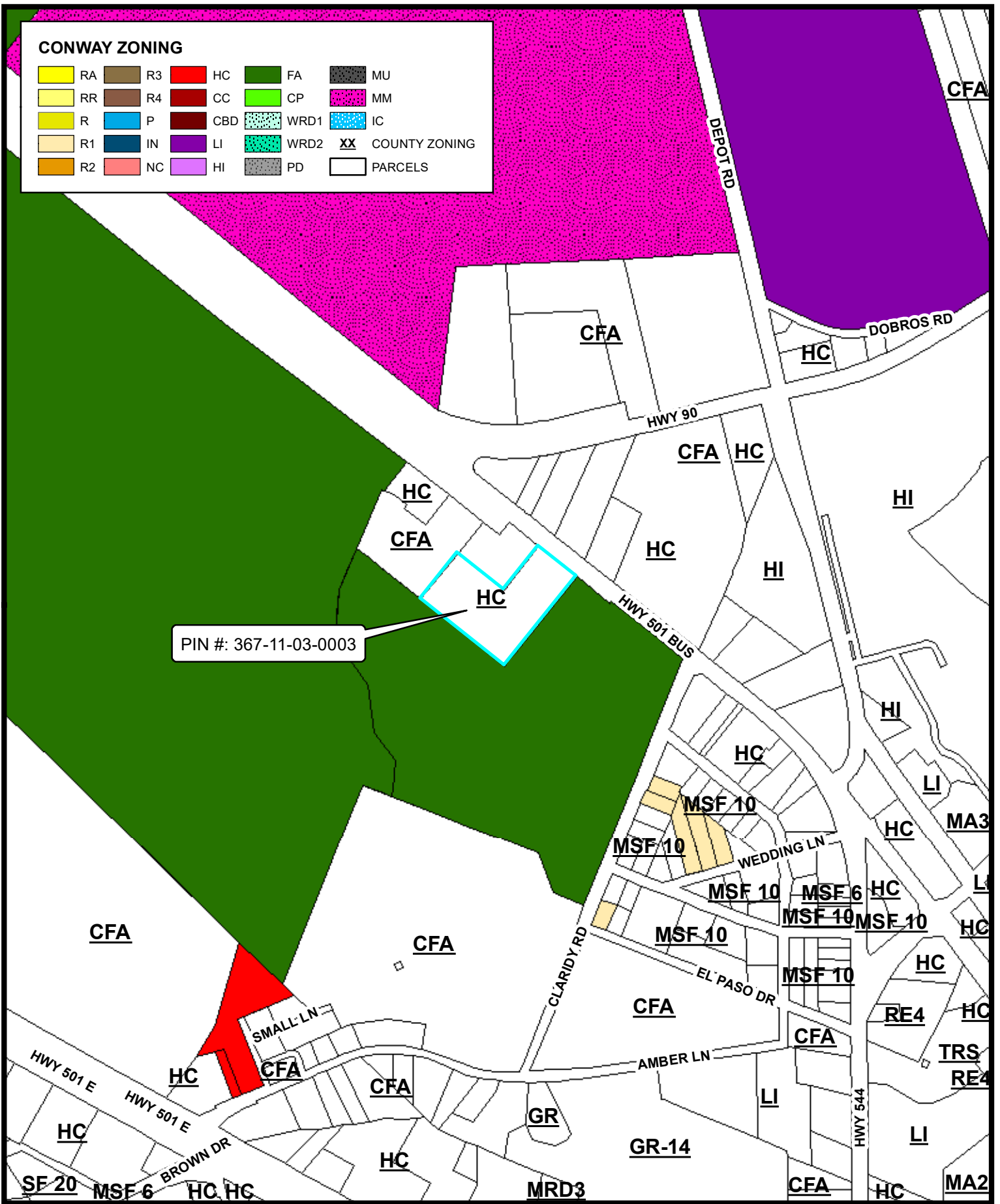


PIN #: 367-11-03-0003
TMS #: 137-00-02-088
1136 HWY 501 BUSINESS



CONWAY ZONING

RA	R3	HC	FA	MU
RR	R4	CC	CP	MM
R	P	CBD	WRD1	IC
R1	IN	LI	WRD2	XX COUNTY ZONING
R2	NC	HI	PD	PARCELS



Disclaimer: This map is a graphic representation only. It is NOT a survey. All efforts have been made to ensure its accuracy. However, the City of Conway disclaims all responsibility & liability for the use of this map.

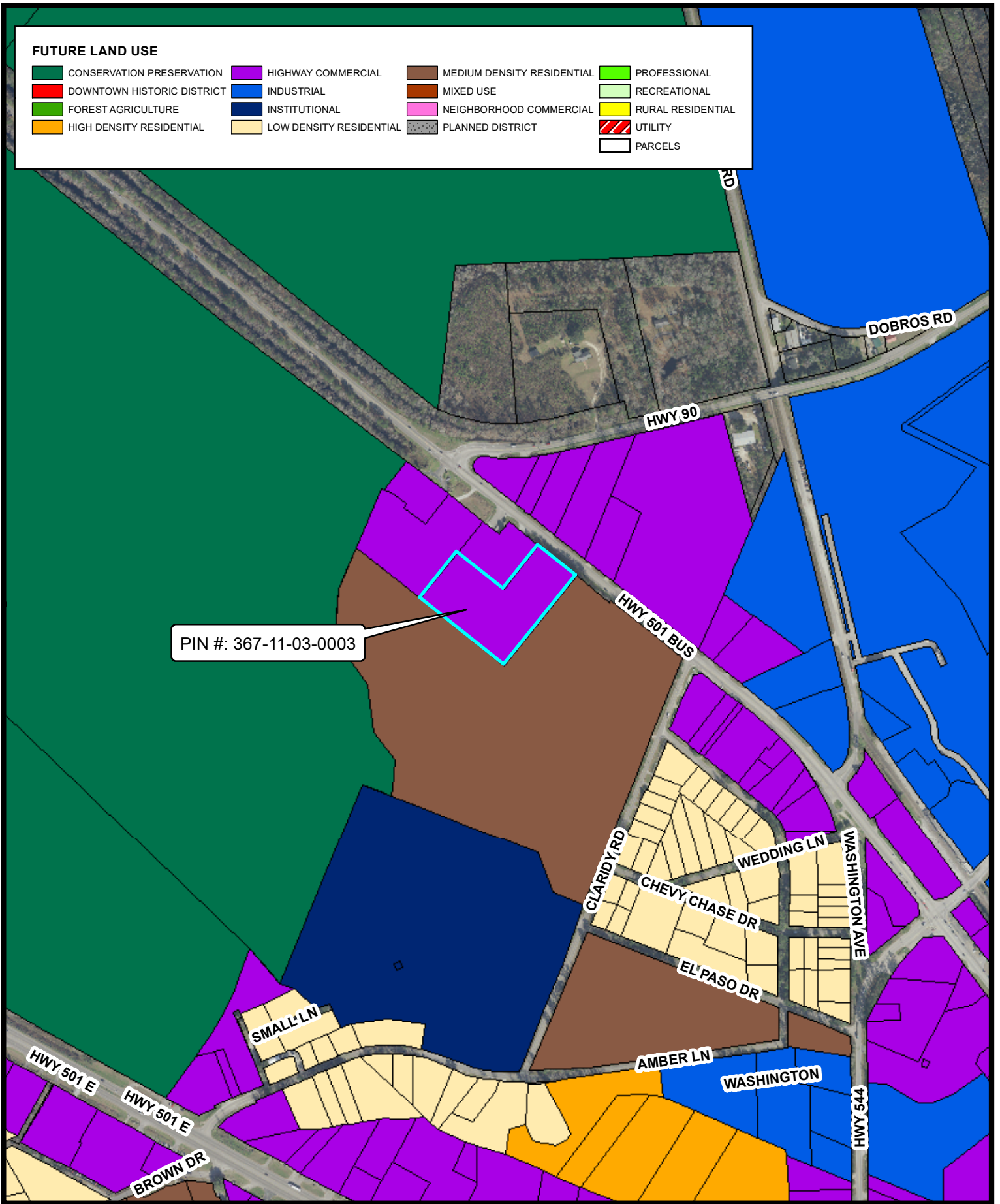


PIN #: 367-11-03-0003
TMS #: 137-00-02-088
1136 HWY 501 BUSINESS



FUTURE LAND USE

- | | | | |
|---|---|--|---|
|  CONSERVATION PRESERVATION |  HIGHWAY COMMERCIAL |  MEDIUM DENSITY RESIDENTIAL |  PROFESSIONAL |
|  DOWNTOWN HISTORIC DISTRICT |  INDUSTRIAL |  MIXED USE |  RECREATIONAL |
|  FOREST AGRICULTURE |  INSTITUTIONAL |  NEIGHBORHOOD COMMERCIAL |  RURAL RESIDENTIAL |
|  HIGH DENSITY RESIDENTIAL |  LOW DENSITY RESIDENTIAL |  PLANNED DISTRICT |  UTILITY |
| | | |  PARCELS |








Disclaimer: This map is a graphic representation only. It is NOT a survey. All efforts have been made to ensure its accuracy. However, the City of Conway disclaims all responsibility & liability for the use of this map.

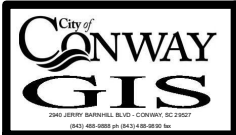
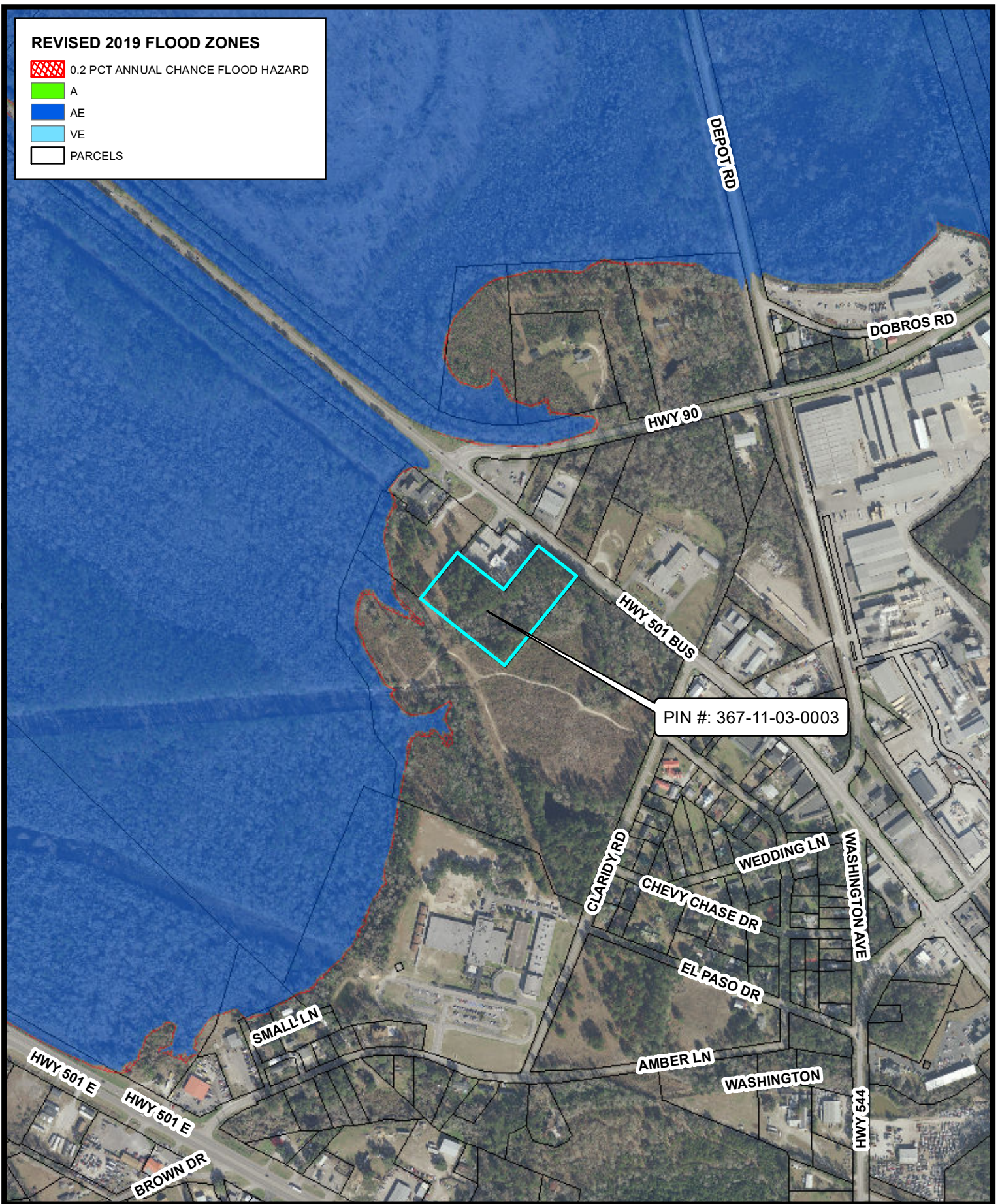


PIN #: 367-11-03-0003
TMS #: 137-00-02-088
1136 HWY 501 BUSINESS



REVISED 2019 FLOOD ZONES

-  0.2 PCT ANNUAL CHANCE FLOOD HAZARD
-  A
-  AE
-  VE
-  PARCELS



Disclaimer: This map is a graphic representation only. It is NOT a survey. All efforts have been made to ensure its accuracy. However, the City of Conway disclaims all responsibility & liability for the use of this map.



PIN #: 367-11-03-0003
TMS #: 137-00-02-088
1136 HWY 501 BUSINESS



Southern Palmetto Environmental

Forest Management - Wetland Consulting - Wildlife Management

March 22, 2023

Rob Huff
U.S. Army Corps of Engineers
1949 Industrial Park Road, Room 140
Conway, SC 29526

**RE: Schumann 501 Bus Tract (4.48 +/- ac)
Request for Delineation Concurrence (DC)
Horry County TMS# 137-00-02-088
Horry County, South Carolina**

Mr. Huff:

We have completed a routine wetland determination of the above referenced project. Based on a field reconnaissance conducted on March 22, 2023, the study area was determined to contain areas subject to the jurisdiction of your office. The site contains one wetland with an unnamed tributary that is connected to the Waccamaw River Swamp.

The site is located along US Business 501 on the edge of Conway in the Red Hill community of Horry County, South Carolina. The project area is 4.48+/- acres and is completely wooded and is made up of mature timber inclusive of pine and hardwood species. The understory is well stocked and contains several different forest communities from one end to the other. The wetlands are defined with saturated soils, evidence of primary and secondary hydrology indicators, and a well developed wetland plant community, including mature hardwoods in the bottomlands. Soils in wetlands are mapped as mostly Johnston and the uplands are mapped as Kenansville. The upland areas are dominated by loblolly pine and lack hydric soil indicators and have a plant community that is normally considered an upland community within this area of Horry County. The uplands contain mostly loblolly pine, sweet gum, horse sugar and some other upland preferred species. Hydrology indicators are absent in the upland areas as they contain moderately well drained to well drained soils. This tract is found within a suburban area of Horry County very close to Conway.

Any further data on this site can be obtained from the mapping information, datasheets, and from a scheduled field visit.

Acting as agent for the applicant, we hereby request this wetland determination be reviewed by your office and a wetland verification letter be issued after having concurred with our findings. Enclosed please find a "Request for Verification" form along with the following:

- Location Map & USGS Maps
- Soil Survey & CIR
- NWI
- 2010 DEM
- Wetland Determination Sheets & Site Photographs
- Wetland Determination Map

www.southernpalmettoenvironmental.com

8300 Parasol Court - Myrtle Beach, SC 29579 - (843) 685-2408 - Fax (843) 808-0460

Since all wetland areas are contiguous and have a connection to hydrologic features connected to the Waccamaw River and its swamp, we are requesting a **Delineation Concurrence** from included map. There will not be a wetland survey for this project. Please notify us when you schedule your on-site inspection so we can be available to accompany you. Should you have any questions or require additional information to facilitate your review, please email me at southernpalmetto@yahoo.com or feel free to call me at (843) 685-2408.

Sincerely,

Jeff Burleson

Jeff Burleson, R.F., C.W.B
Project Manager

N.C. Registered Forester #1433
S.C. Registered Forester #1692
Certified Wildlife Biologist

File#: 144-22011

www.southernpalmettoenvironmental.com

8300 Parasol Court - Myrtle Beach, SC 29579 - (843) 685-2408

U.S. Army Corps of Engineers – Charleston District - Regulatory Division
REQUEST FOR CORPS JURISDICTIONAL DETERMINATION (JD) / DELINEATION
 (For Jurisdictional Status and Identifying Wetlands and Other Aquatic Resources)

I. PROPERTY AND AGENT INFORMATION

A. Site Details/Location:

Site Name: Schumann 501 Bus. Tract Date: 3/22/2023
 City/Township/Parish: Horry County: Horry
 Latitude/Longitude: N 33.8179 W 79.0231 Acreage: 4.48+/-
 Tax Map Sequence (TMS) #(s): TMS# 137-00-02-088
 Property Address(es): TBD HWY 501 Business, Conway, SC 29526

Please attach a survey/plat map and vicinity map identifying location and review area for the JD/delineation. An accurate depiction of the review area must be provided (survey, tax map, or GPS coordinates). Tax maps may only be used if the site includes the entire tax map parcel.

B. Requestor of Jurisdictional Determination/Delineation (if there are multiple property owners, please attach additional pages)

Name: Nick Godwin
 Company Name (if applicable): NG Asphalt
 Address: P. O. Box 1594, Conway, SC 29528
 Phone: _____ Email: ngasphalt@yahoo.com
 Check one: I currently own this property
 I plan to purchase this property
 Other, please explain _____

C. Agent/Environmental Consultant Acting on Behalf of the Requestor (if applicable):

Consultant/Agent Name: Jeff Burleson
 Company Name: Southern Palmetto Environmental Consulting LLC
 Address: 8300 Parasol Court, Myrtle Beach, SC 29579 Phone: 843-685-2408
 Email: southernpalmetto@yahoo.com

II. REASON FOR REQUEST (check all that apply)

- I intend to construct/develop a project or perform activities on this site which would be designed to avoid all aquatic resources.
- I intend to construct/develop a project or perform activities on this site which would be designed to avoid all jurisdictional aquatic resources under Corps authority.
- I intend to construct/develop a project or perform activities on this site which may require authorization from the Corps, and the Jurisdictional Determination would be used to avoid and minimize impacts to jurisdictional aquatic resources and as an initial step in a future permitting process.
- I intend to construct/develop a project or perform activities on this site which may require authorization from the Corps; this request is accompanied by my permit application and the jurisdictional determination is to be used in the permitting process.
- I intend to construct/develop a project or perform activities in a navigable water of the U.S. which is subject to the ebb and flow of the tide.
- A Corps jurisdictional determination is required in order to obtain my local/state authorization.
- I intend to contest jurisdiction over a particular aquatic resource and the request the Corps to confirm that jurisdiction does/does not exist over the aquatic resource on the parcel.
- I believe that the site may be comprised entirely of dry land.
- Other: _____

<p>Charleston Office: US Army Corps of Engineers Regulatory Division 69A Hagood Avenue Charleston, SC 29403 (ph) 843-329-8044 SAC.RD.Charleston@usace.army.mil</p>	<p>Columbia Office: US Army Corps of Engineers Regulatory Office 1835 Assembly Street, Room 865 B-1 Columbia, SC 29201 (ph) 803-253-3444 SAC.RD.Columbia@usace.army.mil</p>	<p>Conway Office: US Army Corps of Engineers Regulatory Office 1949 Industrial Park Road, Room 140 Conway, SC 29526 (ph) 843-365-4239 SAC.RD.Conway@usace.army.mil</p>	<p>Greenville Office: US Army Corps of Engineers Regulatory Office 150 Executive Center Drive, Suite 205 Greenville, SC 29615 (ph) 864-609-4326 SAC.RD.Greenville@usace.army.mil</p>
---	--	---	---

***Authorities:** Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Program of the U.S. Army Corps of Engineers; Final Rule for 33 CFR Parts 320-332.
Principal Purpose: The information that you provide will be used in evaluating your request to determine whether there are any aquatic resources within the project area subject to federal jurisdiction under the regulatory authorities referenced above.
Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public, and may be made available as part of a public notice as required by federal law. Your name and property location where federal jurisdiction is to be determined will be included in the approved jurisdictional determination (AJD), which will be made available to the public on the District's website and on the Headquarters USACE website.
Disclosure: Submission of requested information is voluntary; however, if information is not provided, the request for an jurisdictional determination cannot be evaluated nor can a jurisdictional determination be issued.

III. TYPE OF REQUEST:

Delineation Concurrence¹

Approved² Jurisdictional Determination (AJD) Only

Preliminary³ Jurisdictional Determination (PJD) Only

Approved Jurisdictional Determination (AJD) with submittal of a Pre-Construction Notification or Department of the Army permit application

Preliminary Jurisdictional Determination (PJD) with submittal of a Pre-Construction Notification or Department of the Army permit application

Delineation of Wetlands and/or Other Aquatic Resources Only Conducted By Agent/Environmental Consultant with submittal of a Pre-Construction Notification or Department of the Army permit application (No jurisdictional determination requested)

I request that the **Corps delineate** the wetlands and/or other aquatic resources that may be present on my property with the attached **Pre-Construction Notification or Department of the Army permit application**

I request that the **Corps delineate** the wetlands and/or other aquatic resources that may be present on my property **with a Delineation Only, an AJD or PJD**

“No Permit Required” (NPR) Letter as I believe my proposed activity is not regulated⁴

Unclear as to which jurisdictional determination I would like to request and require additional information to inform my decision

¹ Delineation Concurrence (DC) – A DC provides concurrence that the delineated boundaries of wetlands on a property are a reasonable representation of the aquatic resources on-site. A DC does not address the jurisdictional status of the aquatic resources.

² Approved – An AJD is defined in Corps regulations at 33 CFR 331.2. As explained in further detail in RGL 16-01, an AJD is used to indicate that this office has identified the presence or absence of wetlands and/or other aquatic resources on a site, including their accurate location(s) and boundaries, as well as their jurisdictional status. AJDs are valid for 5 years.

³ Preliminary – A PJD is defined in Corps regulations at 33 CFR 331.2. As explained in further detail in RGL 16-01, a PJD is used to indicate that this office has identified the approximate location(s) and boundaries of wetlands and/or other aquatic resources on a site that are presumed to be subject to regulatory jurisdiction of the Corps of Engineers. Unlike an AJD, a PJD does not represent a definitive, official determination that there are, or that there are not, jurisdictional aquatic resources on a site, and does not have an expiration date.

⁴ “No Permit Required” (NPR) Letter- A NPR letter may be provided by the Corps to notify the requestor that an activity will not require a permit (authorization) from the Corps; this letter can only be used if the proposed activity is not a regulated activity, regardless of where the activity may occur. A NPR letter cannot be used to indicate the presence or absence of wetlands and/or other aquatic resources, nor can it be used to determine their jurisdictional status.

IV. LEGAL RIGHT OF ENTRY

By signing below, I am indicating that I have the authority, or am acting as the duly authorized agent of a person or entity with such authority, to and do hereby grant U.S. Army Corps of Engineers personnel right of entry to legally access the property(ies) subject to this request for the purposes of conducting on-site investigations (e.g., digging and refilling shallow holes) and issuing a jurisdictional determination. I acknowledge that my signature is an affirmation that I possess the requisite property rights to request a jurisdictional determination on the properties subject to this request.

8300 Parasol Court Myrtle Beach, SC 29579

Mailing Address

southernpalmetto@yahoo.com

Email Address

Jeff Burleson

Digitally signed by Jeff Burleson
Date: 2020.08.24 16:19:57 -04'00'

*Signature:

TMS# 137-00-02-088

Property Address / TMS #(s)

843-685-2408

Daytime Phone Number

Jeff Burleson 3/22/2023

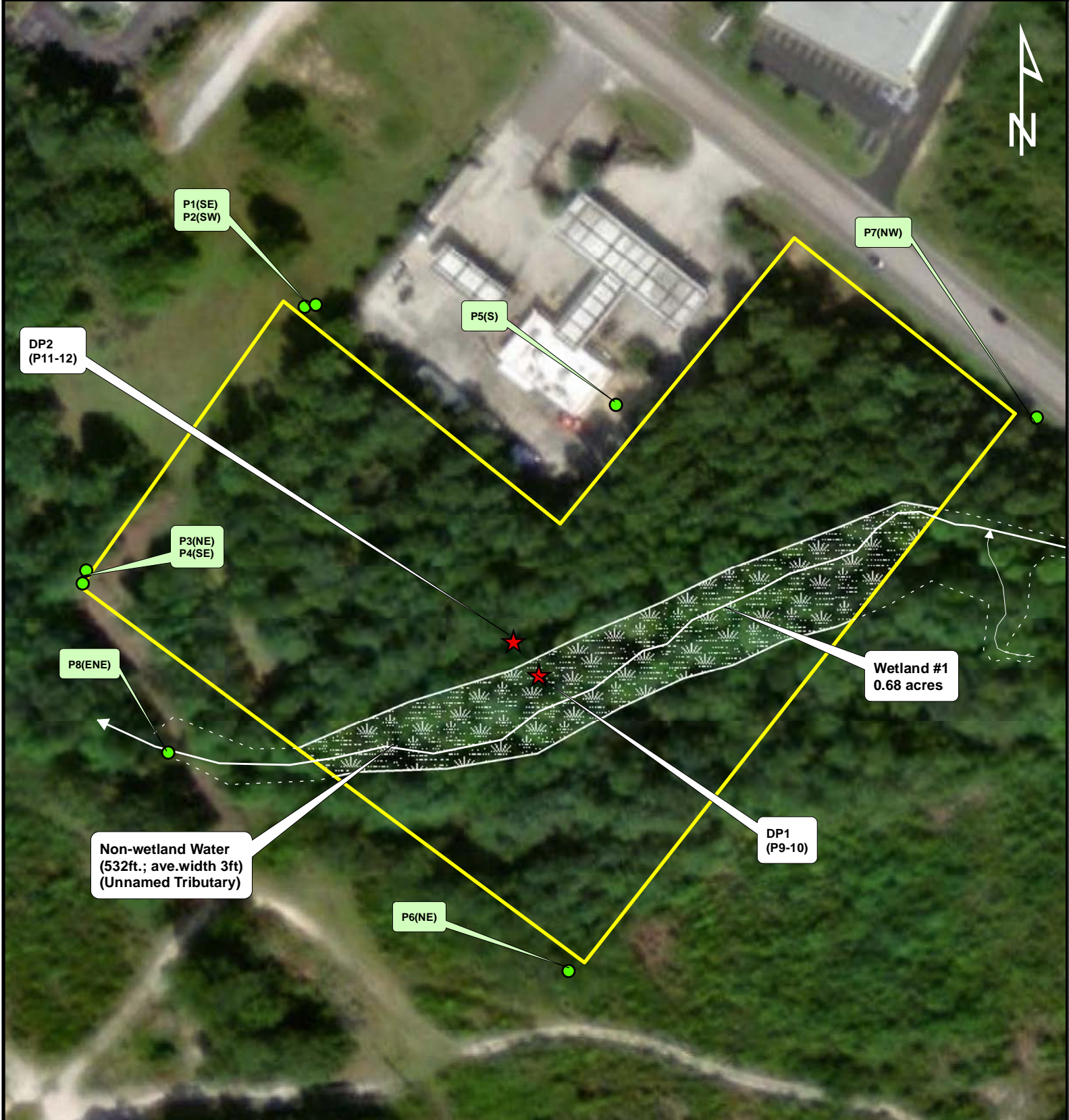
Printed Name and Date

*Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Program of the U.S. Army Corps of Engineers; Final Rule for 33 CFR Parts 320-332.

Principal Purpose: The information that you provide will be used in evaluating your request to determine whether there are any aquatic resources within the project area subject to federal jurisdiction under the regulatory authorities referenced above.

Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public, and may be made available as part of a public notice as required by federal law. Your name and property location where federal jurisdiction is to be determined will be included in the approved jurisdictional determination (AJD), which will be made available to the public on the District's website and on the Headquarters USACE website.

Disclosure: Submission of requested information is voluntary; however, if information is not provided, the request for an jurisdictional determination cannot be evaluated nor can a jurisdictional determination be issued.

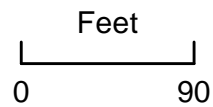


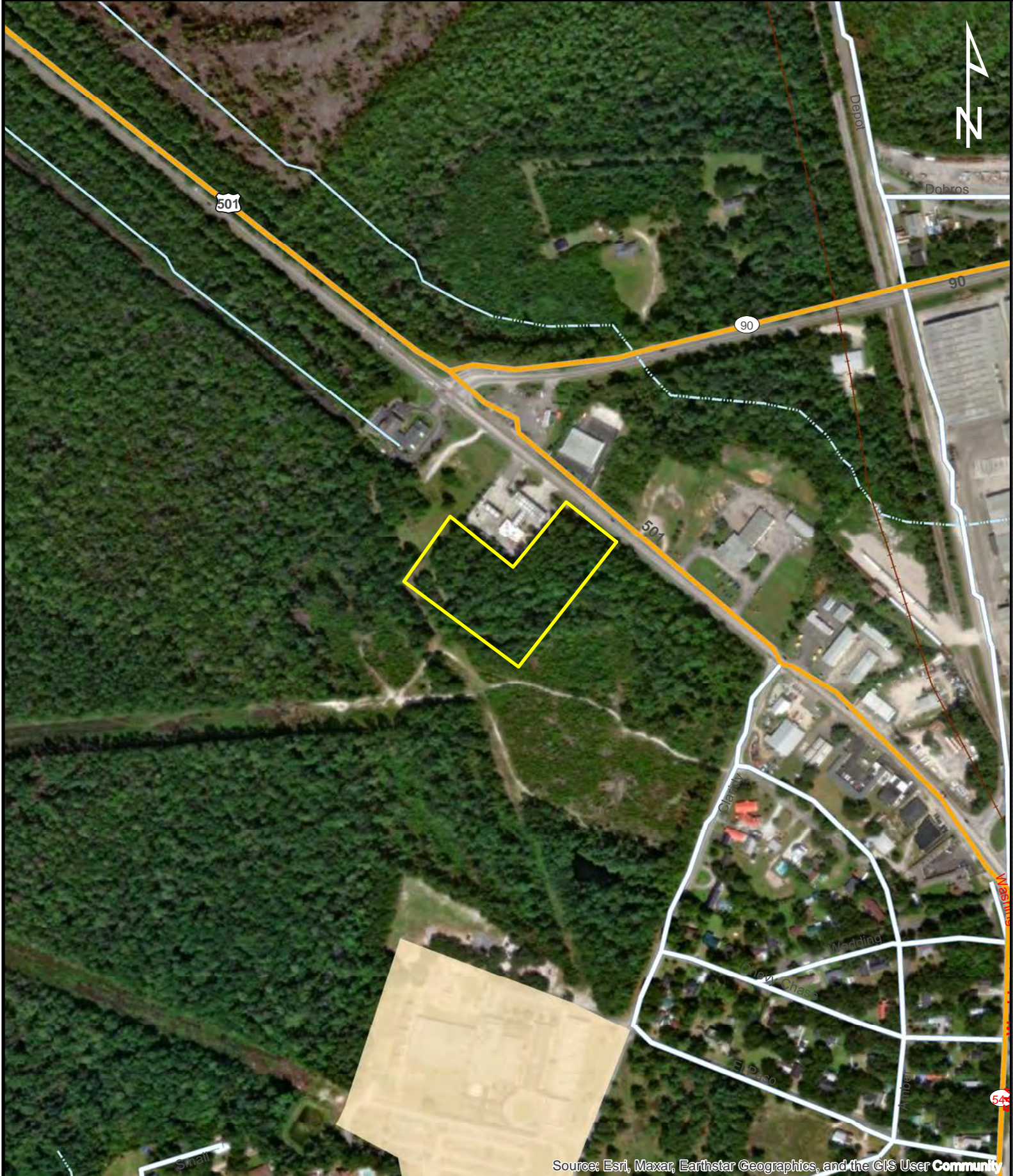
Area Summary	
Wetlands	0.68 ac.
Uplands	3.80 ac.
Total Area	4.48 ac.

Disclaimer: Potential wetland/non-wetland areas depicted here have not been verified by the U.S. Army Corps of Engineers. Areas depicted as potential wetlands were derived from interpretation of available remote sensing information and an onsite investigation. Prior to any land disturbing activities, a final letter of jurisdictional determination should be obtained from the U.S. Army Corps of Engineers.



Wetland Delineation
 Schumann 501 Bus Tract (4.48+/- ac)
 TMS# 137-00-02-088
 Horry County, South Carolina
 March 22, 2023





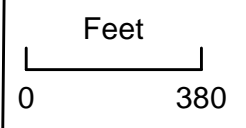
Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



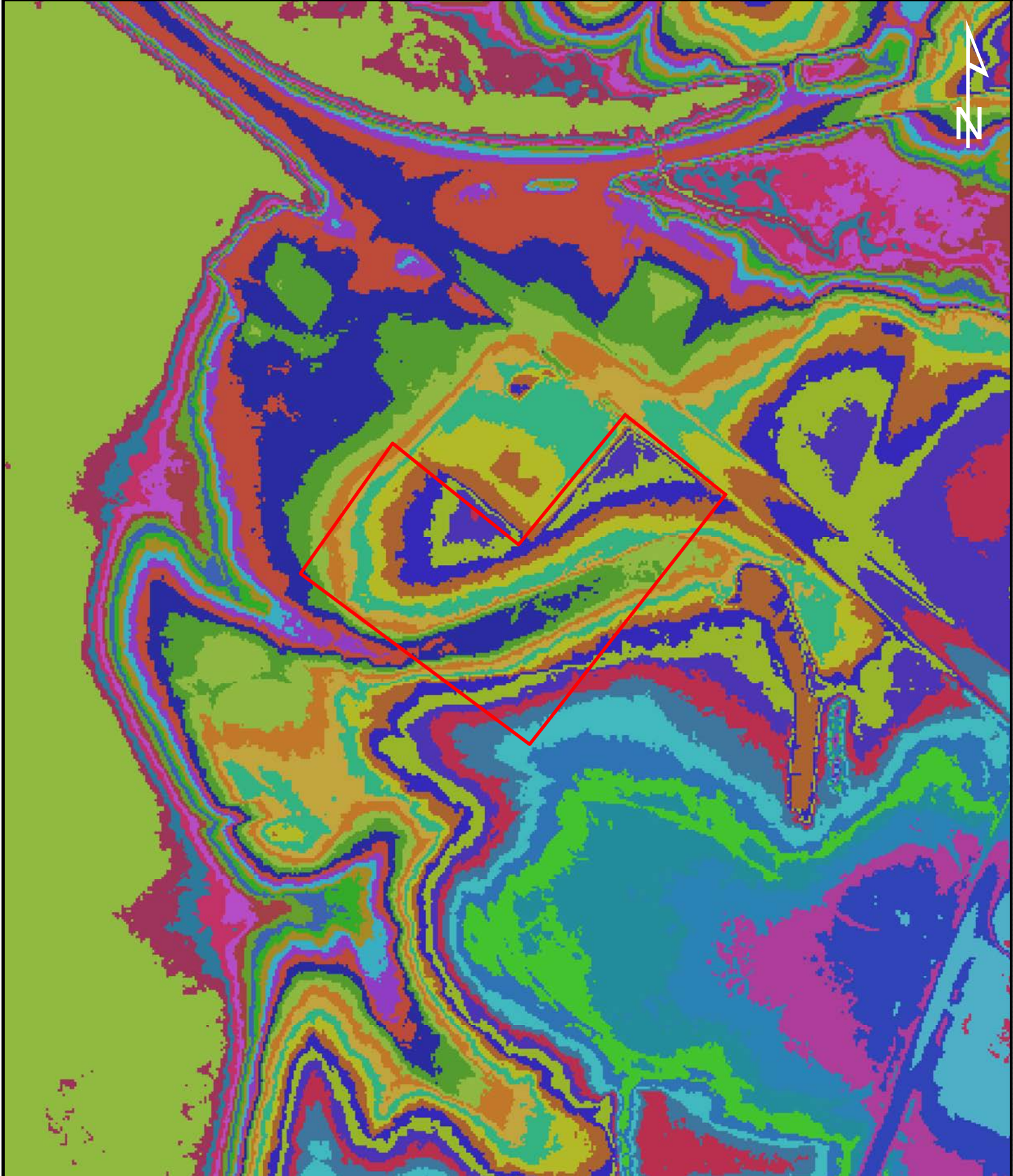
Copyright:© 2013 National Geographic Society, i-cubed

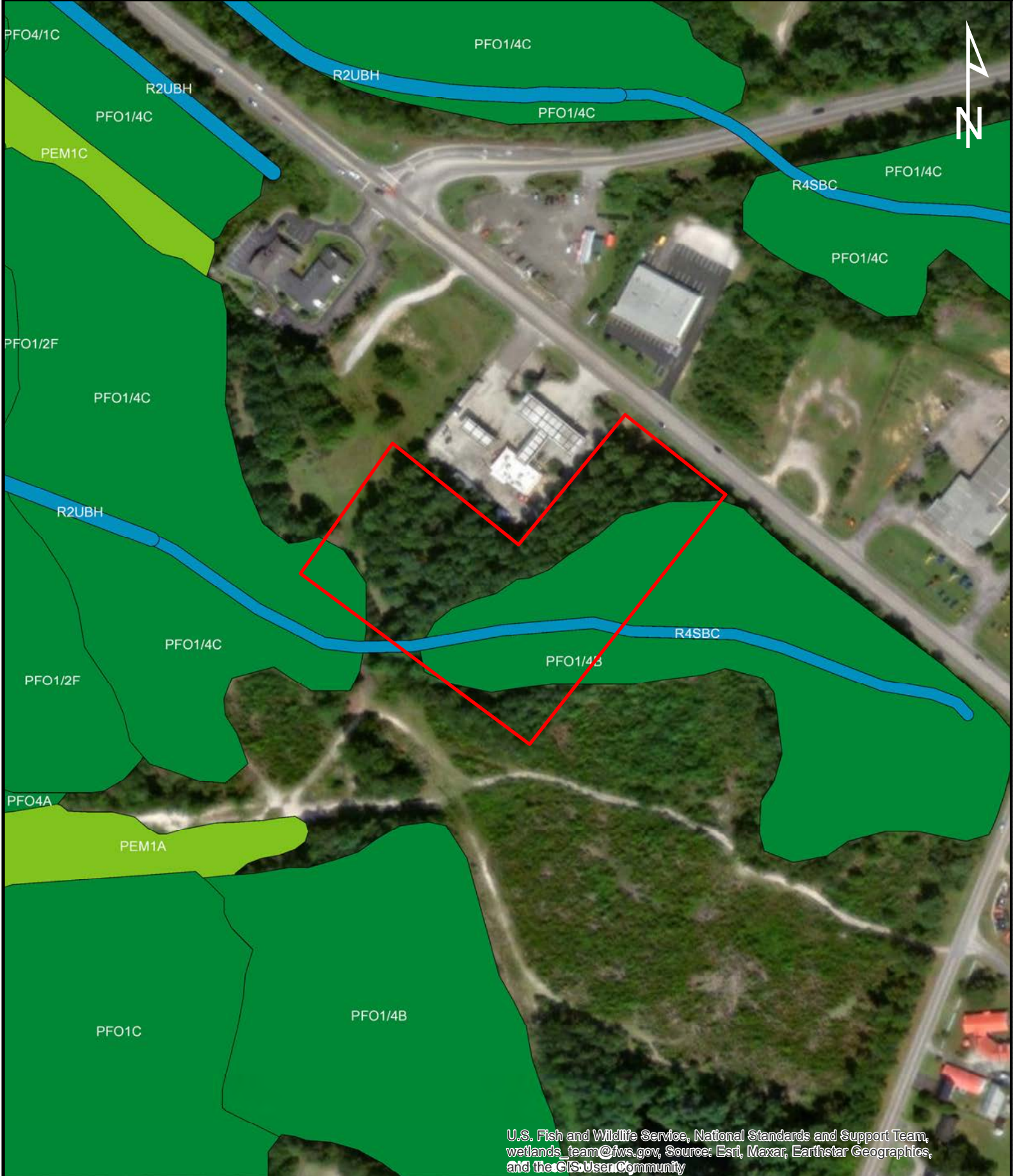
Southern Palmetto
Environmental
Forestry - Wetlands - Wildlife

USGS Topography Map
Schumann 501 Bus Tract (4.48+/- ac)
TMS# 137-00-02-088
Horry County, South Carolina
March 22, 2023





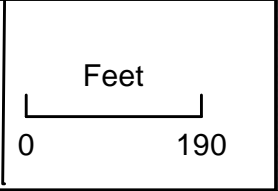




U.S. Fish and Wildlife Service, National Standards and Support Team, wetlands_team@fws.gov, Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



NWI
Schumann 501 Bus Tract (4.48+/- ac)
TMS# 137-00-02-088
Horry County, South Carolina
March 22, 2023





Representative Photos of the Site

Schumann 501 Bus. Tract

March 22, 2023



Photo #1: Facing SE



Photo #2: Facing SW



Photo #3: Facing NE



Photo #4: Facing SE



Photo #5: Facing S



Photo #6: Facing NE



Photo #7: Facing NW



Photo #8: Facing ENE (in wetland off property)



Photo's #9-10: Datapoint DP1 & Soil Representation





Photo's #11-12: Datapoint DP2 & Soil Representation



WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Schumann 501 Business Tract City/County: Conway/Horry Sampling Date: 22-Mar-23
 Applicant/Owner: Nick Godwin State: sc Sampling Point: DP1
 Investigator(s): JB Section, Township, Range: S _____ T _____ R _____
 Landform (hillslope, terrace, etc.): Lowland Local relief (concave, convex, none): concave Slope: 0.0 % / 0.0 °
 Subregion (LRR or MLRA): LRR T Lat.: N 33.8174 Long.: W 79.0239 Datum: wgs84
 Soil Map Unit Name: Mapped as Johnston NWI classification: PFOR

Are climatic/hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="radio"/> No <input type="radio"/>
Remarks: Datapoint located along a drainageway near a tributary and the datapoint contains all required indicators to be classified as a wetland.	

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one required; check all that apply) <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Water-Stained Leaves (B9)	Secondary Indicators (minimum of 2 required) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input checked="" type="radio"/> No <input type="radio"/> Depth (inches): <u>6</u>	Wetland Hydrology Present? Yes <input checked="" type="radio"/> No <input type="radio"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: Primary and secondary indicators of wetland hydrology present.	

VEGETATION (Five/Four Strata) - Use scientific names of plants.

Sampling Point: **DP1**

Tree Stratum (Plot size: 0.10ac)		Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.	<i>Liquidambar styraciflua</i>	40	<input checked="" type="checkbox"/> 44.4%	FAC
2.	<i>Pinus taeda</i>	20	<input checked="" type="checkbox"/> 22.2%	FAC
3.	<i>Nyssa biflora</i>	20	<input checked="" type="checkbox"/> 22.2%	OBL
4.	<i>Fraxinus pennsylvanica</i>	10	<input type="checkbox"/> 11.1%	FACW
5.		0	<input type="checkbox"/> 0.0%	
6.		0	<input type="checkbox"/> 0.0%	
7.		0	<input type="checkbox"/> 0.0%	
8.		0	<input type="checkbox"/> 0.0%	
50% of Total Cover: 45		20% of Total Cover: 18	90 = Total Cover	
Sapling or Sapling/Shrub Stratum (Plot size: 0.10ac)		Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.	<i>Acer rubrum</i>	20	<input checked="" type="checkbox"/> 50.0%	FAC
2.	<i>Nyssa biflora</i>	10	<input checked="" type="checkbox"/> 25.0%	OBL
3.	<i>Liquidambar styraciflua</i>	10	<input checked="" type="checkbox"/> 25.0%	FAC
4.		0	<input type="checkbox"/> 0.0%	
5.		0	<input type="checkbox"/> 0.0%	
6.		0	<input type="checkbox"/> 0.0%	
7.		0	<input type="checkbox"/> 0.0%	
8.		0	<input type="checkbox"/> 0.0%	
50% of Total Cover: 20		20% of Total Cover: 8	40 = Total Cover	
Shrub Stratum (Plot size:)		Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.		0	<input type="checkbox"/> 0.0%	
2.		0	<input type="checkbox"/> 0.0%	
3.		0	<input type="checkbox"/> 0.0%	
4.		0	<input type="checkbox"/> 0.0%	
5.		0	<input type="checkbox"/> 0.0%	
6.		0	<input type="checkbox"/> 0.0%	
50% of Total Cover: 0		20% of Total Cover: 0	0 = Total Cover	
Herb Stratum (Plot size: 0.10ac)		Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.	<i>Leucothoe axillaris</i>	10	<input checked="" type="checkbox"/> 33.3%	FACW
2.	<i>Woodwardia areolata</i>	5	<input checked="" type="checkbox"/> 16.7%	OBL
3.	<i>Osmunda regalis</i>	5	<input checked="" type="checkbox"/> 16.7%	OBL
4.	<i>Acer rubrum</i>	5	<input checked="" type="checkbox"/> 16.7%	FAC
5.	<i>Panicum anceps</i>	5	<input checked="" type="checkbox"/> 16.7%	FAC
6.		0	<input type="checkbox"/> 0.0%	
7.		0	<input type="checkbox"/> 0.0%	
8.		0	<input type="checkbox"/> 0.0%	
9.		0	<input type="checkbox"/> 0.0%	
10.		0	<input type="checkbox"/> 0.0%	
11.		0	<input type="checkbox"/> 0.0%	
12.		0	<input type="checkbox"/> 0.0%	
50% of Total Cover: 15		20% of Total Cover: 6	30 = Total Cover	
Woody Vine Stratum (Plot size: 0.10ac)		Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.	<i>Smilax laurifolia</i>	5	<input checked="" type="checkbox"/> 100.0%	FACW
2.		0	<input type="checkbox"/> 0.0%	
3.		0	<input type="checkbox"/> 0.0%	
4.		0	<input type="checkbox"/> 0.0%	
5.		0	<input type="checkbox"/> 0.0%	
50% of Total Cover: 2.5		20% of Total Cover: 1	5 = Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 12 (A)

Total Number of Dominant Species Across All Strata: 12 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of: 40 Multiply by: 1

OBL species 40 x 1 = 40

FACW species 25 x 2 = 50

FAC species 100 x 3 = 300

FACU species 0 x 4 = 0

UPL species 0 x 5 = 0

Column Total s: 165 (A) 390 (B)

Prevalence Index = B/A = 2.364

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is > 50%

3 - Prevalence Index is ≤ 3.0 ¹

Problematic Hydrophytic Vegetation¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definition of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (If observed, list morphological adaptations below).
criteria met

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: **DP1**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5	10YR	2/1	100				Sandy Loam	
5-12	10YR	3/1	100				Loam	low chroma color

¹Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining, M=Matrix

<p>Hydric Soil Indicators:</p> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) <input type="checkbox"/> Muck Presence (A8) (LRR U) <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) <input type="checkbox"/> Sandy Muck Mineral (S1) (LRR O, S) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)		<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U) <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Marl (F10) (LRR U) <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) <input checked="" type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)		<p>Indicators for Problematic Hydric Soils³:</p> <input type="checkbox"/> 1 cm Muck (A9) (LRR O) <input type="checkbox"/> 2 cm Muck (A10) (LRR S) <input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T) <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)	
--	--	---	--	---	--

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:
 Hydric soil indicator met

WETLAND DETERMINATION DATA FORM - Atlantic and Gulf Coastal Plain Region

Project/Site: Schumann 501 Business Tract City/County: Conway/Horry Sampling Date: 22-Mar-23
 Applicant/Owner: Nick Godwin State: sc Sampling Point: DP2
 Investigator(s): JB Section, Township, Range: S T R
 Landform (hillslope, terrace, etc.): Hillside Local relief (concave, convex, none): rolling Slope: 0.0 % / 0.0 °
 Subregion (LRR or MLRA): LRR T Lat.: N 33.8176 Long.: W 79.0240 Datum: wgs84
 Soil Map Unit Name: Mapped as Kenansville NWI classification: none

Are climatic/hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="radio"/> No <input type="radio"/> Hydric Soil Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>	Is the Sampled Area within a Wetland? Yes <input type="radio"/> No <input checked="" type="radio"/>
Remarks: Datapoint found along a well drained hillside lacking sufficient indicators for wetland classification	

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (minimum of one required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Marl Deposits (B15) (LRR U) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<u>Secondary Indicators (minimum of 2 required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
Field Observations: Surface Water Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Water Table Present? Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="radio"/> No <input checked="" type="radio"/> Depth (inches): _____	Wetland Hydrology Present? Yes <input type="radio"/> No <input checked="" type="radio"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: 	
Remarks: Insufficient hydrology indicators	

VEGETATION (Five/Four Strata) - Use scientific names of plants.

Sampling Point: **DP2**

Tree Stratum (Plot size: 0.10ac)		Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.	<i>Pinus taeda</i>	50	<input checked="" type="checkbox"/> 83.3%	FAC
2.	<i>Quercus alba</i>	10	<input type="checkbox"/> 16.7%	FACU
3.		0	<input type="checkbox"/> 0.0%	
4.		0	<input type="checkbox"/> 0.0%	
5.		0	<input type="checkbox"/> 0.0%	
6.		0	<input type="checkbox"/> 0.0%	
7.		0	<input type="checkbox"/> 0.0%	
8.		0	<input type="checkbox"/> 0.0%	
50% of Total Cover: 30		20% of Total Cover: 12	60 = Total Cover	
Sapling or Sapling/Shrub Stratum (Plot size: 0.10ac)		Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.	<i>Ilex opaca</i>	10	<input checked="" type="checkbox"/> 18.2%	FAC
2.	<i>Symplocos tinctoria</i>	10	<input checked="" type="checkbox"/> 18.2%	FAC
3.	<i>Morella cerifera</i>	10	<input checked="" type="checkbox"/> 18.2%	FAC
4.	<i>Liquidambar styraciflua</i>	10	<input checked="" type="checkbox"/> 18.2%	FAC
5.	<i>Ligustrum sinense</i>	10	<input checked="" type="checkbox"/> 18.2%	FAC
6.	<i>Persea borbonia</i>	5	<input type="checkbox"/> 9.1%	FACW
7.		0	<input type="checkbox"/> 0.0%	
8.		0	<input type="checkbox"/> 0.0%	
50% of Total Cover: 27.5		20% of Total Cover: 11	55 = Total Cover	
Shrub Stratum (Plot size: _____)		Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.		0	<input type="checkbox"/> 0.0%	
2.		0	<input type="checkbox"/> 0.0%	
3.		0	<input type="checkbox"/> 0.0%	
4.		0	<input type="checkbox"/> 0.0%	
5.		0	<input type="checkbox"/> 0.0%	
6.		0	<input type="checkbox"/> 0.0%	
50% of Total Cover: 0		20% of Total Cover: 0	0 = Total Cover	
Herb Stratum (Plot size: 0.10ac)		Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.	<i>Pteridium aquilinum</i>	10	<input checked="" type="checkbox"/> 28.6%	FACU
2.	<i>Rubus argutus</i>	10	<input checked="" type="checkbox"/> 28.6%	FAC
3.	<i>Liquidambar styraciflua</i>	5	<input type="checkbox"/> 14.3%	FAC
4.	<i>Pinus taeda</i>	5	<input type="checkbox"/> 14.3%	FAC
5.	<i>Ilex opaca</i>	5	<input type="checkbox"/> 14.3%	FAC
6.		0	<input type="checkbox"/> 0.0%	
7.		0	<input type="checkbox"/> 0.0%	
8.		0	<input type="checkbox"/> 0.0%	
9.		0	<input type="checkbox"/> 0.0%	
10.		0	<input type="checkbox"/> 0.0%	
11.		0	<input type="checkbox"/> 0.0%	
12.		0	<input type="checkbox"/> 0.0%	
50% of Total Cover: 17.5		20% of Total Cover: 7	35 = Total Cover	
Woody Vine Stratum (Plot size: 0.10ac)		Absolute % Cover	Dominant Species? Rel.Strat. Cover	Indicator Status
1.	<i>Gelsemium sempervirens</i>	5	<input checked="" type="checkbox"/> 33.3%	FAC
2.	<i>Vitis rotundifolia</i>	5	<input checked="" type="checkbox"/> 33.3%	FAC
3.	<i>Smilax rotundifolia</i>	5	<input checked="" type="checkbox"/> 33.3%	FAC
4.		0	<input type="checkbox"/> 0.0%	
5.		0	<input type="checkbox"/> 0.0%	
50% of Total Cover: 7.5		20% of Total Cover: 3	15 = Total Cover	

Dominance Test worksheet:

Number of Dominant Species That are OBL, FACW, or FAC: 10 (A)

Total Number of Dominant Species Across All Strata: 11 (B)

Percent of dominant Species That Are OBL, FACW, or FAC: 90.9% (A/B)

Prevalence Index worksheet:

Total % Cover of: Multiply by:

OBL species 0 x 1 = 0

FACW species 5 x 2 = 10

FAC species 140 x 3 = 420

FACU species 20 x 4 = 80

UPL species 0 x 5 = 0

Column Total s: 165 (A) 510 (B)

Prevalence Index = B/A = 3.091

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation

2 - Dominance Test is > 50%

3 - Prevalence Index is $\leq 3.0^1$

Problematic Hydrophytic Vegetation ¹ (Explain)

¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definition of Vegetation Strata:

Tree - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

Sapling - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1m) tall.

Shrub - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

Herb - All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

Woody vine - All woody vines, regardless of height.

Hydrophytic Vegetation Present? Yes No

Remarks: (If observed, list morphological adaptations below).
 criteria met but available vegetation is more indicative of an upland in this area.

*Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

SOIL

Sampling Point: **DP2**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix			Redox Features			Texture	Remarks
	Color (moist)		%	Color (moist)	%	Type ¹		
0-4	10YR	4/1	100				Fine Sand	less than 30% coated grains
4-12	10YR	5/3	100				Fine Sand	high chroma color

¹Type: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining, M=Matrix

<p>Hydric Soil Indicators:</p> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Organic Bodies (A6) (LRR P, T, U) <input type="checkbox"/> 5 cm Mucky Mineral (A7) (LRR P, T, U) <input type="checkbox"/> Muck Presence (A8) (LRR U) <input type="checkbox"/> 1 cm Muck (A9) (LRR P, T) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 150A) <input type="checkbox"/> Sandy Muck Mineral (S1) (LRR O, S) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Dark Surface (S7) (LRR P, S, T, U)		<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR S, T, U) <input type="checkbox"/> Thin Dark Surface (S9) (LRR S, T, U) <input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR O) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Marl (F10) (LRR U) <input type="checkbox"/> Depleted Ochric (F11) (MLRA 151) <input type="checkbox"/> Iron-Manganese Masses (F12) (LRR O, P, T) <input type="checkbox"/> Umbric Surface (F13) (LRR P, T, U) <input type="checkbox"/> Delta Ochric (F17) (MLRA 151) <input type="checkbox"/> Reduced Vertic (F18) (MLRA 150A, 150B) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149A) <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)		<p>Indicators for Problematic Hydric Soils³:</p> <input type="checkbox"/> 1 cm Muck (A9) (LRR O) <input type="checkbox"/> 2 cm Muck (A10) (LRR S) <input type="checkbox"/> Reduced Vertic (F18) (outside MLRA 150A,B) <input type="checkbox"/> Piedmont Floodplain Soils (F19) (LRR P, S, T) <input type="checkbox"/> Anomalous Bright Loamy Soils (F20) (MLRA 153B) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)	
--	--	--	--	---	--

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:
 no hydric soil indicator