



**Planning for the Future –
Jekyll Island Carrying Capacity &
Infrastructure Assessment**

OUR TEAM



James Sipes



Jim Remlin

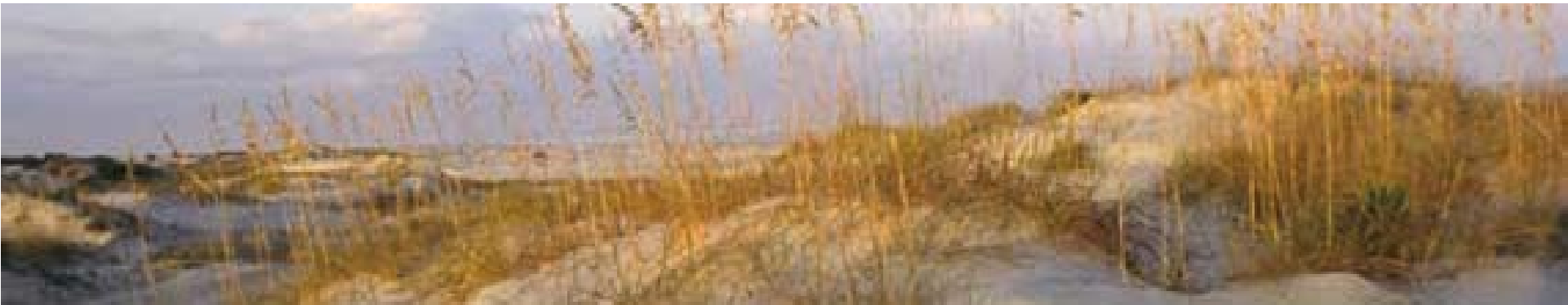


Ryan Argentieri



PHILOSOPHY & APPROACH

Lead JIA through an inclusive and flexible assessment process linking the natural environment and economic opportunities with existing assets to preserve the character of the island, protect natural resources and environmental systems, reduce risk, and increasing resilience and sustainability.



YOUR NEEDS

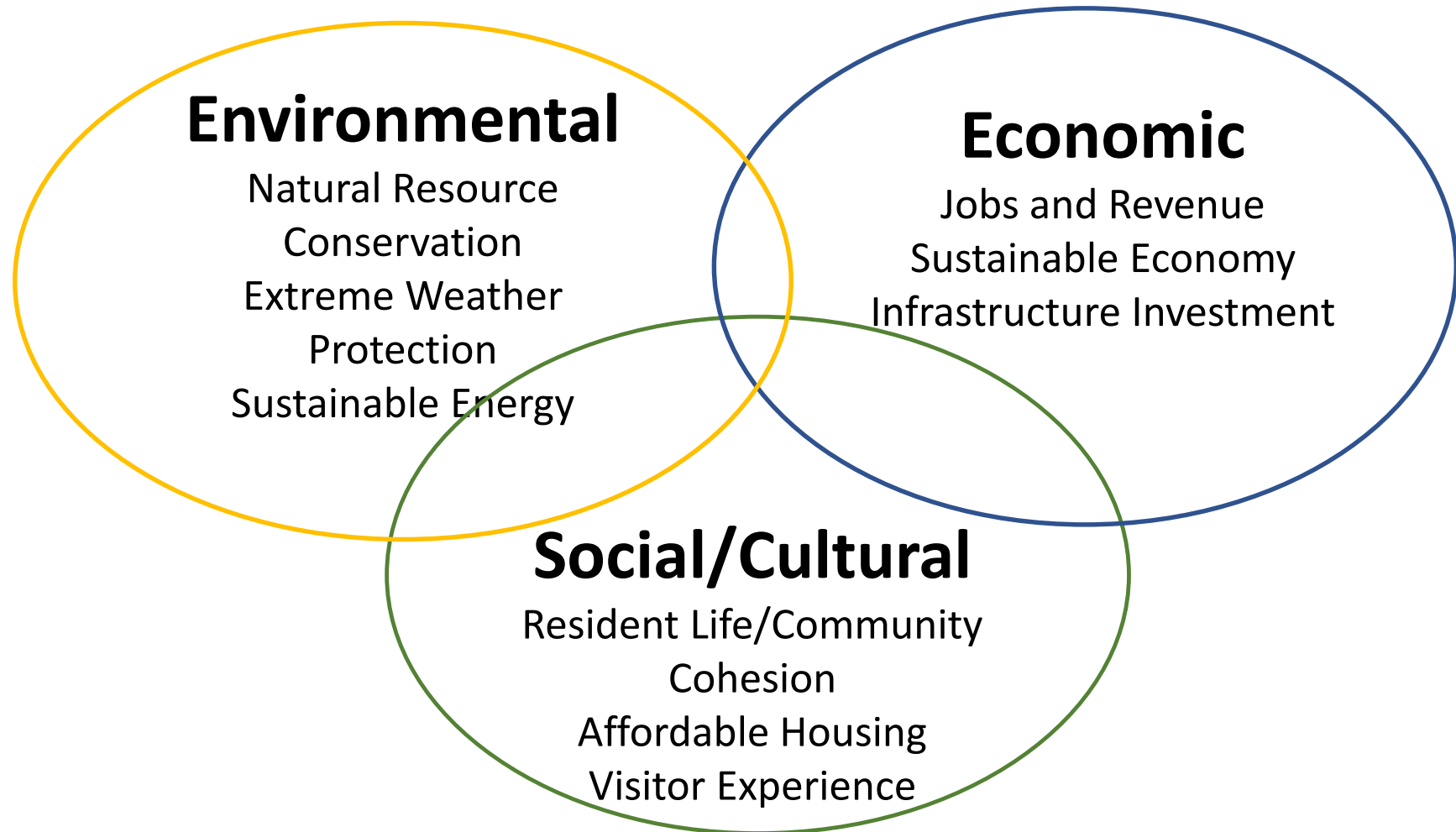
How can we **create and maintain a resilient and environmentally/economically vibrant community** where people want to live and visit?

What **resources and infrastructure are essential to supporting this economy** while maintaining the quality of life and sensitive ecosystems?

What resources do we have, **what do we need and what can the Island support?**

GETTING YOUR FUTURE RIGHT

Create and maintain a resilient and economically vibrant community



PROCESS

Strategic planning

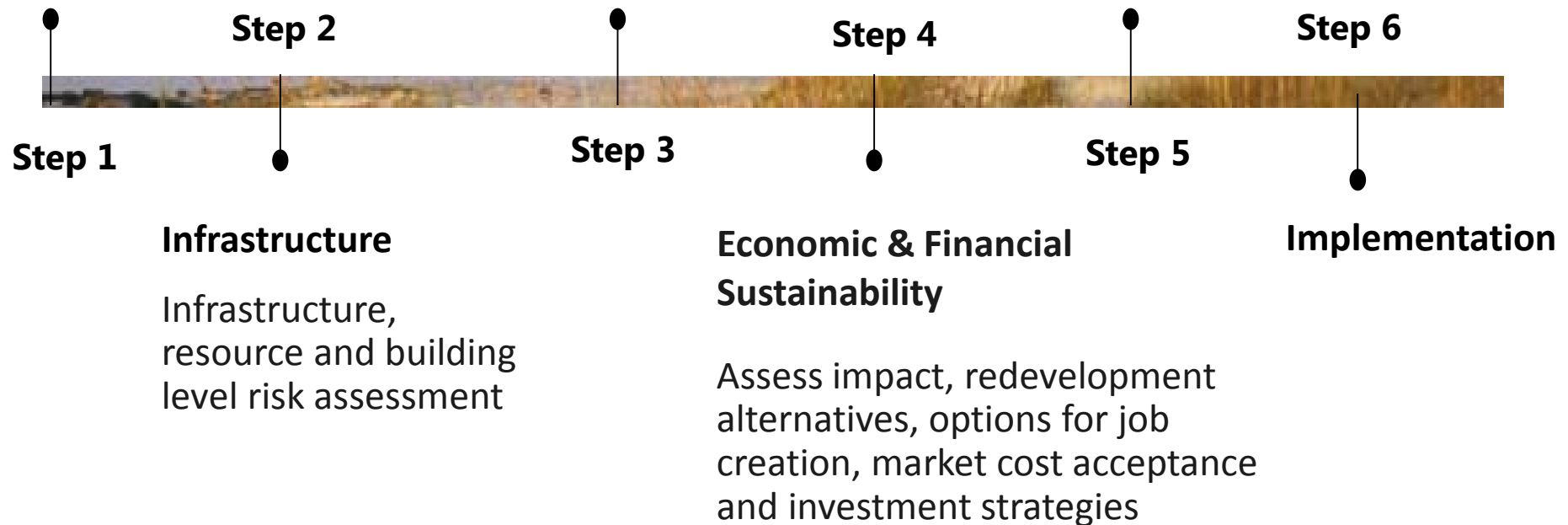
Identify and assess existing resources & overall plan, seek public input

Carrying capacity

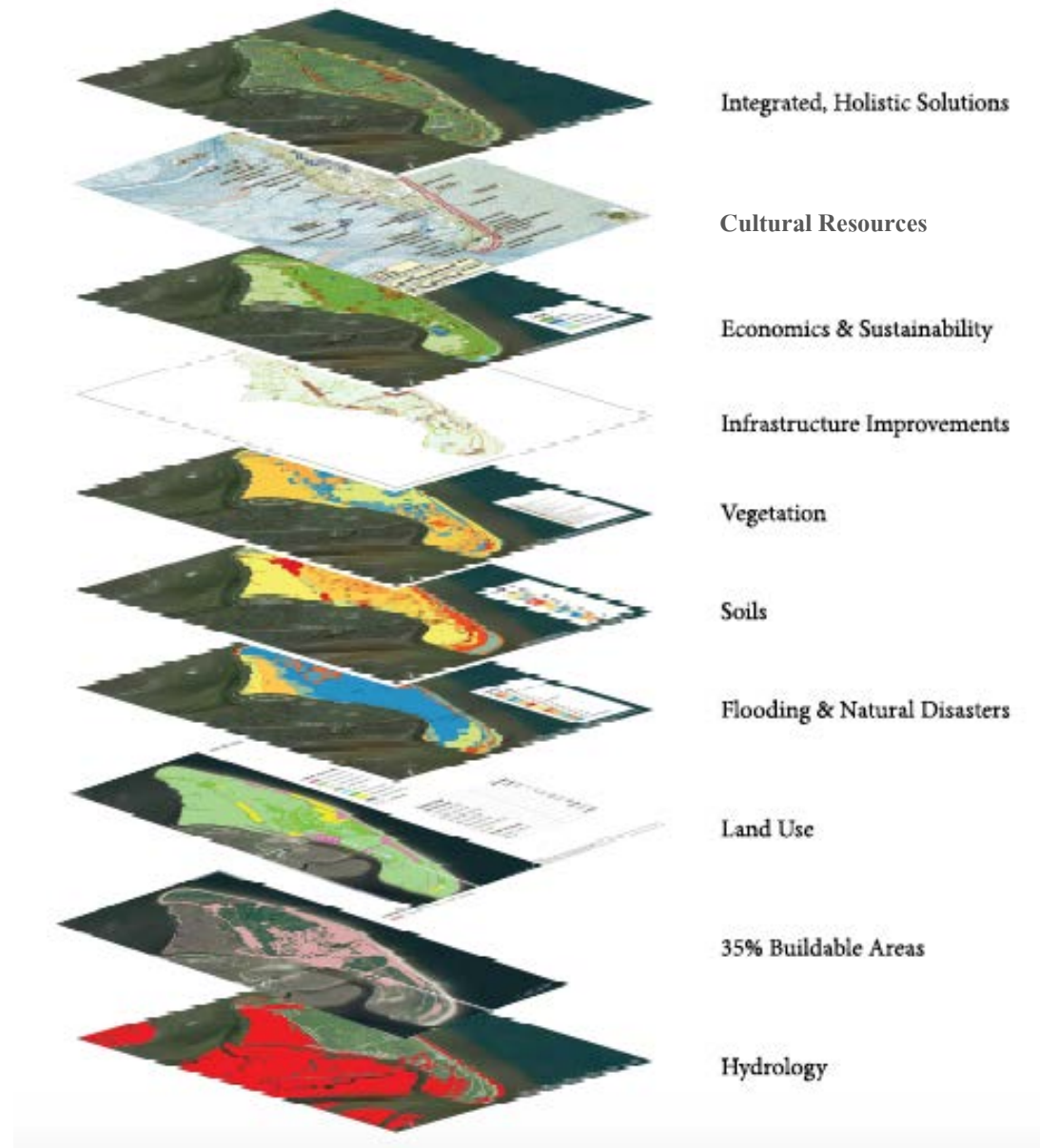
Help JIA create and maintain a resilient, **ecologically sustainable** and economically vibrant community

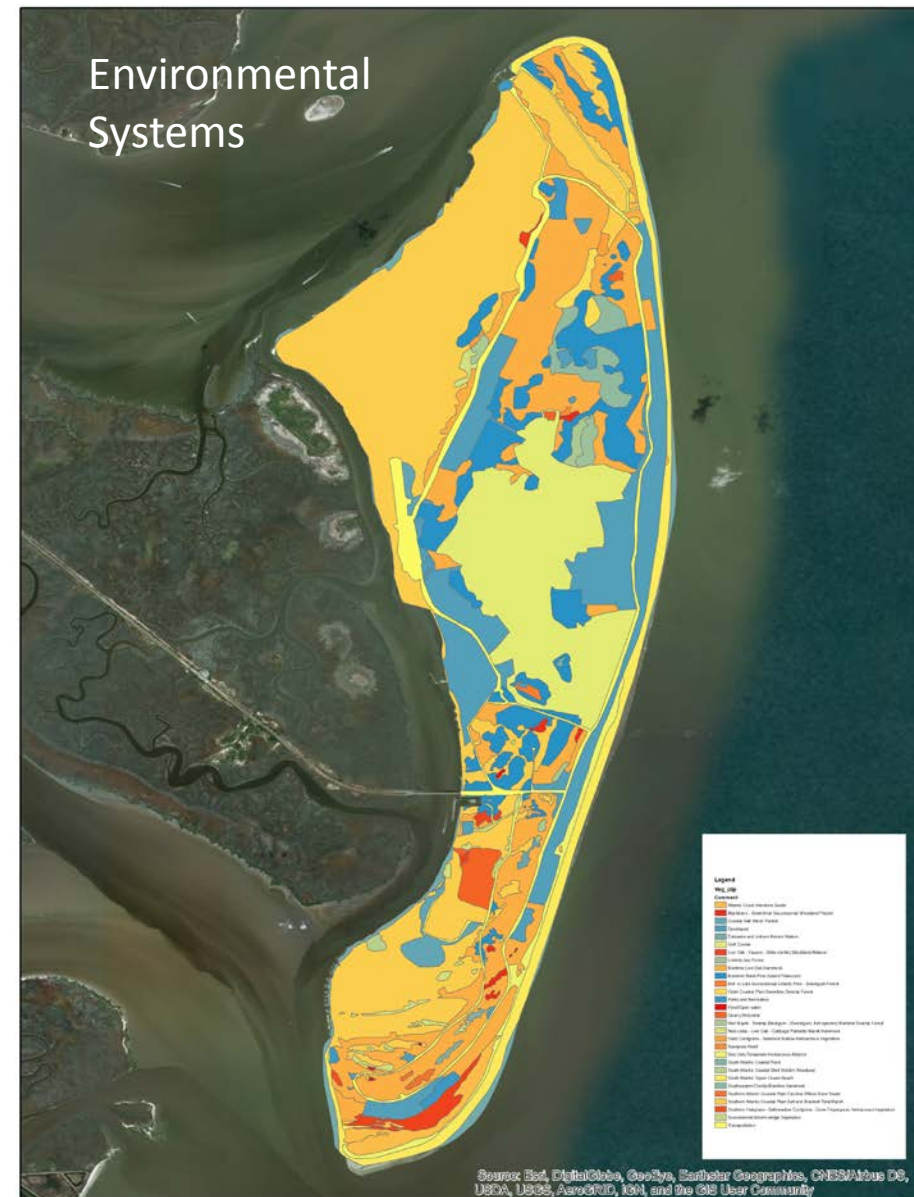
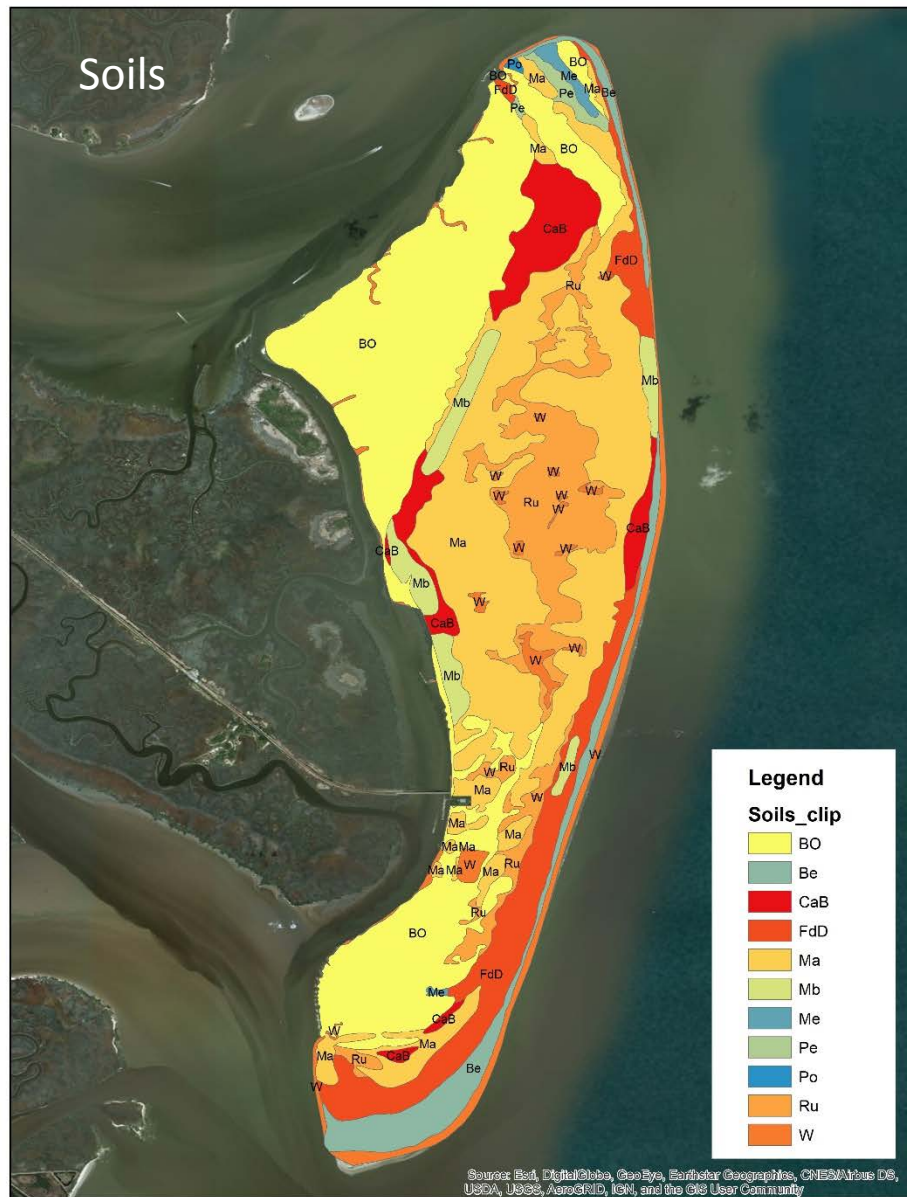
Metrics, assessments, & recommendations

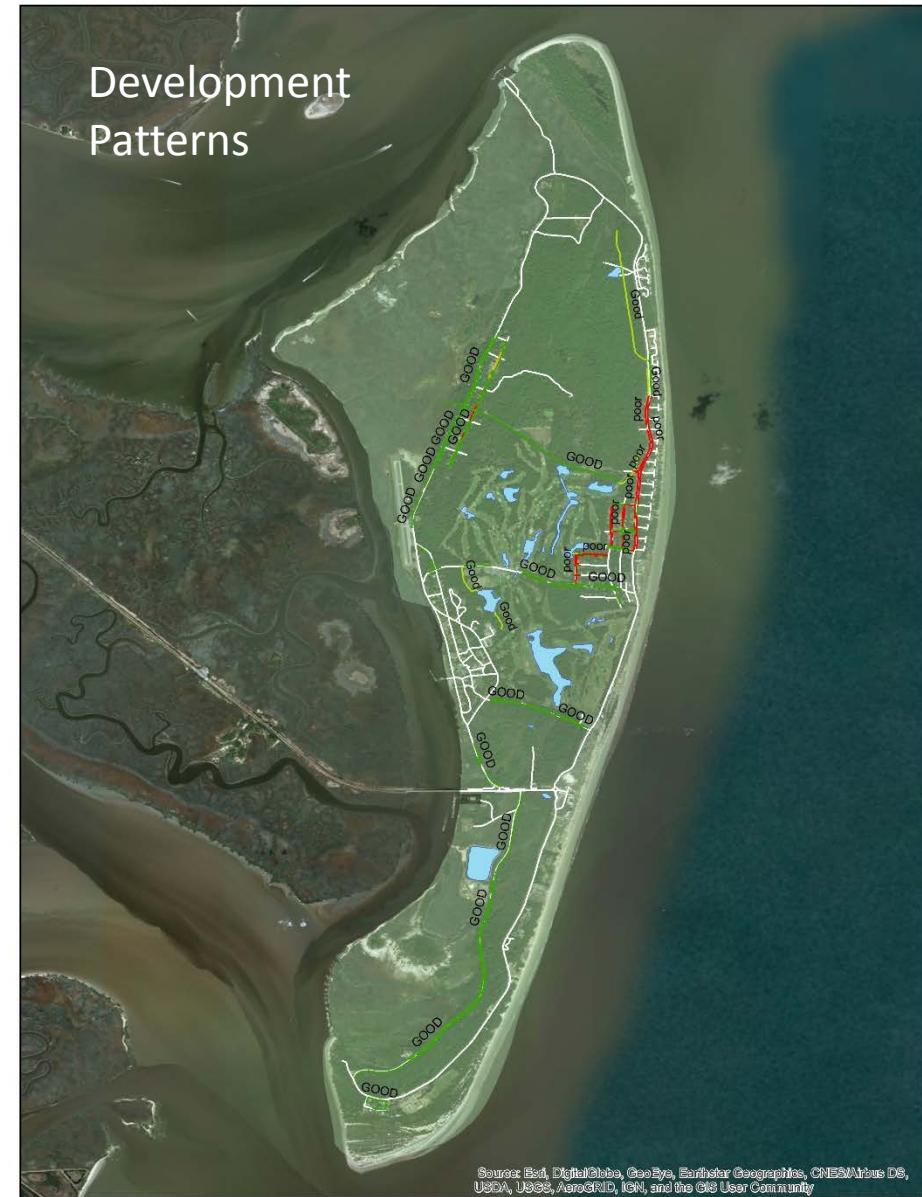
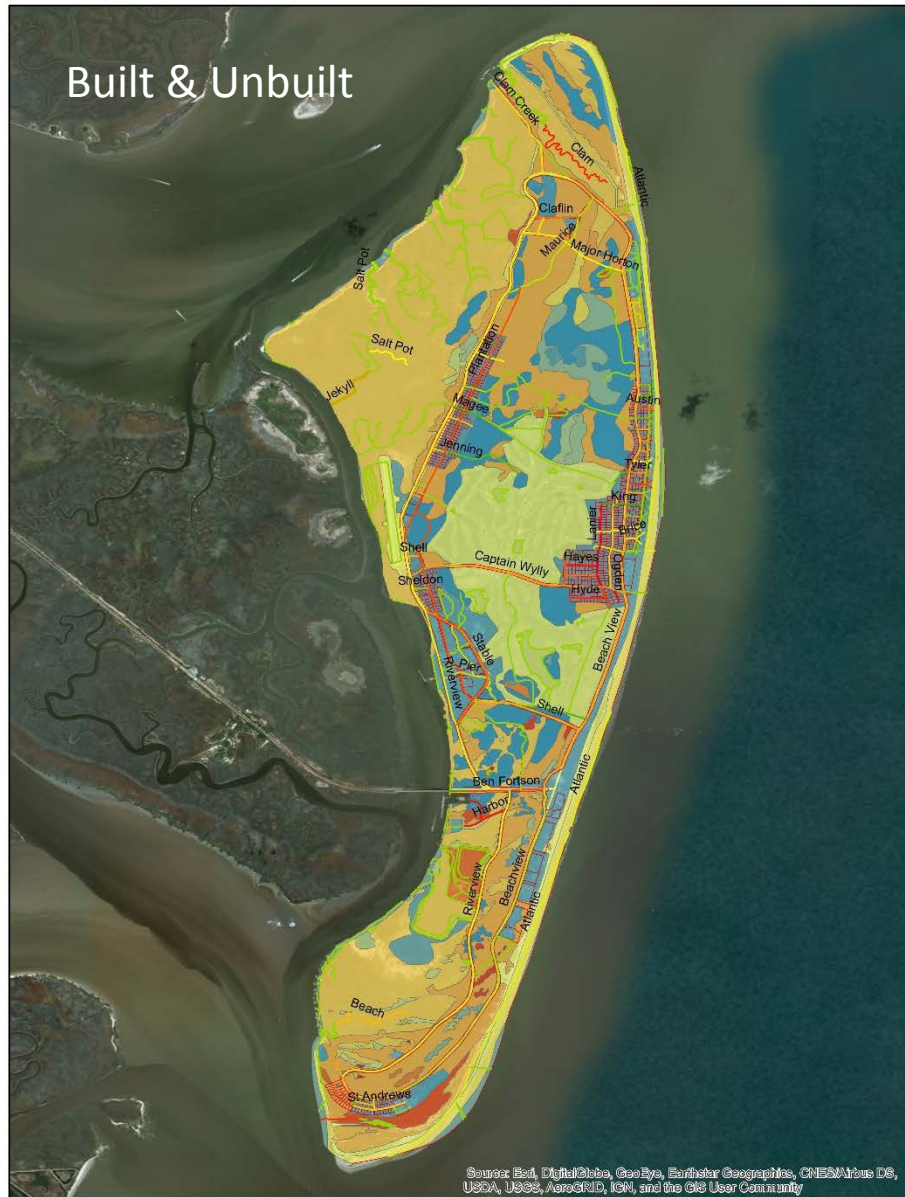
Ongoing M&E process, gauge performance and progress made towards goals



PROCESS







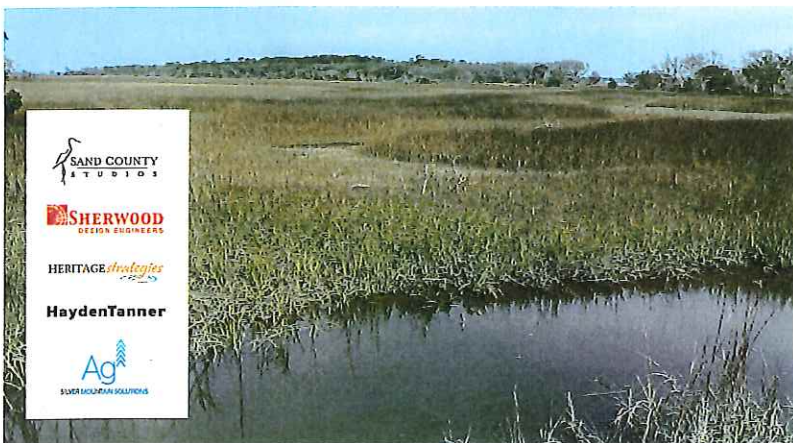
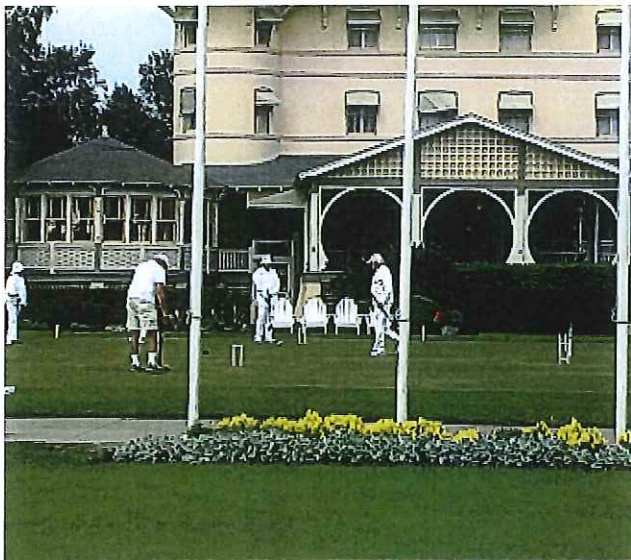




GOALS

The goals of the Jekyll Island Carrying Capacity and Infrastructure project are to:

- Allow the JIA Board to make informed decisions about land use, density, development projects, and amenity enhancements.
- Position the JIA Board to make data-driven decisions regarding capital investment, maintenance, marketing, preservation, and conservation.
- Inform future updates made to the Jekyll Island Master Plan.



Tasks

- 1 Analysis of existing infrastructure essential to supporting the economy and quality-of-life of Jekyll Island as outlined in the Jekyll Island Master Plan;
- 2 Establish the population and visitation parameters that can be supported within the limits of those resources;
- 3 Determine the maximum amount of resident, overnight and daytime populations that can be supported with existing infrastructure without degradation of the island's cultural and natural resources or user experience;
- 4 Understand and consider the seasonality of Jekyll Island visitation regarding service and infrastructure;
- 5 Recommend the additional infrastructure investments and funding strategies for upgrades that may be necessary to support future increases in the cumulative population of residents and visitors;
- 6 Evaluate capacity considerations as related to population (resident and transient), water supply, wastewater handling and treatment, household and commercial solid waste, energy resources, public safety, parking, and traffic;
- 7 Evaluate user fees for residents, businesses, developers, and guests in comparison to other similar entities and make appropriate recommendations;
- 8 Review services performed by the JIA and those conducted by private sector contractors and make any appropriate recommendations;
- 9 Consider and recommend strategies to manage and adapt to projected impacts on infrastructure, amenities, and development posed by rising sea levels;
- 10 Recommend strategies to manage future visitation and population growth to a level that the island's resources and infrastructure can accommodate; and
- 11 Recommend opportunities to increase renewable energy generation for island, commercial, and residential structures.



Carrying Capacity and Infrastructure Assessment

Sheet 1: Goals & Tasks

April, 2018

Prepared for Jekyll Island Authority

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Future Generations

The increasing popularity of Jekyll Island presents both an opportunity and a challenge. How do we ensure the enjoyment of visitors while still maintaining the natural environment and user experience? How do we keep from "loving Jekyll Island to death?"



Carrying Capacity

"Carrying capacity" is the number of individuals who can be supported within a given area without degrading the natural, social, cultural, and economic environment for present and future generations. A carrying capacity seeks to balance human needs and environmental systems.

Visitor Experience

The greater the number of people who visit Jekyll Island, the greater the potential impact on environmental resources of the area, and on the overall visitor experience. The quality of the visitor experience is dependent upon the quality of the island's tidal marshes, maritime forest, loggerhead turtles, natural wildlife communities, dune systems, and natural beauty.



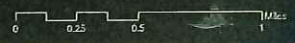
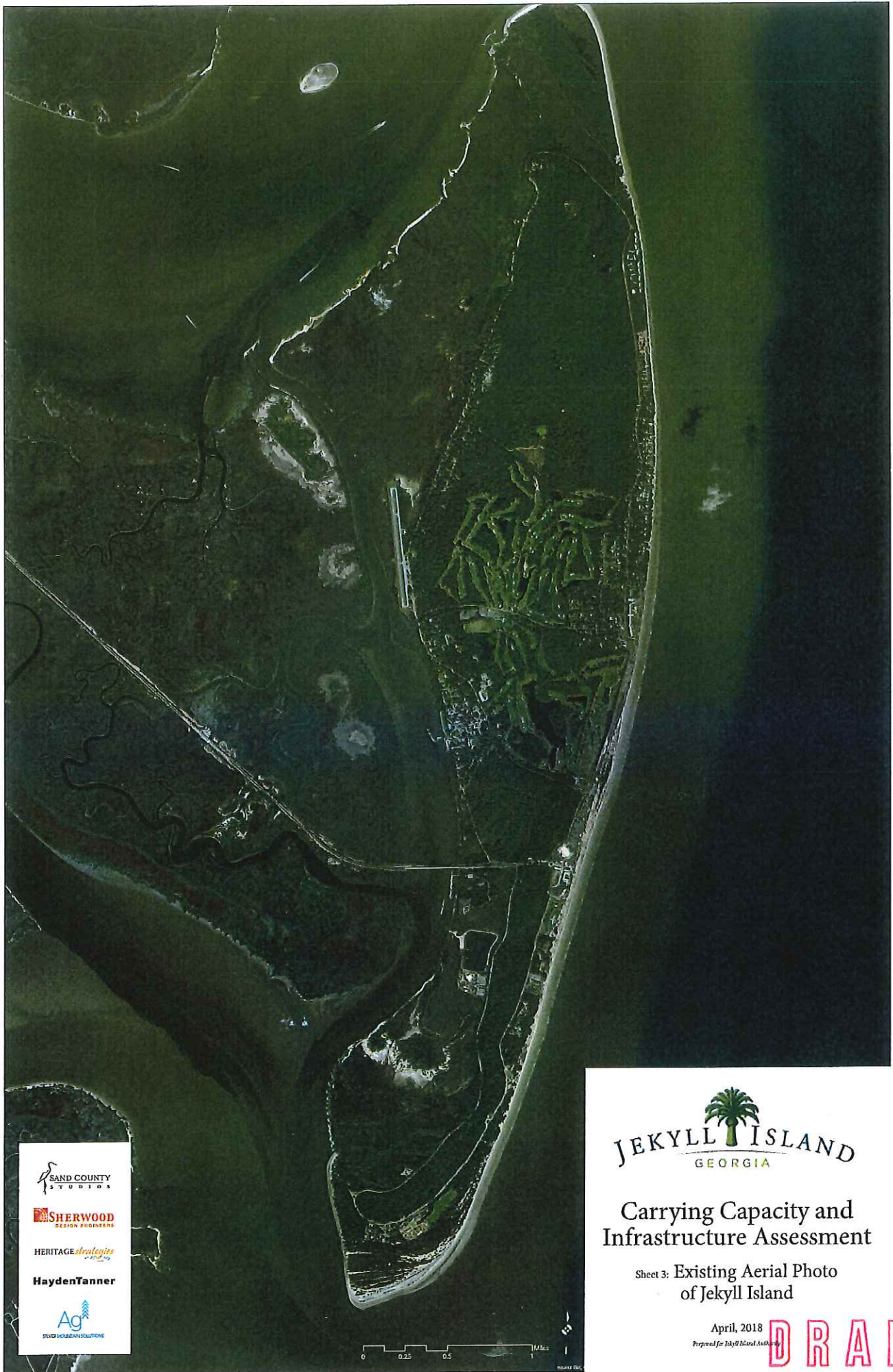
Carrying Capacity and Infrastructure Assessment

Sheet 2: Island Character

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Carrying Capacity and Infrastructure Assessment

Sheet 3: Existing Aerial Photo of Jekyll Island

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Legend
Roads
Tax Parcel

SAND COUNTY
STUDIOS

SHERWOOD
DESIGN ENGINEERS

HERITAGE *strategies*

HaydenTanner

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SILVER HOOKS SOLUTIONS

JEKYLL ISLAND
GEORGIA

Carrying Capacity and Infrastructure Assessment

Sheet 4: Existing Aerial Photo of Jekyll
Island - Southern Section

April, 2018

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0 0.25 0.5 1 Miles



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Roads
Tax Parcel

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SILVER MOUNTAIN SOLUTIONS

0 0.25 0.5 1 Miles
Estimated 2018

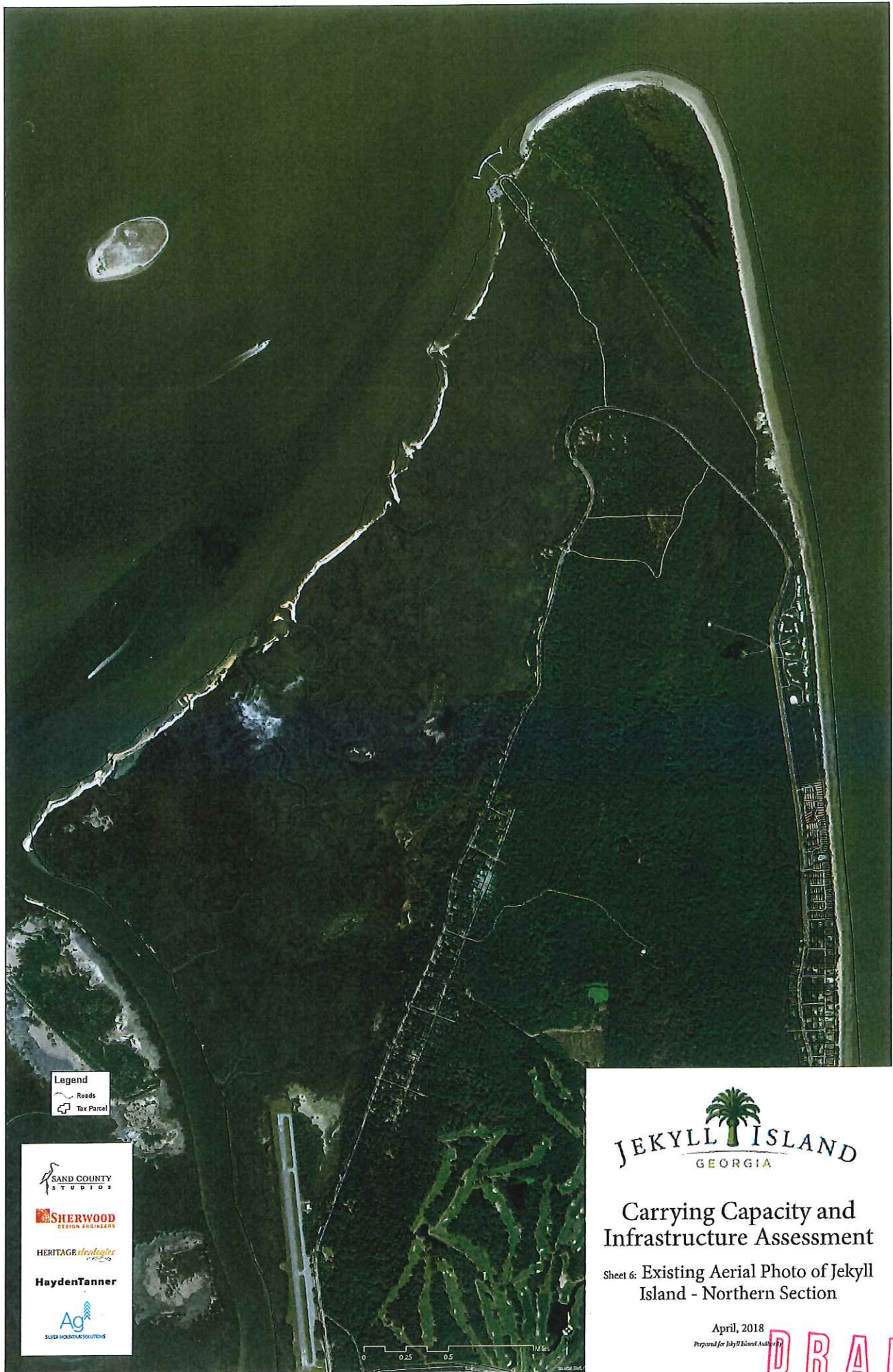
JEKYLL ISLAND
GEORGIA

Carrying Capacity and Infrastructure Assessment

Sheet 5: Existing Aerial Photo of Jekyll
Island - Middle Section

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Legend
Roads
Tax Parcel

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JEKYLL ISLAND
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Carrying Capacity and Infrastructure Assessment

Sheet 6: Existing Aerial Photo of Jekyll
Island - Northern Section

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Carrying Capacity and Infrastructure Assessment

Sheet 7: Cultural Resources

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Legend
Jekyll Roads
2013 Land Use
Developed
Undeveloped

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DESIGN ENGINEERS

HERITAGE STRATEGIES

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SUSTAINABLE SOLUTIONS

JEKYLL ISLAND
GEORGIA

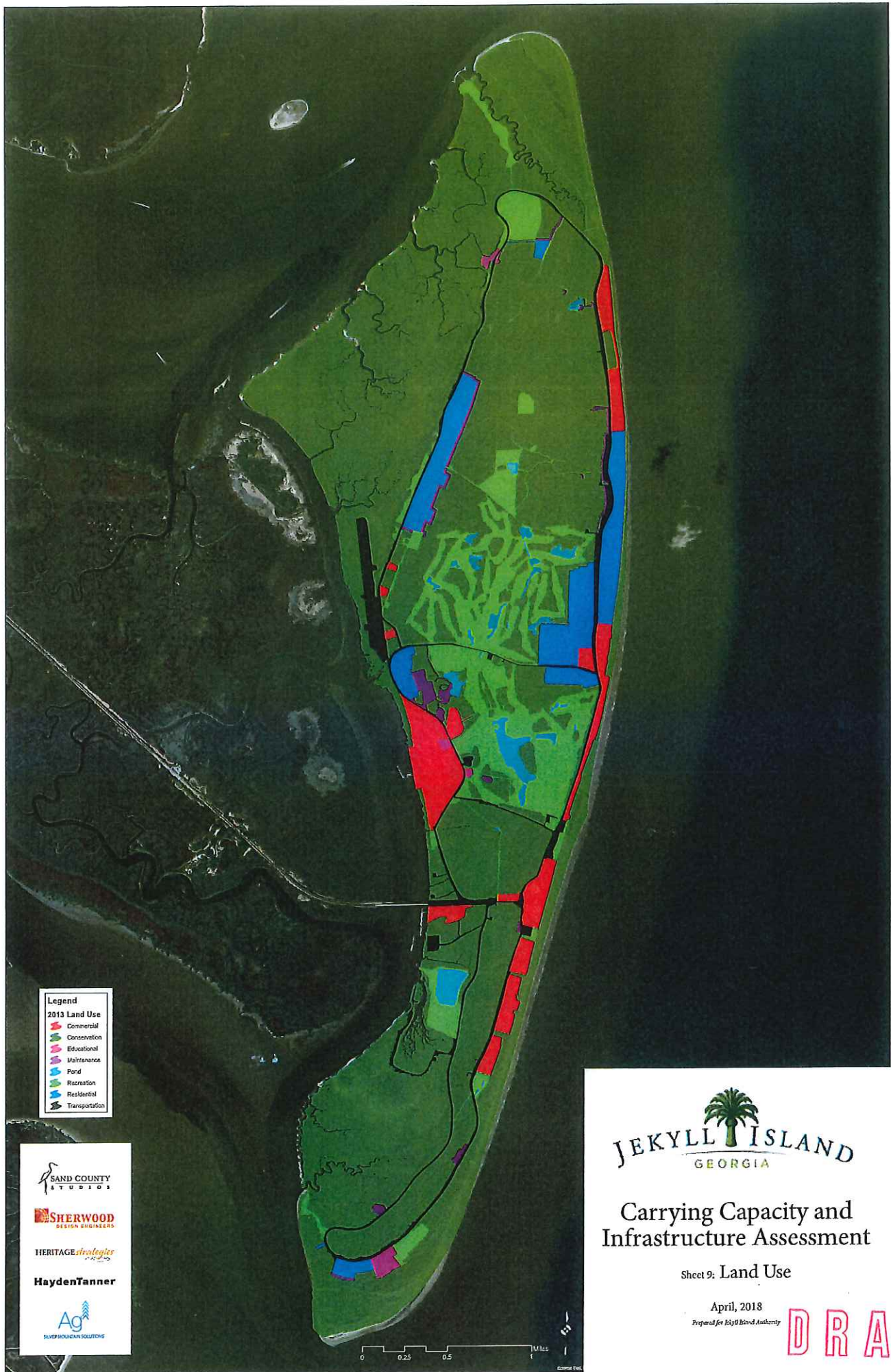
Carrying Capacity and Infrastructure Assessment

Sheet 8: Developed &
Undeveloped Land

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- Legend**
2013 Land Use
- Commercial
 - Conservation
 - Educational
 - Maintenance
 - Pond
 - Recreation
 - Residential
 - Transportation

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DESIGN ENGINEERS

HERITAGE *strategies*

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SOLVE MOUNTAIN SOLUTIONS

JEKYLL ISLAND
GEORGIA

Carrying Capacity and Infrastructure Assessment

Sheet 9: Land Use

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JEKYLL ISLAND
GEORGIA

Carrying Capacity and Infrastructure Assessment

Sheet 11: Golf Courses

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7-16
room /
room)

1-5
n Road)

5-10
e Road)

#19
Church)

#18
Church)

-14
rooms)

(#17
om at
Waves)

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DESIGN ENGINEERS

HERITAGE strategies

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PLANNING SOLUTIONS

LIFT STATION #7
(1174 North Beachview Drive)

LIFT STATION #8
(972 North Beachview Drive)

LIFT STATION #16
(581 Old Plantation Road)

LIFT STATION #9
(934 North Beachview Drive)

LIFT STATION #1
(880 North Beachview Drive)

LIFT STATION #11
(20 King Avenue)

LIFT STATION #12
(12 Forest Avenue)

LIFT STATION #6
(418 Captain Wyly Road)

LIFT STATION #14
(316 Captain Wyly Road)

LIFT STATION #1
(177 Old Plantation Road)

LIFT STATION #20
(Latitude 31)

LIFT STATION #2
(126 Old Plantation Road)

LIFT STATION #15
(50 Crane Road)

LIFT STATION #21
(Jekyll Harbor / Zackery's Riverhouse)

LIFT STATION #5
8" Lines (2) to Wastewater Treatment Plant
(11 South Beachview Drive)

LIFT STATION #19
Force main to Lift Station #5 (Water Park Only)
(Summer Waves)

LIFT STATION #3
(205 South Beachview Drive)

LIFT STATION #18
(650 South Beachview Drive)

WATER TOWER #5
(PUMP, CLEAN, DISTRIBUTE WATER)

WATER TOWER #3
(PUMP, CLEAN, DISTRIBUTE WATER)

WATER TOWER #2
(HOLDING TANK)

WATER TOWER #1
(HOLDING TANK)

WATER TOWER #4
(PUMP, CLEAN, DISTRIBUTE WATER)

WASTEWATER TREATMENT PLANT

0 600' 1200'



LEGEND

- FIRE HYDRANT [Red square with 'H']
- PUMP, CLEAN, DISTRIBUTE [Blue circle with 'X']
- HOLDING TANK [Blue circle with 'X']
- LIFT STATION [White circle with 'X']
- JUNCTION BOX [White square with 'X']
- GRINDER STATION [Green diamond]
- SEPTIC TANK [White rectangle]
- WASTEWATER TREATMENT PLANT [Green rectangle]
- SANITARY SEWER [Blue line]
- DOMESTIC WATER [Red line]
- STORM DRAIN [Grey line]
- UTILITY FLOW [Arrow]



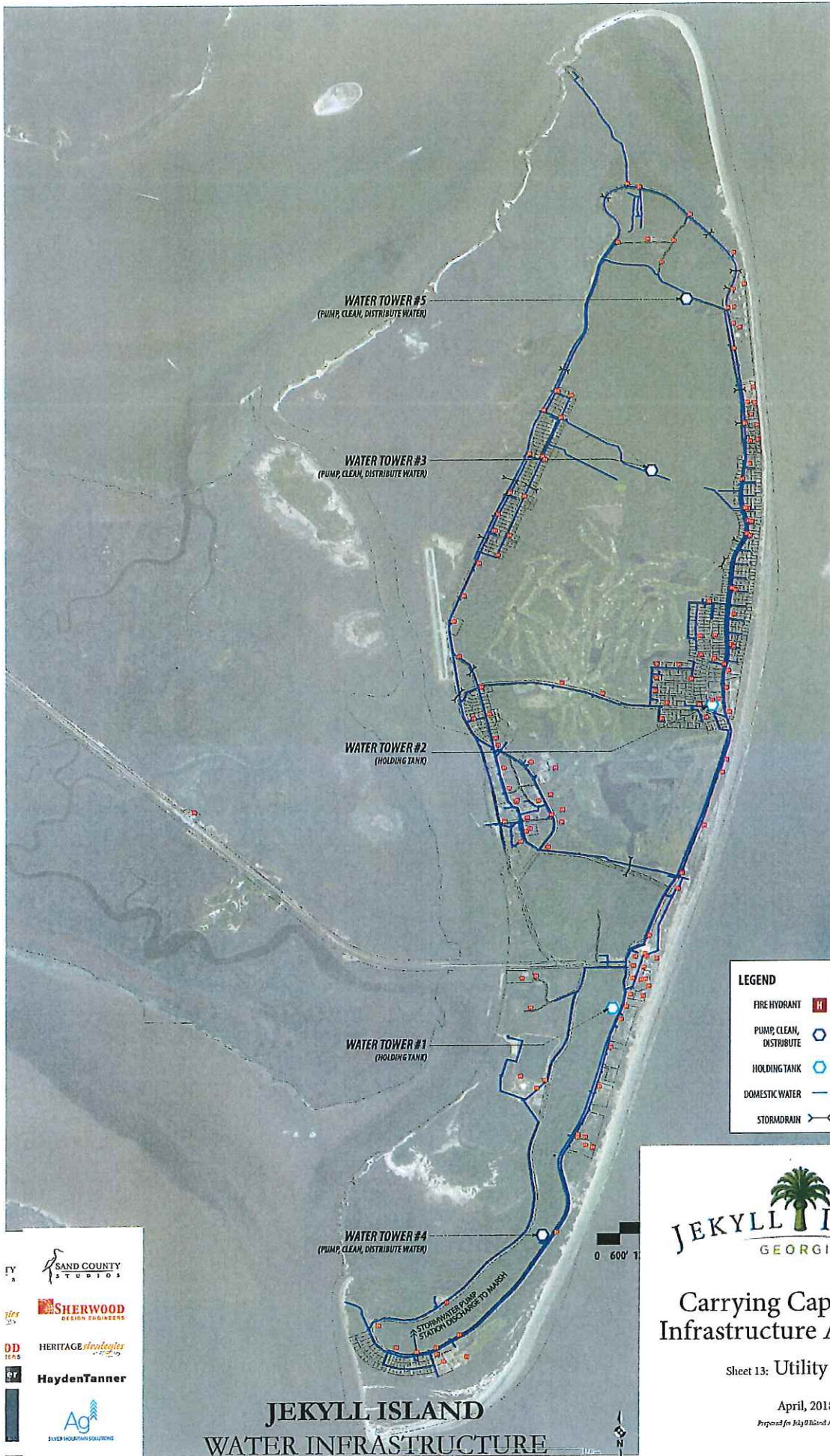
Carrying Capacity and Infrastructure Assessment

Sheet 12: Utility Map 1

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Prepared for Jekyll Island Authority

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JEKYLL ISLAND UTILITY INFRASTRUCTURE



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 HERITAGE *scenologies*
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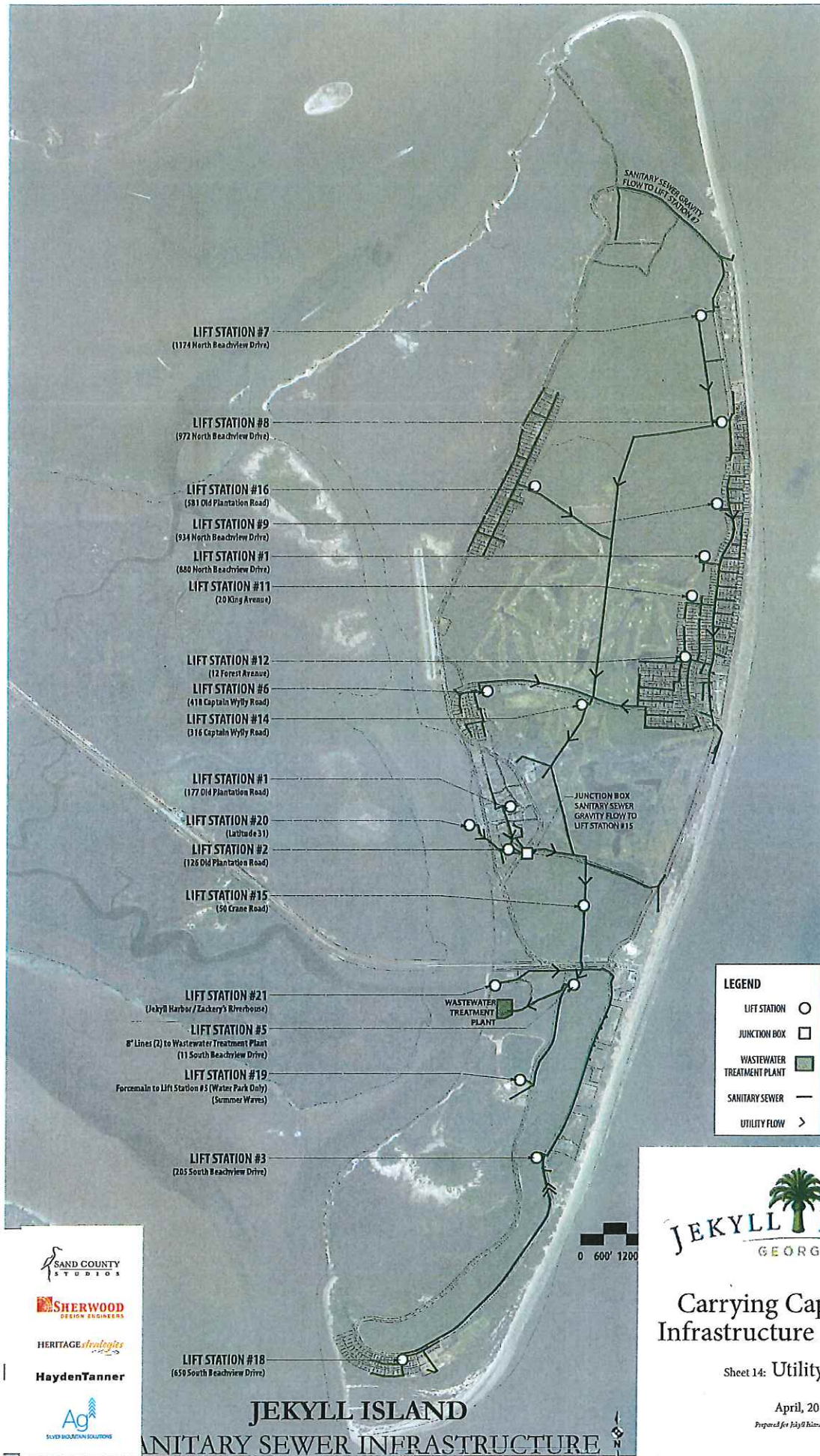


Carrying Capacity and Infrastructure Assessment

Sheet 13: Utility Map 2

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HERITAGE strategies

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GEORGIA

Carrying Capacity and Infrastructure Assessment

Sheet 14: Utility Map 3

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Carrying Capacity and Infrastructure Assessment

Sheet 16: Revenue Generation of Island Facilities

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