



SESSION 3:

# THE BIG GREEN NETWORK

STEVE NYGREN

DR. JAY EXUM





# **DESIGN = VALUE = NATURE CONNECTION**

**Lake Wales Envisioned  
Best Practice Symposium  
March 20, 2023**

**Steve Nygren, Serenbe**



A photograph of a forest path lined with yellow azaleas. The path is a narrow dirt road that recedes into the distance, flanked by tall, thin trees. The ground is covered in fallen leaves and some green grass. The overall scene is peaceful and scenic.

# Serenbe's Path To Development





# **The Beginning, *1991***

Connecting our  
children to nature



# Developing Sprawl

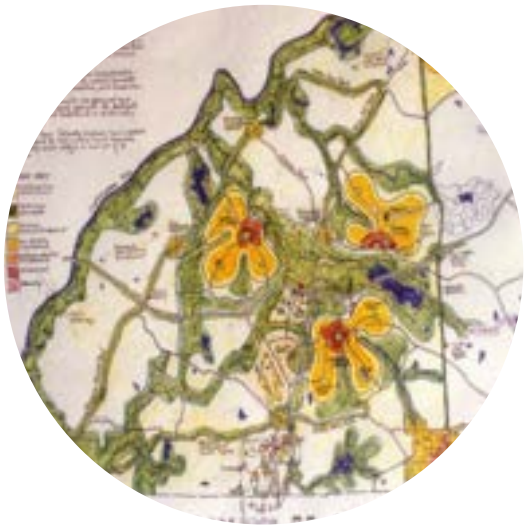


# Threatened our Natural Nature





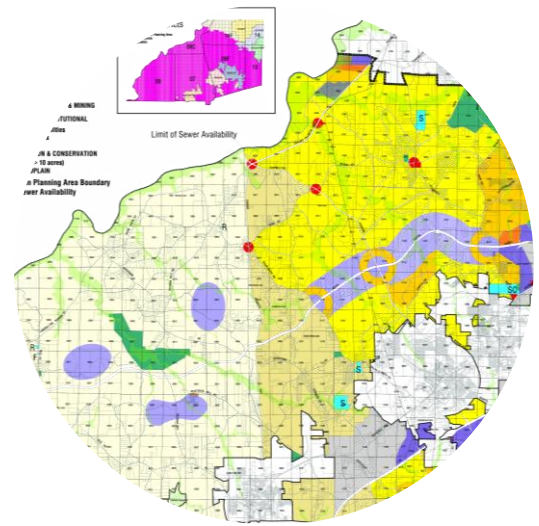
# IF YOU ARE GOING TO DEVELOP...



**Put On My land**



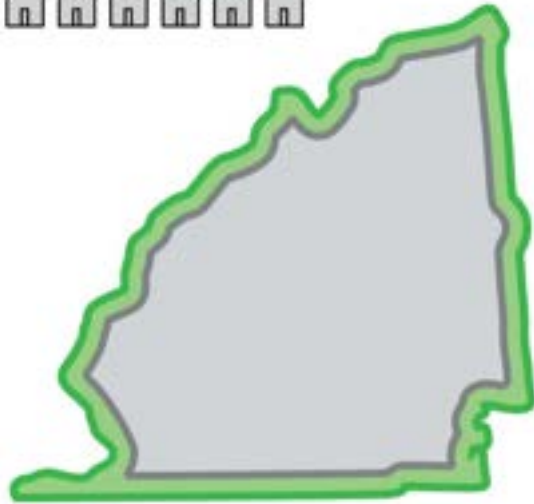
**Not in My  
back yard**



**Put in near  
infrastructure**

# Traditional Development Pattern

Conventional Development  
30,000 Homes



80% of Land Disturbed



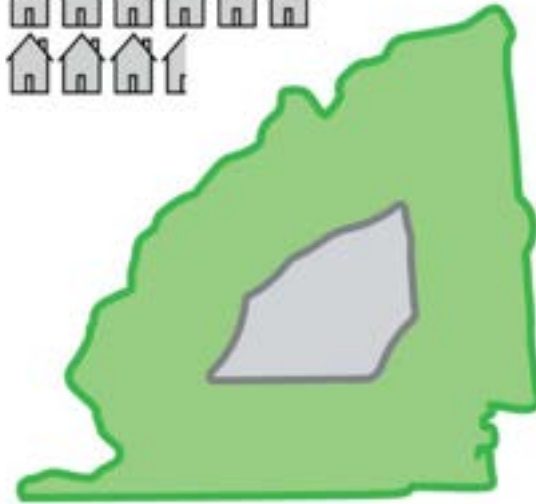
Commercial

Services

Civic

# Balancing Density with Nature

Serenbe and Chattahoochee Hill Country  
38,000 Homes



30% of Land Disturbed

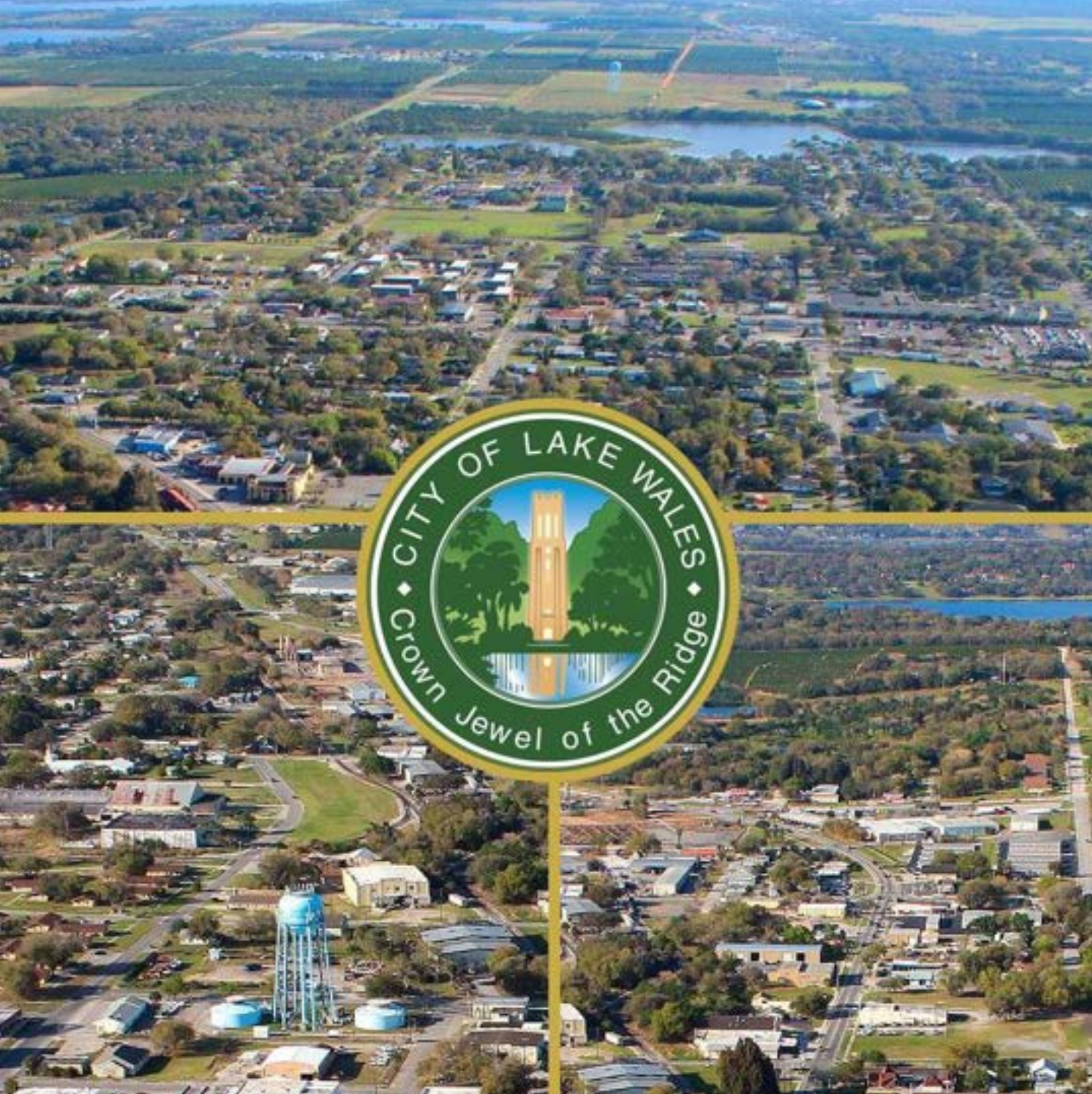


Commercial

Services

Civic





# Lake Wales by the Numbers

6,600 Households

12,800 Acres of land

One Household Per 1.9 Acres



# Obstacles to Develop a Model Community

- Zoning
- Government regulations
- Community Attitudes
- Lending Institutions Perceptions of Profitable Housing Models
- Down zoning is commonly thought of as a solution to urban sprawl, but in reality it causes it.
- During the past decades, the US has been sanitizing the zoning regulations and clustering similar land uses and home values into separate zoned areas
- Small lots are generally associated with housing for low income people and many neighborhoods fight against small lot zoning because they fear lower property values
- Preserved forest or farm land has never been perceived as creating value for the residential lots adjoining that land in the same way that golf courses were perceived as an asset in previous decades.



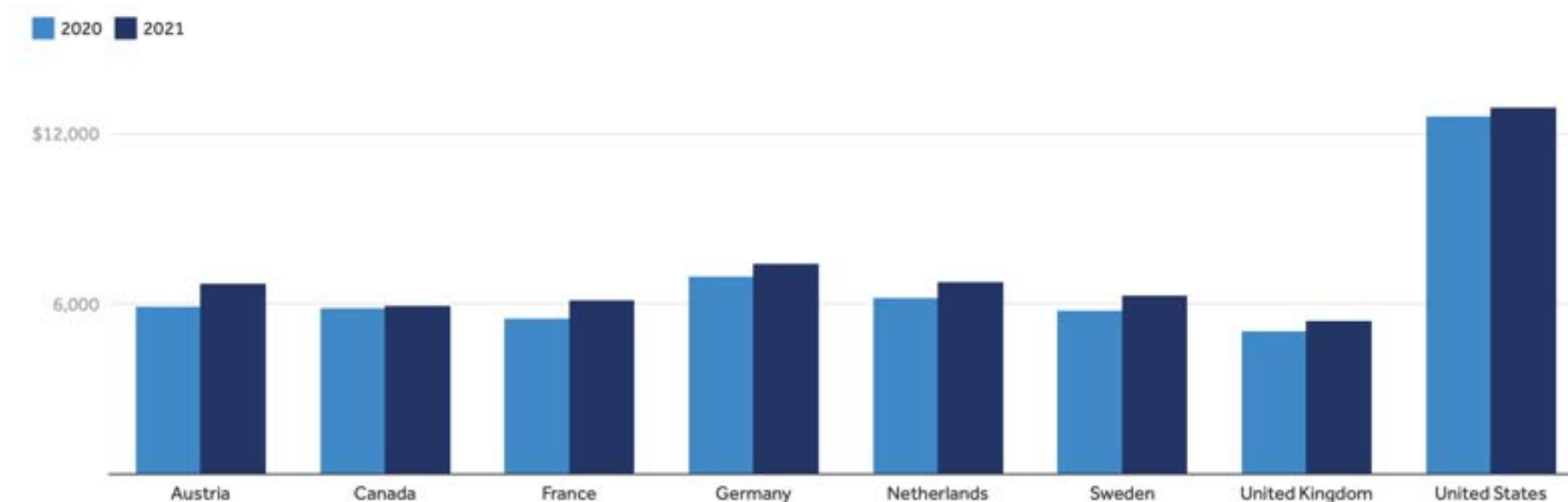
# **Covid-19 Has Exposed Existing Conditions That Are Affecting Our Health Due to our Built Environment**

- Mental health due to **isolation**
- Physical health due to poor diets and a **lack of movement**
- Access to fresh foods
- Pollutants due to landscaping

Wellness Communities address many of these issues.



# Per Capita Health Consumption Expenditures, U.S. Dollars



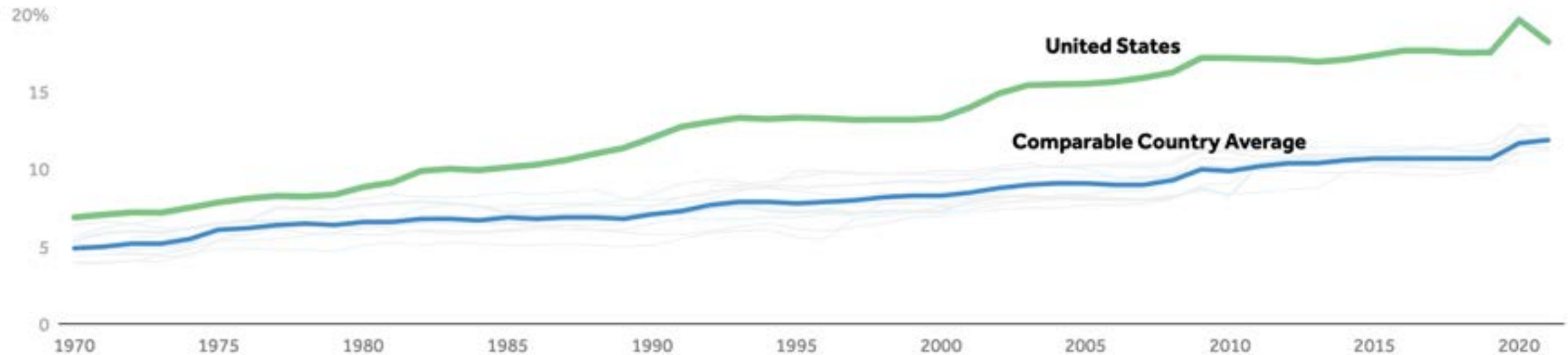
Note: U.S. values obtained from National Health Expenditure data. 2020 data for Canada and Sweden is provisional. 2021 data for all other countries but the United States are provisional. 2021 data for Canada represents a difference in methodology from the prior year.

Source: KFF analysis of [National Health Expenditure \(NHE\)](#) and [OECD data](#) • [Get the data](#) • [PNG](#)

Peterson-KFF  
**Health System Tracker**



# Health Consumption Expenditures as Percent of GDP, 1970-2021



Notes: U.S. values obtained from National Health Expenditure data. Health consumption does not include investments in structures, equipment, or research. 2021 data not yet available for Australia, Belgium, Japan or Switzerland. Provisional 2021 data for Austria, Germany, Netherlands, Sweden, France, United States and the United Kingdom. Provisional 2020 data for Sweden, Japan, Australia and Canada. Difference in methodology for Canada in 2020 and 2021.

Source: KFF analysis of [National Health Expenditure \(NHE\)](#) and [OECD data](#) • [Get the data](#) • [PNG](#)

Peterson-KFF

**Health System Tracker**









**What is the cost of  
providing healthy  
places to live?**

**What is the cost of  
thoughtful planning?**

**HOW CAN WE  
NOT AFFORD IT?**



# THE MARKET: CORPORATIONS GO “NATURE POSITIVE”

Salesforce to create 75-acre employee work-and-wellness center for its staff

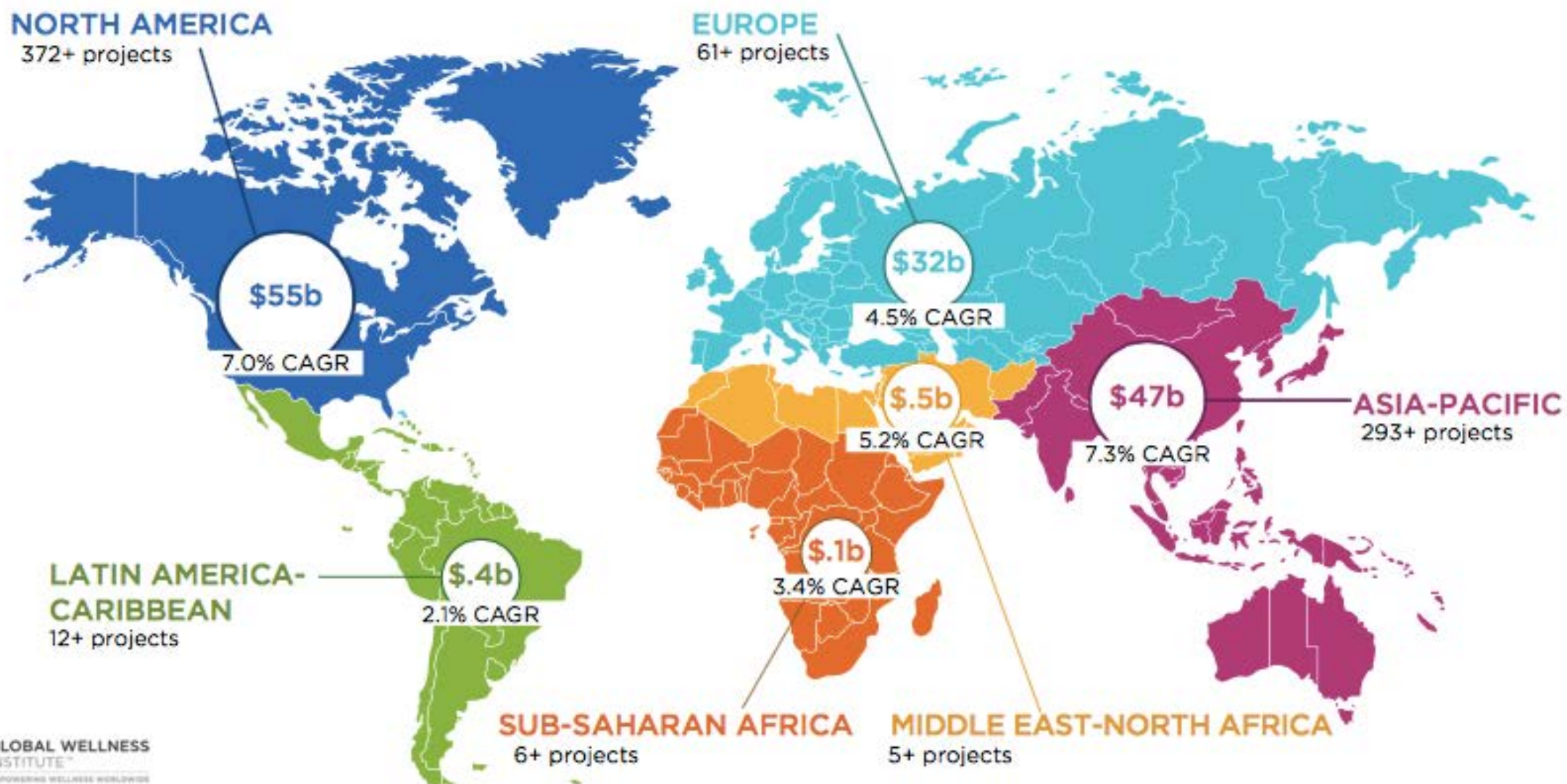
- According to a recent [Deloitte](#) study, employees are working three more hours a day compared to before the pandemic, and 80% of respondents ranked wellbeing as important or very important to their organization's success.
- “After years of being on Zoom calls and staring at computer screens, we're encouraging our employees to step away from their screens and get outdoors.”
- Building a nature positive corporate culture provides an opportunity to disconnect from technology and connect with each other.

- Strongly encouraged by the [World Economic Forum](#) and the [United Nations](#), nature positivity involves resetting humanity's relationship with nature by radically improving on issues such as biodiversity, land degradation, and climate change.
- Being nature positive goes far beyond merely protecting ecosystems or even achieving net-zero targets; the ultimate goal is to create “more nature” by 2030 compared with 2020.

<https://sloanreview.mit.edu/article/businesspeople-must-reconnect-with-nature-to-save-the-planet/>



# Wellness Real Estate is a **\$134 billion global industry in 2017** Over **740** residential projects in the pipeline, across **34** countries



# ONE WORD THAT COMES TO MIND ABOUT THE CORE OF LAKE WALES

## NOW:

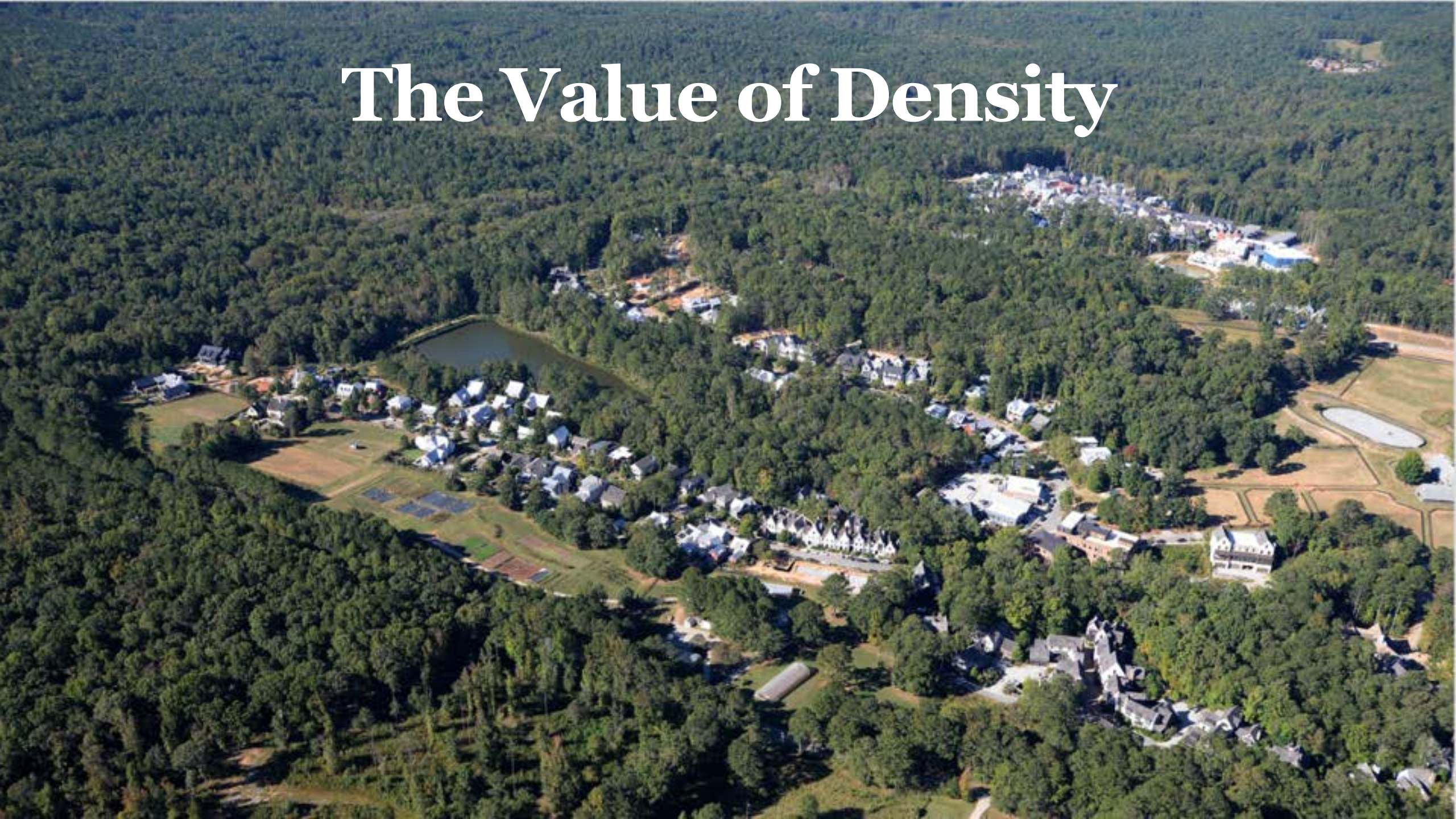


## IN THE FUTURE:





# The Value of Density







# 1 House Per Acre Average







# **Food grown behind homes, at crosswalks and common areas**







# Front Porches Pulled Near Sidewalks







# Walk Out Your Front Door to Retail







# Nature Within Steps From Every Back Door





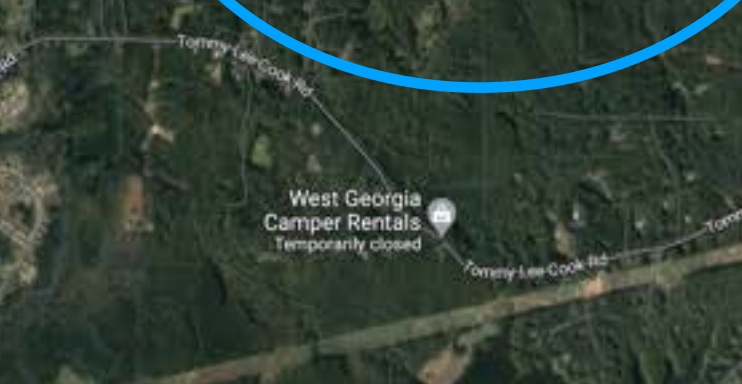


# Pockets To Gather Among The Houses





serenbe





130 Coral Ridge Ct, Palmetto, GA 30268

58 Green Ter, Newman, GA 30265

Add destination

Leave now Options

Send directions to your phone

via Tommy Lee Cook Rd and GA-14 S/GA-154 S/US-29 S 17 min 9.3 miles

Fastest route now due to traffic conditions

Details

Explore 58 Green Ter

Restaurants Hotels Gas stations Parking Lots More

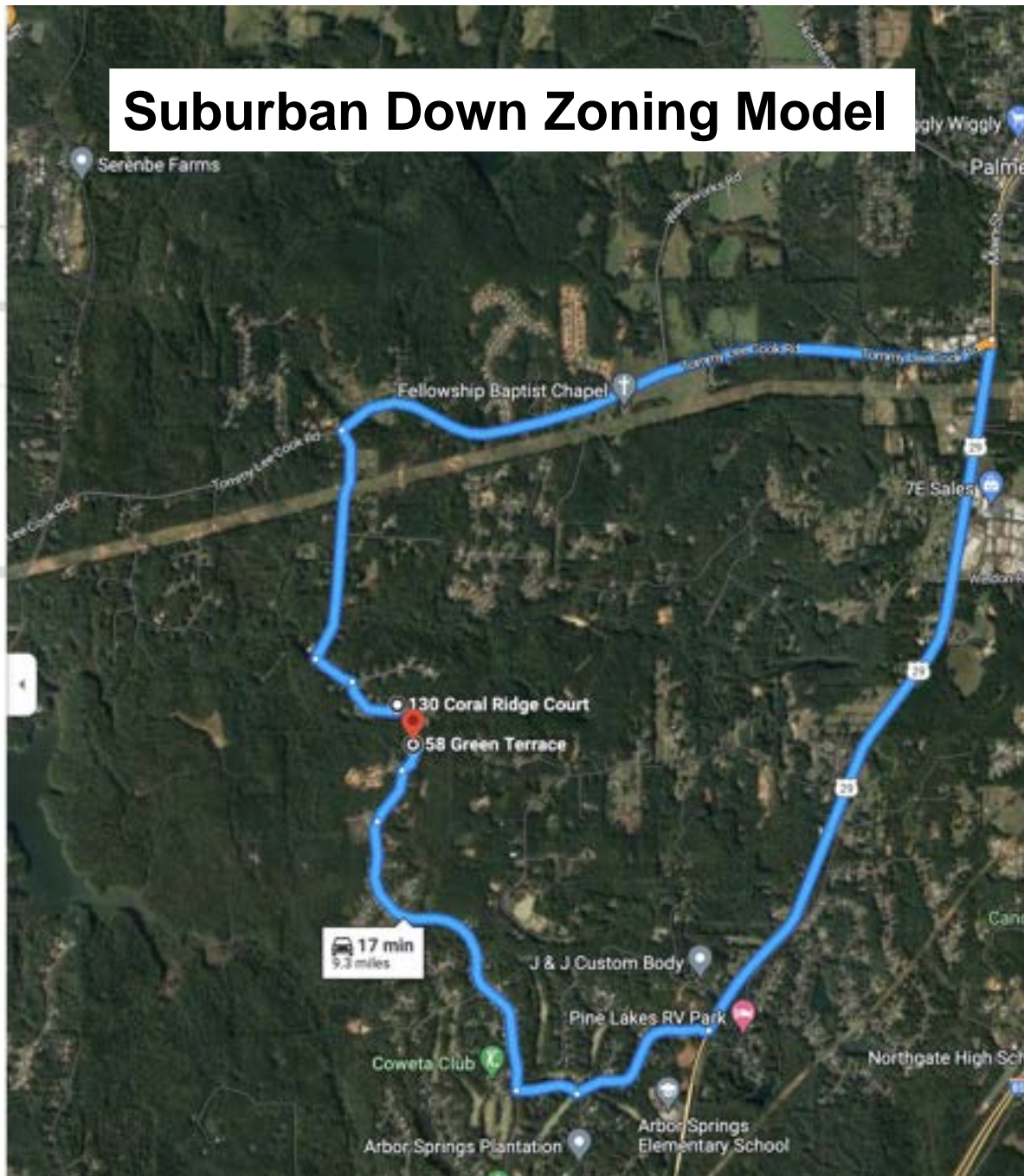


**For parent arranged play dates they travel 9.3 miles which takes 17 minutes oneway**

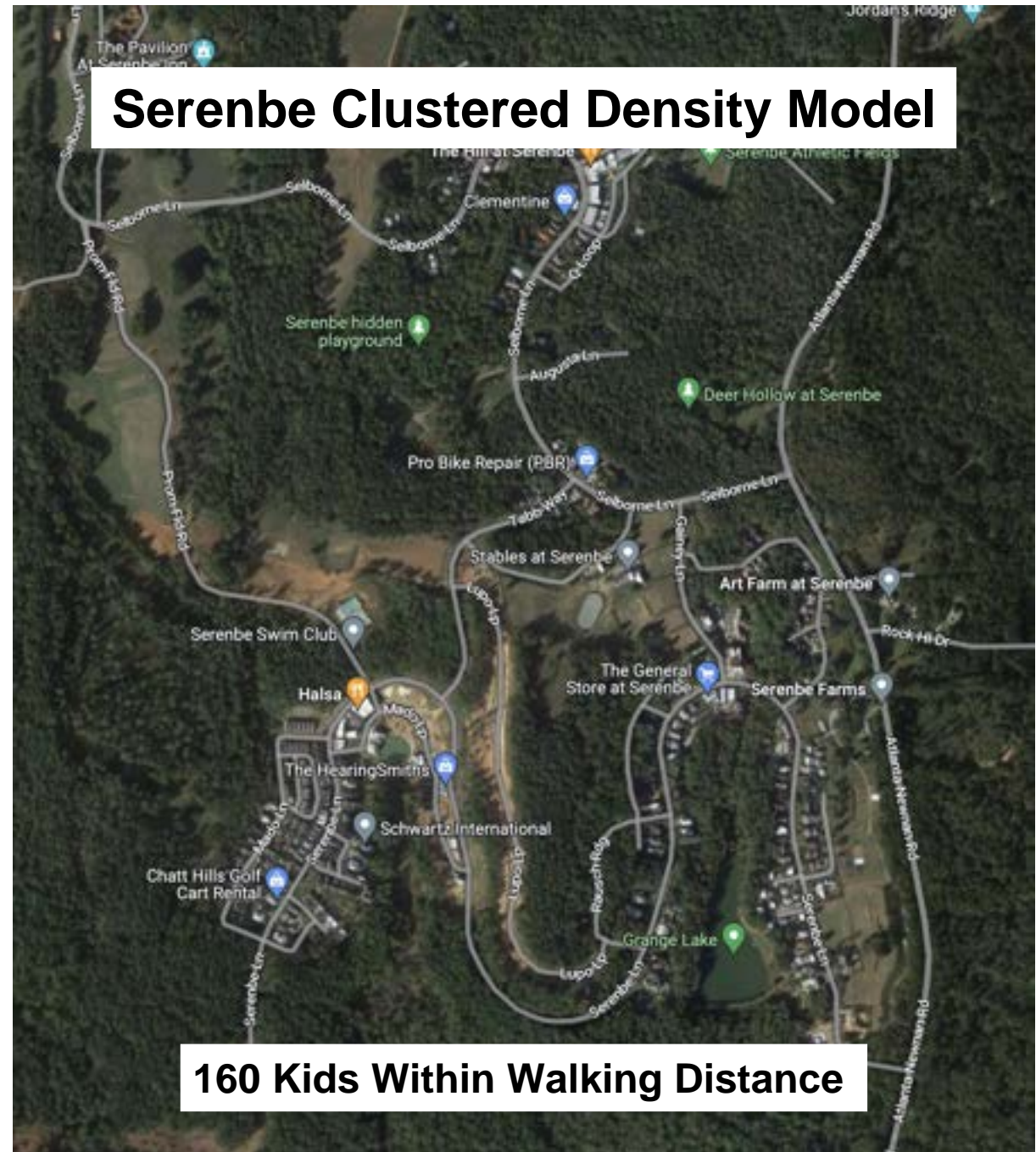
**Two houses 2,500 feet apart with children in the same class at school**



## Suburban Down Zoning Model



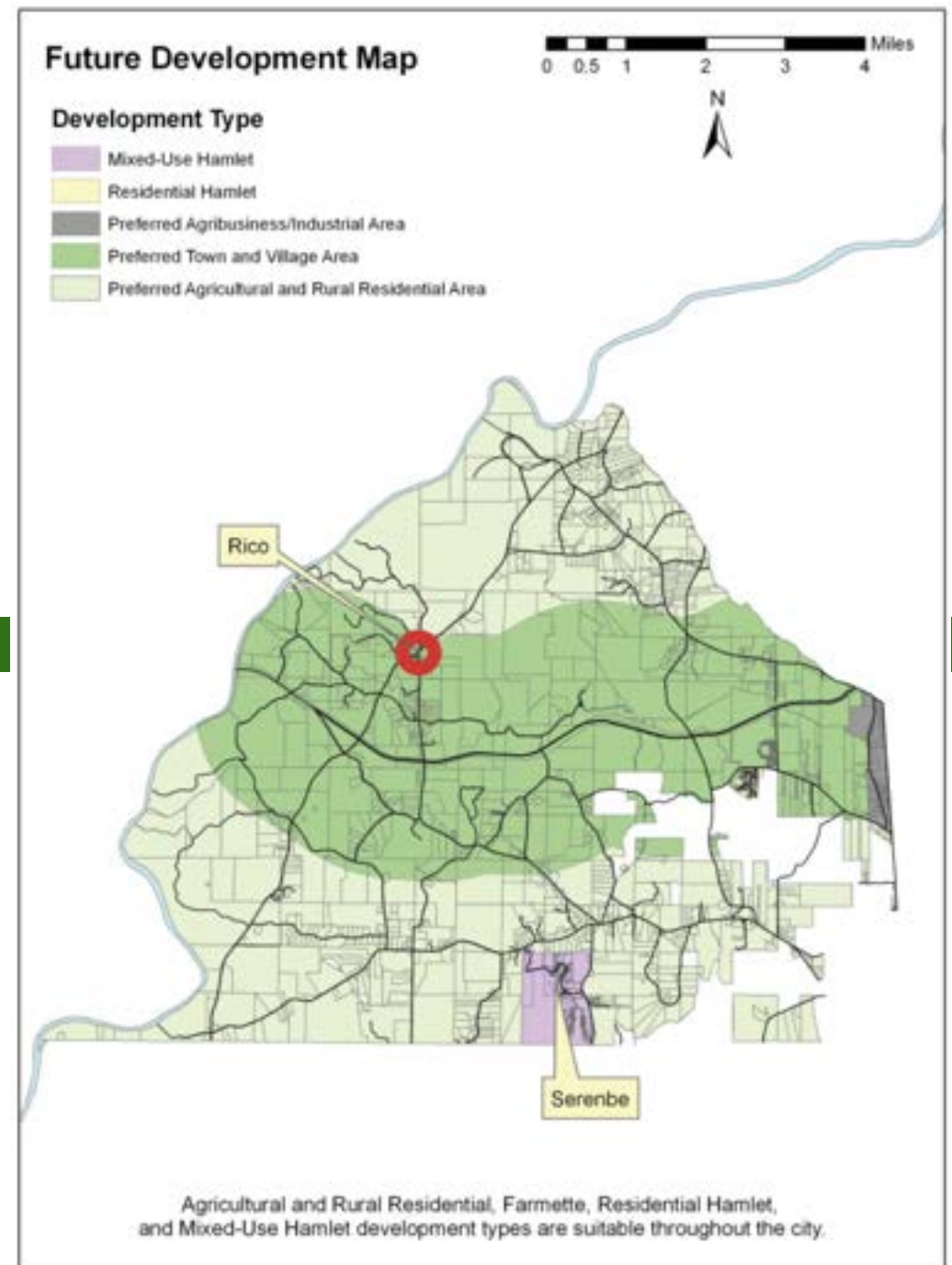
## Serenbe Clustered Density Model





# The Economics of a Balanced Tax Base

- Chattahoochee Hills has 39,000 acres
- Serenbe is 1,400 acres
- Serenbe has disturbed 200 acres for development
- Serenbe represents 60% of the taxes for the city with full time fire and police department
- Fully staffed public works department
- In the past 10 years the millage rate has been rolled back twice due to the taxes from Serenbe's 200 developed acres

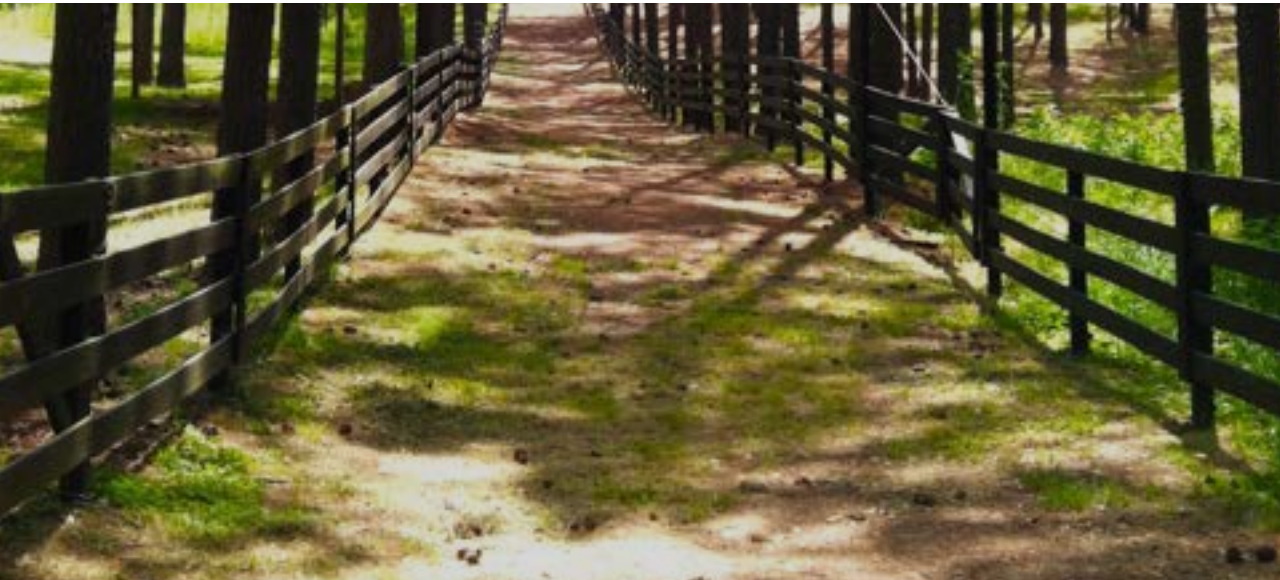






# serenbe

Connection to Nature and Each Other +  
Authentic Placemaking





## CONVENTIONAL DEVELOPMENT

Lower yield for the developer



Costly infrastructure



Costly to maintain



Auto dependent



Lower resident mobility



Isolation is common



Lower property values



## SERENBE'S DEVELOPMENT MODEL

More profitable for developer

60% savings on infrastructure

Less costly to maintain

Walkable

Healthier life-style

Fosters engagement

Higher property values



WE INVITE YOU TO VISIT

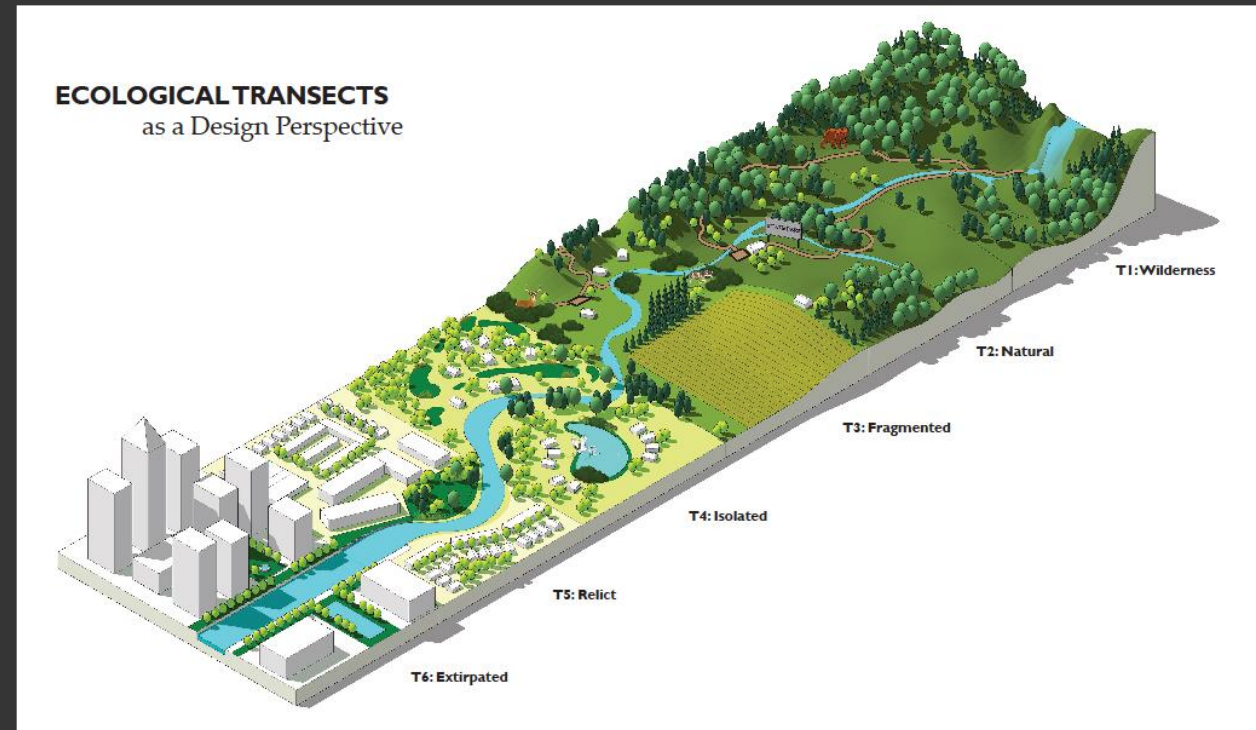
serenbe





# Lake Wales Envisioned: The Ecological Transect

Jay Exum, Ph.D.  
Exum Associates, Inc.





# Lake Wales Envisioned: The Ecological Transect

Consider an ecological basis for planning and design as an alternative to the urban transect concept

- Focus on ecological benefits
- Use historical natural systems and biological diversity as the transect metric



# Lake Wales Envisioned: The Ecological Transect

Flip the context to Biocentric :

T-1: **Wilderness** (Rural Preserve)

T-2: **Natural** (Rural Reserves)

T-3: **Fragmented** (Sub-Urban)

T-4: **Isolated** (General Urban)

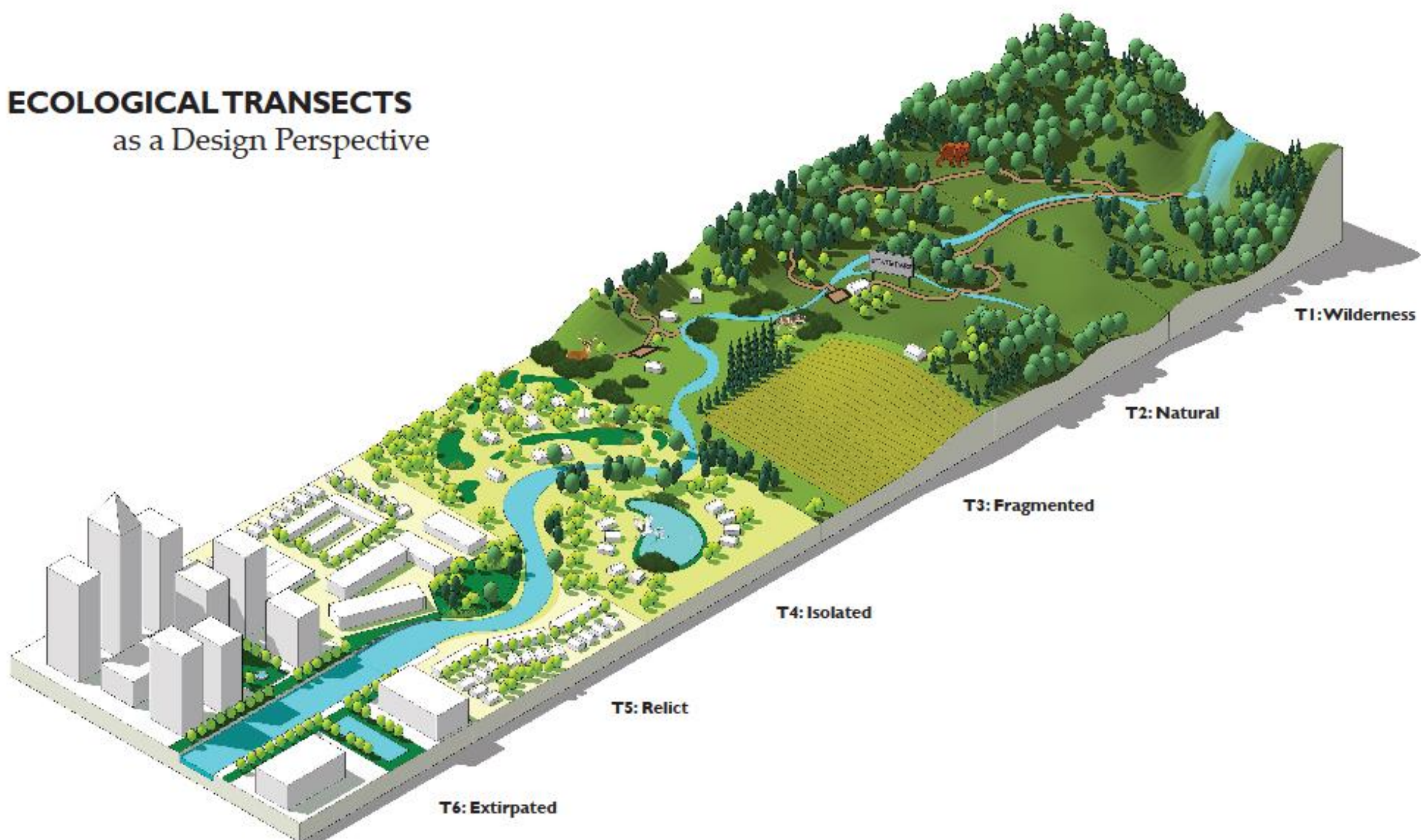
T-5: **Relict** (Urban Center)

T-6: **Extirpated** (Urban Core)



# ECOLOGICAL TRANSECTS

as a Design Perspective





# Lake Wales Envisioned: The Ecological Transect

## Wilderness

Limit roads

## Natural

Natural influences of fires, hurricanes

Land acquisition programs

Native Biological Diversity

Compatibility with adjacent natural lands

Restore natural systems

Ecotourism/Networks of trails

Wilderness experiences

**Natural**

## Fragmented

Manage fertilizer use

Sustain natural hydrology

Agriculture

Low maintenance landscapes

**Suburban**

## Isolated

Don't use toxic chemicals that pollute downstream

Pockets of natural lands

Control exotic species

Protect groundwater recharge

Prevent downstream impacts

Non-native plants in ornamental landscapes

**General Urban**

## Relict

Ecologically benign

Minimize water use

High maintenance landscapes

**Urban Center**

## Extirpated

**Urban Core**



# Lake Wales Envisioned: The Ecological Transect

How they are different:

- The Urban Transect is anthropocentric and potentially self-serving
- The Ecological Transect is biocentric and potentially quantitative/objective



# Lake Wales Envisioned: The Ecological Transect

Still; the two transects have a convergent purpose related to the environment:

- Minimize the human footprint to maximize conservation of natural resources



# Lake Wales Envisioned: The Ecological Transect

## General Design Themes:

Wilderness – *Ecologically Pristine*

Natural – *Ecologically Diverse*

Fragmented – *Ecologically Restorable*

Isolated – *Ecologically Inclusive*

Relict – *Ecologically Relatable*

Extirpated – *Ecologically Benign*



# Lake Wales Envisioned: The Ecological Transect

## **Extirpated Natural Diversity (T6 Urban Core)**

*Biodiversity characteristics:* Generally incompatible

*Resource objectives:* Prevent off-transect or downstream impacts

*Conservation actions\*:*

- Protect water quality (minimize fertilizers, herbicides and pesticides)
- Reduce water consumption
- Prevent the spread of exotic species

## ***Design Considerations:***

- **Concentrate areas of high maintenance landscapes**
- **Don't feel compelled to use native plants**
- **Manage for healthy aquatic systems**

\*All transect zones should include approaches to reduce greenhouse gas production, hazardous waste disposal and toxic emissions



# Lake Wales Envisioned: The Ecological Transect

## T6: Extirpated Natural Diversity (Urban Core): Ecologically Benign Design





# Lake Wales Envisioned: The Ecological Transect

## T5: Relict Natural Diversity (Urban Center): Ecologically Relatable Design

### Design Considerations:

- Seek ways to meaningfully integrate with embedded or adjacent aquatic or natural systems





# Lake Wales Envisioned: The Ecological Transect

## T5: Relict Natural Diversity (Urban Center): Ecologically Relatable Design

### Design Considerations:

- Use long-lived, native canopy species





# Lake Wales Envisioned: The Ecological Transect

## T4: Isolated Natural Diversity (General Urban): Ecologically Inclusive Design

### Design Considerations:

- Minimize the area of high maintenance landscapes; prescribe native plants
- Plan for access to isolated conservation lands via trail networks



# Lake Wales Envisioned: The Ecological Transect

T4: Isolated Natural Diversity (General Urban):  
Ecologically Inclusive Design

Design Considerations:

- Seek ways to incorporate natural lands as active classrooms





# Lake Wales Envisioned: The Ecological Transect

T3: Fragmented Natural Diversity (vs Sub-Urban):  
Ecologically Restorative Design

Design Considerations:

- Incorporate wetland habitat in stormwater systems adjacent to conservation lands



# Lake Wales Envisioned: The Ecological Transect

## T3: Fragmented Natural Diversity (Sub-Urban): Ecologically Restorative Design

### Design Considerations:

- Design trail systems within and through natural lands





# Lake Wales Envisioned: The Ecological Transect

T2: Natural Biological Diversity (Rural Reserves):  
Ecologically Diverse Design

Design Considerations:

- Use only natives and no fertilizers or herbicides



# Lake Wales Envisioned: The Ecological Transect

## T2: Natural Biological Diversity (Rural Reserves): Ecologically Diverse Design

### Design Considerations:

- Consider the effects of wildlife (from herbivory by rabbits and deer to bear-wise programs)





# Lake Wales Envisioned: The Ecological Transect

## T1: Wilderness Diversity (Rural Preserves): Ecologically Pristine Design

### Design Considerations:

- Stimulate wilderness experiences
- Create wilderness-based recreation plans



# Lake Wales Envisioned: The Ecological Transect

## T1: Wilderness Diversity (Rural Preserves): Ecologically Pristine Design

### Design Considerations:

- Monitor human activities and rectify causes of natural resource impacts





# Lake Wales Envisioned: The Ecological Transect

## Tiger Creek Preserve





# Lake Wales Envisioned: The Ecological Transect

## Lake Wales Ridge Wildlife and Environmental Area





# Lake Wales Envisioned: The Ecological Transect

## Babson Park Audubon Center



# Lake Wales Envisioned: The Ecological Transect

## Bok Tower Gardens





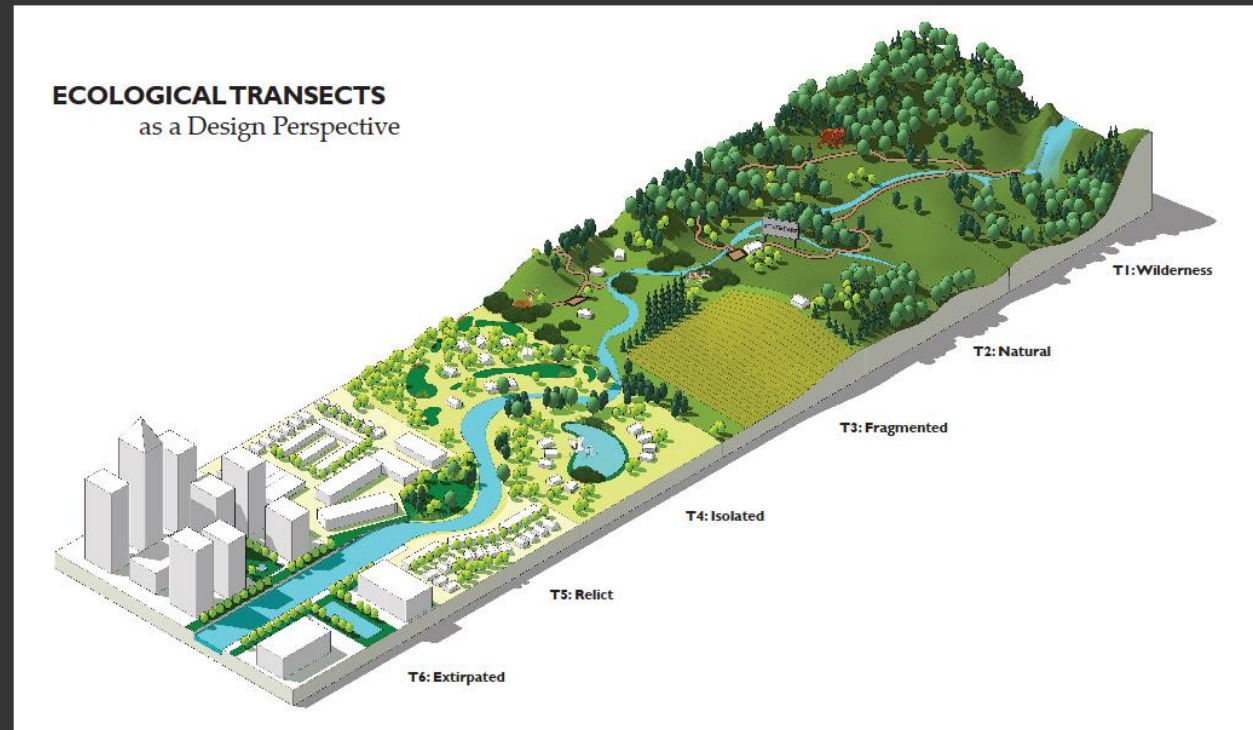
# Lake Wales Envisioned: The Ecological Transect

## Tools to Achieve the Objectives of the Ecological Transect

- Land Acquisition
- Conservation Easements
- Land Trusts
- Conservation and Mitigation Banks
- Density Credits
- Developer and Landowner Incentives
- Comprehensive Plan policies
- Land Development Codes
- Regulations
- Partners
- Grants

# Lake Wales Envisioned: The Ecological Transect

Jay Exum, Ph.D.  
Exum Associates, Inc.







# CLOSING REMARKS

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**L A K E W A L E S**

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OLMSTED'S CITY IN 10, 25, AND 50 YEARS

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