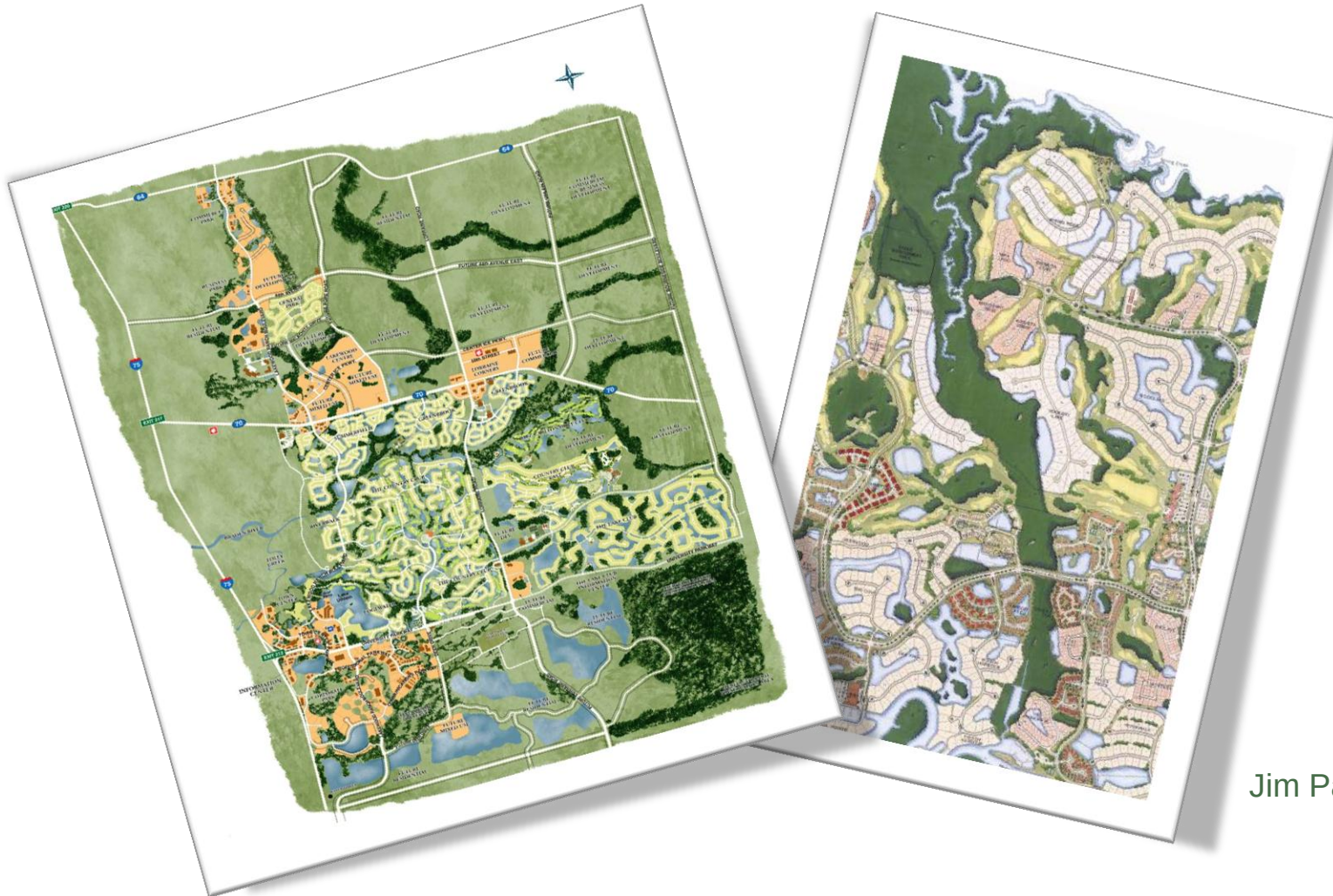




Environmental Planning Applications

For Tomorrow's Master Planned Communities



Jim Paulmann, FAICP
Senior Principal
Stantec



PRESENTATION OVERVIEW

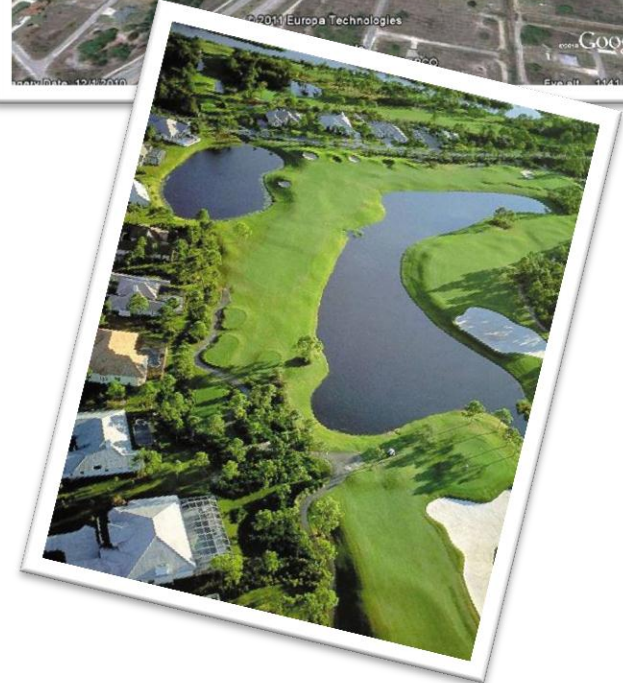
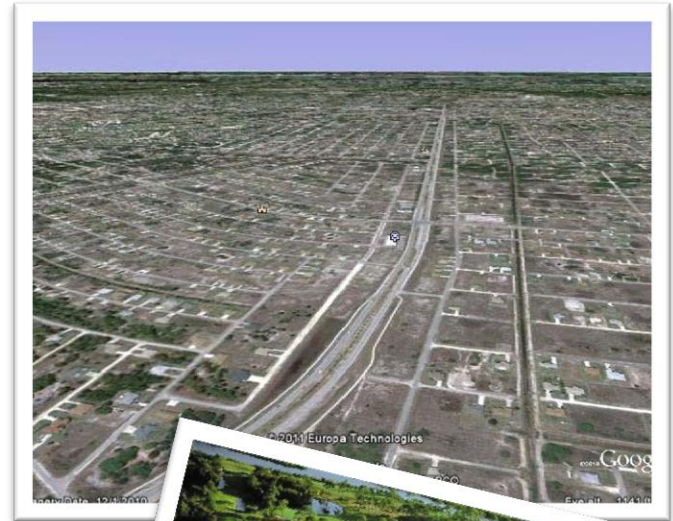
- Foundations of Florida's Master Planned Communities
- Regulatory Tools
- Environmental Framework
- Case Studies
 - Babcock Ranch (Charlotte/ Lee Counties)
 - Lakewood Ranch (Manatee/ Sarasota Counties)
 - Palmer Ranch (Sarasota County)
- Focus on Low Speed Electric Vehicles
- Future for Sustainable Communities





FOUNDATIONS OF FLORIDA'S MASTER PLANNED COMMUNITIES

- Early Examples
- Pre-Platted Land Sales Communities
 - Monocultures
 - Challenges to Retrofit
- Golf Courses and Lifestyle Communities
 - Private Country Clubs – Exclusive Communities
 - Affordable options – National Builders
- Active Adult Communities
 - Age-restricted (55 and older)
 - Mix of Uses
 - Golf Cart Connections





FOUNDATIONS OF FLORIDA'S MASTER PLANNED COMMUNITIES

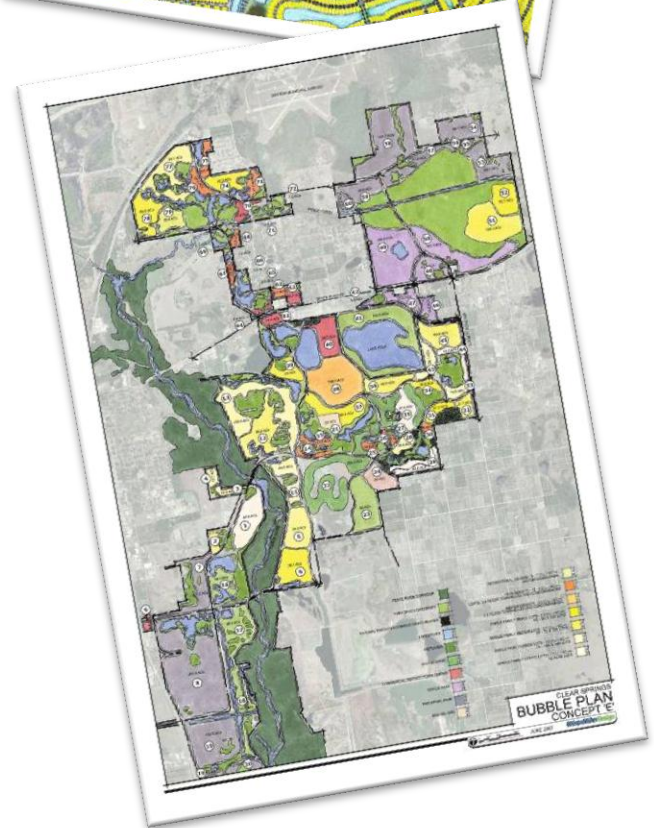
- Self Contained/ Fully Integrated Communities
 - Large Scale
 - Based on a comprehensive strategy
 - Balanced Mix of Land Uses
 - Range of Housing Opportunities
 - Affordable Housing Challenges
 - Generally Low Density
 - Amenities
 - Development Standards/ Unifying Elements
 - Automobile Oriented





REGULATORY TOOLS

- DRIs and PUDs
 - Regional Impacts and Flexibility
- Urban Villages and Hamlets
 - New Urbanist/ TND Framework/ Sprawl Issues
 - Economic Opportunities
- Rural Land Stewardship
 - Voluntary Program
 - Stewardship Credits/ Compact Development
 - Protects Ecosystems and Agriculture
- Sector Plans
 - Long Term Planning
 - Large Land Holdings – Development, Conservation, and Agriculture





ENVIRONMENTAL FRAMEWORK

- Comprehensive Environmental Systems Planning
- Extensive Interconnected Open Space Network
 - Preserve High Value Space (Biodiversity)
 - Restore Native Wildlife Habitat (uplands and wetlands)
 - Create Enhanced Wildlife Corridors (trails/ passive parks)
- Watershed Management
 - Regional Stormwater Management/ LID
 - Stream and Slough Restoration
 - Water Quality Improvements
 - BMP Treatment Train
 - Stream Course Buffers
- Water Conservation
 - Irrigation Strategies
 - Water Efficient Landscaping

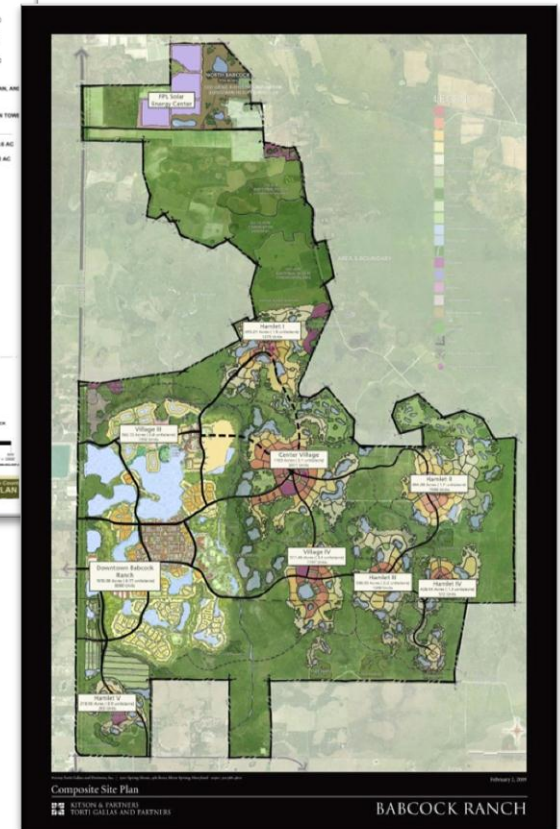
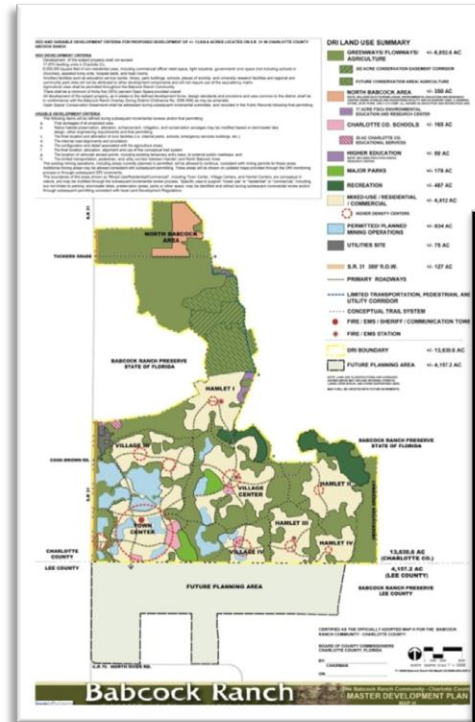




BABCOCK RANCH

(91,000 Acres)

- Environmental Land Sale to the State of Florida
 - 73,000 Acres
 - Largest State Acquisition
- City of Tomorrow (Sustainable Showcase)
 - 17,870 DUs
 - 6 Million Sq. Ft. Non-Residential
 - Development on Most Impacted Areas (Agriculture, Mining Areas)
- Clustered in Villages and Hamlets





ENVIRONMENT

- Extensive Vegetative and Wildlife Studies
- Significant Statewide Greenbelt Corridor (Charlotte Harbor to Lake Okeechobee)
- Incorporated Series of Tiered Use Greenways throughout Community (Based on Environmental Function)





WATER RESOURCES

- State-of-the-Art Surface & Groundwater Hydrologic Monitoring
- Re-established Historic Hydrological Regime
(Corrects Flooding Problems)
- Scrubber Marshes at Outfall
(Water Quality)





ENERGY/SUSTAINABILITY

- Energy Goal to be Grid Neutral
- Partnership with FPL for PV Solar Field
- Water Reuse Irrigation
- LID Development Strategies
- Multi-Modal Transportation Systems
 - Walkable Neighborhoods
 - Transit
 - Electric Vehicles





LAKEWOOD RANCH

(31,000 Acres)

- 23,000 Residential Units
- 12 Million Sq. Ft. Non-Residential
- Regional Hospital
- 100 Miles of Trails
- Active Agri-Business





ENVIRONMENTAL

- Extensive Vegetative and Wildlife Surveys
- Master Restoration Project
 - Long Swamp (400 acres)
 - Braden River Mitigation Bank (350 acres)
- Dedicated Conservation Areas
 - Heritage Ranch (2,000 acres)
- Enhanced Wildlife Corridors





WATER RESOURCES

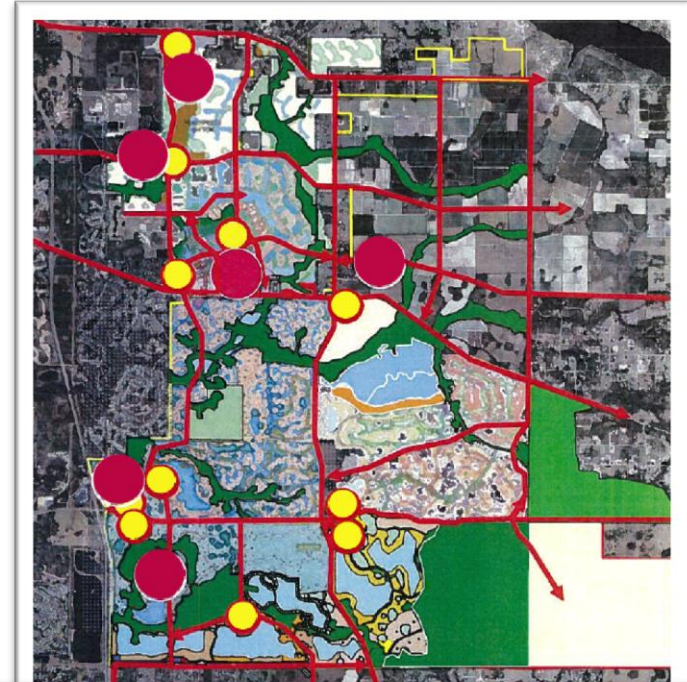
- Stormwater Management
 - Corrected Area-Wide Drainage and Floodplain Problems
 - Restored Historic Water Circulation
- Water Quality and Conservation
 - Higher Level of Treatment
 - No Potable Water for Irrigation
 - Community Education





NEW PLANNING APPROACHES

- Integrated Land Use (Jobs-Housing Balance)
 - Additional Employment Centers
 - Committed to Workforce Housing
- Mobility Choices
 - Extensive Pedestrian Circulation System
 - Potential Trolley System
 - Links to Mass Transit
 - Electric Vehicles
- Urban Villages
 - Reclaimed Areas from Prior Mining
 - Sarasota 2050 Plan
 - Alternative to Urban Sprawl
 - Compact Mixed Use Neighborhood-Based Development
 - Highly Prescriptive Regulations

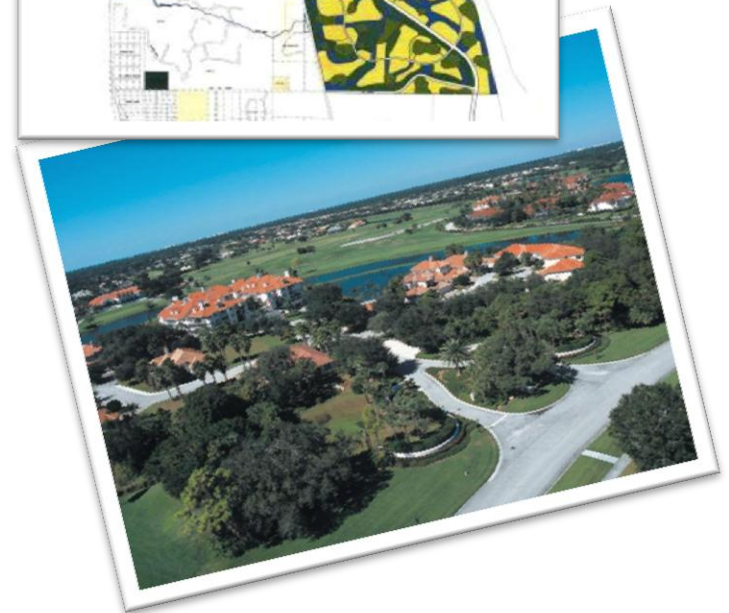
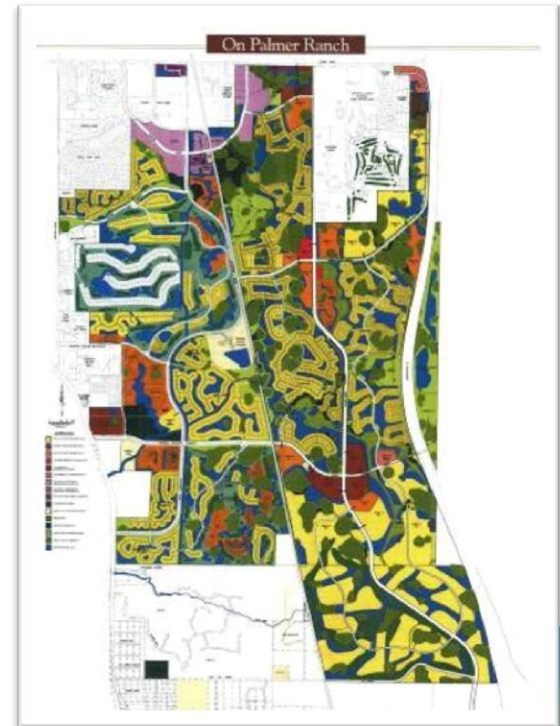




PALMER RANCH

(12,000 Acres)

- Master Plan for North 5,200 Acres
 - 10,500 DUs
 - 4 Million Sq. Ft. for Non-Residential
- Integrated into Sarasota Urban Area
- Cornerstone - Upfront Environmental Systems Planning
 - Native Habitat/Listed Species
 - Flood Plains/Drainage
 - Water Quality
 - Historical & Archaeological Resources
 - Open Space and Parks





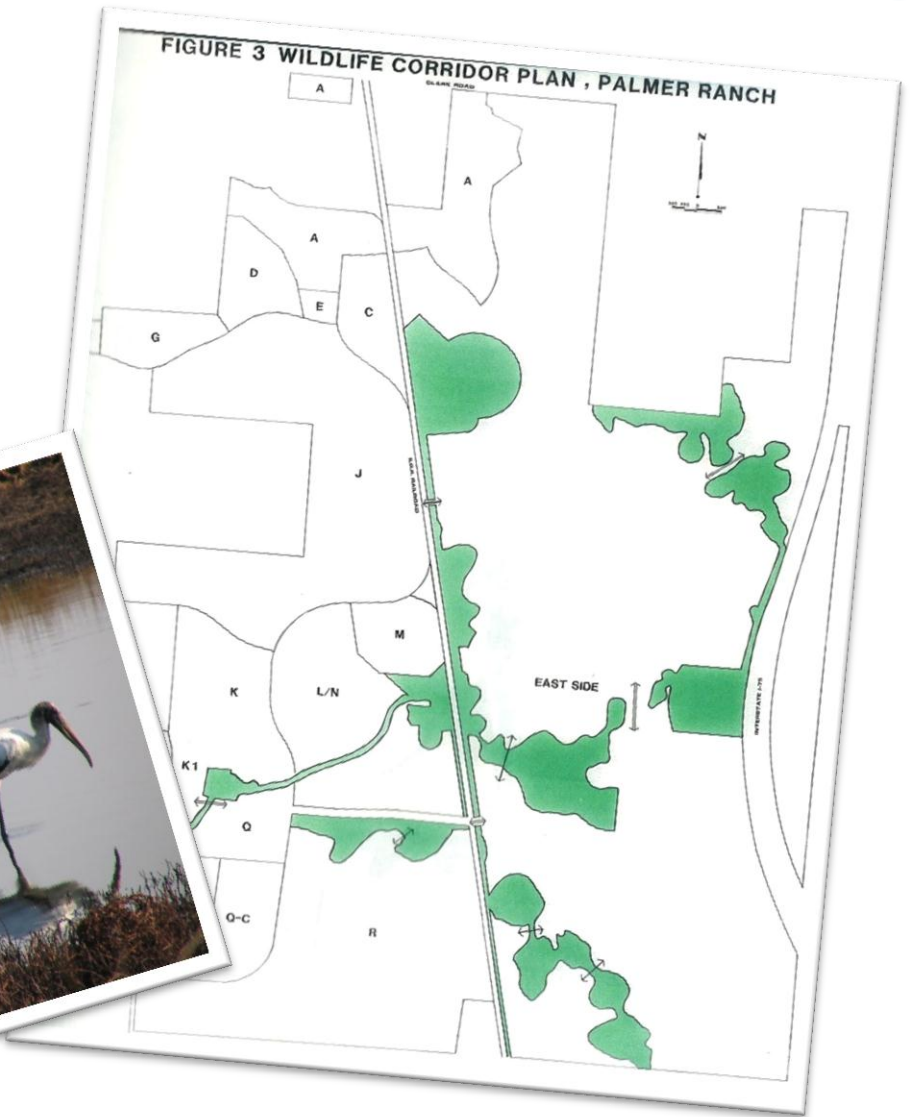
NATIVE HABITAT







WILDLIFE CORRIDORS



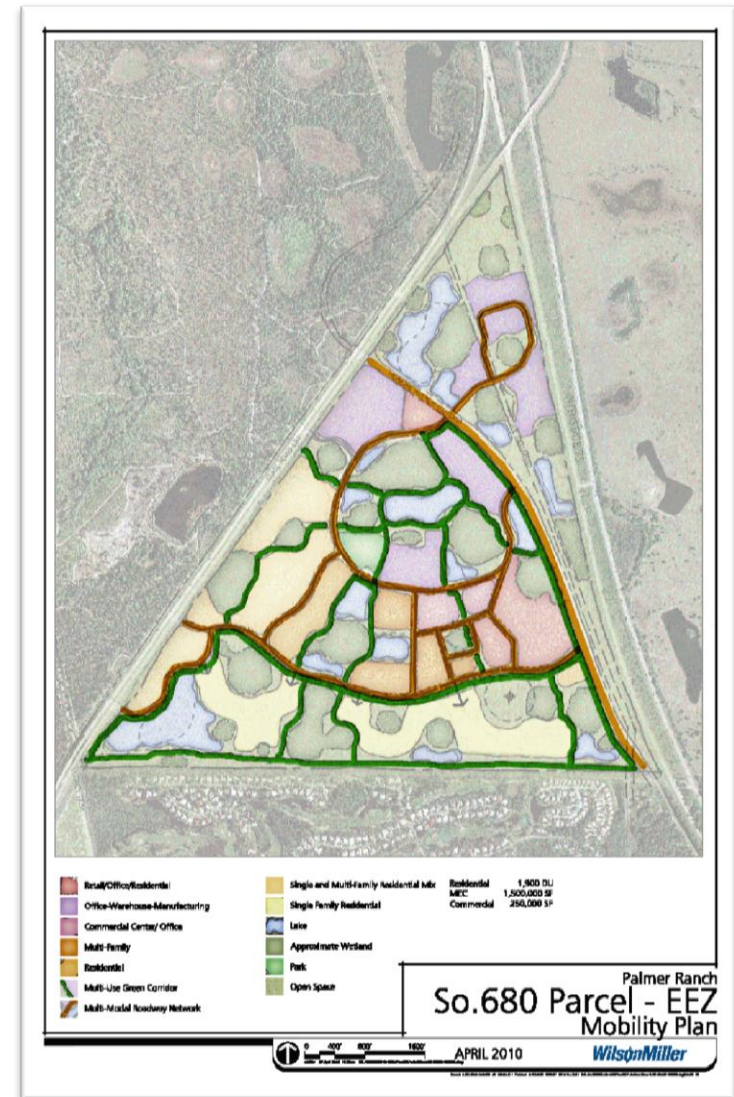
NEIGHBORHOOD CONNECTIONS





MULTI-MODAL PLANNING

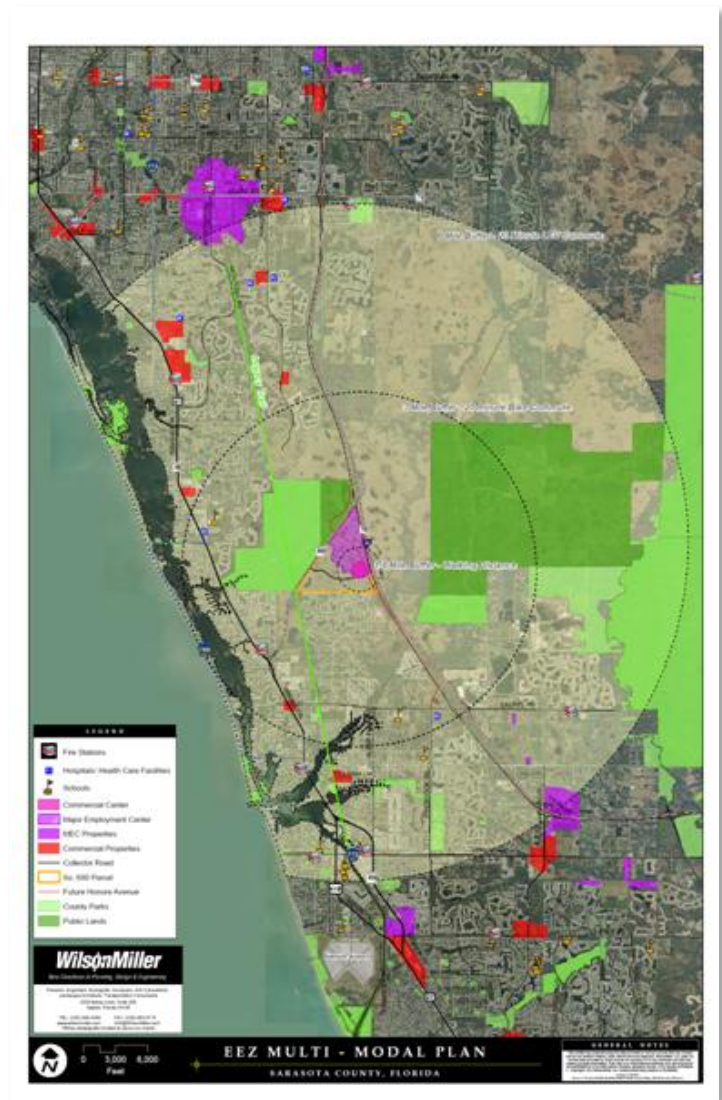
- Energy Economic Zone (State Pilot)
 - Model Community or Green Economic Development
 - Land Use Changes not approved by Sarasota County
- Linking Land-Use & Transportation (Jobs to Housing Balance)
- Road Network - Accommodate Low-Speed Electric Vehicles (LEVs)
- Green Corridors - Link Habitats to Move People and Wildlife
Neighborhood Electric Vehicles (NEVs)
- Opportunities to Connect to a Regional System





MULTI-MODAL PLANNING

- Multi-Modal Network/ Evaluated Connections Between:
 - Residential
 - Major Employment Centers
 - Commercial Centers
 - Schools
 - Hospital/ Health Care Providers
 - Parks/ Libraries
 - Publicly Owned Lands
- Coordinated within Regional Transit Plans
- Extensive Community Outreach





MULTI-MODAL PLANNING

EXISTING NETWORK

- Operational Concerns Identified within Existing Network:
 - Speed Control
 - Pedestrian Conflicts
 - Bikes vs. Cars
 - Wildlife Conflicts





MULTI-MODAL PLANNING

DEVELOPING A NETWORK - SHARING MAJOR ROADWAYS



Honore Avenue



Laurel Road



US 41



MULTI-MODAL PLANNING

DEVELOPING A NETWORK - SHARING MINOR ROADWAYS



Potter Park Drive



Bay Street



MULTI-MODAL PLANNING

NETWORK DEVELOPMENT - DESIGNATED PATH



Palmer Ranch Parkway



McIntosh Road

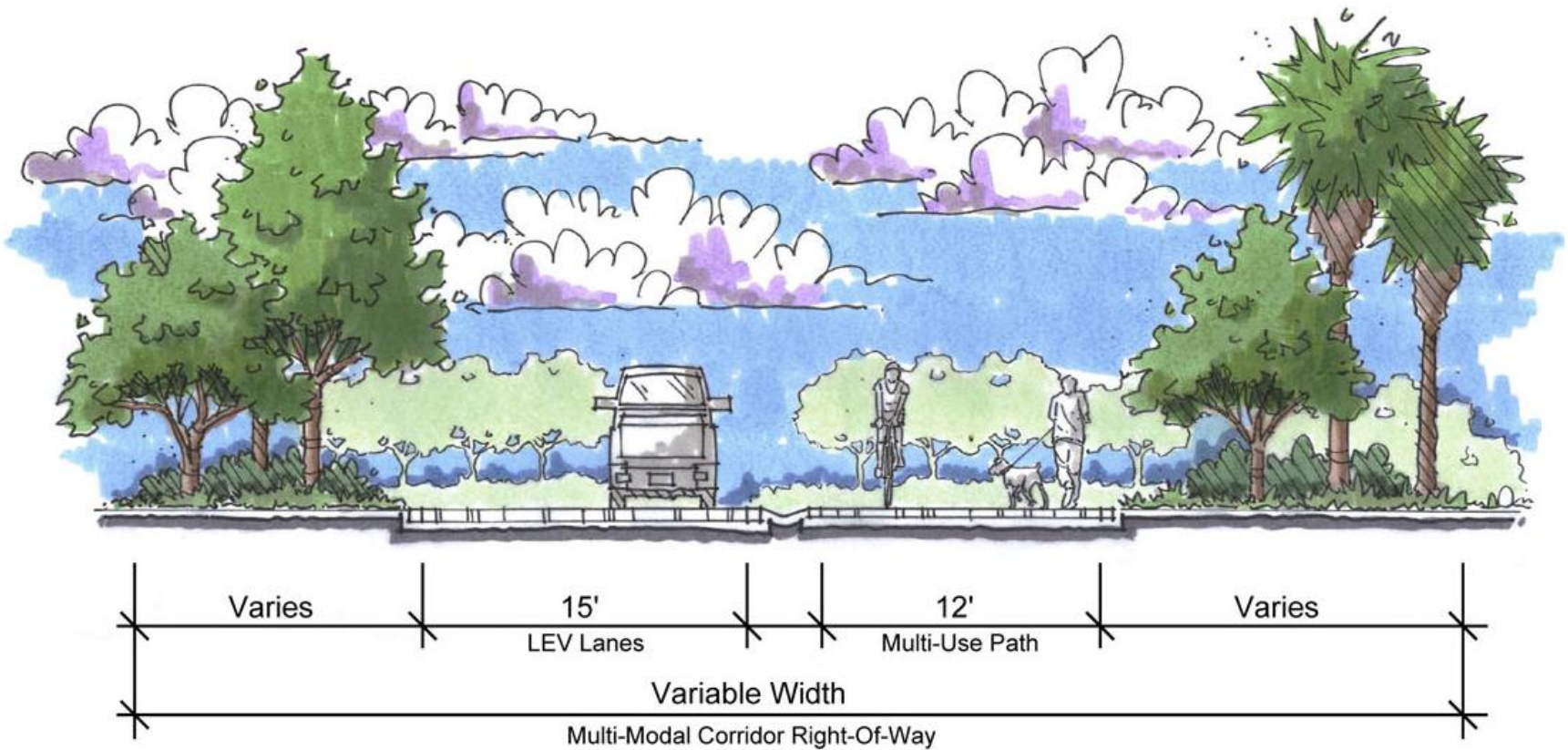


Central Sarasota Parkway



MULTI-MODAL PLANNING

TYPICAL SECTION

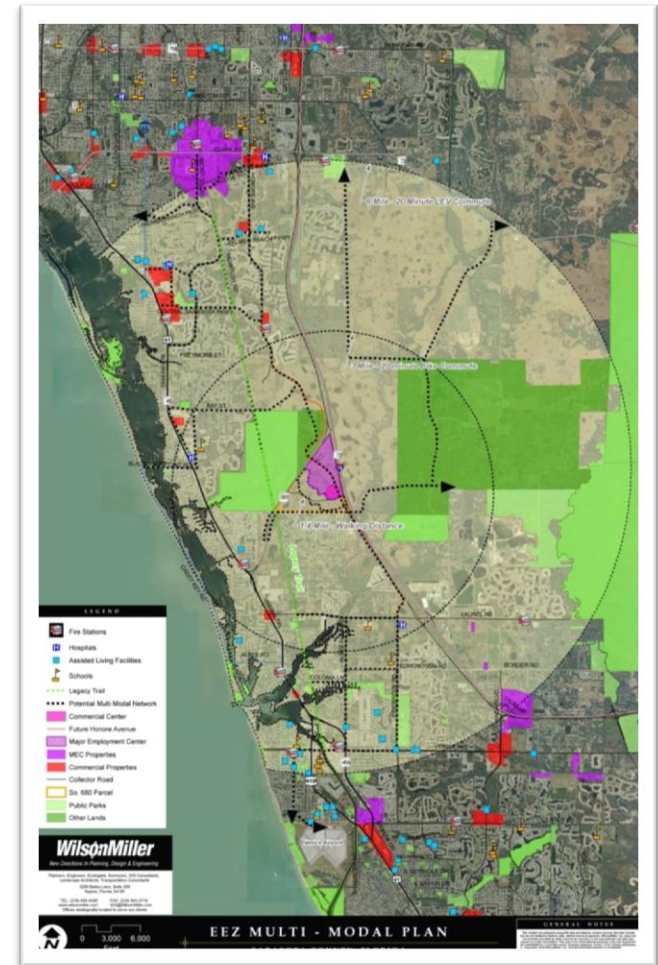




MULTI-MODAL PLANNING

(LOW IMPACT MOBILITY – LIM)

- Regional Multi-Modal System
 - Walk
 - Bike
 - LEVs
 - Transit (Macro and Micro)
- Opportunities Plan (Connect the Dots)
 - Provide Employment Connections
 - Interconnections of Attractors
 - Eco-Tourism
- Benefits
 - Reduces Traffic Congestion
 - Reduces Greenhouse Gases
 - Energy Savings
 - Quality of Life





CONTINUATION OF SARASOTA'S LSV EFFORTS

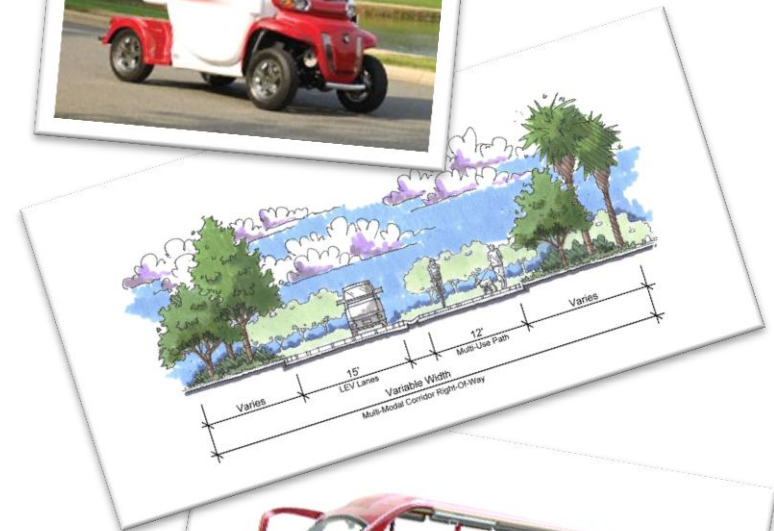
- Strong Community Support for LSV Network
- Created Low-Speed Electric Vehicle Cluster
- Local Solar Enhanced LSV Manufacturer
- Private Sector Implementing Microtransit (Siesta Key, St. Armands, Downtown)





IMPLEMENTATION OF A LOW-SPEED ELECTRIC VEHICLE PLAN

- Requirements
 - Restricted to Private Roads
 - Public Roads Posted 35 MPH or Lower
 - Safety Features (seatbelts, wipers, signals)
 - Single Charge Range (30 miles)
- Planning a Network
 - Incorporate into a Multi-Modal System (Walk, Bike, Transit)
 - Identify Attractors/Evaluate Linkages
 - Separate Pathways/Lower Speed Limits
 - Address Intersection Routing
 - Evaluate Parking and Charging Stations
- Challenges and Education
 - Real and Perceived Safety Issues
 - Legislation – Signage - Striping
 - Community Opposition (Bike Groups)





FUTURE MOBILITY



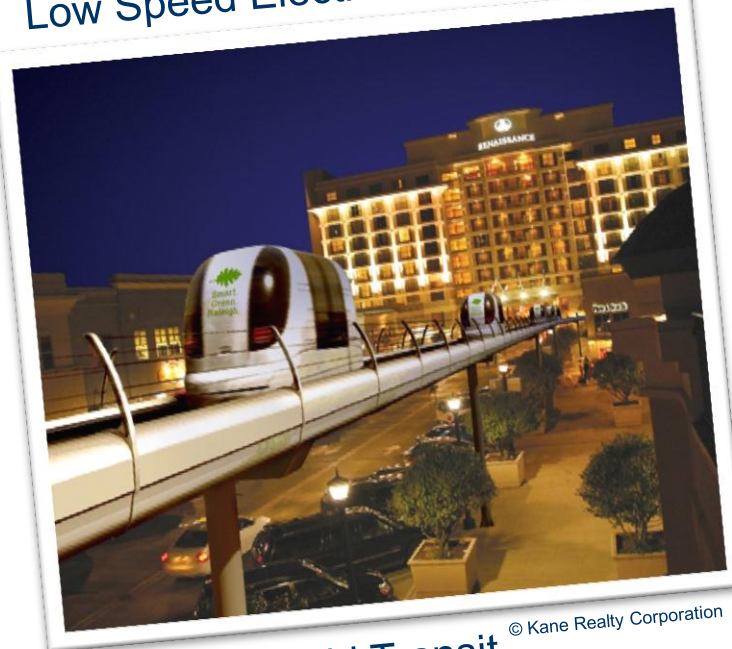
Electric Vehicle – Volt © Chevrolet



Autonomous Car © Google



Low Speed Electric Vehicle



Personal Rapid Transit © Kane Realty Corporation



FUTURE FOR SUSTAINABLE COMMUNITIES

- Demographics/Economics
- Water and Energy Issues
- Focus on Sustainable Options
- Urbanization of Suburban Areas
 - Compact, Denser, Taller
 - Employment
 - Sense of Place
 - Shift to 24/7 World
 - Mobility
 - Soft Infrastructure
 - Recreation
 - Education
 - Technology
 - Health Care





Questions

DISCUSSION

A large, three-dimensional green question mark icon is positioned to the right of the word "Questions". It has a metallic or glossy finish with a subtle gradient and a soft shadow cast to its right.