

**Welcome to the 2023 FRPA Conference!**



**August 28 - 31, 2023 | Orlando, FL**

# SITE PLAN DEVELOPMENT FOR BEGINNERS, NOVICES AND NEWCOMERS





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# LEARNING OBJECTIVES

- One: Have a basic understanding of site analysis, including site conditions, zoning regulations, land development regulations, utilities, topography, soils, hydrology, vegetation and/or wildlife, cultural features/community interests, and environmental concerns
- Two: Understand the agency stakeholders and their interrelationships in site development
- Three: Understand the basic terminology of park site development



# Introduction

Site planning is the art of arranging structure on the land and shaping the spaces between linking architecture, engineering, landscape architecture and city planning

Site Planning by Kevin Lynch

Park systems are built site by site

Great Sites are

Responsive to humans

Adaptable over time

Efficient

compatible with surroundings

sustainable



# Introduction

## WHEN IS A SITE PLAN REQUIRED

- For any building permit for new development
- Any redevelopment that includes exterior work
- Many types of land use applications, such as site plan review, conditional use permit, or land divisions



# Introduction

Site planning begins by assessing a potential site for development through site analysis. Information about slope, soils, hydrology vegetation, parcel ownership, orientation to wind & sun, etc.

By determining areas that are poor for development (such as floodplain or steep slopes) and better for development, the planner can access optimal location and design a structure that work within a space



# Introduction

Why do you need a site plan? Most often to obtain a permit!

There are 3 property rights

- The right to purchase property
- The right to sell property at a profit
- The right to develop land by permit such as zoning



# Introduction

What is it for a parks project?

- Creation of a Site Plan
- Creation of Social Infrastructure

Site Planning involves  
Buildings & Structures  
Roads & Walkways  
Trees & Gardens  
Water Bodies & Controls  
Landscaping  
Services  
Parking  
Manmade Features



# Site Plan Development

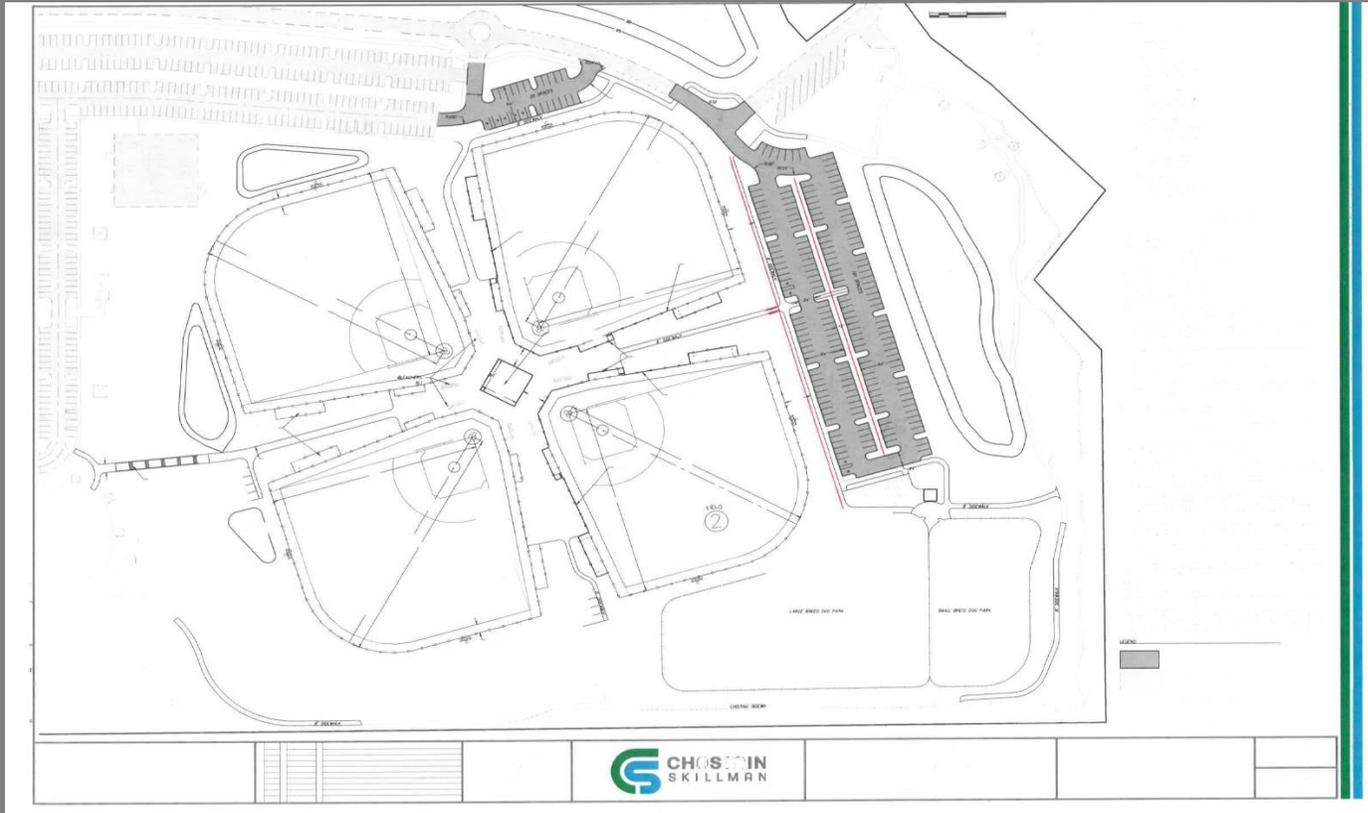
- Two Types of Site Plans

1. Certified site plan by design professional
2. Noncertified site plan you create in-house



# Site Plan Development

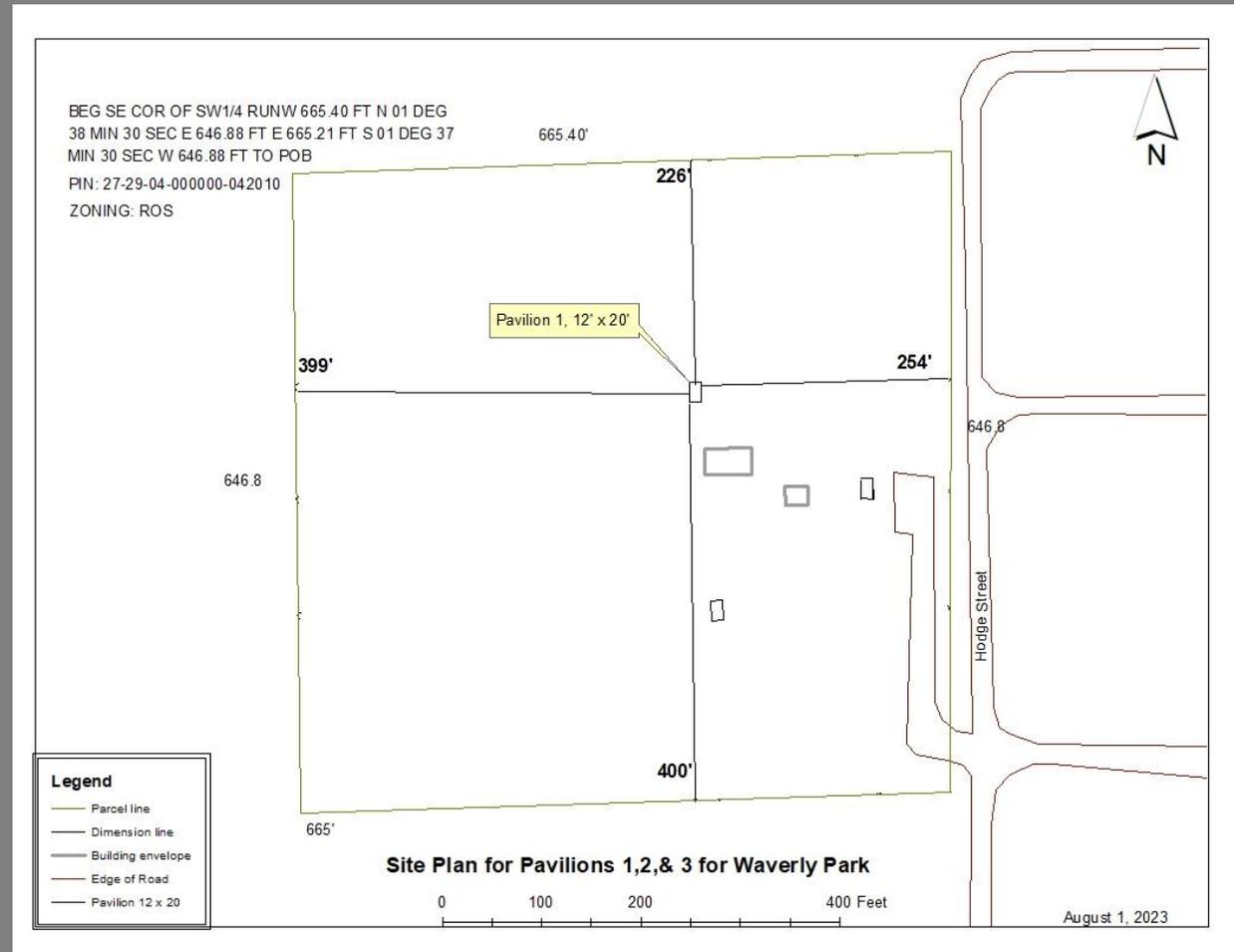
Certified site plan created by professionals





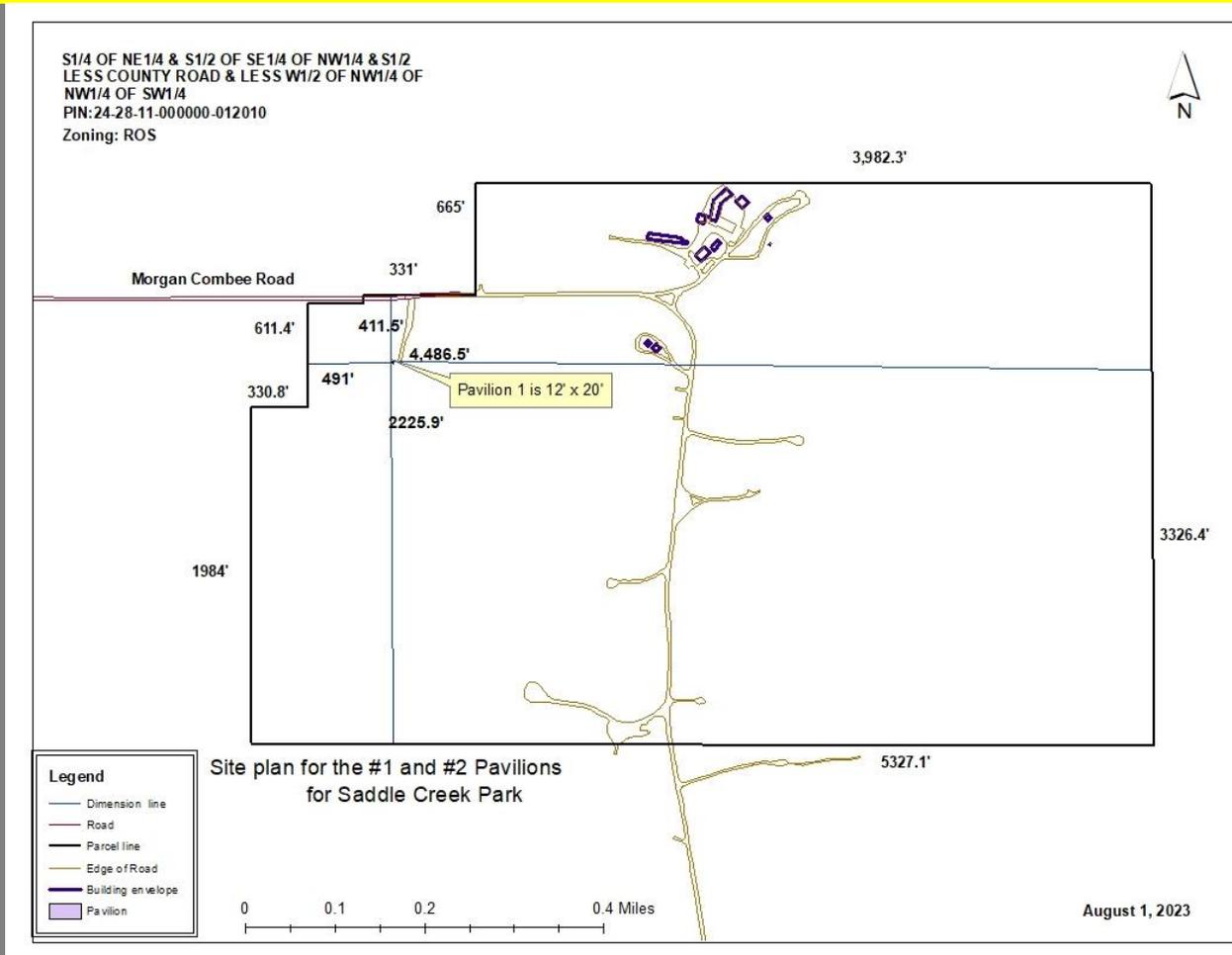
# Site Plan Development

Size matters



# Site Plan Development

Size /scale matters in parks



# Site Plan Development

Minimum information on a site plan from bird's eye view

- Your name and address
- Legal Description
- Scale
- Cardinal direction
- Property lines
- Location details: streets, driveways, parking
- Outline of existing structures and distances between them
- and proposed structures



# Site Plan Development : Research

1. Goals What do we need to achieve, and why
2. Facts What do we know, what is a given, what do we not know?
3. Concepts – How do we want to achieve goals? Inhouse talent or hired help
4. Needs How much money and space is needed? What level of quality
5. Problem What are the significant conditions affecting the design of the space? What are the general directions the design should take



# THE DISC GOLF COURSE PROJECT

It all started with the Parks, Recreation and Preserves Master Plan Questionnaire

The Questionnaire reveals citizens desire for a Disc golf Park Planning Staff contact the local disc golfers

Where is a possible site location

What is the size and shape of the site

Do you need utilities?

Power water sewage?

Proximity to user group?

Access by police, fire/rescue?



# Data Gathering

## Site Development Planning 101

### Design process

- Data gathering
- Analysis
- Synthesis

1. Identify your project objective
2. Collect existing data
3. Results of your site visit
4. Environmental assessment
5. Infrastructure analysis
6. Regulatory review
7. Socio-economic considerations
8. Stakeholder engagement
9. Site constraints
10. Synthesize findings



# Data Gathering

## *A Site Donated!*

### Assessing site suitability

- Comprehensive Plan: “ROSE”
- Parks and Recreation Master Plan
- Individual park master plan



# Data Gathering

- Land Development Regulations
- Building Codes
- Environmental Laws
- Public Access Requirements



# Data Gathering Land Development Regulation

WHATS ALLOWED BY LAW:

Ownership data from County Property Appraiser Site

Land use and zoning data from the Planning Department site

Transportation data from the County Transportation Planning Organization (TPO) site.

Floodwater Data from the Federal Emergency Management Agency



# Data Gathering

## Building codes

- Land use districts
- Conditional uses i.e. boat ramps, High intensity recreation
- Special Districts
- Site development standards
- Access to transportation
- Parking
- Landscaping



# Data Gathering

## Building Codes

- Ensuring compliance with regulations and laws
- Design and permitting consultants
- Land use Permits
- Building Permits
- Environmental Permits
- Grading Permits
- Sign Permits
- Noise Permits



# Data Gathering Environmental

National Environmental Policy Act  
Environmental Assessment

(Categorical exemption 1 to 2 months)

Finding of no significant Impact

(Negative Declaration 4 to 9 months)

Environmental impact

(Environmental Impact Report 9 to 18 months)



# Data Gathering Public Public Access

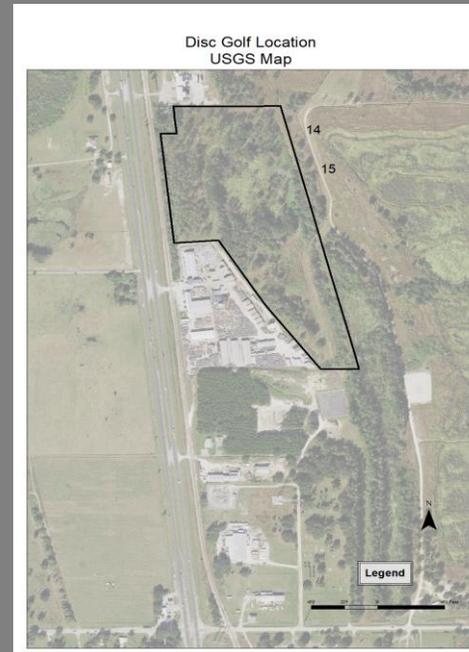
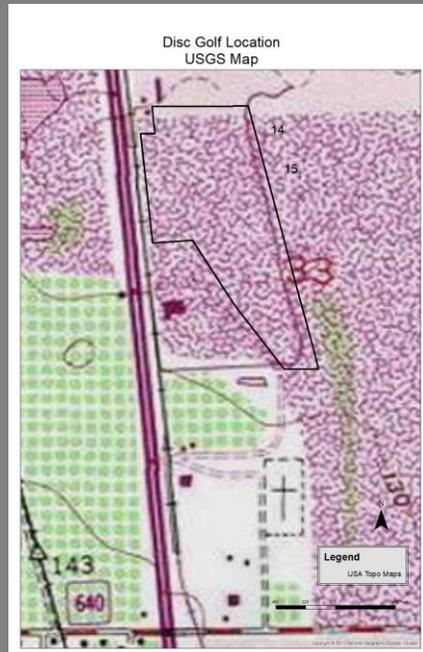
1. Traffic Study Major or Minor
2. Multimodal transportation
3. American Disability Act
1. Transportation Assessment
2. Connectivity Analysis
3. Designed Parking Areas
4. Pedestrian Pathways
5. Bicycle facilities
6. Public Transit Integration
7. Universal Accessibility
8. Safety and Traffic Calming
9. Shared use areas
10. Education and promotion



# Site Analysis & Assessment: Location

Overview of the potential site, an expansion of Mosaic Peace River Park: Existing land use

United States  
Geographical  
Services Map



Polk County  
Aerial Photo  
2020



# Site Analysis & Assessment Checklist

Analyze the data you gathered with your team?

1. Do you need an environmental study or permit?
2. Do you have transportation connectivity and ADA access?
3. Do you require a Land Use or Zoning change?
4. Is there Cultural and Historical significance?
5. Do you have psychographic profile of stakeholders
6. What stakeholder engagement do you need?



# Site Analysis and Assessment Environmental

Soils determine what you can build



Building on sand or muck can require costly engineering solutions for buildings or roadways

Data available from United States Department of Agriculture Soil Conservation Service

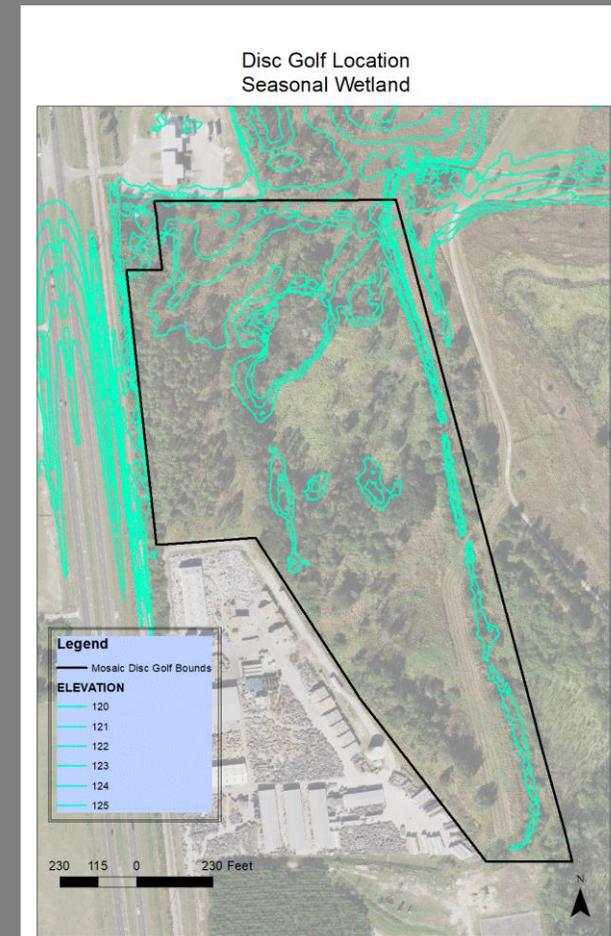


# Site Analysis & Assessment Environmental

LIDAR: Light Detection and Ranging  
Data collected every 3 to 5 years

Hydrology:

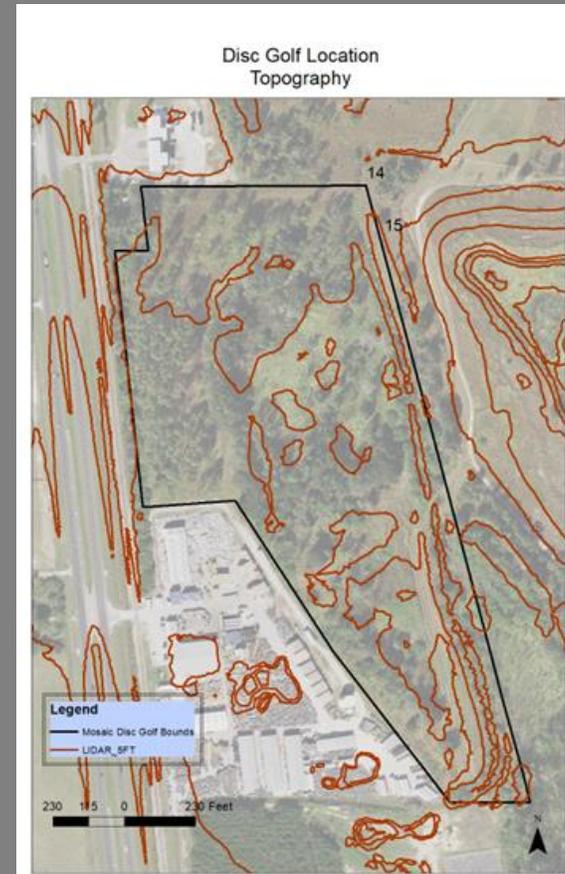
) Uplands, where the rain runs from  
Lowlands, where the rain runs to  
Swamps, where the rain stays (and  
mosquitos breed



# Site Analysis & Assessment Environmental

Look for the possibilities in the topography

- elevation
- slope gradient
- slope aspect
- safe places for trails



# Site Analysis & Assessment

## OTHER ON SITE FACTORS

Vegetation

Water Bodies

Wildlife Habitat

Geological features

Climate, humidity/Rain

Natural resources

Ecological assessment

visual linkages

Infrastructure

Gas/ power/water

View from site/view to site

Shape and Size

Accessibility

Orientation

Wind Direction

Local Culture

Transportation Infrastructure



# Site Analysis & Assessment

## OFF SITE FACTORS

Land use patterns

Stream and drainage source

Visual , smells sounds

Neighboring aesthetic character

Public utility locations and capacities  
(POP Point of presence)

Transportation ways and systems



# Site Analysis & Assessment

Public Participation does not have to be painful

- Identifying the needs & preferences of Park Users



# Site Analysis & Assessment

Translating community needs into park program



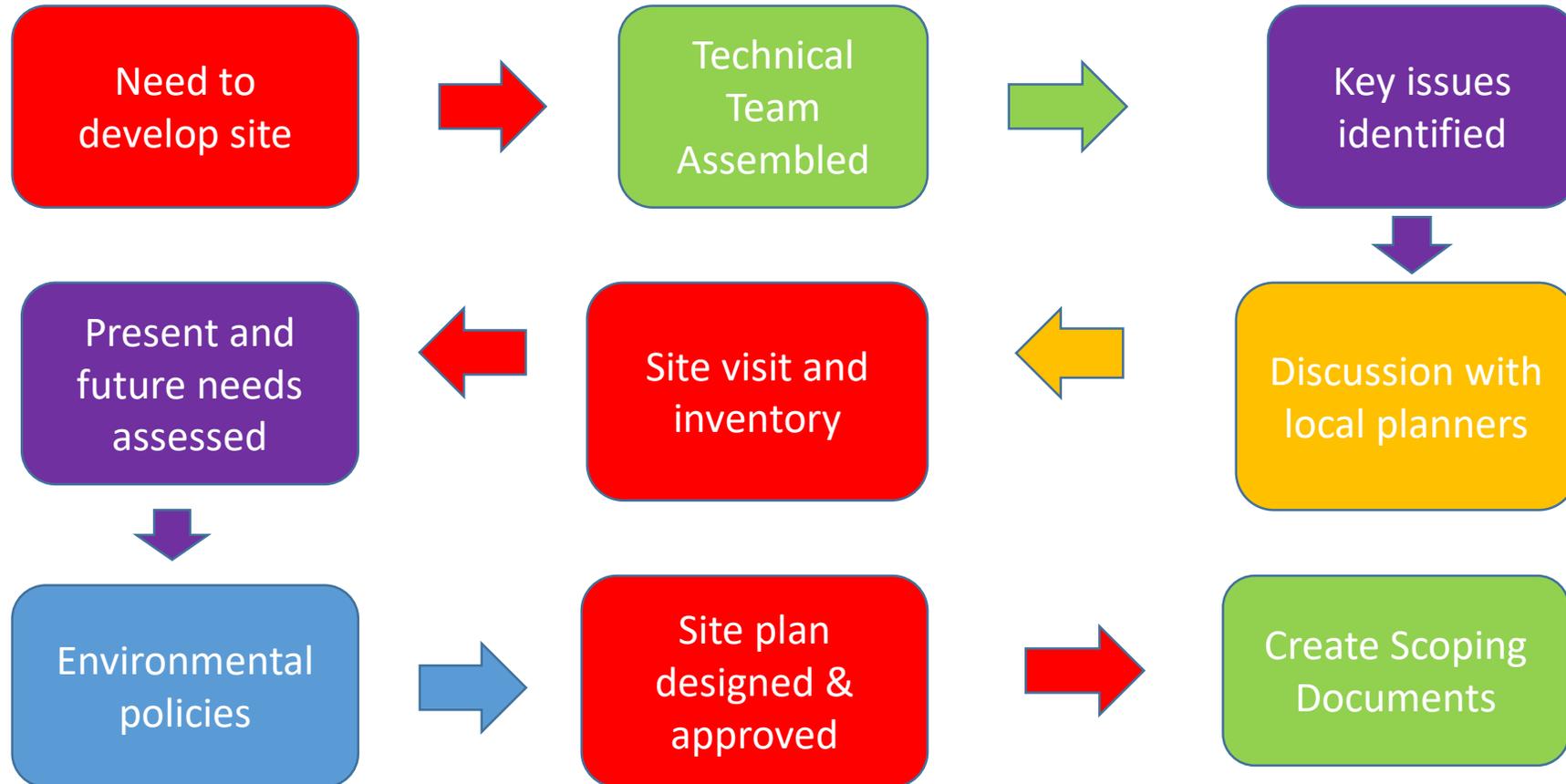
# Synthesis

## Understanding the Project

- Goals and objectives
- Site Requirements
- Project development
- Implementation and Maintenance



# Sequence in producing a Site Plan

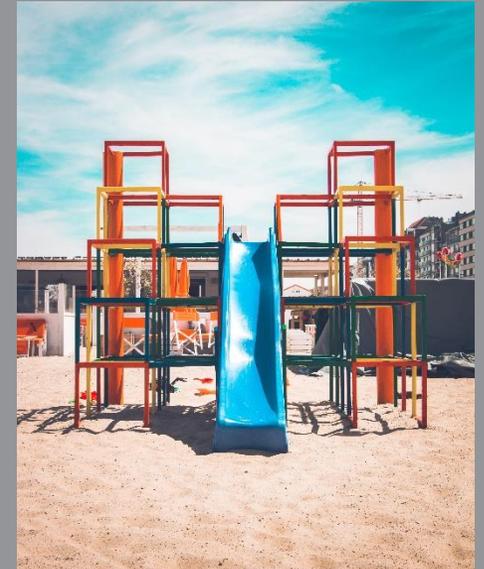


# Synthesis

Review to begin

## Determining the park's functional requirements

1. Needs Assessment
2. User Profile and demographics
3. Activity analysis
4. Facility and amenity planning
5. Design guidelines



# Synthesis: What it is

- Activity planning
- Site facilities & Amenities
- Budgeting & Phasing

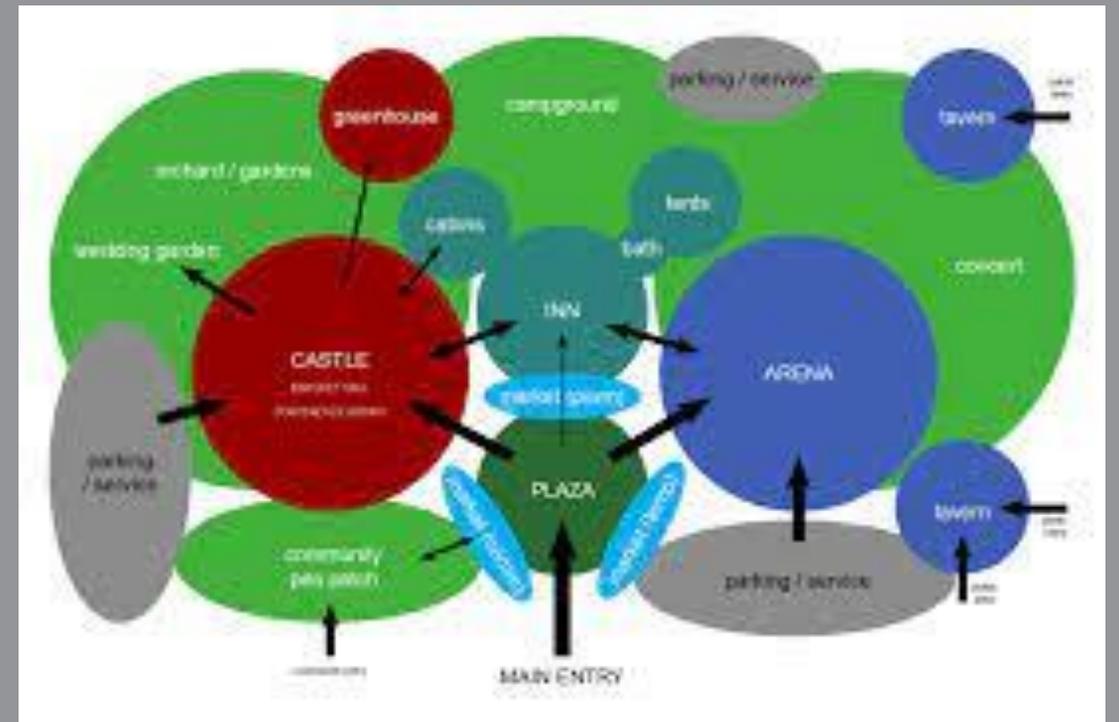
## CAN INVOLVE DESIGN FOR

- Sports and Recreation
- Nature /Environmental education
- Arts and Cultural events
- Community Gatherings
- Child and youth programs
- Health and wellness
- Special Events
- Community services

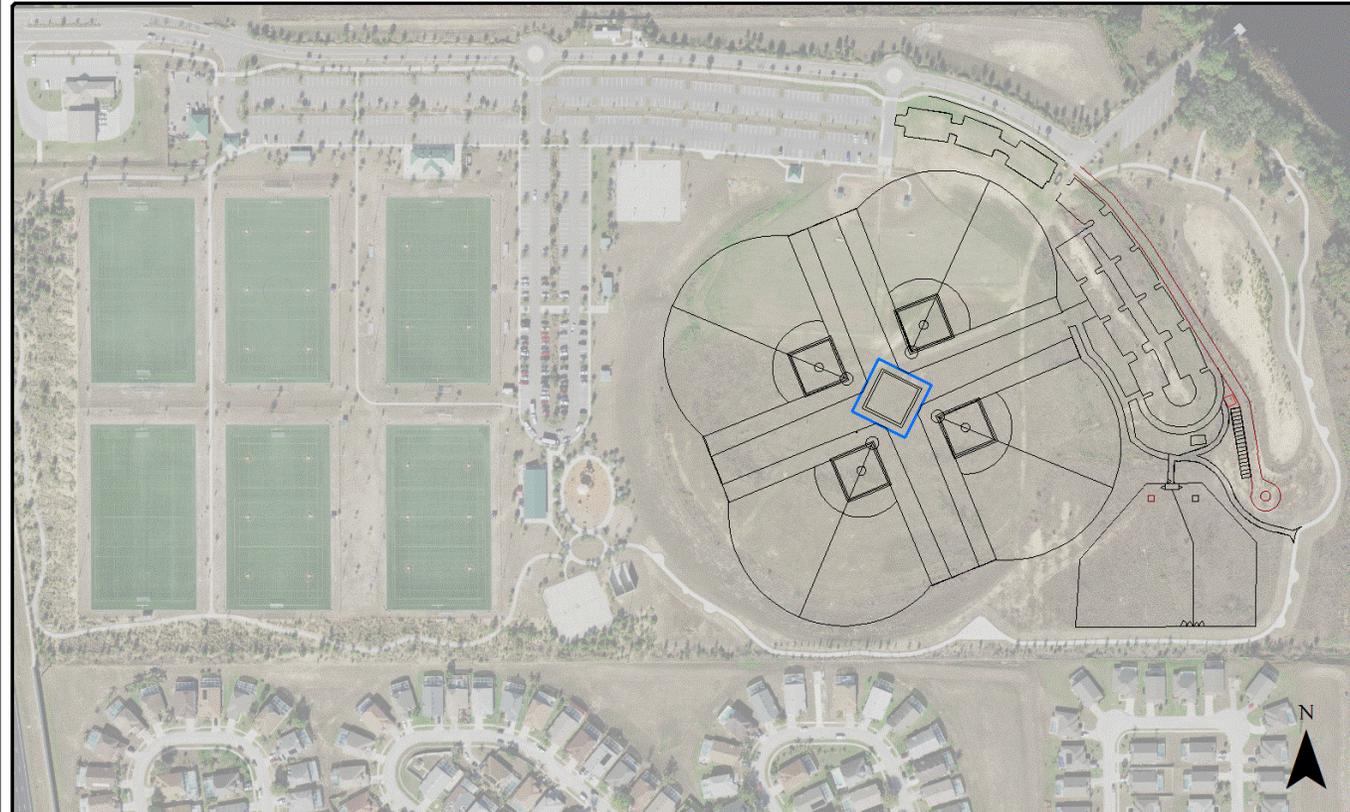


# Synthesis: The Bubble diagram, a planning tool

Use of open spaces,  
circulation patterns,  
views & accessibility



# Synthesis : Re-exam Recycle, Reuse your land



# Synthesis: Design Principles

- Functionality and flexibility
- Integration with nature
- Safety and security
- Sustainability and stewardship
- Social Interaction and Community Engagement
- Connectivity and linkages
- Maintenance and long-term viability



# Synthesis: Design Principles

Creating visually  
appealing  
Park Spaces



# Synthesis: take a fresh look

Preservation  
of existing  
Natural  
Resources

1. Site analysis and assessment
2. Native vegetation
3. Water Management
4. Energy efficient lighting
5. Renewable energy
6. Sustainable materials
7. Wildlife habitat enhancement
8. Education and interpretation
9. Community Engagement



# Synthesis: How do you implement sustainability?

## Principals of a Sustainable Site Plan

- Preserve an enhance natural feature
- Efficient Resource management
- Efficient Materials and Construction
- Accessible and green transportation
- Educational and interpretative Elements
- Waste management and recycling
- Community Engagement

e



# Synthesis Guidelines

Use this chance to upgrade to the use of Green Infrastructure

1. Rain Gardens
2. Permeable Pavers
3. Bioswales
4. Urban Forests
5. Natural Wetlands
6. Sustainable irrigation
7. Pollinator-friendly landscapes
8. Green roofs, green walls and vertical gardens
9. Natural Play areas



# Synthesis: Prepare to present your site plan

- Develop a realistic timeline
- Develop a solid realistic budget that is not too detailed
- Develop a list of suitable amenities for the park site
- Identify special constraints on the park site, i.e. wetland restrictions, restrictive easements etc.
- **BE PREPARED FOR ALL POSSIBLE QUESTIONS**



# Synthesis

1. Preliminary cost estimate
2. Prioritize amenities and phases
3. Cost allocation and funding sources
4. Detailed cost Analysis
5. Contingency planning
6. Phasing Timeline
7. Public engagement and approval
8. Monitor progress and adjustments

## Budgeting and Phasing



# Synthesis: Costs

## COST ESTIMATION

1. Scope Definition
2. Quantify Materials and Labor
3. Construction Activity Breakdown
4. Unit Cost Analysis
5. Include contingencies
6. Review and finalize

## Construction cost factors:

Soil Conditions/ erosion

Availability of Water utilities

Sewer utilities

Electric utilities

Roadway capacity

Cost of transporting materials

Site cost/ Mitigation costs

Existing site development

Natural Hazards



# The Site Plan Brief

1. Project goals
2. Site Analysis
3. Community Input
4. Conceptual Design
5. Sustainability Considerations
6. Accessibility and universal design
7. Traffic Circulation
8. Safety and security
9. Detailed Design and Documentation
10. Implementation and Maintenance plan



# Mapping the Site Plan

Laying out disc golf course with GPS and mapped with GIS

Tee pads laid out and  
GPS



Baskets laid out  
and GPS



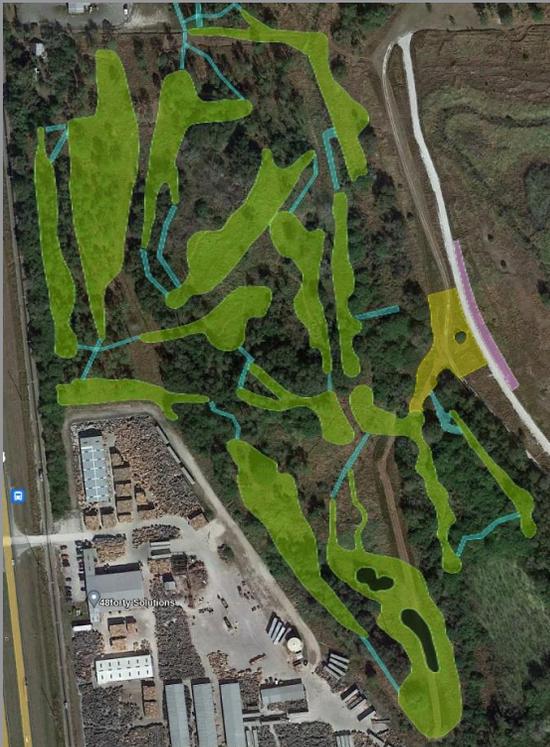
# Mapping the Site Plan

GPS data on GIS map



# Mapping the Site Plan

Projecting the Disc Golf Greens with GIS



# Mapping the Site Plan

Projecting the Disc Golf Greens with GIS

## Vision

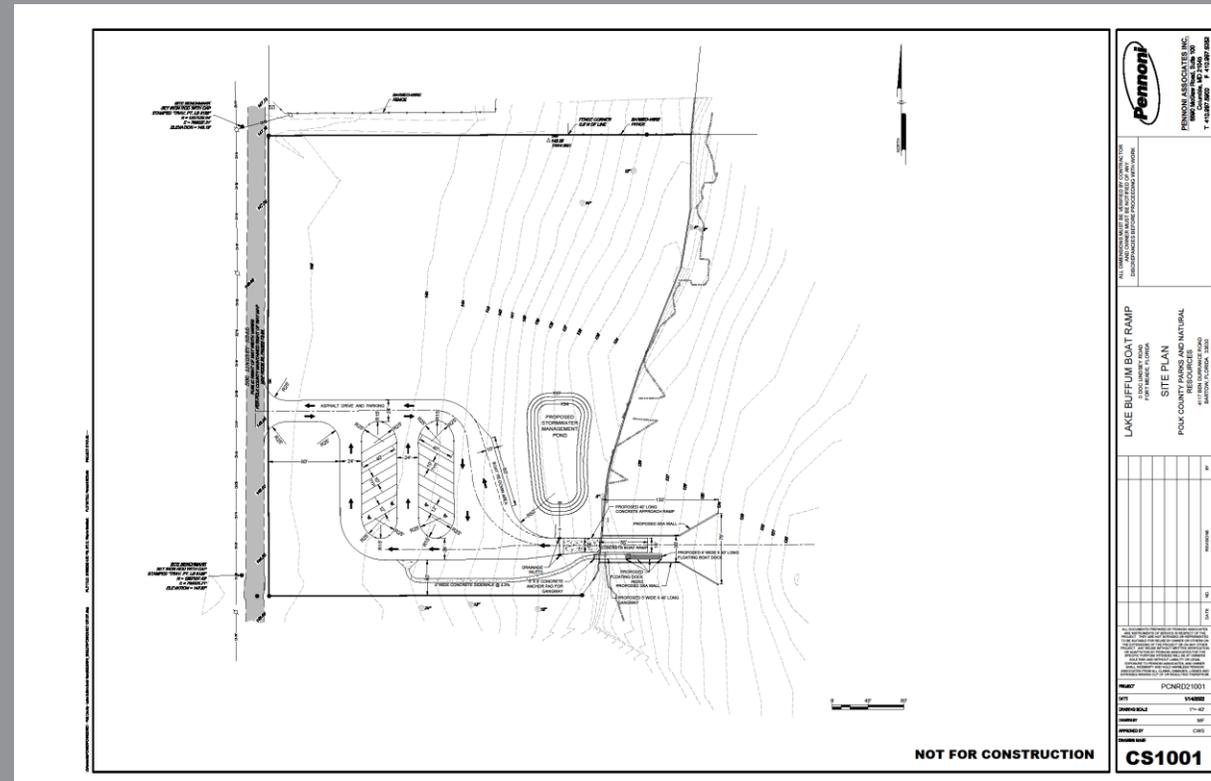
Championship layout &  
Competitive layout

Target a National Disc Golf Event  
with Sport Marketing



# Mapping the Site Plan

## Site Plan Lake Buffum Boat Ramp



# CHECK IN QR CODE

You will receive a QR code to place in your slide deck before you come to the Conference. This code should be placed within the last five slides of your deck; or last 15-20 minutes of your presentation.

Participants will scan the QR code with their phones to check in to the class. QR codes will be used to track attendance at your session.



# Next Steps

## Site Plan Approval at Planning Board

Your site plan goes to appropriate officials for review

- Public works
- Fire Prevention
- Zoning
- Survey review and Real estate services
- Health Department
- Land Development (includes landscaping review)
- Construction Services
- Environmental Review
- Parks and recreation



# Next Step : Design/Permitting Phase

Here are six steps to describe the design and permitting phase of a construction site plan:

- 1. Refine Conceptual Design: Environmental and Engineering Studies: .**
- 2. Regulatory Compliance and Permitting:**
- 3. Detailed Construction Documents: .**
- 4. Cost Estimation and Budgeting:**
- 5. Review and Approval Process: .**



# Next Steps: Management and Maintenance

1. Asset inventory and condition assessment
2. Develop a maintenance schedule and plan
3. Implement an asset Management System



# Site Plan Development

Why it is important for Parks

- Improved functionality and usability
- Cost savings
- Increased safety and security
- Enhanced aesthetics & user experience
- Environmental conservation & sustainability



# Conclusion

Importance of Site Planning for creating functional and sustainable parks

- Process involves site analysis, goal setting, design and development and implementation and maintenance
- Benefits include improved functionality, cost savings environmental conservation, safety, security and enhanced visitor experience





# Thank You!

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**FRPA**  
FLORIDA RECREATION  
& PARK ASSOCIATION

For more information about the  
Florida Recreation and  
Park Association  
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