

# ASGCA Forum

## Trends That Don't Break Maintenance Budgets

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AMERICAN SOCIETY OF GOLF COURSE ARCHITECTS  
GOLF INDUSTRY SHOW, FEBRUARY 5, 2019

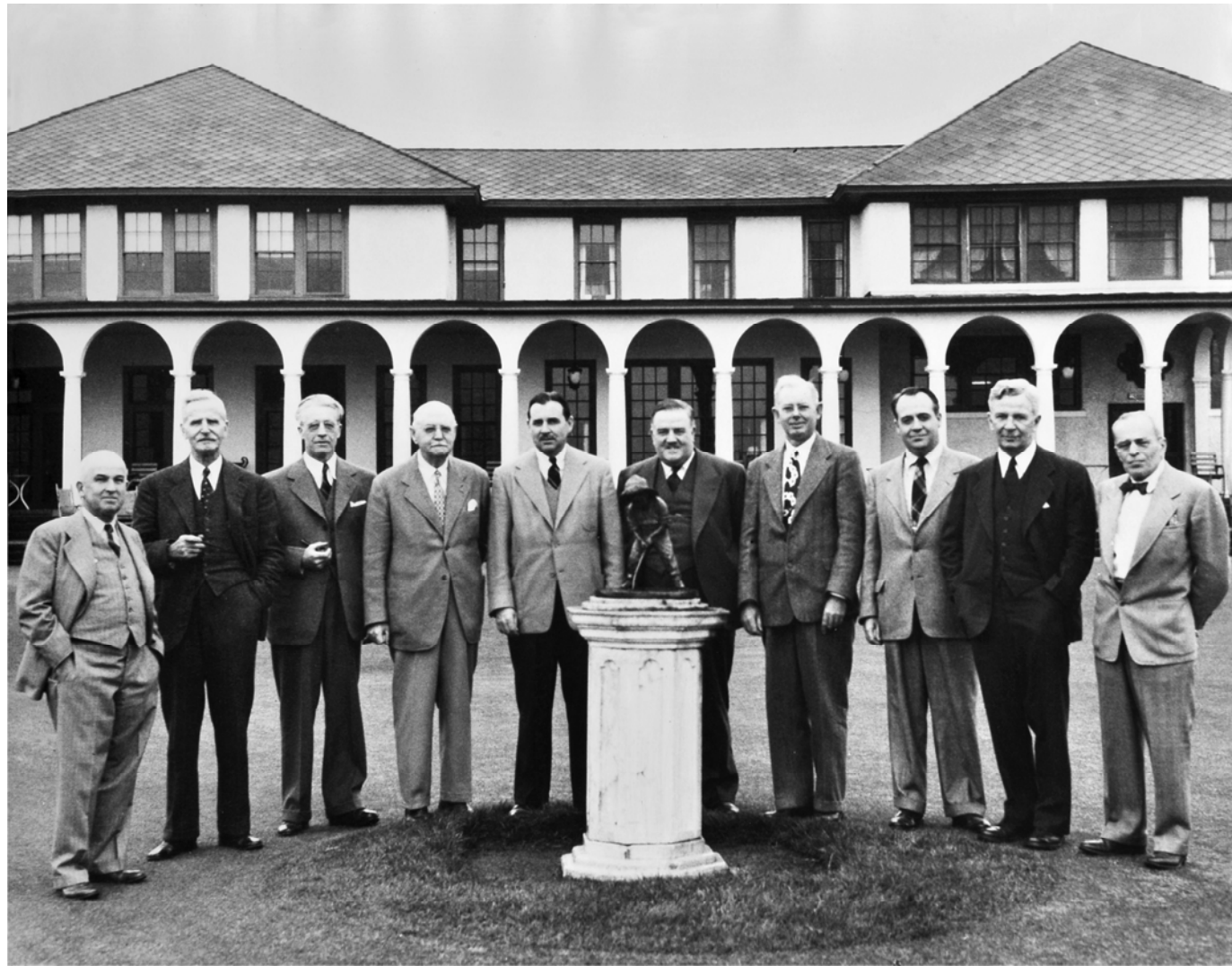


# Founding Fathers

First meeting, held at Pinehurst in 1947

Pictured from left to right: Billy Bell, Robert White, Bill Langford, Donald Ross, Robert Bruce Harris, Stanley Thompson, Bill Gordon, Robert Trent Jones, Bill Diddel and J.B. McGovern.

Not pictured: Jack Daray, Robert Lawrence, Perry Maxwell, Wayne B. Styles



# ASGCA Vision and Missions

## **Vision**

ASGCA is the leader in advancing the interests of golf course architects and the profession of golf course architecture for the benefit of ASGCA members and their clients, the golf industry and the game of golf.

## **Missions**

Foster Professionalism  
Support Design Excellence  
Help Grow the Game  
Expand Opportunities



# Today's Presenters

## **Moderator**

Jeff Blume, ASGCA

## **Presenters**

Brian Costello, ASGCA

Kevin Norby, ASGCA

Brandon Johnson, ASGCA Associate

Lester George, ASGCA





# Brian Costello, ASGCA

## Principal – JMP GOLF DESIGN GROUP

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GOLF INDUSTRY SHOW, FEBRUARY 5, 2019



## Trends Renovation & Design

- **Long-Range Master Plans**
  - **Water Conservation**
    - **Drainage**
    - **Playability**
    - **Bunkers**
  - **Tree Management**
- **New Sources of Revenue**
- **Competitive Advantage**
- **Creative Design Solutions**
  - **Budget Conscious**

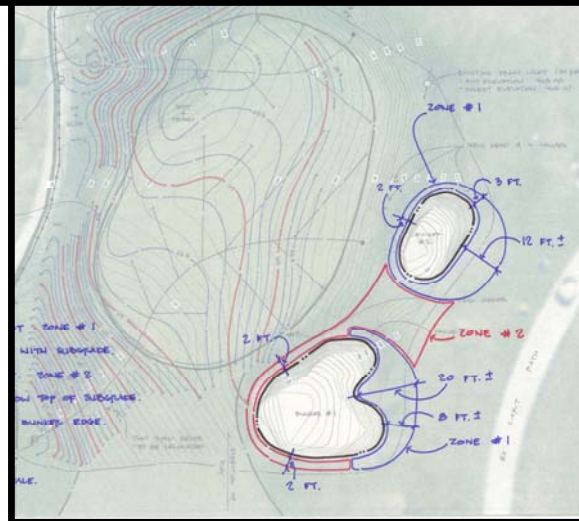
# Representative Projects

## Callippe Preserve GC

Opened 2005 – Renovation 2014

Pleasanton, CA

- Playability
- Water Conservation
- Bunker Restoration



**Greens** – Renovation of two greens to USGA specifications to improve playability & increase pin locations.

**Water Conservation** – Introduction of sub-surface drip irrigation around bunkers and polymer coated sand soil amendment.

**Bunkers** – Installed Better Billy Bunker.

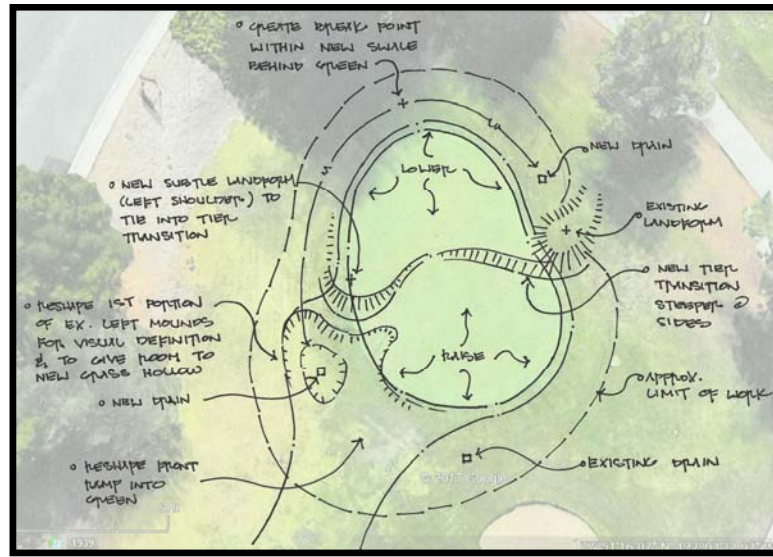
# Representative Projects

## Rossmoor Golf Club

Opened 1964 – Renovation 2018

Walnut Creek, CA

- Playability
- Creative Solutions



**Green** – Re-built “push-up” style green for consistency with other greens and to reduce excessive back to front slope gradient.

**Creative Solutions** – Stripped and saved poa green turf. Excavated in three lifts. Re-shaped floor. Installed one smile drain. Reversed the order of the green mix lifts.



# Representative Projects

## Pacific Northwest Resort GC

18-Hole Regulation Course

Opened early to mid 1990's

Final Master Plan Completed

- Master Plan
- Playability & Pace
- Re-imagined Golf
- New Revenue Sources – Recreation & Development Options

## Existing Facility Assessment –

- Decisions made during initial construction, including significant budget reduction that impacted clearing, earthwork, drainage, etc.
- More recent competitors offer better 18-hole golf experience.
- Current resort guests enjoy a variety of alternative resort amenities both indoor and outdoor.
- Guest Profile Changing – Couples, families, millennials, etc.

## Re-imagined Golf Experience –

- Smaller golf foot print to open up other recreational and development opportunities.
- Create “short course” golf as an additional “attractor” to the variety of other resort offerings.
- Caters to groups, couples and families.
- Fun and exciting, lower green fees and takes less time to play.
- Considering elimination of all sand bunkers.
- Walking only course – may introduce single rider golf cycles.



# Representative Projects

## Palo Alto Hills G & CC

Opened 1961

Renovation On-going Since 2015

Palo Alto, CA

- Long-Range Master Plan
- Water Conservation
- Tree Management
- Playability
- Bunkers
- Creative Solutions



**Water Conservation** – Turf reduction and conversion to rye and fescues.

**Tree Management** – Monterey Pines dying of pitch canker transforming landscape - the pros & cons.



**Greens** – Re-building to USGA specifications, increasing the green sizes 20%, re-contouring for added variety and expanded pin locations.

**Bunkers** – Strategic & technical evaluation.

# Representative Projects

## Palo Alto Hills G & CC

Opened 1961

Renovation On-going Since 2015

Palo Alto, CA

- Tree Management
- Playability
- Bunker Visibility
- Presentation & Visual Drama



**Before & After  
Photo Visualizations**





# Representative Projects

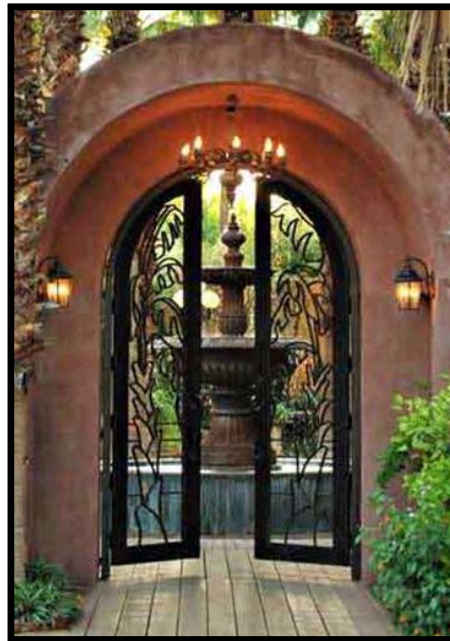
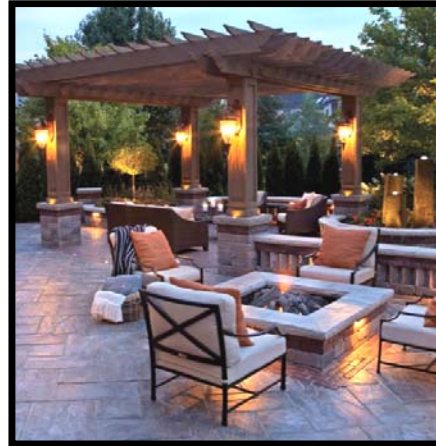
## Palo Alto Hills G & CC

Opened 1961

Renovation On-going Since 2015

Palo Alto, CA

- Competitive Advantage
- Creative Solutions
- New Revenue Sources



**Identifying New Revenue Sources** – Outdoor Wedding & Multi Event Areas for Members & Guests that can be carefully integrated into the setting without disruption to normal operations. Taking advantage of the Mediterranean climate and the panoramic views of the preserve and San Francisco Bay.

# Representative Projects

## Shadow Hills GC - South

Opened 2004/05

Phase 1 – Completed 2017

Indio, CA

- Master Plan
  - Turf Reduction
  - Bunker Restoration
  - Practice Facility Upgrades
- Competitive Advantage
  - 18-hole Putting Course Renovation
  - Lighted
- Tree Management
  - Removal of Acacias
  - Highlight Palms & Reduce Shade



**Phase 1 Implementation** - The Montecito 18-Hole Putting Course is now an amenity that the community is proud of and provides separation from other communities in the Coachella Valley. This has increased and extended use of the facility and can be leveraged as a retention tool and in the sales of homes.



# Representative Projects

## Uptown Cairo GC Under Construction Cairo, Egypt

- Water Conservation
  - Limited Turf
  - Sandy Waste Areas
- Extensive Sub-drainage
  - All irrigated areas lined
  - Routed to ponds/oases
- Introduction Foot Golf





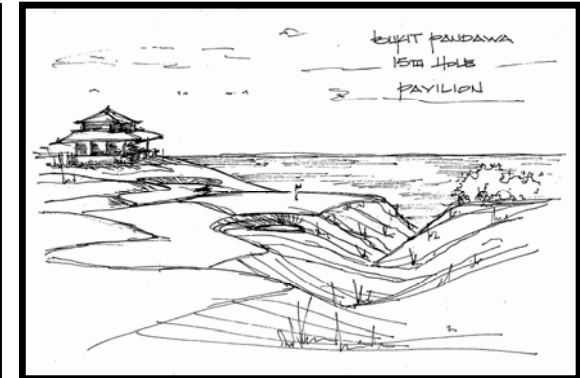
# Representative Projects

## Bukit Pandawa G & CC

New Course - 2016

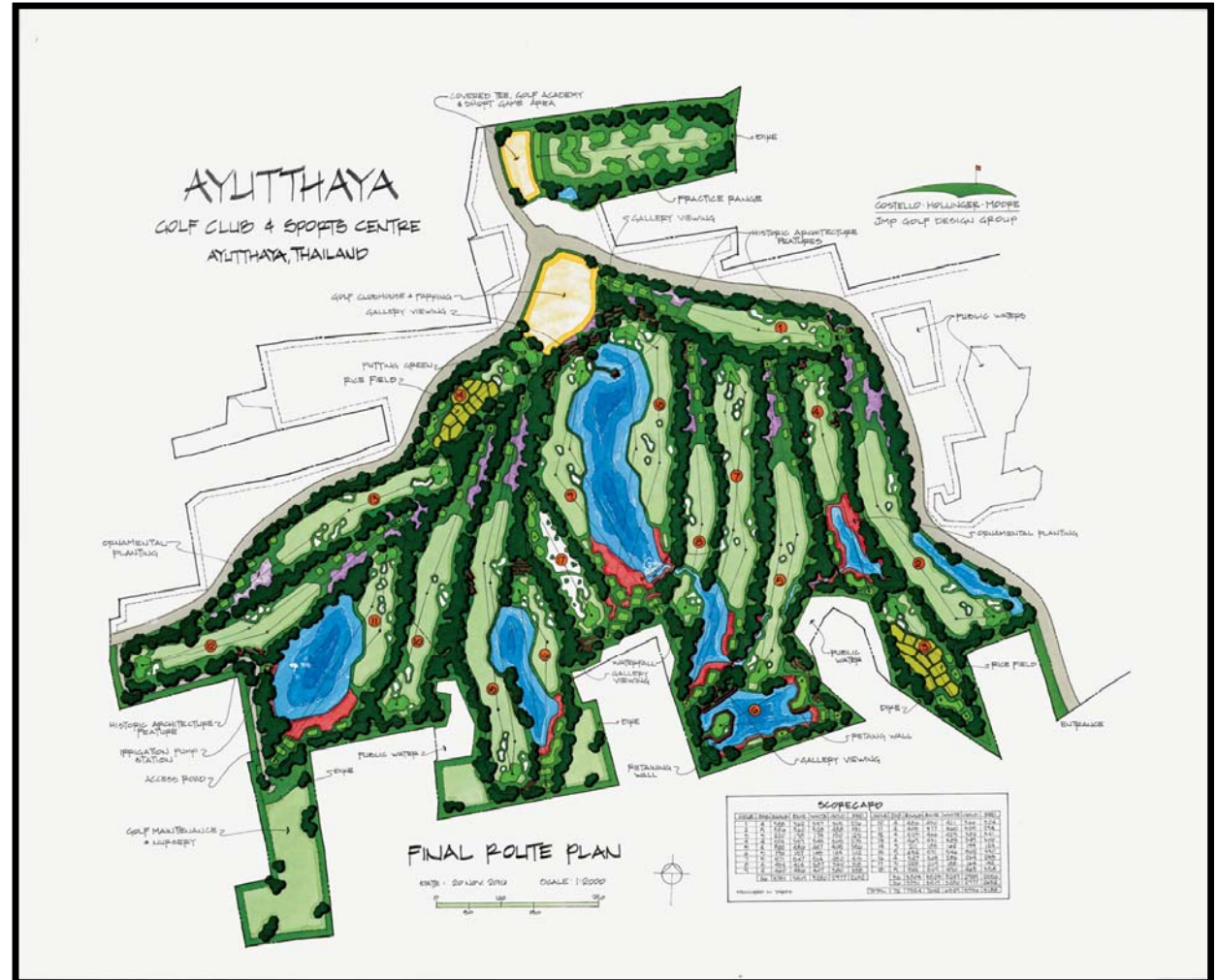
Bali, Indonesia

- “World’s Best Par 3 Course”
  - World Golf Award in 2017
- 18-Hole Par 3 features 10 holes with ocean views
- Course centrally located amongst four new 5-star hotels that include Mandarin Oriental, Raffles, Fairmont and Waldorf Astoria.
- Created Architectural Temples & Ruins



**Ayutthaya GC & Sports Centre**  
**Under Construction**  
**Bangkok, Thailand**

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## Trends Renovation & Design

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    - **Bunkers**
  - **Tree Management**
- **New Sources of Revenue**
- **Competitive Advantage**
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  - **Budget Conscious**

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**Brian Costello, ASGCA**  
Principal



**Closing Thoughts**

**Thank you!**



# Kevin Norby, ASGCA

## President – Herfort-Norby Golf Course Architects

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## ASGCA Forum

Design Trends That Don't Break  
Maintenance Budgets



Kevin Norby, ASGCA  
Bunker Renovations

## ASGCA Forum

Design Trends That Don't Break  
Maintenance Budgets



## Bunker Renovations

- Eliminate bunkers
- Smaller bunkers
- More natural looking bunkers
- Less flashed sand
- Larger grass faces
- Bunker liners



Trend towards more natural looking bunkers that are easier to maintain.



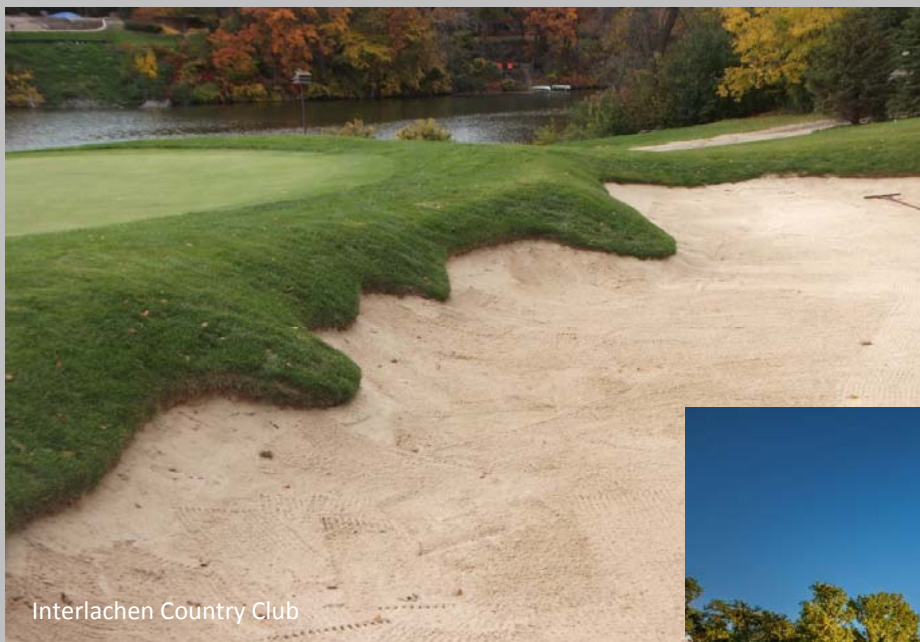
Trend away from large or highly-erodible bunkers



Trend away from high-flashed unnatural  
looking bunkers







Interlachen Country Club



Theodore Wirth Golf Club



Meadowbrook Golf Club

Trend towards flatter sand and grass-down vs. sand-up

## ASGCA Forum

Trends That Don't Break  
Maintenance Budgets

# Bunker Liners

## 3 Types

### Fabric Liners

- Sand Trapper
- Sand Dam

### Synthetic Liners

- Bunker Solutions
- Flexscape
- Polylast
- Z-Line

### Pour-on/Spray-on Liners

- Klingstone
- Linebacker
- Blinder
- Capillary Concrete
- Better Billy Bunker



## Bunker Liners

- Better Billy Bunker \$2.00 to 2.50 psf
- Blinder \$3.00 to 4.00 psf
- Bunker Solutions \$3.50 to 4.00 psf
- Capillary Concrete \$2.25 to 2.75 psf
- Flexscape \$2.00 to 2.50 psf
- Klingstone \$1.95 to 2.25 psf
- Linebacker \$2.00 to 2.50 psf
- Polylast \$2.25 to 2.75 psf
- Sand Trapper \$1.50 to 1.85 psf
- Sand Dam \$1.50 to 1.85 psf
- Z-Line \$3.50 to 3.75 psf





Z-Line



The Harmon Course  
at Floridian National

Trend towards products that reduce bunker  
maintenance/edging



Eco Bunker/PermaEdge





Royal Cinque Ports



St. Andrews



Bandon Dunes



Fox Hills Golf Club



Royal St. Georges

Reduced washouts, hand mowing  
& string trimming



Old MacDonald







## ASGCA Forum

Design Trends That Don't Break  
Maintenance Budgets



- Bunkers define the strategy of the hole
- Bunkers should visually frame the hole
- Bunkers must be in scale with the hole

Maintenance is Important  
but remember...

## ASGCA Forum

Design Trends That Don't Break  
Maintenance Budgets



## A Final Thought

*"Often the highest recommendation of a bunker is when it is criticized. That shows that it is accomplishing the one thing for which it was built: it is making players think". - Donald Ross*

# Brandon Johnson, ASGCA Associate

VP and Senior Golf Course Architect –  
Arnold Palmer Design Company

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# Old Tabby Links at Spring Island Oakatie, SC

Tree Management and Turf Grass  
Conversion/Reduction in the context  
of a large renovation



## **Project Goals**

- Restore and enhance the natural character and aesthetic of the golf course
- Inject another layer of strategic interest and play options for members that “Pay the freight”

## **Project Catalyst**

- Irrigation/Pump Station Replacement
- Shade issues and desire to improve agronomic conditions

# Guiding Principles & Project Scope

## **Guiding Principles**

- Comprehensive review and approach to the golf course and Master Plan
- Establishing a unified direction of the club and golf course
- All features and components of the golf course are interconnected. Any attempt to fix or solve one features issues must consider their relationship to the other features
- Reduce maintenance inputs

## **Project Scope**

- Green Renovation
- Bunker Renovation and/or Reduction
- Tee Renovation, Placement, Re-alignment
- Drainage improvements and contour softening
- Address Cart Path/access issues
- New Irrigation System and Pump Station

# Tree Management

-Conducted Shade Study

(There will be no Oakmont approach here!)

- + Pin point exact trees to trim or remove
- + Provided hardline areas for healthy turf
- + Helped direct and inform the why, where, how behind enhancements
- + Influenced turf varieties and grassing lines
- + Allowed us to incorporate and/or enhance the aesthetic and strategic value of significant trees/tree lines



# Turf Conversion and Reduction

## **Turf Conversion or Reduction**

- Each and every decision to convert or remove turf had a agronomic, maintenance reduction, strategic or aesthetic reason
  - Convert existing 419 Bermuda to Native Grasses (Out of play areas)
  - Convert to existing 419 Bermuda to Natural leaf litter layer, pine straw or mulch
- (Where would these occur naturally based on native trees and surrounding vegetation?)
- Golf Feature turf conversion (Greens, Tees, Bunker surrounds)
  - Reduction of 419 Bermuda by converting and/or expanded existing sandy waste areas

## Tree Management

### Hole #16

- Tree removal
- Alleviate shade issues
- Open expansive views to natural tidal marsh
- +Increased “meaningful width”
- +Increased strategic interest
- +Shift of green
- +Bunker realignment





## Tree Management

Hole #17

- Trimming/No Removal
- Slight Green adjustment/reduction





## Tree Management Hole #9

- Significant trees on entire hole that membership, superintendent and/or conservation covenants would not allow removal

-This influenced where, how and why features changed

+Utilized trees to create “meaningful width” and strategic interest

+Influenced green size and location

+Influenced fairway/grassing lines/irrigation limits





## Turf Conversion and Reduction Hole #6

-Bermuda to Pine Straw litter layer

- + Reduced bunker sq. ft.
- +Tree Management exposed original Tabby feature/reduced shade
- +Enhanced Strategic interest





Turf Conversion and Reduction  
Hole #11

-419 Bermuda to Warm Season  
Native Grasses

+Restore natural feel/character  
+Influenced Strategic Interest  
+Transformed bland hole into  
member favorite





Turf Conversion and Reduction  
Hole #14 Bermuda to Native/Waste Bunker





## Turf Conversion and Reduction

- Bermuda to warm season native grasses and waste bunker
- + Cart Path hiding/realignment
- + Enhanced strategic interest



# Lester George, ASGCA

## President – George Golf Design

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# REPURPOSING A SITE AND ADDING TO THE BOTTOM LINE

Presented by



**LESTER GEORGE**

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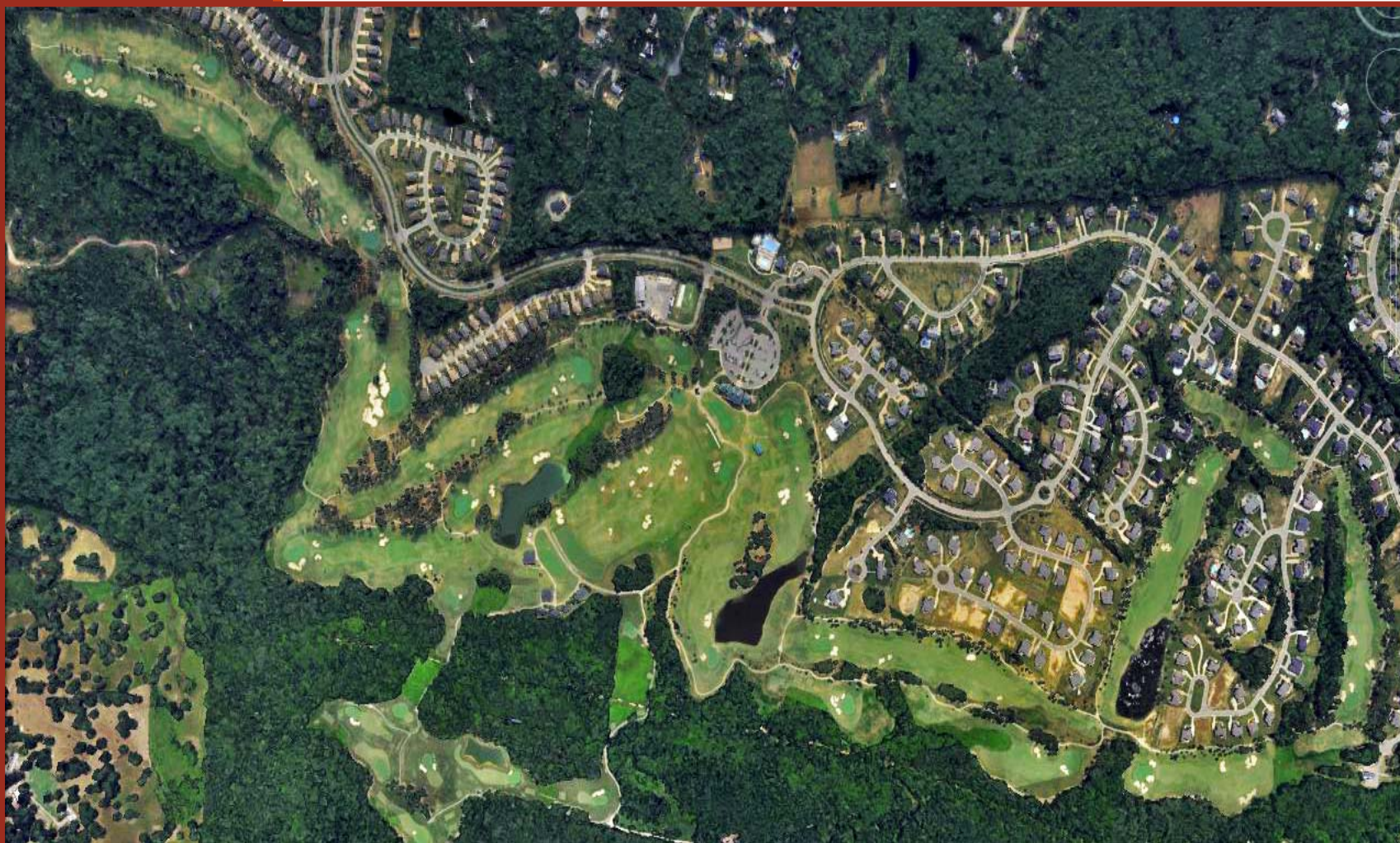
804-897-8600

# Market-Driven Realities

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- Planning for the Future







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# Campus Evaluation



# Imagineering

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- Campus Optimization
- Reallocation of Maintenance
- Repurposing
- Revenue Generation





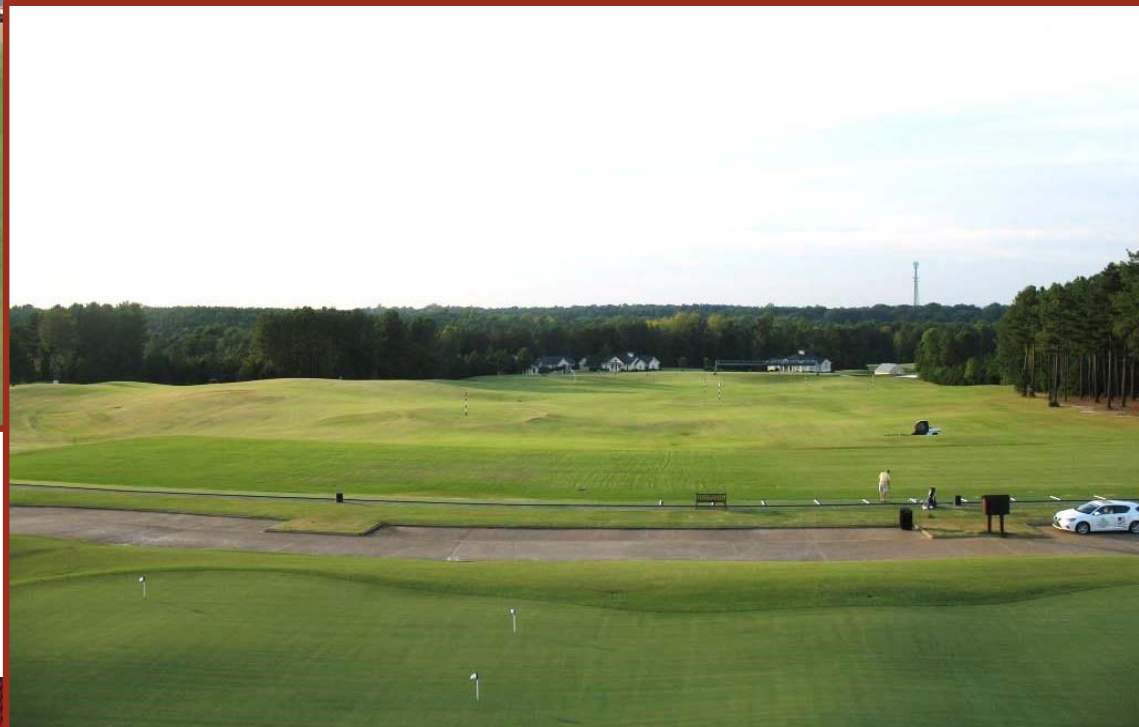
# Final Campus Plan

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# Reallocation of Maintenance and Revenue Generation







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# Reallocation of Maintenance



- Pace of Play





# Reallocation of Maintenance

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- Pace of Play







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# Reallocation of Maintenance

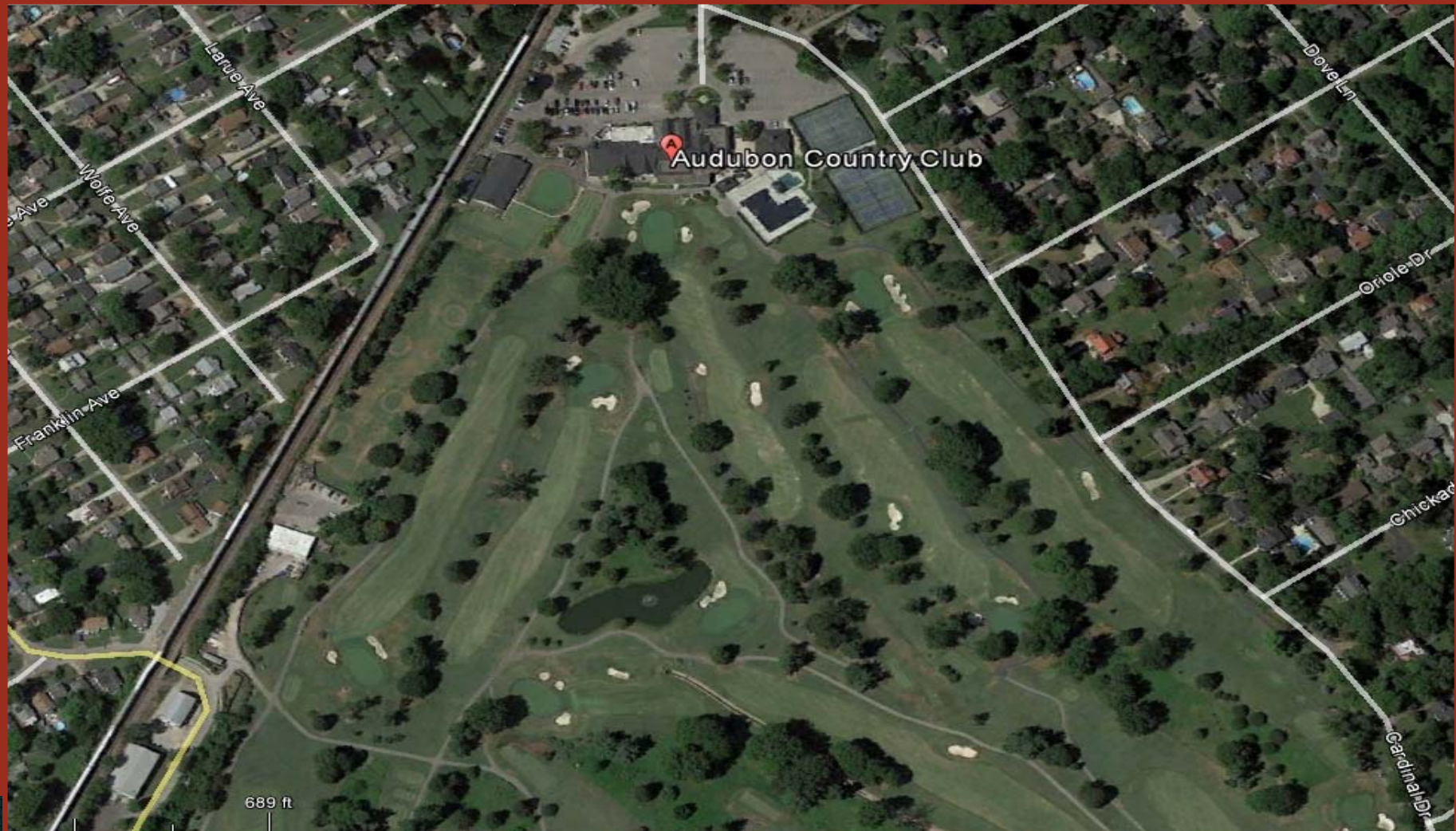






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# Campus Optimization

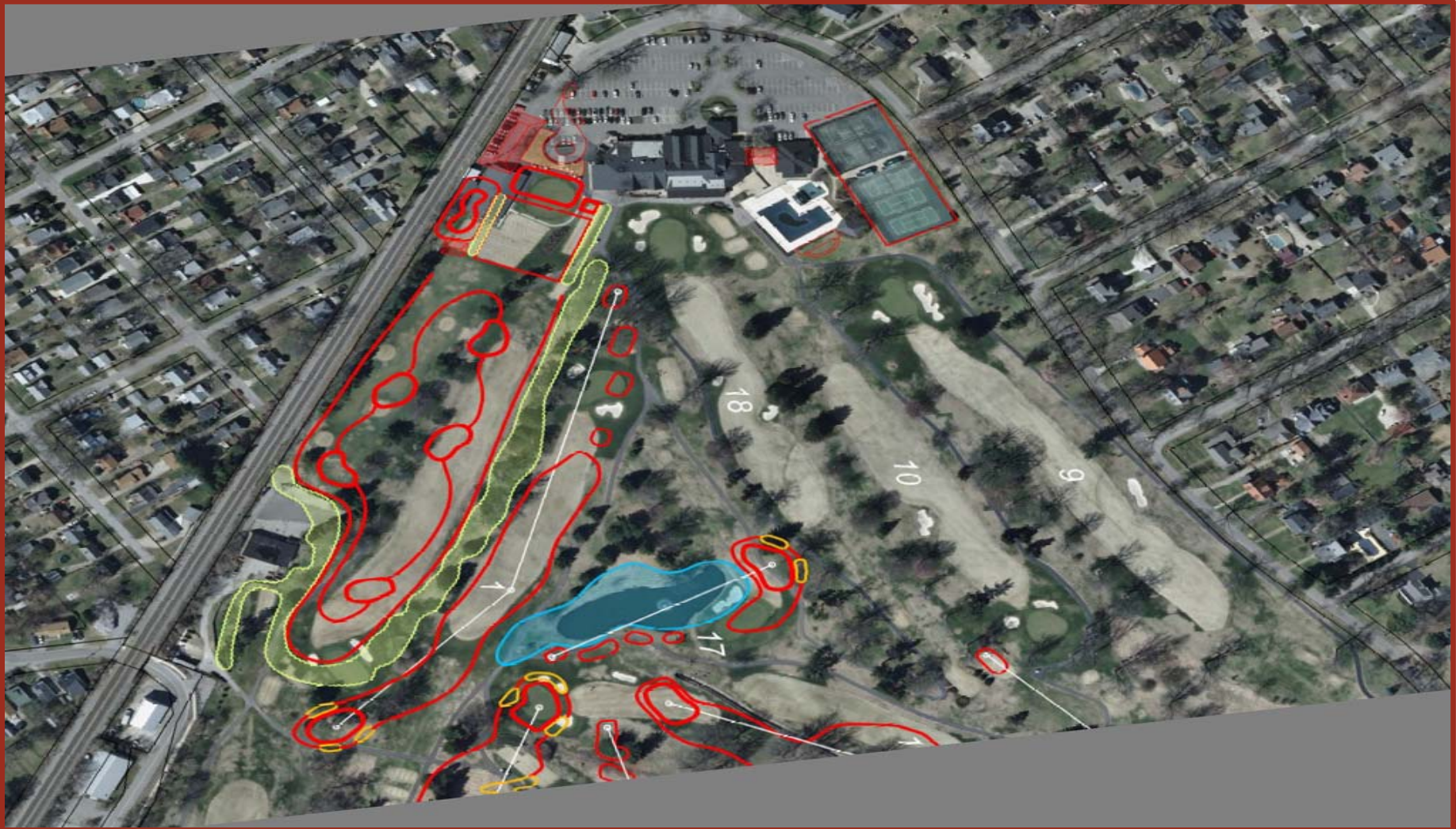






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# Campus Optimization







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# Revenue Opportunity



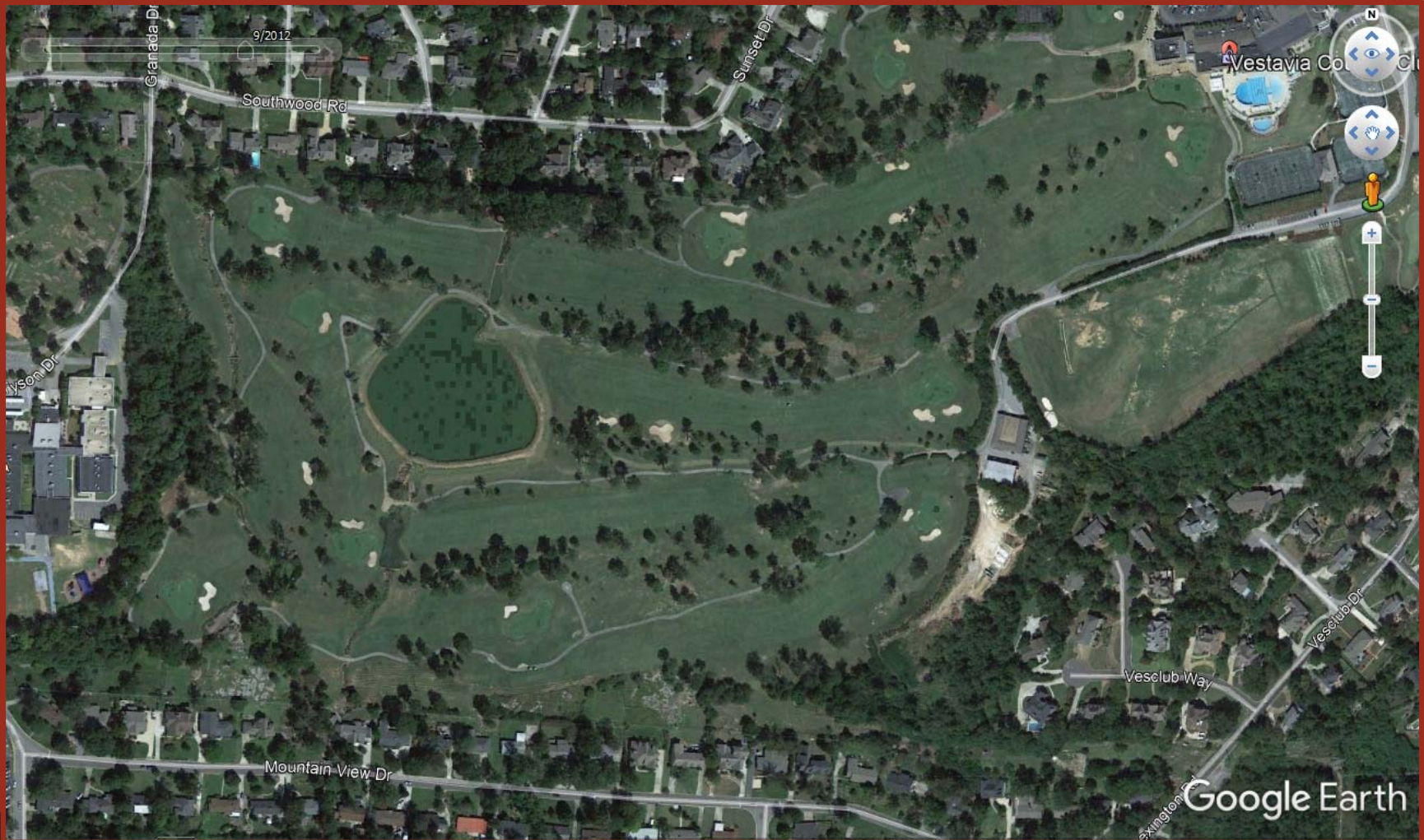


# Mowing Efficiency



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- Wall to wall



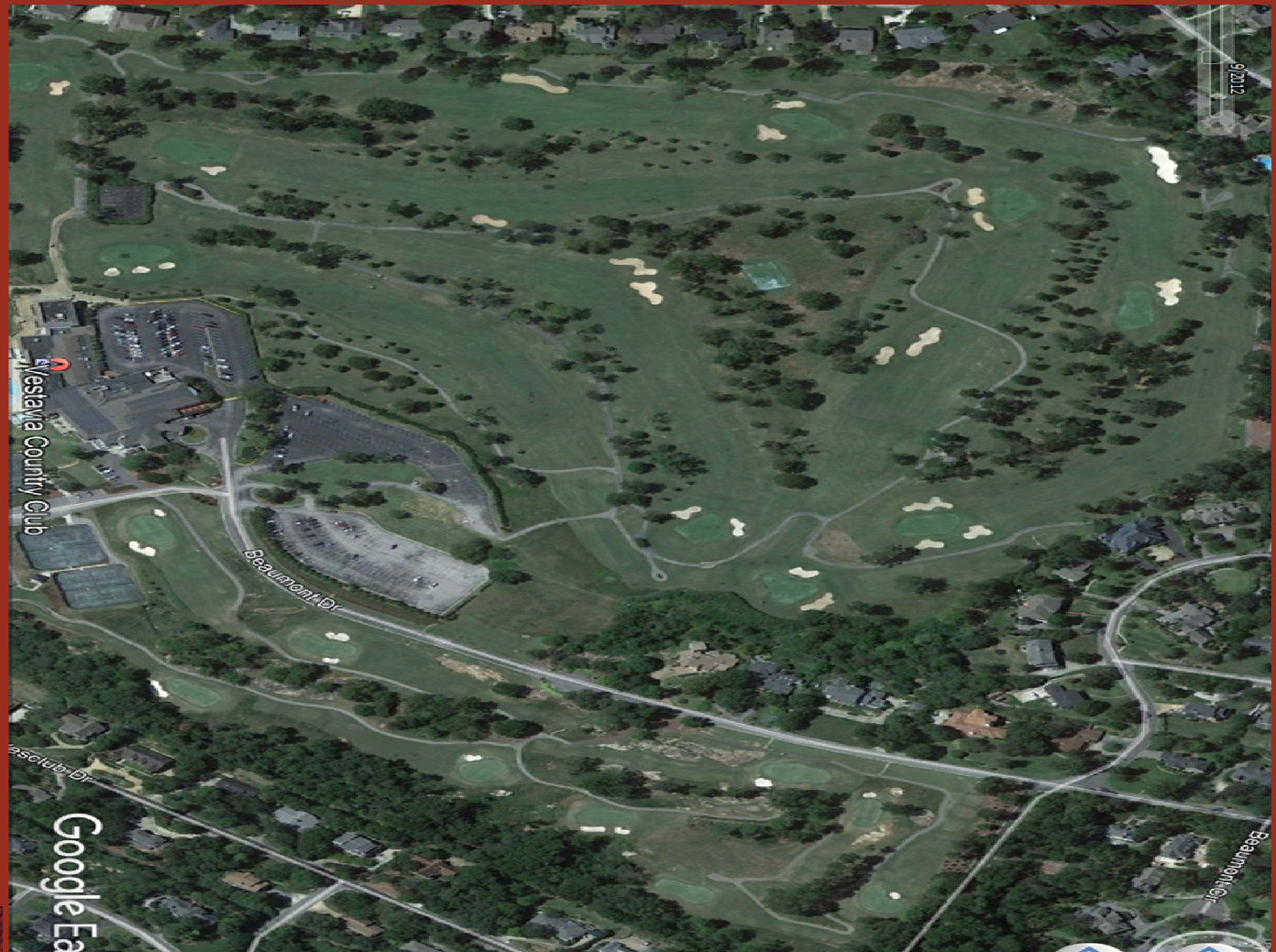


# Mowing Efficiency



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- Wall to wall







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# Repurposing of Playing Areas



**VESTAVIA COUNTRY CLUB**  
**POST CONSTRUCTION AERIAL**  
JEFFERSON COUNTY, ALABAMA

REVISIONS	
DATE	NOTES
8/10/15	REVISION 1
11/30/17	REVISION 2
FRONT NINE	
DATE:	AUG. 2015
SCALE:	1"=100'
SHEET:	2







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# Repurposing of Playing Areas

- Sustainability from other options
- Campus Planning
- Alternative Uses





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# Repurposing of Playing Areas

## Front 9 Post-Renovation Routing





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# Repurposing of Playing Areas

## Back 9 Post-Renovation Routing







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# Revenue-Generating Opportunities

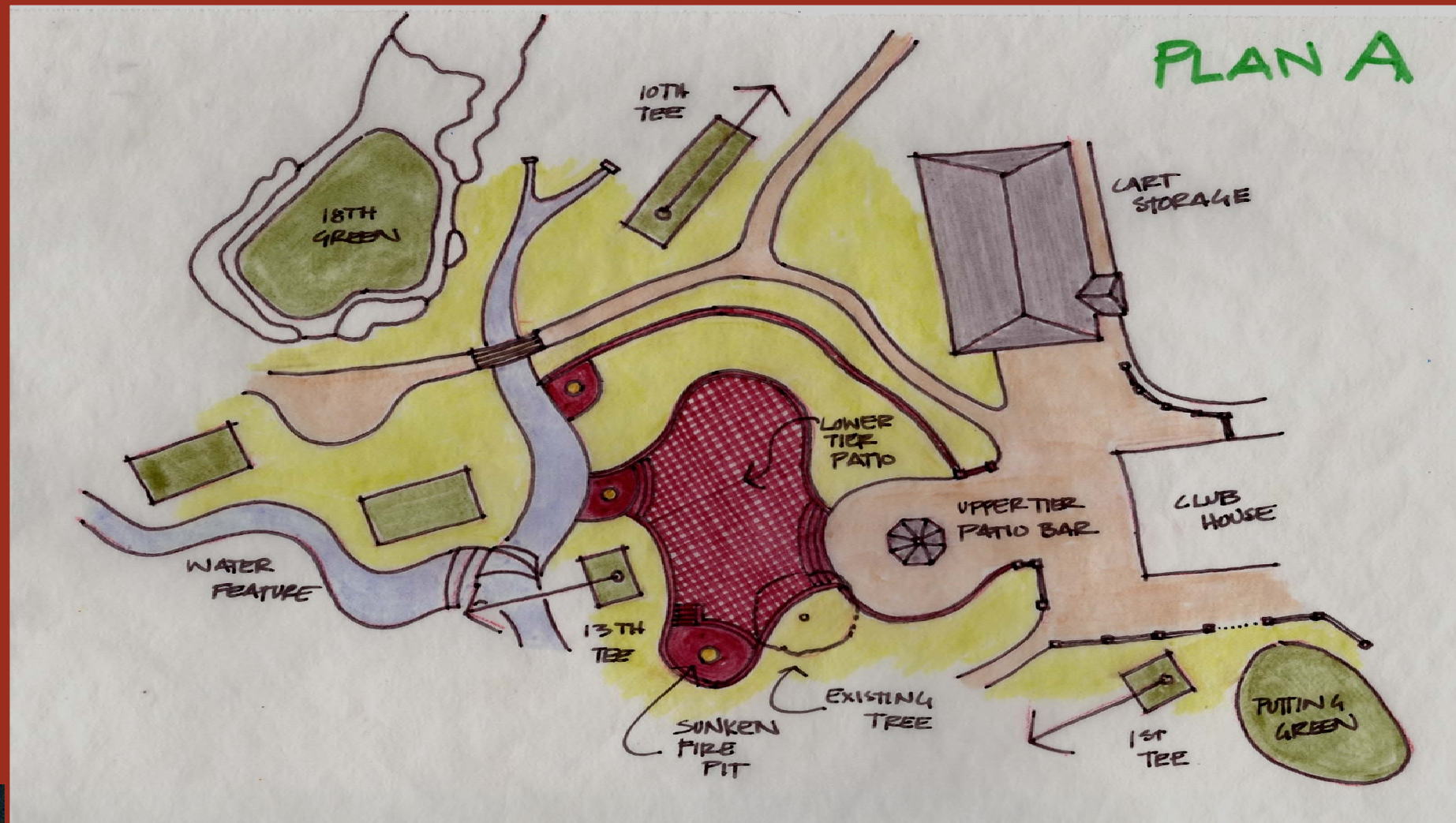






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# Revenue-Generating Opportunities







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# Revenue-Generating Opportunities





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# Campus Optimization





# Campus Optimization

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