



*Pecan Plantation
Country Club*

Pecan Plantation Country Club
Granbury, Texas

LONG RANGE MASTER PLAN

September 2008

Prepared by:



Pecan Plantation Country Club

Granbury, Texas

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Pecan Plantation Country Club

Granbury, Texas

Foreword

DESIGN PROCESS

Colligan Golf Design has been retained to provide a long-range master redevelopment plan for Pecan Plantation Country Club. This plan will incorporate modifications proposed in the first phase of development planning for the Course. The following outlines the “traditional” design process as summarized below:

- 1) Meet with client to review problems, set scope of work, and establish design criteria.
- 2) On-site review of course with an eye toward possible solutions.
- 3) Presentation of preliminary plan(s) and review of conceptual studies of cart paths, drainage, bunker placement, tee locations and greens as necessary.
- 4) Submittal of final preliminary for approval.
- 5) Prepare final master plan, fully colored for presentation.
- 6) Include conceptual studies of cart paths, drainage, bunker placement, tee locations and tree planting as necessary.
- 7) Document on a hole-by-hole basis proposed design change.
- 8) Prepare preliminary cost estimates.

This systematic process, with review and involvement of the membership has proven to produce a plan responsive to the needs of the client. This design development statement is a tool to establish design criteria as required in step one. This statement is based on our general design criteria, the time we have spent on the course to review the problems, and on our preliminary discussions with the golf course superintendent, golf pro, and Club. It is intended as a starting point and as a basis for discussion. Feel free to question it, or to suggest changes to better fit the needs of the Club.

Pecan Plantation Country Club

Granbury, Texas

Design Criteria

DESIGN PHILOSOPHY

For this specific criterion, we looked at the course from our design philosophy, which is generally similar for most courses on which we work. Consideration must be given equally in these four areas:

- 1) Shot Values and Playability (for all classes of golfers)
- 2) Aesthetic Value
- 3) Maintenance Considerations
- 4) Economic Considerations

This is often referred to as ‘The Design Quadrangle’ and no question can be examined successfully unless it deals with issues in all these areas adequately.

The following is a description of our basic Design Philosophy:

ROUTING

Ideally, the golf course should become longer and more difficult as the round progresses. In particular, the first hole should allow the chance for a comfortable, quick start. The eighteenth is preferably a long par-4 with potential for a heroic gamble. For change of pace, one of the later holes can be short but require the utmost accuracy, as opposed to most holes that require some length.

The plan should include holes that will enable a golfer to hit every club in his bag. Following well-struck tee shots, a variety of approach shots should be required. Variety of length in the holes is an important element. Also, essential is consideration of other factors such as wind and ground slope for the “equivalent” length of the hole.

Nothing is more satisfying to a golfer than a well-hit tee shot. Therefore, most long holes should be laid out to accommodate a full tee shot. A few “lay-up” holes through the round provide a change of pace and enhance strategic value. The shortening of the tee shot should be dictated by narrow fairways, bordering hazards, or an advantageous landing area for a target. In general, a golfer should tee off with a longer club than he uses for his approach shot, although the club does not have to be a driver. On longer Par-4’s and Par-5’s, the golfer will not appreciate being forced to lay up. He should be able to hit his maximum drives on these holes.

The golf course design should recognize and provide for the natural circulation patterns of the players. The design should provide for the safety of the players by avoiding walk-backs, and avoiding poor relationship of holes. Creation of proper circulation allows for more expedient play, and avoids chronic maintenance problems.

In general, the routing at Pecan Plantation Country Club is solid. However, the overall length of the course is relatively short by today's standards. It has been our observation that the course is of adequate length for the mid to high handicapper but plays fairly short for the better golfer. Throughout the design process we will look for opportunities to add challenge for the low handicap player while analyzing ways to make the round more enjoyable for those with a higher handicap.

HOLES

There should be distinct variety among the Par-3's, the Par-4's and the Par-5's.

PAR – 3 HOLES

Ideally, we seek a range of length on the four Par-3 holes from very short to very long, similar to the following:

<u>Gold</u>	<u>Blue</u>	<u>Silver</u>	<u>Red</u>
150	120	110	100
170	140	130	120
190	160	150	140
210	180	170	160

Preferably, there should be two water Par-3's and two without water; one each with key hazard left, key hazard right; and one with frontal hazard. Ideally, Par-3's should be downhill with a clear overview of the problems encountered.

The par 3 holes at Pecan Plantation Country Club vary in length from 193 yards down to 179 yards from the Back tees. This is only a difference of fourteen yards. Three of the four play for the most part from south to north and all four require a forced carry over water. Each par 3 will be studied in an effort to create more variety in each hole.

PAR – 4 HOLES

For the Par-4's on each nine, we seek a balance of long, medium and short holes. These are the backbone of the golf course and should represent infinite variety in challenge in demanding draw or fade, high shot or low shot, maximum backspin or pitch and run, sand or chip recovery, etc.

We intend to create the long Par-4's to stretch the player's ability to hit the green in two shots. We occasionally create a Par-4 that is drivable with appropriate penalties for an unsuccessful attempt. We strive for that forgotten hole in golf—the great, short Par-4. The medium length holes should be ones of choice and placement.

Like the par 3's, the par 4 holes at Pecan Plantation offer minimal variety from a length standpoint. The longest is 18 and it measures 431 yards from the Back tees. The shortest is number 15 and measures 372 yards. Our goal for the par 4's will be to accommodate the positive aspect of each hole and create more variety, strategy and aesthetic value into each hole.

PAR – 5 HOLES

In general, a variety of Par-5's should be designed, of which one is a true 3-shot hole, one is definitely reachable, and the others are in between. At least one of the "in-betweens" should be designed so that accuracy is more important than pure length, i.e.; there should be a narrow gap between hazards rather than a frontal hazard.

The four par 5's at Pecan Plantation offer good variety in their orientation. They also differ in the shots that are required to best play the hole. The lengths could offer more variety as there is only 38 yards difference between the shortest and longest par 5's.

Greens should be designed to receive a properly played golf shot:

- 1) Green designs should present one large target for average play, but have one difficult pin position to create challenge in tournament play.
- 2) They should be sloped back to front to stop the ball's momentum. They should be concave, or slope to the middle, so that a shot that hits on the putting surface tends to stay on the surface. In no case should they be crowned so as to reject a shot or direct it to nearby hazards.
- 3) The green design should recognize that a longer approach shot requires a more generous target. The shorter the approach shot, the more accuracy should be required. Therefore, the approach on a short Par-4 or Par-5 could have bunkers partially across the front of the green, while a 400+ yard, Par-4 would tend to have the bunkers at the side.
- 4) The most severe approach shot is one with frontal hazards. In addition, a green with little depth to stop the ball is severe and should only be limited to short holes. Frontal hazards should be considered carefully before use. A large segment of the players cannot consistently negotiate this type of hazard.
- 5) The green and its surrounding mounds and grass bunkers should be designed to help hold a "near-miss" approach shot close to the green. This not only follows the dictum of "proportional punishment" but will also help speed up play.
- 6) The greens should have several distinct cupping areas. These should be relatively level to allow an approach putt to stop near the hole and to allow the short second putt to be relatively straight.
- 7) Depending on the nature of the hole, some greens may be shaped and contoured with decks to emphasize the premium of getting close to the pin. By and large, the greens should be gently rolling. The premium for getting close to the pin will come from a shorter putt, which in itself increases the chances for a birdie.

As the United States Golf Association regional Agronomist has pointed out, the greens at Pecan Plantation are on their last leg. This is primarily due to the fact that they were not constructed properly to begin with. In addition, new greens would be designed to enhance the overall aesthetic, strategic and conditioning of the course. The putting

quality will be much improved with the conversion to one of the new super dwarf variety of grasses.

Fairways should be designed so that:

- 1) Wide fairways, \pm 35-40 yards in average landing areas and light rough are proposed for everyday play. It is our contention that nothing slows down play more than ignoring these two factors. For tournaments, the fairways can be narrowed and rough can be allowed to grow. A golf course with 60 bunkers contains no more than four acres of sand, while a typical 18-hole golf course can have over 100 acres of rough. This offers a much higher probability that the average golfer will repeatedly encounter rough as a hazard.
- 2) There is good definition of target area(s) from the tee, and good definition between fairway and rough. Ideally, there should be no blind landing areas.
- 3) Each fairway should present a choice on the tee. A premium landing area should be created on each hole. To hit this area, the golfer must negotiate key hazards, but will be rewarded with an easier approach shot. There should be a wide bailout area to which the golfer may play easily and safely, but it should yield a less favorable angle to the green.
- 4) Challenge levels are different for each class of player on the tee shot. To equalize challenge, we will attempt to combine relatively large and unguarded targets for average players with smaller, better-guarded target areas for better players.
- 5) Fairway hazards should allow a good chance for recovery and typically provide a direct shot to the green.
- 6) In most cases, the fairway landing areas should be fairly level to provide a fair stance in striking the ball. If a sloping fairway is inevitable the slope should be planned in concert with the prevailing wind and green design to allow the player a chance to place the tee shot in the fairway and have a playable approach shot.
- 7) A fairway should (like a green) never direct a well-struck shot into surrounding hazards. Since many slopes will not be recognized from the tee, this constitutes a hidden hazard.
- 8) Ideally, a dogleg hole should have the fairway area banked up at the outside of the dogleg to help keep a good tee shot from going through the fairway. A dogleg left with ground sloping right (or vice-versa) is particularly inadvisable.

The fairways at Pecan Plantation are one of the strongest features of the course. They are well conditioned and add character to the round with their rolling nature.

Tees

- 1) Tee sets should correspond to the driving distances of various levels of players.

- 2) Tees may be rectangular or free form, but as a general rule should be built with their axis along the line of play to help the player properly line up his shot.
- 3) Tees should be arranged so that the fairway hazards can be brought into play for all players, if desired, by choosing the tee set that most closely corresponds to his driving distance. Tees should utilize natural sites and contour to dictate their shape. Tees, like greens, can have infinite variety if this is done. As a general rule, however, multiple tees are more desirable than so called "runway strips". They are more aesthetic and make the golfer feel he is playing on "the" only tee rather than the front of a larger tee.
- 4) Tees are best if elevated to provide a dramatic view. The golfer never tires of this. It will also give the thinking golfer an overview of the hole, hazard and pin position, in order that he may plan his strategy before hitting the tee shot.

For the most part the tees at Pecan Plantation are adequate in their size, however many are not as level as they should be. In addition, the tees should be studied to ensure that they are located at the proper distance for the handicap that will be playing them.

Hazards

- 1) Combination of many sand bunkers, grass bunkers and grassy mounds. Grass bunkers provide easier recovery for the average player and yet can be most troublesome to a good player trying to "get it close". This is further magnified if these areas are specifically grown long for tournaments.
- 2) To recognize effect on varying levels of play when locating and choosing hazard types: (in descending order, these are the most severe hazards)
- 3) Water (there is no recovery)
- 4) Woods (cover large area; thick woods make escape difficult)
- 5) Rough - covers large area adjacent to fairway target; depending on depth, escape is difficult.
- 6) Sand bunkers next to green (very close to target, generally deep)
- 7) Fairway bunkers - covers small area adjacent to a relatively large target; proper design is shallow to allow a good chance at recovery.
- 8) Grassy mounds and hollows - cover small areas adjacent to a variety of targets; primary problem in recovery is chance of uneven stance or lie.
- 9) To provide some challenges to all players it is also necessary to choose and locate hazards in such a way that impossible situations are not created for the higher handicap player. Each individual golf hole should be challenging and fair to each class of golfer.

- 10) No hazard is truly fair unless it is visible. Visibility of hazards and target areas is of prime importance. The challenge of the game is to know your problems and overcome them, not to be caught in unknown hazards.
- 11) It is necessary to distinguish between challenge and difficulty. Challenge is the testing of skill in negotiating the golf course, while difficulty, stems from the severity of the hazards, penalty, and recovery should one fail.
- 12) For all players, targets and hazards shall be designed in accordance with the difficulty of the shot. Targets must be fair and the degree of punishment in proportion to the margin for error.

Like the greens the 25 sand bunkers at Pecan Plantation have seen better days. The bunkers do not contain liners as many of today's new bunkers do. Because of the lack of liner they have become contaminated and do not drain. Any new bunkers will be located to improve the strategy and aesthetics of the course making it more enjoyable to play and more competitive in the market place.

Wind

All holes must be designed for play in the prevailing wind. General rules for design with wind as a factor are as follows:

- 1) The long axis of green (or target area) should be canted in the direction of the prevailing wind to allow for the fact that a good player curves the ball into the direction of the wind; i.e., if the wind is blowing right to left, the good player will attempt to hook the ball into the green. The average player must allow for the wind to blow his ball left. A green canted right to left best accepts the properly played shot.
- 2) In a downwind approach shot, it is unfair to place frontal hazards as the wind knocks the backspin off the ball. In a head wind, it is possible to stop a shot on a green with frontal hazard.
- 3) As a general rule, we allow one yard to be added (or subtracted) from the distance of a shot for every mile an hour of wind. This affects the placement of fairway hazards. Similarly, for every foot of elevation we allow one yard to be added (or subtracted) to the expected shot distance. These are general rules of thumb, however, and can be affected by trees, turf cover and other factors that must be considered, possibly by a playing test during construction.
- 4) The plan must be cognizant of the effect of the wind on equivalent hole length. Many Designers try to balance the challenge of short holes against long holes by laying out the short holes uphill or against the wind. We disagree. Our preference is to emphasize the variety of short and long holes by having some of the longer holes play into prevailing wind and the shorter holes play with the wind.

The majority of the holes at Pecan Plantation have a cross wind, with or against the direction of play. Nine holes run in a south to south east direction and the remaining nine holes run in a north to northwest direction.

Practice Facilities

Proper attention practice facilities should not be under estimated. A good practice area can turn a good golf complex into a great one. In addition, when designed properly the practice facilities can be a major revenue source offering a place to give lessons on all aspects of the game as well as monies generated from the sale of range balls or range club.

- 1) Practice Range – When locating the range the best orientation is always north or south in order to avoid morning and especially afternoon sun. It is also best if the shots are directed into the prevailing wind, accentuating the curvature of the ball flight. If room permits the range should be wide enough to accommodate a minimum of 30 practice spots. This is especially critical should the golf course plan on holding any events requiring a shotgun start. The depth of the tee is also very important as it will require time to heal during times of heavy use. The various shots encountered on the golf should be simulated on the range tee as well as the typical flat lie. Up hill, down hill and side hill lies can all be designed into the practice tee. An area of longer grass can also be used on the tee to simulate the rough found on the course. Should the opportunity present it is often beneficial to have a tee at both ends of the range. This will offer an option of practicing in differing wind conditions, spread out wear and allow for a more secluded teaching area for lessons.

Circulation to and from the practice tee should be as convenient as possible. Often a parking area behind the range can offer the ideal staging area for tournaments and daily play allowing the participants the chance to warm up without moving their cart or walking long distances with clubs in tow.

Targets on the range are best when they resemble actual targets on the course, although they are typically somewhat smaller in size. In addition, the incorporation of a target fairway in the center of the range will offer a more realistic practice environment while keeping more shots within the practice area. Target greens are best located at regular intervals of 50,100, 150, 200, 250 and 300 yards. A good range will also offer the user accurate distance measurements from all areas of the practice tee.

- 2) Short Game Area – The short game has been identified in recent years as one of the most critical parts of the golf to focus practice on. It is for this reason that this practice area be given equal if not more emphasis as the range and the putting green. While not typically the revenue source the range can be, the short game complex can do much to complement the overall practice facility allowing for lessons in chipping, pitching and bunker play. Players using this area will most likely utilize the range and the course.

The short game area may consist of one or several greens depending on the room and the budget available. It will preferably offer a wide variety of shot options from a 100 yard wedge to chipping and bunker practice. As with the range tee, the areas shots are hit from should offer many options in terms of lie angle,, loft required and depth of grass. Various approach directions preferred to work in concert with the lie options.

- 3) Putting Green – The last component of the practice complex is the putting green. Working together with the short game area this element can come in many shapes and sizes depending on available room and budget. On the conservative side the putting green should be about twice the size of the average green on the golf course. In this case the contours should be kept fairly mellow, emulating the greens on the course. At the other end of the spectrum, the putting green could become a putting course measuring one half acre or more. These often feature rock outcroppings, landscaping, sand bunkers and even water features. A course of this nature will become a marketing tool allowing for putting tournaments, lessons, and can often be designed to work in unison with the short game complex.

The practice facilities at Pecan Plantation are in need of some major assistance. The putting green is too small for the number of rounds being played and it could be in a better location. There is no driving range other than the net and the short game area could offer more variety.

Pecan Plantation Country Club

Granbury, Texas

General Information on Remodeling

TYPES OF RENOVATION

As a general rule, we classify renovation programs into three basic types:

- 1) Budget-minded improvements
- 2) Rebuild-in-place
- 3) Relocation of major features

Each carries a successively larger price tag, yet can solve more technical and design problems. Most renovation programs eventually contain some elements of each, although major relocation is rare. A summary of typical improvements in each type of program is given below:

BUDGET – MINDED IMPROVEMENTS

- 1) Contour fairway mowing: Gently curving fairway edges can be very attractive if they fit the contour of the land and existing and / or proposed vegetation. These mowing patterns can also affect playability. The contoured edge can create wider fairway areas for the average player and narrower targets for the lower handicap player. When properly done, they define the landing areas, provide focus from the tee, and improve the aesthetic beauty of the course.
- 2) Contour mowing of the tees is also sometimes possible. Changing your tee-mowing pattern can enhance aesthetics by matching the curving lines of the fairway or to offer a more traditional appearance.
- 3) Introduction of native areas: This has been an issue in architecture for the last several years. Although it has been touted in many journals, very few golfers or superintendents have jumped on the bandwagon of “target golf courses”. However, many superintendents have successfully introduced wild areas by gradually converting out-of-play areas to native grasses and wildflowers. It is important that any wild area look as it is integrally designed to be part of the golf hole. Anything else will look left over and ragged. A bold, clean delineating edge will create that “designed” feeling more than anything else will. This edge, like fairway contour mowing, should relate to ground contour, trees and cart paths.

- 4) Introduction of landscaped areas: On courses where a more formal style still reigns, more superintendents yearly add flower beds, orchards, tree planting, stone or railroad retaining walls, etc. Many times tree planting is done with little thought other than filling in the open areas. Professional designers locate trees with respect to composition, variation in spatial quality and with particular emphasis to accent through selection for fall color, spring flowers or other characteristics. Filling in the open spaces tends to negate accent rather than create it.

REBUILD IN PLACE

This type of renovation is probably most common. It assumes that the original layout (and any subsequent revisions) is basically good, and that renovation is needed to solve specific problems but generally fall under one of the following categories.

At Pecan Plantation Country Club, the predominant problems as expressed are underlined.

Design Problems

- 1) Desire to make course more aesthetically pleasing.
- 2) Desire to improve strategic value of the course.
- 3) Need to consider technological advancements in equipment.

Maintenance Problems

- 1) Need for larger tee surfaces.
- 2) Need to solve drainage and erosion problems.
- 3) Need to solve flooding problem.
- 4) Cart paths need coordinated extension plan.

Aesthetic Problems

- 1) Landscaping needs additional work.

Economic Problems

- 1) Need to make golf course more attractive to potential players.
- 2) Need to match golf course to existing or proposed players.

RELOCATION OF MAJOR FEATURES

This type of renovation is generally prohibitive because of cost, for it requires rebuilding of infrastructure (irrigation, drainage, etc.) to a much greater degree than rebuilding in place. It is occasionally made necessary by several problem areas, including:

- 1) Relocation out of flood prone areas.
- 2) Relocation in conjunction with drainage or flood control measures.
- 3) Loss of land due to highway widening, etc.
- 4) Desire to use / acquisition to usable land for improvements.
- 5) Desire to relocate clubhouse / tennis / pool, etc.
- 6) Need to relocate unsafe holes.
- 7) Need for new irrigation pond for water storage.

Pecan Plantation Country Club

Granbury, Texas

Typical Cost Estimates for Golf Course Renovations

The following information includes typical unit costs for green, tee, mound and fairway bunker construction. Each feature will naturally vary somewhat from the price. All are based on recent contractor's bids for similar type projects and are stated in terms of 2007 prices and discussions with local contractors regarding this project.

Estimates for each phase of work have been prepared by extension of these typical prices to each work area.

Golf Course Designer does not warrant that final construction cost will not vary from these estimates in that:

- 1) Designer has no control over contractors, fluctuations in material prices, or methods of billing.
- 2) Designer has made some assumptions on construction specifications and techniques, which may vary at time of construction.
- 3) Designer has no control over inflation.
- 4) Club's selection of phases to do more or less work at any given time will affect prices, as there is "economy of scale" in doing more work at one time.

TYPICAL GREEN (6,500 SQUARE FEET)

	Quantity	Unit Price	Total
Strip sod and remove/bury	360 CY	3.50/CY	1,260.00
Mass Grading			
1) Strip topsoil	550 CY	2.50/CY	1,375.00
2) Onsite cut & fill	2500 CY	2.50/CY	6,250.00
3) Establish sub grade	Allow		4,915.00
4) Replace topsoil	550 CY	2.50/CY	1,375.00
Feature Construction			
1) 4" Perf. drain tile	350 LF	5.00/LF	1,750.00
2) 4" Solid drain tile	200 LF	4.50/LF	900.00
3) Gravel sump	2 EA	750.00/EA	1,500.00
4) 4" Gravel layer	100 TN	35.00/TN	3,500.00
5) 12" Mix	300 TN	50.00/TN	15,000.00
6) Bunker sand	50 TN	60.00/TN	3,000.00
7) Green liner	300 LF	1.00/LF	300.00
8) Cleanouts	10 EA	50.00/EA	500.00
Irrigation			
1) Full circle heads	4 EA	600.00/EA	2,400.00
2) Part circle heads	4 EA	600.00/EA	2,400.00
Preparation Fertilizing & Grassing			
1) Fine grading	1 AC	1000.00/AC	1,000.00
2) Fertilization	1AC	1000.00/AC	1,000.00
3) Sod	4,850 SY	3.50/SY	16,975.00
4) Seed green	6,500 SF	.40/SF	2,600.00
Total All Work Items			\$68,000.00

TYPICAL FAIRWAY BUNKER (2,400 SQUARE FEET)

	Quantity	Unit Price	Total
Strip sod and remove/bury	60 CY	3.50/CY	210.00
Mass Grading			
1) Strip topsoil	50 CY	2.50/CY	125.00
2) Import cut & fill	500 CY	5.50/CY	2,000.00
3) Establish sub grade	Allow		2,000.00
4) Replace topsoil	50 CY	2.50/CY	125.00
Drainage			
1) 4" Drain tile	250 LF	5.00/LF	1,250.00
2) Gravel sump	1 EA	750.00/EA	750.00
3) Air vent/sump	4 EA	50.00/EA	200.00
Grassing			
1) Sod banks	400 SY	4.00/SY	1,600.00
Sand in bunker	60 TN	60.00/TN	3,600.00
Misc./Clean-up/ Irrigation Mod.	Allow		640.00
Total All Work Items			\$12,500.00

TYPICAL GREENSIDE BUNKER (1,200 SQUARE FEET)

	Quantity	Unit Price	Total
Strip sod and remove/bury	40 CY	3.50/CY	\$140.00
Mass Grading			
1) Cut bunker	180 CY	4.00/CY	720.00
2) Establish subgrade	Allow		2,000.00
Drainage			
1) 4" Drain tile	250 LF	5.00/LF	1,250.00
2) Gravel sump	1 EA	750.00/EA	750.00
3) Air vent/sump	2 EA	50.00/EA	100.00
Grassing			
1) Sod banks	250 SY	4.00/SY	1,000.00
Sand in bunker	30 TN	60.00/TN	1,800.00
Misc./Clean-up/ Irrigation Mod.	Allow		240.00
Total All Work Items			\$8,000.00

TYPICAL TEE COMPLEX (6,000 SQUARE FEET – TEE SURFACE)

	Quantity	Unit Price	Total
Strip sod and remove/bury	160 CY	3.50/CY	560.00
Mass Grading			
1) Strip Topsoil	300 CY	2.50/CY	750.00
2) *Import cut & fill	700 CY	5.50/CY	3,850.00
3) Establish subgrade	Allow		3,000.00
4) Replace topsoil	300 CY	2.50/CY	750.00
Irrigation			
1) Replace heads	2 EA	600.00/EA	1,200.00
2) Add new heads	2 EA	600.00/EA	1,200.00
3) 2" PVC pipe	200 LF	5.00/LF	1,000.00
4) Control line	200 LF	0.75/LF	150.00
Preparation Fertilizing & Grassing			
1) Fine grading			
2) Fertilization	23,000 SF	0.05/SF	1,150.00
3) Sod	23,000 SF	0.05/SF	1,150.00
	2,550 SY	3.50/SY	8,925.00
Misc./Clean-up/ Irrigation Mod.	Allow		315.00
Total All Work Items			\$24,000.00

TYPICAL MOUND

	Quantity	Unit Price	Total
Strip sod and remove/bury	20 CY	3.50/CY	70.00
Mass Grading			
1) Strip topsoil	50 CY	2.50/CY	125.00
2) Import cut & fill	150 CY	5.50/CY	825.00
3) Establish sub grade	Allow		750.00
4) Replace topsoil	50 CY	2.50/CY	125.00
Grassing			
	70 SY	4.00/SY	280.00
Misc./Clean-up/ Irrigation Mod.	Allow		125.00
Total All Work Items			\$2,300.00

Section

5

Pecan Plantation Country Club

Granbury, Texas

Hole by Hole Recommendations

Card of the Course

HOLE	BACK	MIDDLE	FRONT	LADIES	PAR
1	412	394	370	331	4
2	525	510	446	382	5
3	408	386	364	345	4
4	417	403	363	322	4
5	174	150	130	100	3
6	536	515	465	425	5
7	424	389	350	295	4
8	185	145	126	96	3
9	428	400	301	275	4
OUT	3509	3292	2915	2571	36
10	196	170	145	121	3
11	341	324	301	272	4
12	510	497	442	402	5
13	415	382	345	325	4
14	211	175	136	91	3
15	384	365	325	305	4
16	413	393	365	329	4
17	571	526	490	450	5
18	455	417	375	347	4
IN	3496	3249	2924	2642	36
TOTAL	7005	6541	5839	5213	72

Master Plan



Card of the Course

HOLE	BACK	MIDDLE	FRONT	LADIES	PAR
1	412	394	370	351	4
2	525	510	446	382	5
3	408	386	354	345	4
4	417	396	356	315	4
5	174	150	130	100	3
6	536	515	465	425	5
7	424	389	350	295	4
8	185	145	126	96	3
9	428	400	351	275	4
OUT	3909	3285	2988	2554	36
10	106	170	145	121	3
11	341	324	301	272	4
12	510	497	442	405	5
13	415	382	345	325	4
14	211	175	136	91	3
15	384	365	325	305	4
16	413	393	365	329	4
17	571	526	490	450	5
18	455	417	375	341	4
IN	3496	3249	2924	2642	36
TOTAL	7005	6534	5812	5226	72

Master Plan

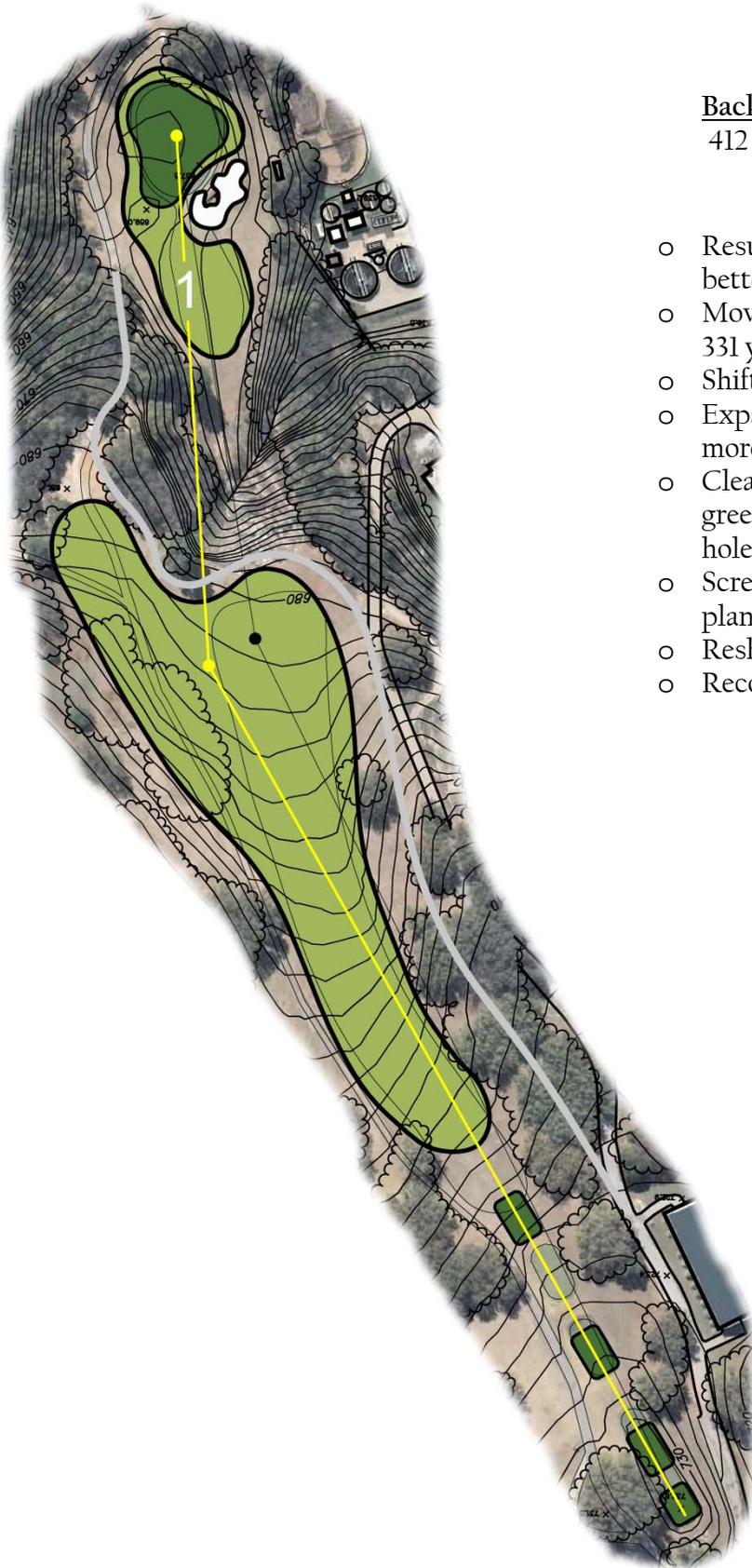
July 8, 2008



Hole 1

<u>Back</u>	<u>Middle</u>	<u>Front</u>	<u>Ladies</u>
412	394	370	331

- Resurface, level and lower forward tees for better visibility from the back set of tees.
- Move the ladies tee up to play from a length of 331 yards (351 yards currently).
- Shift the cart path to the right side of the hole.
- Expand the fairway to the left to give the golfer more options from the tee.
- Clear trees to open up the views down to the green. This will help with the playability of the hole and also help speed up play.
- Screen the water treatment plant with evergreen plant material.
- Reshape the greenside bunker.
- Reconfigure and enlarge the green.



Hole 2

<u>Back</u>	<u>Middle</u>	<u>Front</u>	<u>Ladies</u>
525	510	446	382

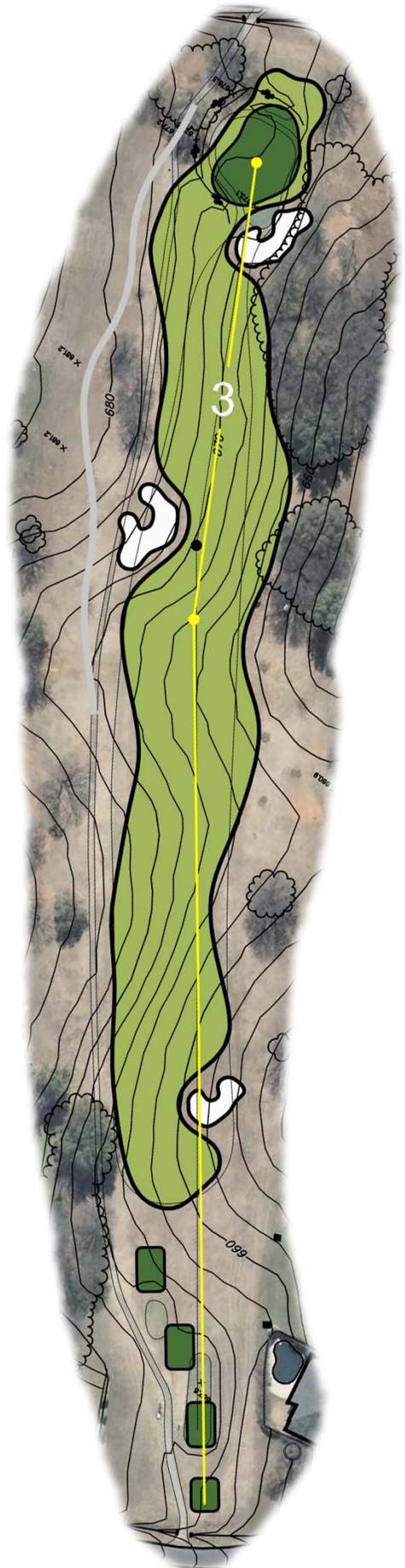
- Move the back tee to play from 525 yards.
- Trim or remove trees to open up views to the river.
- Resurface and level all tees.
- Add a new forward tee that would create a better angle to play the hole.
- Add two bunkers to help turn the hole. These bunkers will enhance the playability and aesthetics of the hole.
- Shift the cartpath slightly to go around the new bunkers.
- Add a creek in the low area. This will enhance the aesthetics of the hole and also help with the drainage.
- Reshape the greenside bunker.
- Enlarge and rotate the axis of the green.



Hole 3

<u>Back</u>	<u>Middle</u>	<u>Front</u>	<u>Ladies</u>
408	386	364	345

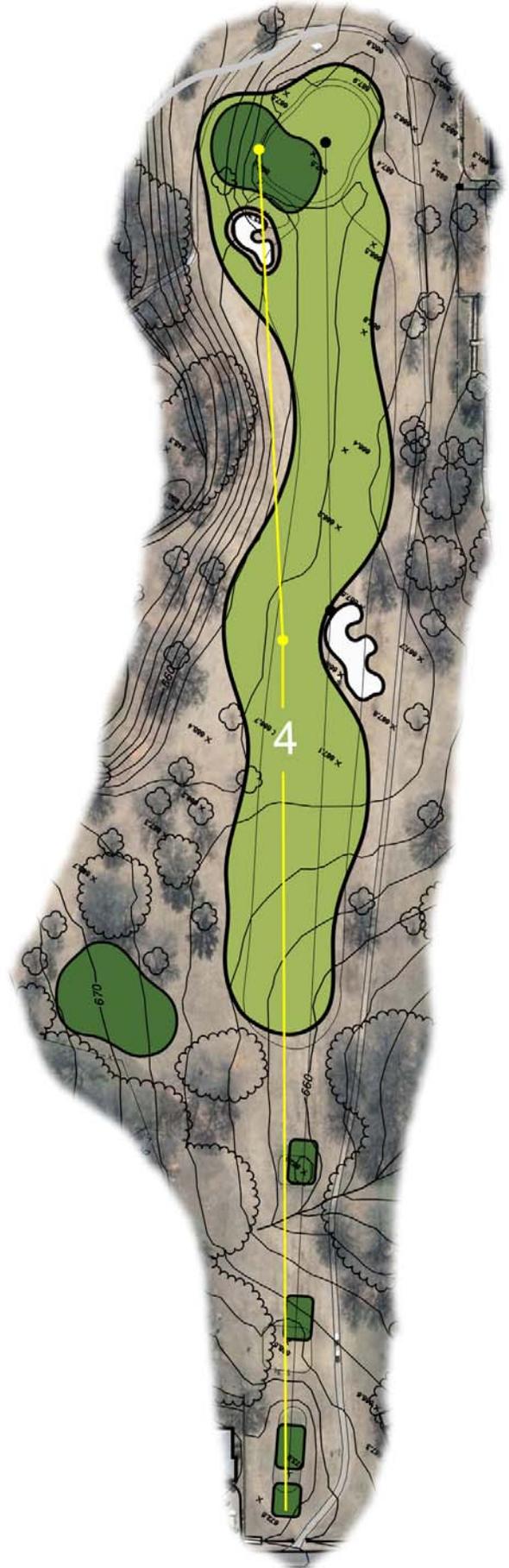
- Move the back tee back to lengthen the hole.
- Resurface and levels all tees.
- Add a crossing bunker to enhance the playability and aesthetics of the hole.
- Add a bunker on the left side of the hole that would be 290 yards from the back tee and 220 yards from the forward tee. This will improve the aesthetics and strategy of the hole.
- Add a bunker on the front right of the green.
- Rotate the axis and reconfigure the shape of the green.
- Remove the bunker from behind the green.
- Add Chipping areas around the green to enhance the playability and strategy of the hole.



Hole 4

<u>Back</u>	<u>Middle</u>	<u>Front</u>	<u>Ladies</u>
417	403	363	322

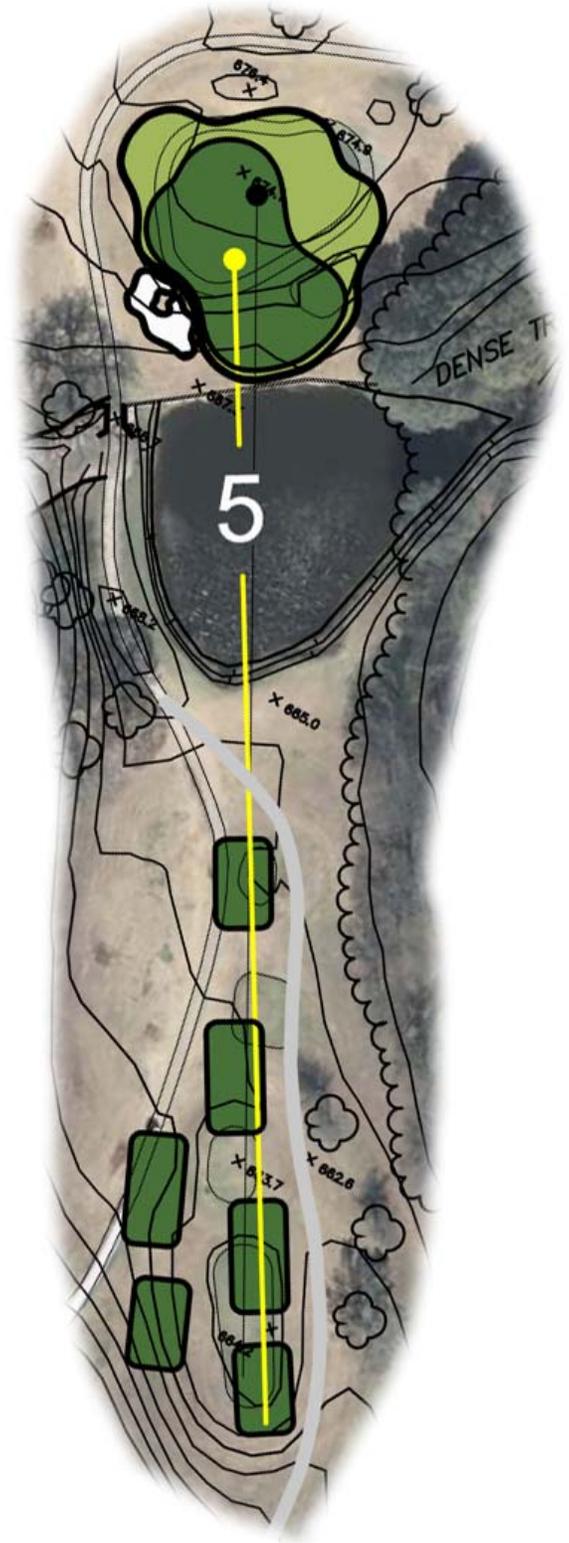
- Resurface and level all tees.
- Add a Nursery Green to the left side of the hole.
- Add a fairway bunker to the right side of the hole to enhance the playability and aesthetics of the hole.
- Shift and rotate the axis of the green and bunker to improve the strategy of the hole.
- Add Chipping areas around the green to enhance the playability and strategy of the hole.
- Shift the cart path behind the green to make the flow better to the 5th hole.



Hole 5

<u>Back</u>	<u>Middle</u>	<u>Front</u>	<u>Ladies</u>
174	150	130	100

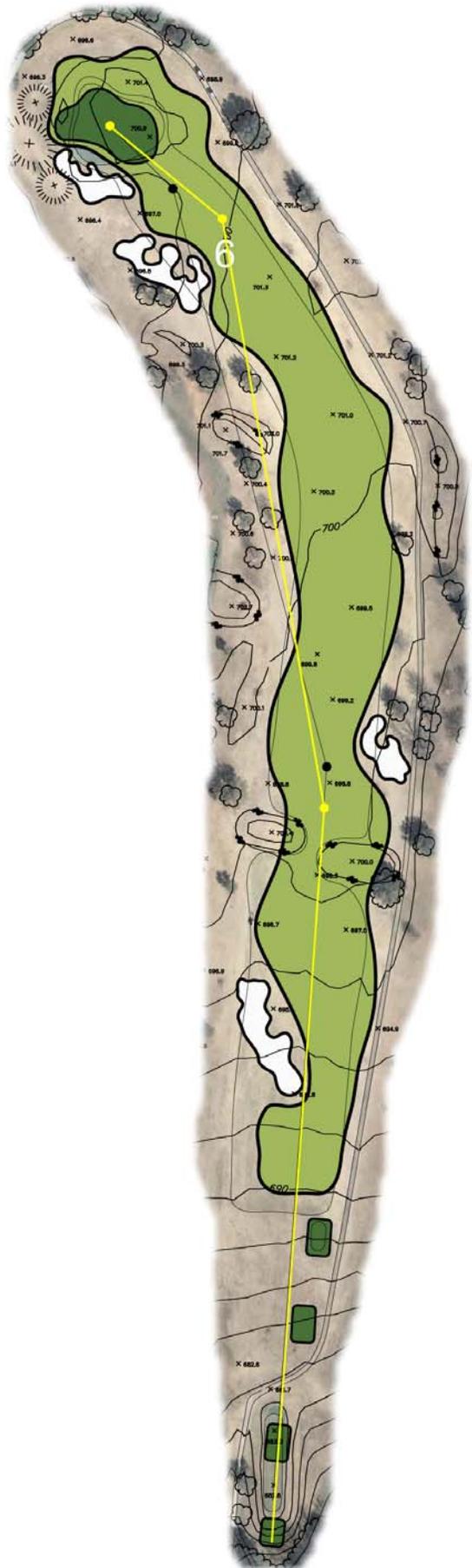
- Shift the cart path to the right side of the tees.
- Enlarge, resurface and add additional tees to improve the variety of the hole.
- Repair the dam, which will allow the water level to be raised.
- Remove the bunker short and right of the green.
- Add a bunker to the front left side of the green.
- Shift the green and lower the green to get it closer to the water.
- Add chipping areas around the green to enhance the playability and strategy of the hole.



Hole 6

<u>Back</u>	<u>Middle</u>	<u>Front</u>	<u>Ladies</u>
536	515	465	425

- Move the back tee back to play from a length of 536 yards.
- Add a new forward tee to create more tee space and variety.
- Resurface and level all tees.
- Add a crossing bunker to enhance the aesthetics of the hole.
- Remove the two mounds in the fairway to improve the visibility of the hole.
- Add a fairway bunker on the right side to help improve the strategy of the hole.
- Add two bunkers to help protect the green from those golfers going for the green in two.
- Add chipping areas around the green to enhance the playability and strategy of the hole.
- Enlarge and rotate the axis of the green.



Hole 7

<u>Back</u>	<u>Middle</u>	<u>Front</u>	<u>Ladies</u>
424	389	350	295

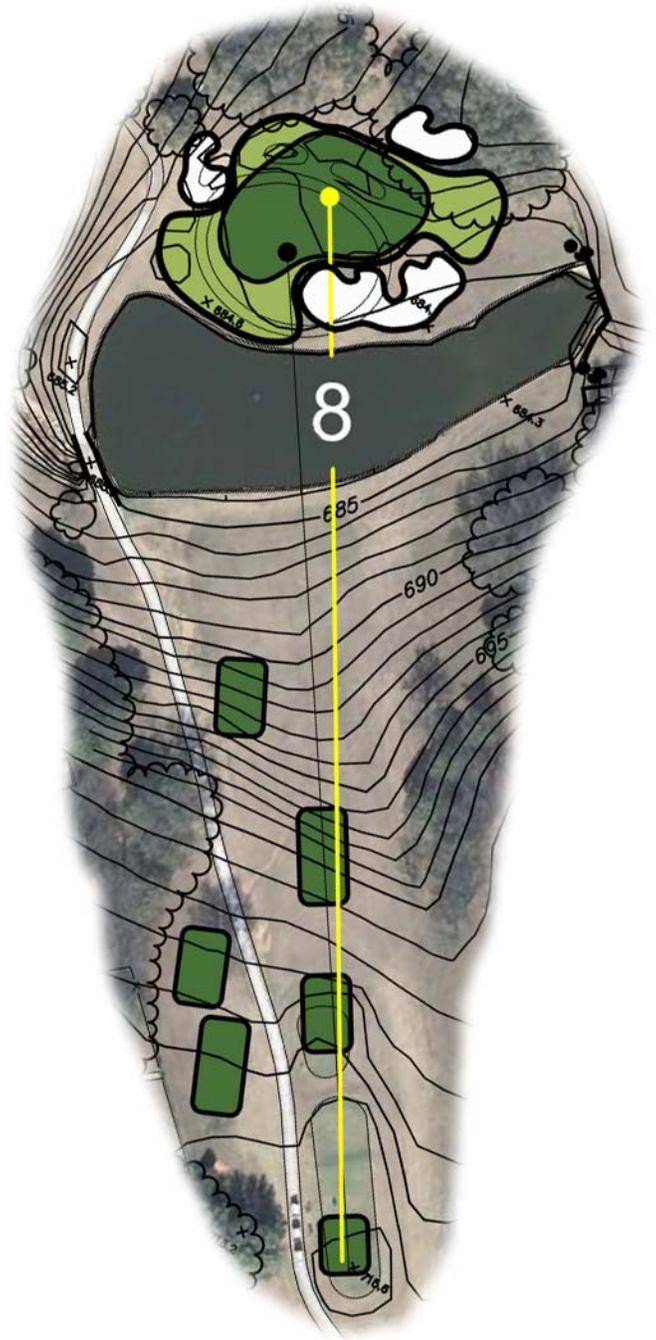
- Move the back tee back and to the left to lengthen the hole.
- Shift the cart path to have it come around the left side of the tees.
- Shift all the tees to the left.
- Add a fairway bunker on the left side to help turn the hole and also enhance the strategy.
- Add a fairway bunker on the right side of the fairway to help protect the hole from those golfers trying to hit their tee shots over the trees.
- Remove the bunker on the left side of the green.
- Reshape the greenside bunker on the right.
- Rotate the green to improve the strategy of the hole.
- Add chipping areas around the green to enhance the playability and strategy of the hole.



Hole 8

<u>Back</u>	<u>Middle</u>	<u>Front</u>	<u>Ladies</u>
185	145	126	96

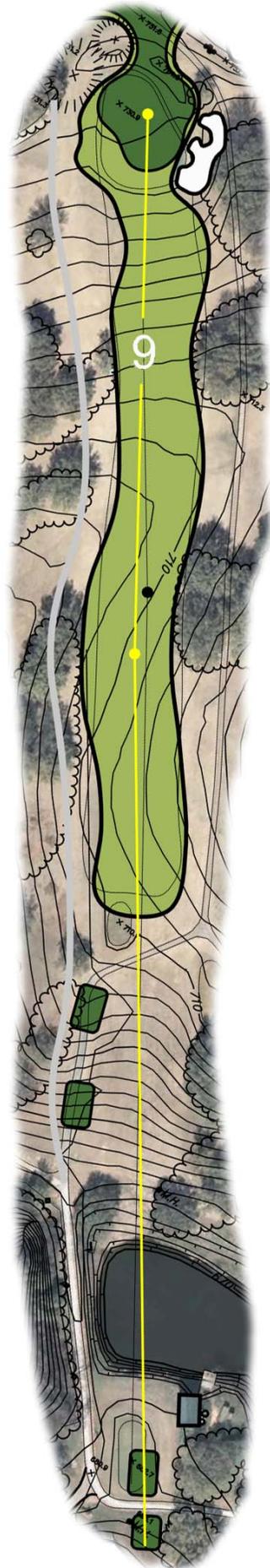
- Add several tees to help with wear and also to improve the variety of the hole.
- Reshape and reconfigure the green complex by rotating the axis of the green and adding three bunkers around the green. This would improve the strategy, playability and aesthetics of the hole.
- Remove the three bunkers from behind the green.



Hole 9

<u>Back</u>	<u>Middle</u>	<u>Front</u>	<u>Ladies</u>
428	400	301	275

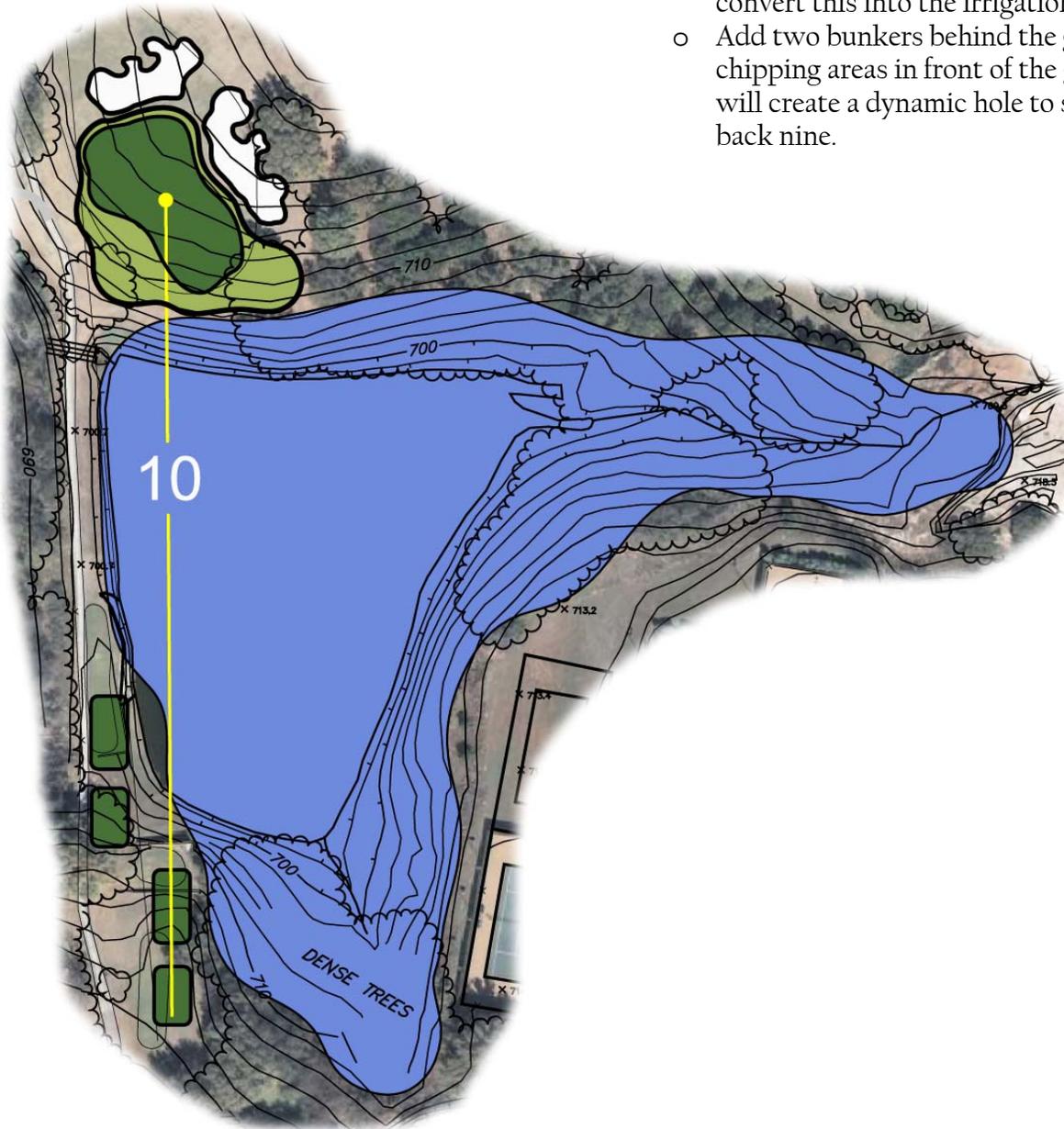
- Move the back tee back across the cart path.
- Shift the two forward tees back and to the left.
- Shift the cart path to the left side of the fairway.
- Add a greenside bunker on the right side to improve the playability, strategy and aesthetics of the hole.
- Add chipping areas around the green to enhance the playability and strategy of the hole.
- Reconfigure the green complex, creating a triple green with hole 18 and the putting green.



Hole 10

<u>Back</u>	<u>Middle</u>	<u>Front</u>	<u>Ladies</u>
196	170	145	121

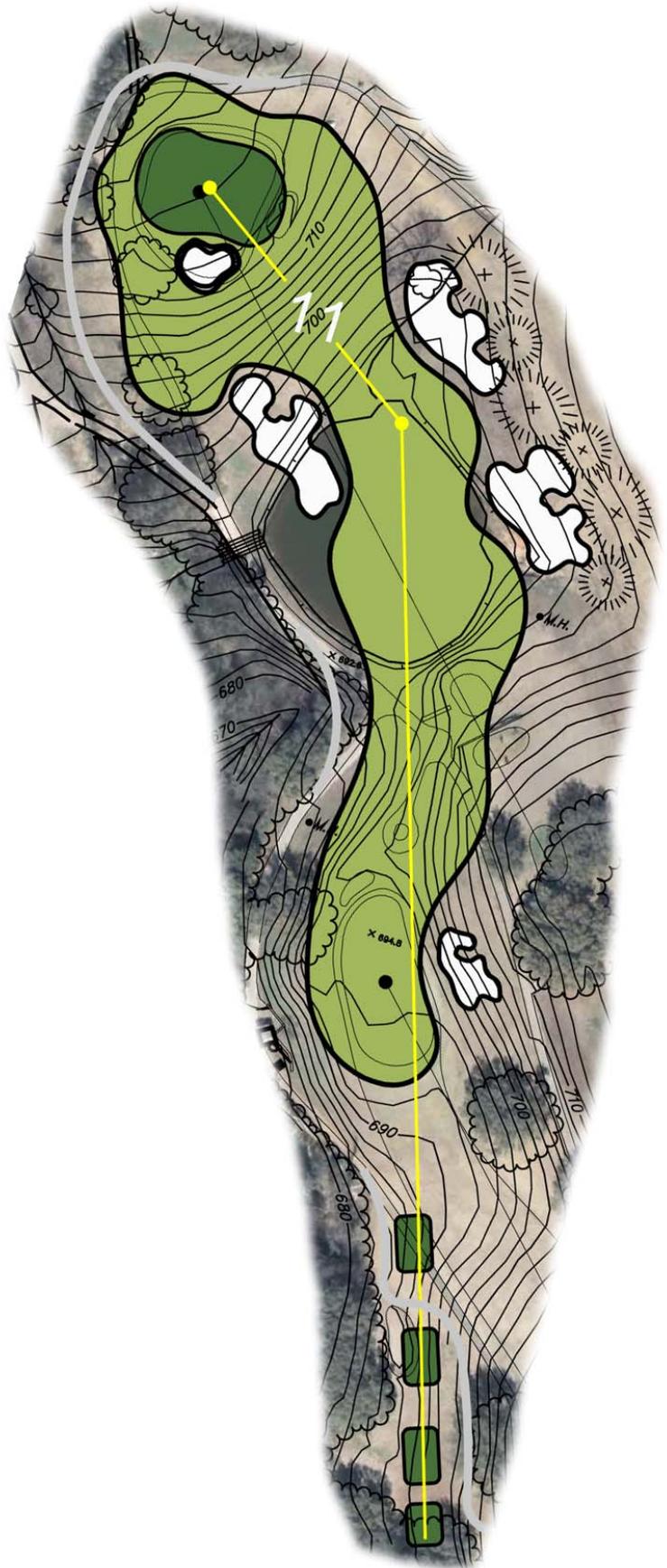
- Change hole 10 from a par 4 to a par 3.
- Enlarge the pond to roughly 3 acres and convert this into the irrigation pond.
- Add two bunkers behind the green and chipping areas in front of the green. This will create a dynamic hole to start the back nine.



Hole 11

<u>Back</u>	<u>Middle</u>	<u>Front</u>	<u>Ladies</u>
341	324	301	272

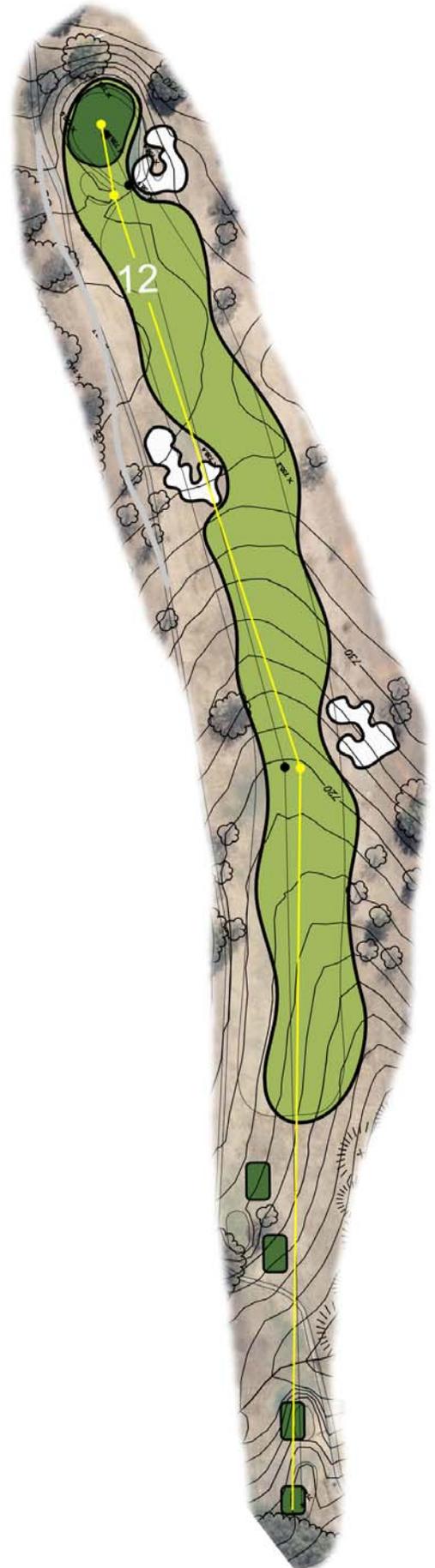
- Change hole 11 from a par 3 to a par 4.
- The back tee will be located in the area where the current fairway bunker is on hole 10. The hole will play 341 yards from the back tee and 270 yards from the front tees.
- Add a crossing bunker to enhance the aesthetics and strategy of the hole.
- Add a fairway bunker on the left side of the fairway that will challenge golfers who try to hit their tee shots up by the green.
- Add two fairway bunkers on the right side of the fairway to help turn the hole and also improve the strategy and aesthetics.
- The green complex will be in the same area, but reconfigured to help with the playability and strategy of the hole.
- Add chipping areas around the green to enhance the playability and strategy of the hole.



Hole 12

<u>Back</u>	<u>Middle</u>	<u>Front</u>	<u>Ladies</u>
510	497	442	402

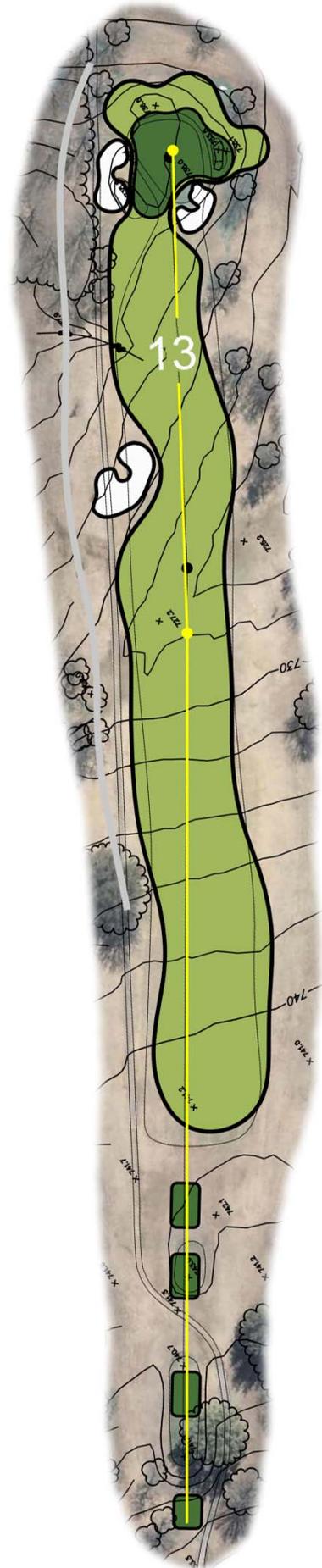
- Shift the back two tees to the left to provide better spacing from 11 green.
- Add a new forward tee.
- Add a bunker on the right side of the fairway to improve the aesthetics, playability and strategy of the hole.
- Add a bunker on the left side of the fairway to enhance the aesthetics of the hole.
- Remove the bunker on the left side of the green and reshape the bunker on the right side.
- Rotate the axis of the green to improve the strategy of the hole.



Hole 13

<u>Back</u>	<u>Middle</u>	<u>Front</u>	<u>Ladies</u>
415	382	345	325

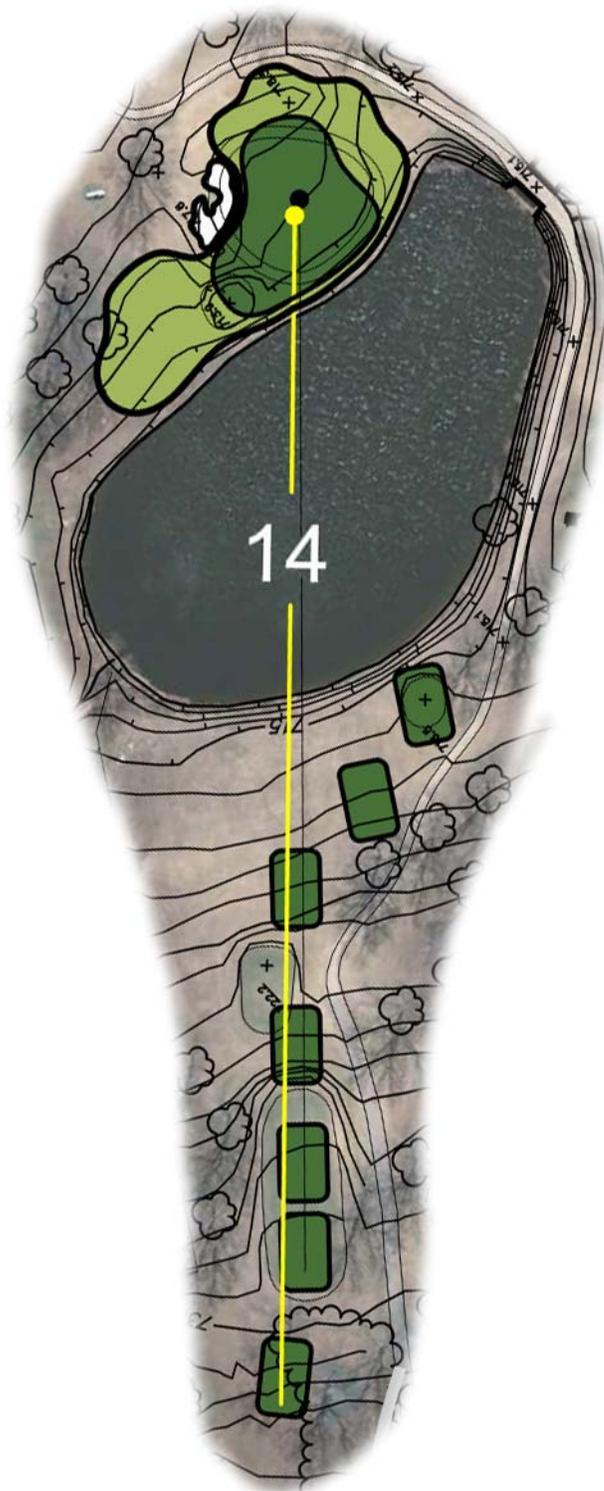
- Move the back tee back to play from a length of 413 yards.
- Resurface and level all tees.
- Add a new forward tee.
- Add a fairway bunker to the left side of the fairway to improve the strategy, playability and aesthetics of the hole.
- Remove the two greenside bunkers and add two bunkers, one on the left and one on the right of the green.
- Reconfigure the green and rotate the axis to enhance the strategy of the hole.
- Shift the cart path to the left.
- Add chipping areas around the green to enhance the playability and strategy of the hole.



Hole 14

<u>Back</u>	<u>Middle</u>	<u>Front</u>	<u>Ladies</u>
211	175	136	91

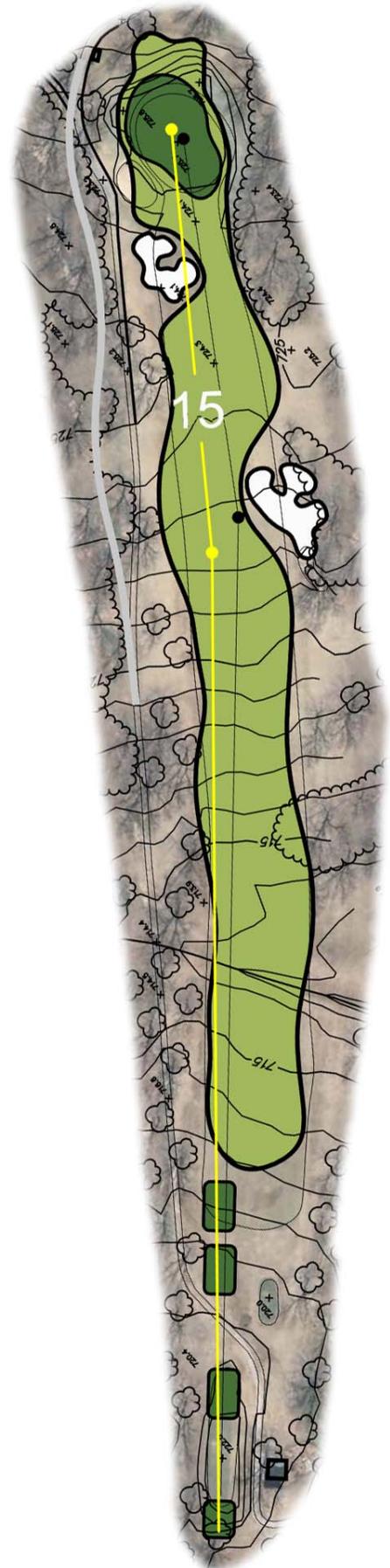
- Add a new back tee that will play from 211 yards.
- Resurface and level the existing tees.
- Add three new tees to create more variety.
- Move the bunker from the front of the green to the back of the green to allow for the green to be shifted closer to the pond.



Hole 15

<u>Back</u>	<u>Middle</u>	<u>Front</u>	<u>Ladies</u>
384	365	325	305

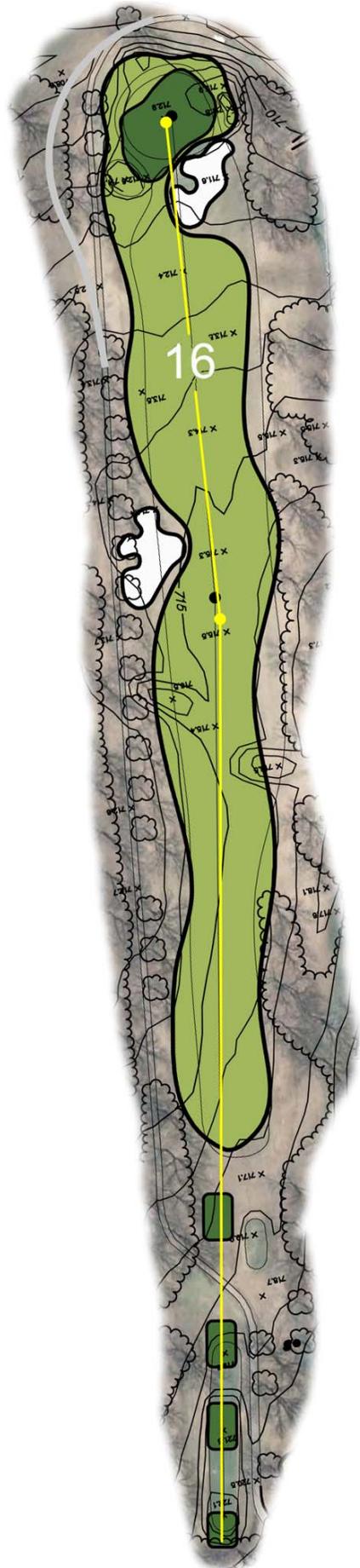
- Shift the back tee back to play from a length of 384 yards.
- Add a new forward tee and shift the existing tee to have them align with the back tees.
- Shift the current fairway bunker down the fairway and to the left. Also, reshape the bunker to improve the aesthetics.
- Add a deception bunker on the left side of the hole about 20-30 yards from the green.
- Reconfigure and rotate the axis of the green.
- Add chipping areas around the green to enhance the playability and strategy of the hole.



Hole 16

<u>Back</u>	<u>Middle</u>	<u>Front</u>	<u>Ladies</u>
413	393	365	329

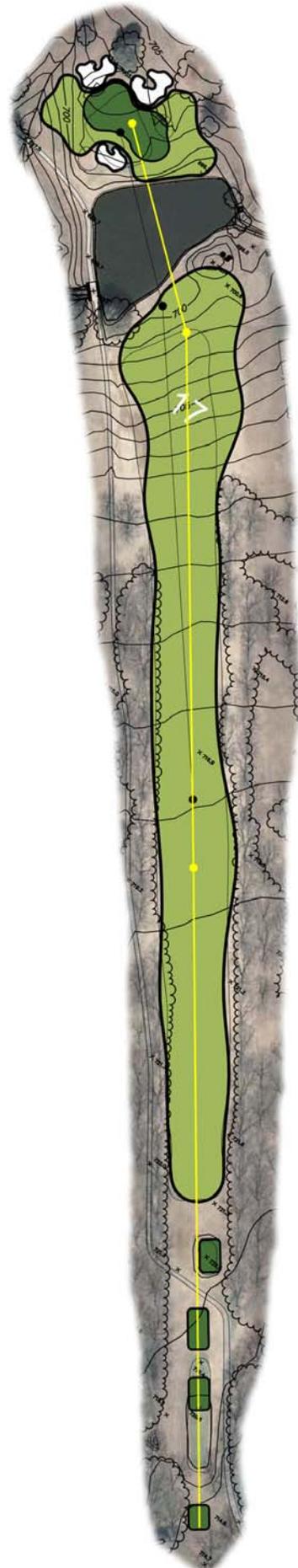
- Resurface and level all tees.
- Shift the forward tee to be inline with the other tees on the hole.
- Remove the mounds in the middle of the hole to create better visibility on the hole.
- Add a fairway bunker on the left side to enhance the strategy and aesthetics of the hole.
- Remove the two greenside bunkers and replace them with one bunker on the right of the green.
- Rotate the axis of the green to improve the strategy and playability of the hole.
- Add chipping areas around the green to enhance the playability and strategy of the hole.



Hole 17

<u>Back</u>	<u>Middle</u>	<u>Front</u>	<u>Ladies</u>
571	526	490	450

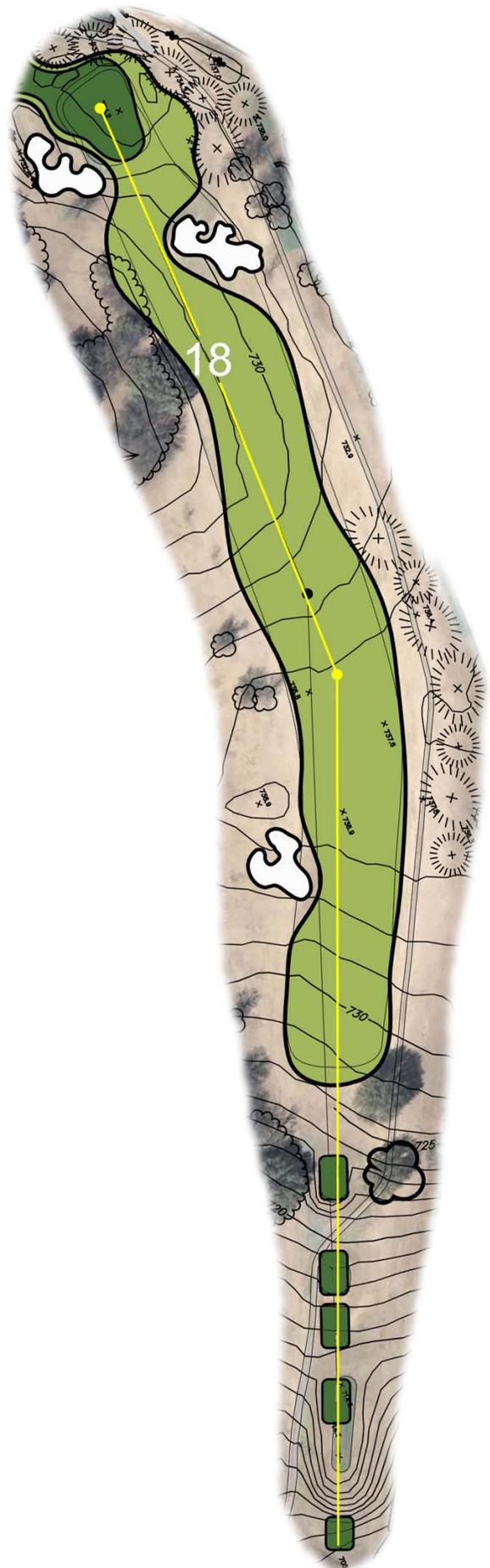
- Move the back tee back to play from a length of 571 yards.
- Resurface and level all tees.
- Enlarge the fairway to the right to allow for a better angle into the new green complex.
- Add two bunkers behind the green and one in front to challenge the golfers trying to go for the green in two.
- Remove the two current bunkers and reconfigure the green to improve the strategy of the hole.
- Add chipping areas around the green to enhance the playability and strategy of the hole.



Hole 18

<u>Back</u>	<u>Middle</u>	<u>Front</u>	<u>Ladies</u>
455	417	375	347

- Move the back tee back to play from a length of 455 yards.
- Resurface and level all tees.
- Add a crossing bunker in the hillside to enhance the aesthetics of the hole.
- Add mounding on the right side of the hole to help contain errant tee shots.
- Add a deception bunker about 30-40 yards from the green to improve the strategy of the hole.
- Add a greenside bunker on the left side of the green that will play off of the deception bunker. This will improve the strategy, playability and aesthetics of the hole.
- Reconfigure the green complex creating a triple green with the 9th hole and the putting green.
- Remove the bunker behind the green and add mounding to screen the parking lot.



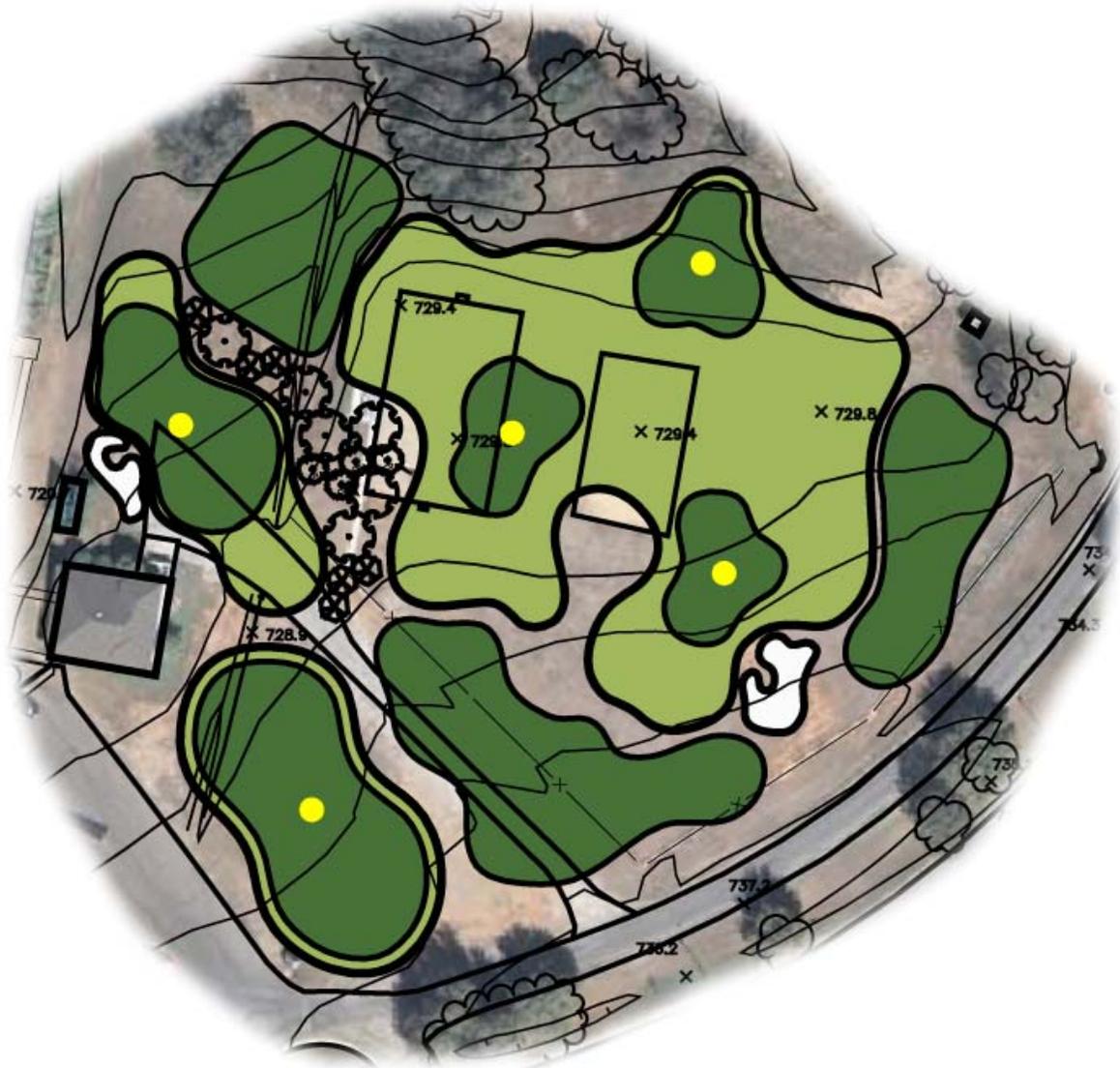
Putting Green Complex

- The triple green complex will include the primary putting green, hole 9 and 18.
- The location of the existing putting green will be converted into a new cart staging area.



Short Game Area

- Add a new short game area to the east of the tennis courts.
- The short game area will include:
 - 3 teeing areas allowing shots to be played from 20 – 85 yards.
 - A chipping green with a greenside bunker.
 - An alternate putting green.



Section

6

Pecan Plantation Country Club

Granbury, Texas

Design Recommendations



Hole 8



Hole 8 - Proposed



Hole 10



Hole 10 - Proposed



Hole 11 - Before



Hole 11 - Proposed



Hole 18



Hole 18 - Proposed

Pecan Plantation Country Club

Granbury, Texas

Cost Estimate

A. Mobilization, Clearing & Site Preparation	\$193,250.00
B. Mass Grading	\$418,000.00
C. Drainage	\$100,000.00
D. Feature Construction	\$986,006.75
E. Water Feature Construction	\$192,700.00
F. Soil Preparation & Grassing	\$385,200.00
G. Irrigation	\$2,056,200.00
H. Finish Out	<u>\$8,643.00</u>
PROJECT TOTAL	\$4,340,000.00

* The following pages go into greater detail for the Cost Estimate.