



BRAEMAR GOLF COURSE

EDINA, MINNESOTA

PREPARED FOR: CITY OF EDINA, MINNESOTA

RENOVATION BUSINESS PLAN REPORT

APRIL 2015



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LEGEND

-  TEE
-  GREEN
-  SAND BUNKER
-  FAIRWAY
-  TREELINE
-  WATER BODY
-  CLUBHOUSE
-  MAINTENANCE



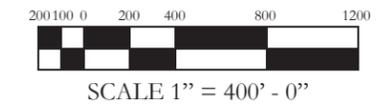
FEBRUARY, 2015
EXISTING CONDITIONS



Hole	Par	Blue	White	Silver	Red	Green	Gold
1	4	458	445	372	372	372	346
2	5	546	530	530	395	395	366
3	3	179	160	140	140	120	120
4	4	432	426	400	400	371	371
5	4	414	406	376	376	303	303
6	4	411	402	382	382	382	370
7	3	177	165	165	160	160	118
8	4	395	380	330	330	290	290
9	5	488	471	471	405	405	364
CASTLE	36	3500	3385	3166	2960	2798	2648
Castle to Hays	71	6602	6329	6048	5677	5429	5043

Hole	Par	Blue	White	Silver	Red	Green	Gold
10	4	401	381	381	359	359	337
11	4	343	337	337	332	332	297
12	3	141	120	120	115	115	98
13	4	358	351	351	335	335	312
14	5	485	476	476	456	406	406
15	4	411	396	363	363	363	316
16	4	420	413	384	384	348	348
17	3	227	170	170	152	152	119
18	4	316	300	300	221	221	162
HAYS	35	3102	2944	2882	2717	2631	2395
Hays to Clunie	71	6262	5960	5710	5336	5250	4737

Hole	Par	Blue	White	Silver	Red	Green	Gold
19	4	372	361	361	322	322	313
20	3	181	164	164	140	140	128
21	4	377	351	322	322	322	295
22	3	195	185	185	164	164	142
23	5	511	497	443	443	443	404
24	5	504	484	444	444	444	390
25	3	146	129	129	101	101	85
26	4	388	377	377	280	280	213
27	5	486	468	403	403	403	372
CLUNIE	36	3160	3016	2828	2619	2619	2342
Clunie to Castle	72	6660	6401	5994	5579	5417	4990



BRAEMAR GOLF COURSE RENOVATION BUSINESS PLAN REPORT EXECUTIVE SUMMARY

BRAEMAR GOLF COURSE IN EDINA, MINNESOTA INCLUDES A TWENTY-SEVEN HOLE REGULATION GOLF COURSE, NINE-HOLE EXECUTIVE COURSE, AND A DRIVING RANGE WITHIN A 445-ACRE PARK OWNED BY THE CITY OF EDINA. THE PARK ALSO INCLUDES A GOLF PRACTICE DOME, ATHLETIC FIELDS, HOCKEY RINKS, AND OPEN SPACE WITH TRAILS.

THE CITY OPENED THE ORIGINAL EIGHTEEN HOLES FOR PLAY IN THE SUMMER OF 1964. A NINE-HOLE PAR THREE COURSE OPENED SOON THEREAFTER. IN 1986, THE PAR THREE COURSE WAS CONVERTED TO THE EXISTING NINE-HOLE EXECUTIVE LAYOUT. THE CITY PLANS TO CONVERT THE EXECUTIVE LAYOUT BACK TO A PAR THREE COURSE IN CONJUNCTION WITH A DRIVING RANGE EXPANSION IN THE SUMMER OF 2015.

IN 1994, THE CITY ADDED NINE NEW HOLES, KNOWN AS THE CLUNIE NINE, TO THE ORIGINAL 1964 LAYOUT (NOW KNOWN AS THE CASTLE AND HAYS NINES). ONCE THE CLUNIE NINE OPENED FOR PLAY, ROUNDS AT BRAEMAR PEAKED AT 82,400 IN 1997 BUT HAVE FALLEN STEADILY SINCE. THE REASONS FOR THIS ARE NOT DUE TO A LACK OF INTEREST IN PLAYING GOLF BECAUSE IT IS CLEAR THE DROP OFF IN ROUNDS PLAYED AT BRAEMAR BEGAN LONG BEFORE THE ECONOMIC CRISIS OF 2008. INSTEAD, THERE WAS A WANING INTEREST FROM THE MAJORITY OF CITY RESIDENTS AND OTHER GOLFERS IN PLAYING THE CLUNIE NINE.

THIS LACK OF INTEREST COMES IN THE DIFFICULTY OF THE CLUNIE CONTRIBUTING TO HIGH SCORES AND SLOW ROUNDS. FORCED CARRIES, EXTREME ELEVATION CHANGES FOR WALKERS, AND NARROW LANDING AREAS ARE THE LEADING CONTRIBUTORS. THE DISINTEREST IN PLAYING THE CLUNIE NINE HAS PROMPTED MANY GOLFERS TO CANCEL PLAYING AT BRAEMAR ALTOGETHER FOR DREAD OF PLAYING AT LEAST PART OF THEIR DAY'S ROUND ON THE CLUNIE NINE.

IN ADDITION TO THE LACK OF INTEREST IN THE CLUNIE NINE, CONDITIONS ON THE CASTLE AND HAYS NINES SLIPPED AS THE INFRASTRUCTURE OF THE GOLF COURSE HAS BECOME MORE AND MORE OUTDATED. GOLF COURSE FEATURES SUCH AS THE PUTTING SURFACES, SAND BUNKERS, AND IRRIGATION SYSTEM HAVE NEVER BEEN REBUILT AS ENTIRE UNITS. NEITHER HAVE THE TEE COMPLEXES, WHICH ARE NOT LARGE ENOUGH TO ACCOMMODATE THE NUMBER OF ROUNDS THE COURSE HANDLES IN 2014 COMPARED TO WHEN THEY WERE FIRST BUILT IN 1964. EACH TEE COMPLEX DOES NOT PROVIDE APPROPRIATE PLAYING DISTANCES FOR THE MAJORITY OF GOLFERS EITHER. DRAINAGE ISSUES HAVE CONTINUALLY BEEN REPAIRED AS BAND-AIDS TO DEAL WITH INAPPROPRIATE SUB-SOILS AND A LACK OF TOPSOIL IN MANY PLACES DATING BACK TO ORIGINAL CONSTRUCTION.

THE CITY OF EDINA PREFERS TO PROVIDE THE BEST POSSIBLE GOLFING EXPERIENCE TO AS MANY DIFFERENT GOLFERS AS POSSIBLE AT BRAEMAR GOLF COURSE. THE OVERRIDING GOAL IS TO PROVIDE THAT EXPERIENCE TO GOLFERS OF ALL AGES AND ALL ABILITIES. BRAEMAR MUST BE APPEALING AND WELCOMING TO KIDS, YOUNG ADULTS AND SENIORS IN ORDER TO REMAIN RELEVANT AND VIBRANT WELL INTO THE FUTURE. THE RENOVATION BUSINESS PLAN FOR BRAEMAR GOLF COURSE DEFINES

BOTH GENERAL AND SPECIFIC TASKS NECESSARY TO ACHIEVE THE CITY'S GOALS. THIS REPORT WILL PRESENT A VARIETY OF RENOVATION OPTIONS TO CONSIDER FOR THE EXISTING TWENTY-SEVEN HOLES WITH THE INTENTION OF MAKING INFRASTRUCTURE, TREE ENCROACHMENT, DESIGN STYLE, AND MODERNIZATION UPGRADES THAT TAKE INTO ACCOUNT REASONABLE GREENS FEES AND EASE OF MAINTENANCE. MULTIPLE GOLF COURSE TOURS WITH THE RENOVATION BUSINESS PLAN TASK FORCE, GOLFERS (OF ALL AGES, TALENT LEVELS, AND GENDER), AND STAFF SERVED AS THE BASIS FOR PRACTICAL SOLUTIONS TO THE CURRENT CHALLENGES EXPERIENCED AT BRAEMAR GOLF COURSE.

THE RENOVATION BUSINESS PLAN REPORT ALSO PRESENTS A VARIETY OF SITE PLAN ROUTING CONCEPTS THAT MAY SERVE THE CITY OF EDINA'S NEEDS FOR ITS GOLFING POPULATION BETTER THAN THE CURRENT CASTLE, HAYS, AND CLUNIE NINE HOLE CONFIGURATIONS PROVIDE. THE PRIMARY FUNCTION OF THIS TASK IS TO UTILIZE THE LAND ON WHICH THE CLUNIE NINE SITS IN ORDER TO PROVIDE A MORE SUPERIOR GOLFING ALTERNATIVE THAN THE CLUNIE NINE CURRENTLY PROVIDES.

ROUTING OPTIONS INCLUDE CREATING THE VERY BEST TWENTY-SEVEN REGULATION HOLES POSSIBLE, AN ALTERNATIVE THAT INCLUDES THE VERY BEST EIGHTEEN REGULATION HOLES FOR THE SITE IN CONJUNCTION WITH AN EXECUTIVE NINE HOLES, AN EIGHTEEN HOLE REGULATION GOLF COURSE WITH A FOUR-HOLE PRACTICE LOOP, AND AN ALTERNATIVE THAT INCLUDES SOLELY A STAND-ALONE EIGHTEEN REGULATION HOLES AMONG OTHERS. EACH OPTION ALLOWS FOR ADDITIONAL ACTIVE AND PASSIVE USES FOR CITY RESIDENTS WITHIN THE PARK SUCH AS SLEDDING, TUBING, FIELD GAMES, WATER ACTIVITIES, DISC GOLF, FOOTGOLF, FLINGGOLF, PICNICKING, WILDFLOWER GARDENS, AND WALKING TRAILS.

BY UNDERGOING A SENSIBLE UPGRADE OF THE GOLFING FACILITIES, THE CITY OF EDINA CAN TAKE ADVANTAGE OF THE IMPROVEMENTS OUTLINED IN THIS RENOVATION BUSINESS PLAN REPORT TO ENHANCE THE GOLFER'S PLAYING EXPERIENCE. THE MAINTENANCE STAFF CAN ALSO INCREASE CONDITIONING TO A LEVEL THAT CURRENTLY CANNOT BE MET DUE TO OUTDATED CONSTRUCTION AND DETERIORATING AGRONOMIC CONDITIONS (FROM SEVERE DRAINAGE ISSUES, TREE ENCROACHMENT, AND POOR INFRASTRUCTURE).

THE CITY MAY ALSO CHOOSE TO UNDERTAKE A RE-DESIGN OF ITS FACILITIES AS THE ALTERNATIVE ROUTING OPTIONS WITHIN THIS REPORT SUGGEST IN ORDER TO PROVIDE THE VERY BEST GOLFING EXPERIENCE POSSIBLE FOR ALL AGES AND ABILITIES. THE ROUTING OPTIONS SOLVE FUNDAMENTAL ROUTING PROBLEMS THE CURRENT LAYOUT POSSESSES WHICH HINDER THE ABILITY FOR THE CITY TO TRULY PROVIDE THE BEST POSSIBLE GOLFING EXPERIENCE. RENOVATION OF THE GOLF COURSE CONFIGURATION AS IT CURRENTLY SITS WILL NOT FULLY IMPROVE PLAYABILITY; NOR FULLY OVERCOME ENVIRONMENTAL, TOPOGRAPHICAL, OR SAFETY CHALLENGES; THEREBY LIMITING THE FUTURE SUCCESS OF BRAEMAR GOLF COURSE.

GENERAL DESIGN AND MAINTENANCE ISSUES

Through a systematic analysis of the golf course accomplished by walk-throughs with the Renovation Business Plan Task Force, golfers (of all ages, abilities, and gender) and staff, Richard Mandell Golf Architecture has identified general design and maintenance issues which require consideration when assessing Braemar Golf Course:

- The opening holes of the Castle nine set a very difficult tone for the golfers in terms of playability. The Castle nine is almost 400 yards longer than both the Hays and Clunie nines.
- The golf course is too long and too narrow for the majority of women golfers. There are numerous forced carries and the rough is too deep for the ladies, as well.
- The water features are surrounded by invasive species and are concealed by tall plants which create an unfair carry for the lesser-skilled golfers. Ponds need to be cleaned out and improved aeration needs to be implemented.
- Numerous drainage issues make the golf course wet for golfers and much longer-playing than the yardage reflects.
- Multiple fairways have water-holding soils and/or lack topsoil to effectively grow a proper stand of turf for golf.
- Fairways are very bumpy due to drainage issues and heaving of underlying soils.
- Fairways and approaches are too narrow. Fairway lines do not reflect the natural topography of the land.
- Forced carries, narrow fairways, tree encroachment, and deep rough are primary contributors to slow play.

IRRIGATION SYSTEM ISSUES:

- The irrigation system is composed of Toro components installed in 1980 on the Castle and Hays nines. The Clunie nine irrigation system was installed in 1994. All greens, tees, fairways, some rough areas, and the driving range are irrigated.
- The irrigation system is a fully automatic irrigation system with a double row of heads in the fairways only. Only full heads are utilized throughout the golf course, including the putting surfaces.
- Two variable frequency drive pumps were installed in 1980 and a third submersible well pump was inherited by the City in 2010. The system pumps water directly from three wells on site to the golf course features. The three wells are the only sources for irrigation water and there is currently no storage. Prior to 1980, irrigation water was pumped directly from Nine Mile Creek.
- Currently the pumps operate at 1000 gpm, 700 gpm, and 300 gpm respectively and it takes 11 hours to irrigate the entire golf course.
- There are few isolation valves on the golf course. Typically four holes can be isolated at a time which makes repair work of such an old system very inefficient.
- Typically irrigation system pipes have a life span of no more than thirty years. A pump system kept in reasonable shape is expected to last no more than fifteen to twenty years. Irrigation heads and other components shall not be expected to work beyond ten to fifteen years.
- All components of the irrigation system at Braemar Golf Course have exceeded these life expectancies. Stability of an irrigation system is crucial to a maintenance staff's success in maintaining other elements of a golf course and providing an acceptable stand of turf for golfers.



GENERAL TEE COMPLEX ISSUES:

- Tee boxes appear the most dated of all the golf course features at Braemar Golf Course. They are very uneven and all need to be laser-leveled at a minimum.
- The average tee complex size per golf hole at Braemar is 5,785 square feet but many tee boxes are no longer in use. A rule of thumb for tee complex size is that for every 1,000 rounds of golf expected, there should be 100 square feet of tee space to accommodate such play, with twice as much for par threes. RMGA recommends a minimum of 7,500 square feet of tee space per hole.



Narrow fairways and forced carries.



Fairways don't follow natural contour of the land.



Sand bunkers have exceeded their life expectancy.



Many bunkers are too large and penal.



Wetland invasive species block views.



Cart paths are in poor condition.

- There is a severe lack of Tee Shot Distance Equity for golfers, meaning that the golf course plays relatively longer for some golfers than others and the same experience is not provided for all ages and abilities.
- There are four original sets of tees which have been supplemented by two additional sets to counter the equity problem but the additional sets of tees can only work within the confines of the existing tee boxes, limiting the elasticity of the yardages. In addition, the resulting six sets of tee boxes have created a confusing setup for the golfers.
- Despite these efforts, the average spacing at Braemar Golf Course for all six tee box options (including the Silver and Green combos) is only 315 yards per eighteen hole configuration. Following is the average spacing between each set (18 hole equivalent):
 - Blue to White: 268 yards.
 - White to Silver: 313 yards.
 - Silver to Red: 389 yards.
 - Red to Green: 165 yards.
 - Green to Gold: 442 yards.
- Only the Hays-Clunie configuration provides a forward tee in the 4,500-4,800 yard range (4,737 yards). The others (Castle/Hays: 5,043 yards & Clunie/Castle: 4,990 yards) exclude a large percentage of golfers.
- Generally, the tee box configuration does not provide for Tee Shot Distance Equity from hole to hole.
- Many front tee boxes force golfers to lay up and then play a very difficult shot over water features, automatically adding a shot to each golf hole and not allowing par to be achieved.

GENERAL SAND BUNKER ISSUES:

- Big rain events create washes and standing water. The maintenance crew needs a full day and a half to get the bunkers pumped dry and raked.
- Many bunkers are much too large, resulting in increased maintenance as well as requiring difficult recoveries for the majority of golfers. The bunkers are out of proportion to the greens in terms of size, providing an odd appearance. This also creates access/egress issues for golfers.
- The edges of many bunkers have been worn down over time.
- The bunkers do not have a third dimension to them, appearing flat and shallow. Some are blind as a result.
- There is little sand in the bunkers.
- Many bunkers are too far from the putting surfaces they are supposed to guard, making them more penal for the lesser-skilled golfers.
- Some bunkers are placed only to penalize a poor shot.

GENERAL GREENS COMPLEX ISSUES:

- Although the majority of the original greens were built in 1964 and those of the Clunie were built in 1994, many have been rebuilt in piecemeal fashion and are not of the same material composition. Others have been built which do not match the character of the original greens.
- The greens are all native soil push-up greens with no internal drainage.
- Many greens have a predominant back to front slope.

CLUNIE NINE ISSUES:

- Rounds at Braemar fell when the Clunie nine was built because golfers did not like playing it and were upset their round would include the Clunie nine and not the original 18. As a result, it became more of an overflow nine instead of a third nine of comparable golf.

- The Clunie nine was not accepted by the older golfers due to the difficult elevation changes.
- The Clunie nine is tougher to walk because of the elevation changes.
- The Clunie nine is much more narrow with more forced carries, especially for the women. Golfers are not allowed to use driver as much as they prefer or are able to as they are on the original eighteen.
- There are many penal bunkers that make each fairway even more narrow.
- The vegetation lining the water features blocks the view of many holes and require higher than necessary shots to be played over them, creating a more difficult challenge for women and beginners.
- The majority of holes are wetter than the original holes because they were built in the flood plain with little drainage over poor soils.
- The tees for holes 24, 26, and 27 were built with pond muck.
- Holes 23, 24, 26, and 27 never had a layer of topsoil added and still do not have quality grass. If topsoil were to be added, six inches of material would need to be excavated and then topsoil added because the Nine Mile Creek flood plain will not allow any elevation increases on these holes.

FLOODPLAIN ISSUES:

- 165 acres of the Braemar park property is within the 100-year floodplain, which sits within a range of elevations between 832-845 mean feet above sea level (MSL). The only holes (9) which are entirely out of the 100-year floodplain are holes 1, 3, 4, 5, 10, 14, 20, 22, and 24.
- Placement of fill below the 100-year flood elevation (832-845) is prohibited unless a subsequent cut provides an equal amount of storage at the same elevation (+/- 1 foot) and within the floodplain of the same water body.
- Any cut or fill operations must be done in adjacent areas to each other. For instance, one cannot fill two feet in the 100 - year flood plain on hole #2 and then cut two feet on hole #26 to compensate for the lost storage. A further example is one cannot cut two feet below the 100 - year floodplain elevation near the tees of hole #2 and then fill two feet near the second landing area of hole #2 unless the cut and fill actions are adjacent to the same common elevation.
- Any filling needed above the 100-year floodplain elevation range of 832-845 does not require subsequent cutting to balance the storage.
- Overcoming these requirements demands careful, yet creative, thought to the grading process.

WETLAND & WETLAND BUFFER ISSUES:

- The Nine Mile Creek Watershed District (NMCWD) and the U.S. Army Corps of Engineers (USACE) oversee regulation of the wetlands within Braemar Park. The NMCWD is the local government unit that administers the Minnesota Wetland Conservation Act (WCA). A permit will be required from the NMCWD for any activity that results in the draining, excavation, or filling of a wetland regulated by WCA. If wetlands are unavoidable, NMCWD rules specify wetland replacement siting criteria and size ratios based on the location of the replacement wetlands and the value rating of the wetland. Some wetlands and aquatic resources on the site are also considered Waters of the U.S. according to Section 404 of the Clean Water Act and regulated under the jurisdiction of the USACE.
- Buffers are required on all wetlands disturbed by land alteration activity requiring a NMCWD permit or on all wetlands downgradient from the activity. The buffer requirements vary depending on whether the wetland is rated as high value, medium value, or low value. The high, medium, or low value ratings are determined by conducting a Wetland Functions and Values Assessment using the Minnesota Routine Assessment Method (MnRAM) and comparing the MnRAM results to criteria established in the NMCWD rules. The required buffer widths are as follows:

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- High value buffers shall average 60' from the edge of high value wetlands with a minimum of 30'.
- Medium value buffers shall average 40' from the edge of medium value wetlands with a minimum of 20'.
- Low value buffers shall average 20' from the edge of low value wetlands with a minimum of 10'.
- There are approximately 73 acres of wetland on the 27-hole portion of the Braemar Park golf course property. Detailed wetland evaluations, including boundary delineations and functions and values assessments, have not been conducted for the wetlands, with the exception of approximately 4.6 acres which were delineated and assessed in 2012 and determined to be Medium Value wetlands with regard to the NMCWD buffer requirements. An additional 6.3 acre MN Public Water wetland, which is regulated by the MN DNR, was also assessed as a Medium Value wetland. Approximately 8.4 acres are mitigated wetlands required by the USACE in association with the addition of the Clunie nine.
- There are an additional 5 acres of delineated medium value wetlands within the driving range and nine-hole executive course portion of the park which is *NOT* part of this Renovation Business Plan Report. That acreage has been delineated as medium value by a consultant specializing in wetland delineation.
- All design decisions for the Renovation Business Plan Report and associated concept plans have incorporated a 60' wetland buffer to ensure flexibility in design regardless of final delineation work.

SLOPE DEVELOPMENT ISSUES:

- According to phone conversations between Ross Bintner, Environmental Engineer for the City of Edina, and Cary Teague, Community Development Director for the City of Edina, there are no restrictions for development of slopes for City of Edina uses. The restrictions only apply if there is a zoning action such as platting and developing a property.

COVENANT OF DEDICATION:

- As part of the 1992 USACE permit, a Covenant of Dedication was agreed upon by the City of Edina to acquire a parcel of 21.59 acres (known as Parcel C) and dedicate it in perpetuity for use as a conservancy area. No development or construction of structures or buildings is allowed. In addition, no agricultural uses, lumbering, mowing, draining, burning, or filling shall be allowed or conducted within this parcel without written approval from the Corps of Engineers.

GENERAL TREE ISSUES:

- The average golf hole corridor width (from treeline to treeline) is just 39 yards wide. RMGA suggests the average corridor should be closer to the 50 yard range yet tree clearing should not be undertaken that may create unsafe playing conditions or sacrifices necessary tree safety buffer.
- Woodland on both sides of many holes is so dense that sunlight and air circulation limit grass growth. A tree thinning program must be undertaken to improve air circulation, increase sunlight, and improve the overall condition of the trees to remain. In general, native hardwood trees should be preserved while native softwood trees and non-native trees should be removed.
- There are many trees on the property approaching the end of their growth cycle that shall be removed.
- Many tree roots are exposed in the rough and fairway edges.

OAK SAVANNA & OAK WOODLAND ISSUES:

- Two areas within Braemar Park (totaling 29.13 acres) to the west of the golf holes are considered Oak Savanna. Specifically two smaller parcels within these areas (totaling 9.15 acres) known as Parcels A (3.85



Braemar Park 1947 Aerial - 13.6% Tree Canopy



Braemar Park 2012 Aerial - 38.26% Tree Canopy

acres) and B (5.30 acres) are designated as mitigation areas to be “maintained as natural areas” by the USACE as part of the permit agreement for the development of the Clunie nine in 1992. In addition, “future conservancy enhancement work may be allowed in these areas upon prior notice and approval from the Corps” per the special conditions of the 1992 construction permit for the Clunie nine.

- Generally speaking, a savanna is defined as a plant community with trees naturally dispersed from one tree per acre to fifty percent canopy. Under the trees shrubs, grasses and wildflowers cover the ground plain. An Oak Savanna is a wooded area dominated by Oak species in which less than 50% of the ground area is exposed to the sun at noon in midsummer. Stated in more general terms, an Oak Savanna has 50% or less tree canopy coverage. Bur oaks are the primary tree species of Oak Savanna.
- At Braemar, much of the original Oak Savanna has transitioned into Oak Woodland due to elimination of grazing and fire. In most areas, the oak canopy has closed in and other tree species have filled in canopy gaps.
- The best indicator of a former Oak Savanna is the presence of historically visible open-grown oaks found within an existing Oak Woodland. Open-grown oaks are recognized by the presence of intact lower limbs spreading to the ground.
- Oaks without these lower limbs present typically have been surrounded by other trees in such a crowded way that the lower limbs were not allowed to grow as nature intended, mostly due to inadequate sunlight, and are indicative of an original Oak Woodland.
- In 1947, the 445-acre parcel of Braemar Park included 1,843 individual trees dispersed across the site with an average spread of 40’ that remained untouched from agricultural clearing. Most of the original native herbaceous layer was likely eliminated by cattle grazing. The total tree canopy for these trees is 53.15 acres. In addition, there are 7.5 acres of woodland along the northern border of the site. Based upon these numbers, the total acreage of the site that is wooded is 60.65, or 13.6% of the site.
- In 2015, Braemar Park has 170.27 acres of tree canopy, or 38.26% of the site. None of these acres can currently be classified as Oak Savanna due to the increased presence of invasive species and additional Oak growth.

AGE OF GOLF COURSE FEATURES:

All golf course features on a golf course eventually break down due to the effects of nature and maintenance practices. The length of their life cycles are directly related to the original construction specifications, the quality of the materials used in construction and proper installation of those materials.

Following is a list of golf course features and their general ages (based on an opening year of 1964; the Clunie golf course features were all built in 1994). Recommended life spans (as determined in a joint-venture study by the USGA Green Section, Golf Course Builders Association of America, and the American Society of Golf Course Architects) are shown in parentheses. The ages reflect the majority of features as some of these features were rebuilt individually over time.

- Tee Boxes (15 - 20 years): Original 18: 50 years; Clunie: 20 years
- Irrigation Control System (10 - 15 years): Original 18: 34 years; Clunie: 20 years
- Irrigation Mainline PVC (10 - 30 years): Original 18: 34 years; Clunie: 20 years
- Irrigation PVC Laterals (10 - 30 years): Original 18: 34 years; Clunie: 20 years
- Irrigation Heads (10 - 15 years): Original 18: 34 years; Clunie: 20 years
- Irrigation Pump System (15 - 20 years): Original 18: 34 years; Clunie: 34 years
(An additional pump was inherited in 2010)
- Cart Paths (5 - 10 years): Original 18: Indeterminate; Clunie: 20 years
(All cart path is piecemeal and includes gravel, concrete, and asphalt)
- Sand Bunkers (5 - 15 years): Original 18: 50 years; Clunie: 20 years
- Putting Greens (15 - 30 years): Original 18: 50 years; Clunie: 20 years

The life cycle of golf course features is unrelated to design issues that may require re-construction or the availability of preferred products to replace products currently in the ground, both of which are subjective conditions.

GENERAL RENOVATION SOLUTIONS

1. Adopt an ecological management plan to eliminate invasive species within the wetland buffers and along all waterbody margins. Replace with low-growing native sedges and grasses that enhance the site and allow for visibility of the water features, as well as improved playability of the golf course (in terms of unimpeded views of golf targets and ease of golf shot recovery) (IM).
2. Adopt a woodland management plan to remove buckthorn and other invasive species within the Oak Savanna and Oak Woodland areas of the golf course (IM).
3. Undertake a tree removal program without sacrificing safety. This will improve agronomic conditions and create a more playable and strategic golf course (IM).
4. Finalize and adopt the Tree Management Plan for the entire golf course to address relative health and age of trees as well as introduce additional trees for strategic and aesthetic purposes (not to increase difficulty of the golf course (IM)).
5. Develop a series of Oak Savanna Restoration Areas (no-mow zones) throughout the golf course consisting of native savanna sedges, forbs, and grasses. No more than 50% of these areas shall be randomly planted with Bur Oak and other appropriate characteristic Oak Savanna hardwood species (IM).
6. Establish wider fairway lines which better reflect the existing topography of each golf hole. Widen each green approach as well (IM).
7. All tee complexes need to be relocated and enlarged to provide for improved Tee Shot Distance Equity and maximize usable tee surface area. Incorporate designated flat areas in fairways as forward tees for children. Tee re-construction will create a better playing environment for all ages and abilities (IM).
8. All greens complexes should be renovated with internal drainage to provide a unified design appearance and consistent profile. This will improve growing conditions and drainage as well as incorporate proper slopes for appropriate green speeds (in the 9 range on the stimpmeter for everyday play) and grass types (IM).
9. All sand bunkers shall be renovated to improve drainage and sand quality, minimize washes, improve visual appearance, and fit better into their surrounds (IM).
10. Install internal drainage in the form of catch basins and pipe throughout the golf course (IM).
11. Install a new irrigation system and pumps to improve irrigation efficiencies, water distribution, and usage. There are no salvageable components to the existing irrigation system as existing parts are well past their life expectancies (IM).
12. Install wall-to-wall asphalt cart paths for the golf course to ensure the course is playable during wet periods as well as by golfers of all ages who may not be able to walk (MT).
13. Upgrade maintenance facility (LI).



R I C H A R D
M A N D E L L
G O L F A R C H I T E C T U R E

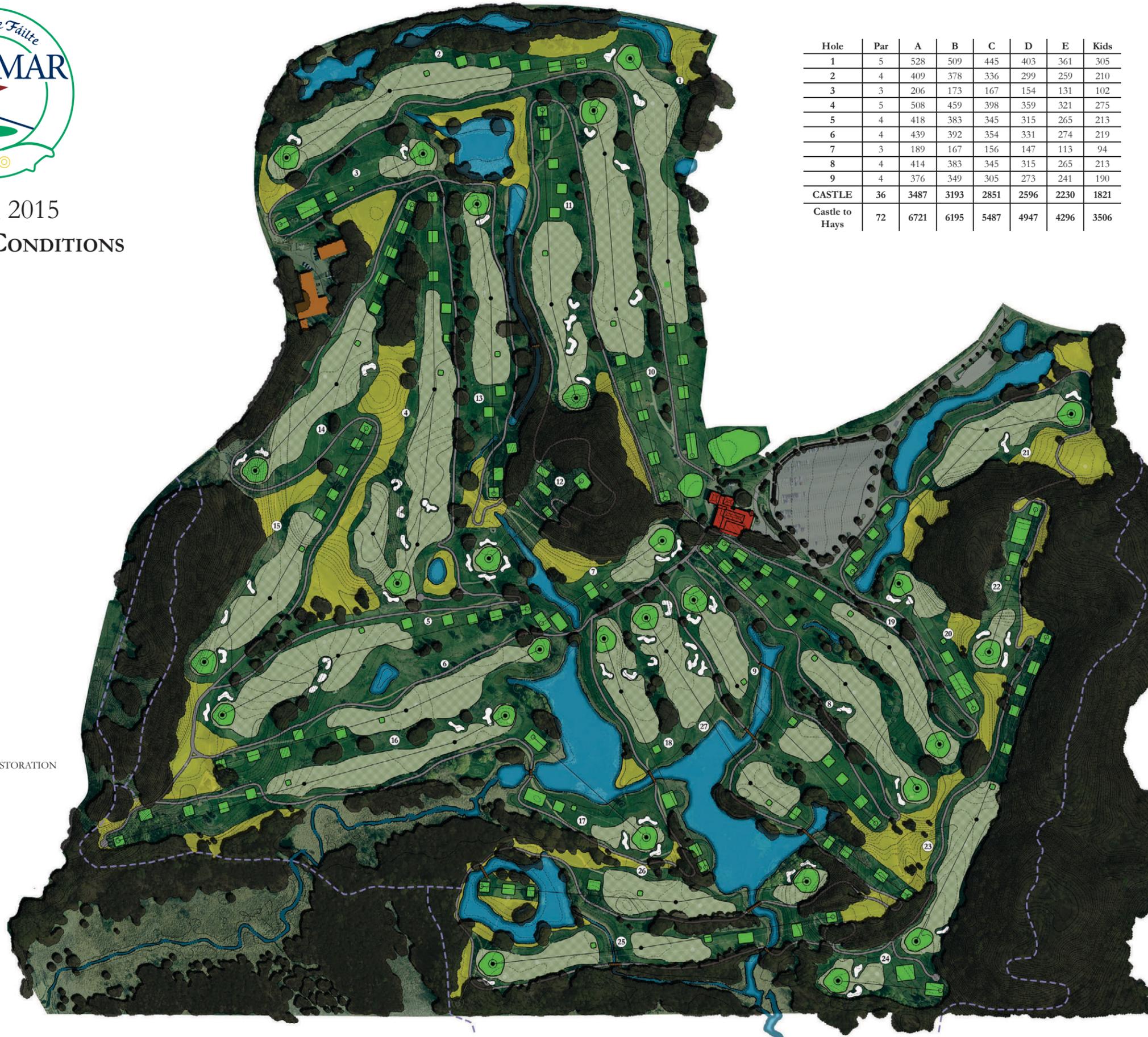


APRIL, 2015

PROPOSED CONDITIONS

LEGEND

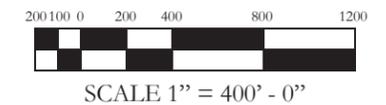
-  TEE
-  GREEN
-  SAND BUNKER
-  FAIRWAY
-  TREELINE
-  WATER BODY
-  CLUBHOUSE
-  MAINTENANCE
-  OAK SAVANNA RESTORATION
16.2 ACRES
-  WALKING TRAIL



Hole	Par	A	B	C	D	E	Kids
1	5	528	509	445	403	361	305
2	4	409	378	336	299	259	210
3	3	206	173	167	154	131	102
4	5	508	459	398	359	321	275
5	4	418	383	345	315	265	213
6	4	439	392	354	331	274	219
7	3	189	167	156	147	113	94
8	4	414	383	345	315	265	213
9	4	376	349	305	273	241	190
CASTLE	36	3487	3193	2851	2596	2230	1821
Castle to Hays	72	6721	6195	5487	4947	4296	3506

Hole	Par	A	B	C	D	E	Kids
10	5	509	460	398	359	321	275
11	4	371	344	302	268	237	186
12	3	160	154	138	115	98	85
13	4	378	356	311	279	246	194
14	4	404	379	336	299	259	210
15	4	369	350	305	273	241	190
16	5	525	488	428	379	341	287
17	3	195	171	160	150	122	98
18	4	323	300	258	229	201	160
HAYS	36	3234	3002	2636	2351	2066	1685
Hays to Clunie	70	6304	5834	5165	4656	4037	3280

Hole	Par	A	B	C	D	E	Kids
19	4	392	373	327	290	252	203
20	3	187	167	156	147	113	94
21	4	362	349	305	273	241	190
22	3	194	177	168	157	132	104
23	4	426	388	349	324	272	217
24	3	141	135	119	97	85	72
25	4	443	395	358	334	283	223
26	4	423	388	349	324	272	217
27	5	502	459	398	359	321	275
CLUNIE	34	3070	2831	2529	2305	1971	1595
Clunie to Castle	70	6557	6024	5380	4901	4201	3416



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HOLE BY HOLE ISSUES AND SOLUTIONS

1" = 200' - 0" UNLESS OTHERWISE NOTED

EACH SOLUTION IS CLASSIFIED AS FOLLOWS:

IM (Immediate): The most pressing needs which are major playability and maintenance issues.

MT (Mid-Term): Items which require attention the next few years that can greatly improve playability and maintenance.

LT (Long-Term): Future work undertaken as part of the Renovation Business Plan recommendations but doesn't inhibit play or maintenance on a daily basis.

NO. 1

The first hole at Braemar Golf Course is a long, straight par four which sets a very difficult tone for a round of golf for most golfers. Trees needed to buffer the tenth hole on the left and the driving range on the right nonetheless encroach on the fairway, making the golf hole as narrow as it is long to the lesser-skilled golfers.

Drainage issues plague the last 150 yards of the hole to the green, whose putting surface is not as visible as preferred for a beginning hole and also slopes to the back slightly. A sand bunker to the left of the green extends almost thirty yards in front of the putting surface, needlessly penalizing short approaches. The approach to the green is further pinched by cart path on the right side. There is no strategy to the golf hole, just a penal slog with little inspiration from tee to green.

EXISTING HOLE

PAR 4



VIEW FROM TEES



VIEW FROM LANDING AREA



VIEW OF GREEN



DESIGN ISSUES:

- This hole originally played as a par five with the back tees located on the hill but brought to their current position in 1986.
- The hole is a par four for men and a par five for women.
- Hole needs to be a better experience that gives golfers hope. Many lesser-skilled play the hole as a par five.
- Boring starting shot with little interest. Hole is too long and narrow for most.
- Golfers tend to aim toward ten fairway because many tee shots go over the fence into the driving range on the right side. Many of the better golfers hit into ten fairway and approach the green from there.
- Many tee shots from the tenth hole land in the fairway. Trees were placed between these holes to discourage golfers from intentionally playing into both fairways off the tees.
- Too many trees encroach on the fairway.
- Blind pond on right is penal.
- Much of the putting surface is blind from the landing area.
- Cart path location is too close to fairway and green. Many second shots hit asphalt cart path on the right.
- Green contributes to the difficulty of the hole.
- Left green-side bunker is too large and penalizes short approaches.
- Green complex is too flat-looking. Lack of depth perception behind the green.
- Balls often roll off the back of the green.

MAINTENANCE ISSUES:

- Drainage issues in fairway due to presence of clay from 150 yards in to the green.
- There are many ruts and holes behind the green.

458 - 445 - 372 - 346 YARDS

PROPOSED HOLE #1

PAR 5

M

RICHARD
MANDELL
GOLF ARCHITECTURE

Because the overall site is so tight, the first hole is a logical choice to be converted to a par five due to the available length. Extending the tees backward allows the flexibility to play the hole as a par five. In addition, it will provide a promising start to a round at Braemar needed for most golfers.

Select clearing and widening of the fairway will make the opening tee shot more player friendly. A fairway bunker at the inside corner of the second landing area challenges golfers to take the shorter route to the green, which will be placed slightly downhill from its present location. The shorter route also avoids the pond to the right of the green.

Although not completely visible from the first landing area, the putting surface and its surrounding hazards will be seen from the second landing area nestled between the fairway bunker on the left and the hillside on the right.



SOLUTIONS:

- Extend tee boxes back to allow hole to play as a par five (IM).
- Install higher netting (50' tall or more) along right side of fairway to protect from sliced tee shots going into the driving range and from range shots going into the first fairway (IM).
- Install drainage from fairway landing area to existing green location (IM).
- Selectively clear trees to widen golf hole corridor (IM).
- Move green to new location in existing second fairway and shape new second landing area (IM).
- Move cart path to the left side of the fairway in conjunction with new construction (MI).

528 - 509 - 445 - 403 - 361 - 305 YARDS

NO. 2

The second hole is considered a medium par five in this day and age but actually plays much longer than the yardage indicates for a few reasons. First, the ground is so wet that few people experience much roll on any of their shots. Secondly, there is little Tee Shot Distance Equity for the majority of male golfers as the back two tee boxes are separated by just 15 yards.

The final reason is the challenge of carrying the piped creek crossing between landing areas. Coupled with the trees pinching the left at that spot and an unreceptive landing area, this is a very difficult hole for players of all genders. To make matters worse, trees along the right side unnecessarily narrow the fairway.

Coming off a very difficult opening par four, this hole only exacerbates a frustrating start for most golfers. Strategically, it lacks any real interest.

EXISTING HOLE

PAR 5

VIEW FROM TEES



VIEW FROM LANDING AREA



VIEW OF GREEN



DESIGN ISSUES:

- Hole plays very long for the majority of golfers.
- Hole slows play down due to its difficulty and length.
- Tee bench near ladies tee is in an awkward location.
- Very uneven and bumpy fairway makes cart riding uncomfortable.
- Trees on both sides unnecessarily narrow the fairway.
- Very deep, penal rough along both sides of the fairway.
- Trees and other vegetation have blocked out water features on both sides of fairway which were clearly in view in 1964.
- Creek needs to be better defined.
- Tough second (sometimes third) shot for most golfers from piped creek crossing and other hazards pinching fairway.
- Slopes along left side of second landing area make the fairway play smaller at that location.
- Ladies second landing area is right at pipe crossing, which deflects balls away from the fairway.
- Cluster of oaks just past creek do not really protect third green but block approach shots from that side.
- Balls roll off back of green yet it is too soft in front to run it onto the green.

MAINTENANCE ISSUES:

- There are low areas throughout the fairway with standing water.
- Peat material is under fairway, also causing wet conditions.
- Drainage problems along piped portion of creek.
- Drainage problem left of fairway thirty yards short of green.
- Hardpan along edges of green due to sunlight issues inhibiting growth of grass.

546 - 530 - 395 - 366 YARDS

PROPOSED HOLE #2

PAR 4



RICHARD
MANDELL
GOLF ARCHITECTURE

In a further effort to improve the pace of play and reduce the difficulty of the opening holes, the second hole should be converted to a reasonable par four. Moving the tees forward will allow more golfers to cross the piped creek crossing much more easily with their second shots.

The better golfers can challenge carrying the crossing off the tee and cut the corner to gain an advantage for a shorter approach. By playing the more aggressive route, they will also be rewarded with an open angle to the green. The longer, safer approach from the right side will require negotiating a sand bunker protecting the front right side of the green.

Tree clearing for sunlight along both edges and installation of catch basins will improve drainage. Additional removal of invasive species will create views of the water features on both sides of the hole which will transform it into a visually pleasing golf experience that does not increase the hole's difficulty.



SOLUTIONS:

- Build new tees closer to green to convert hole into par four (IM).
- Clear trees along both sides of fairway to widen playing corridor (IM).
- Remove invasive species along margins of water features on both sides of the hole to improve views. Install more appropriate low-growing native plantings (IM).
- Re-grade fairway and repair pipe along creek crossing to make area more receptive to golf shots (IM).
- Install catch basins and internal drainage along fairway (IM).

409 - 378 - 336 - 299 - 259 - 210 YARDS

NO. 3

The third hole is a solid par three that simply asks the golfer to hit a good shot to the target. The pond behind the green has no presence to the hole.

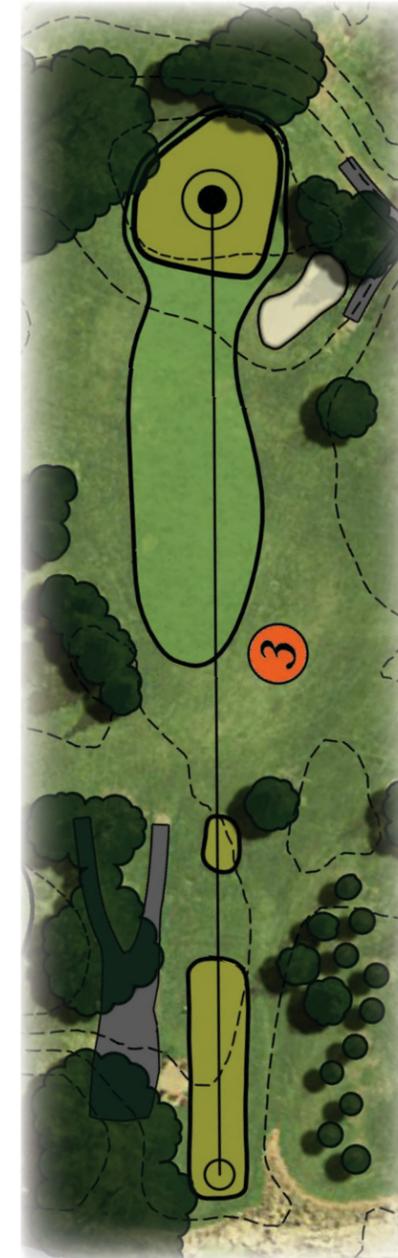
EXISTING HOLE

PAR 3

VIEW FROM TEES



VIEW OF GREEN



1" = 100' - 0"

DESIGN ISSUES:

- Elevated green prohibits many golfers from being able to run approach shots onto the green.
- Green slopes off back making it difficult to hold tee shots.
- Sand bunker lacks sand and visual depth. It looks very artificial.
- Sand bunker only penalizes mis-hit shots short of the green.
- Access/egress issues on right side because of sand bunker.
- Cart path on right side is too close to the green.
- Rough behind is very penal.

MAINTENANCE ISSUES:

- Trees in immediate vicinity of the putting surface inhibit grass growth because of shade and roots.

179 - 160 - 140 - 120 YARDS

PROPOSED HOLE #3

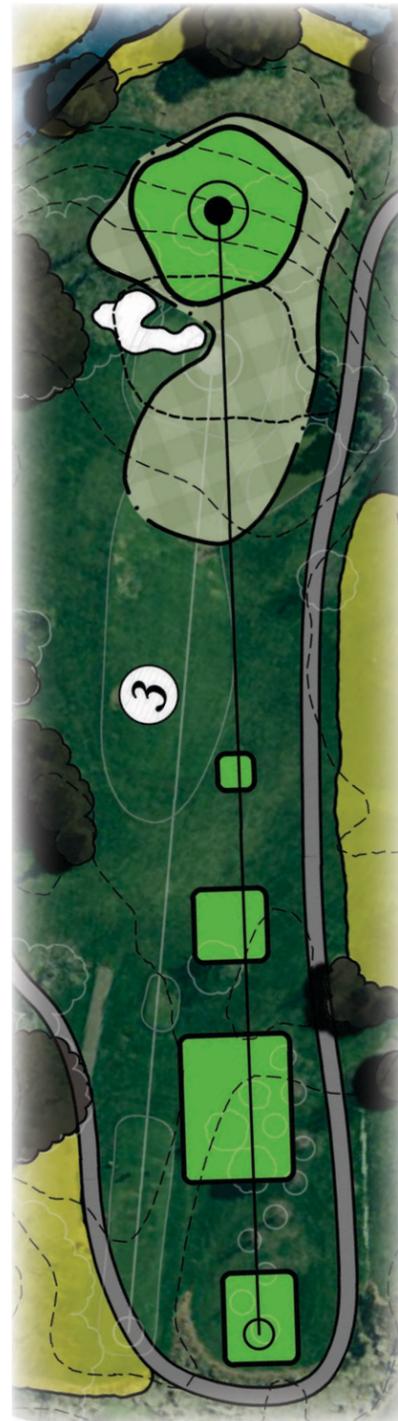
PAR 3

M

RICHARD
MANDELL
GOLF ARCHITECTURE

In order to increase safety buffer from the second green and improve congestion in that area, the tees for the third hole shall be moved 25 yards to the right. Rebuilding the green will allow for more approaches along the ground and more aerial shots will hold the putting surface.

Moving the sand bunker to the left will greatly improve access/egress of the green and will open up the approach for the lesser-skilled. Clearing out trees and invasive species along the pond behind the green and along the pond behind will create a better view of the water feature from the green.



1" = 100' - 0"

SOLUTIONS:

- Move tees 25 yards to the right to create more buffer and reduce congestion from the second green (MT).
- Rebuild green to be more receptive to approach shots (LT).
- Move sand bunker to the left side of the hole to improve access/egress and be less penal (IM).
- Clear out trees and invasive species between green and pond to increase sunlight, improve drainage, and provide a better view of the water (IM).

206 - 173 - 167 - 154 - 131 - 102 YARDS

NO. 14

Currently the fourteenth hole, this short par five is blind off the tee which creates a safety issue with the parallel thirteenth hole. The hole is defined by its narrow fairway as the only defense against par without any strategy.

Trees planted above moguls along the right side of the fairway when the green was moved from its original position in 1988 (left of its current position) force all golfers to play to a narrow neck of fairway to the left. A pond that replaced the original green site creates an even narrower second landing area and green complex.

EXISTING HOLE

PAR 5



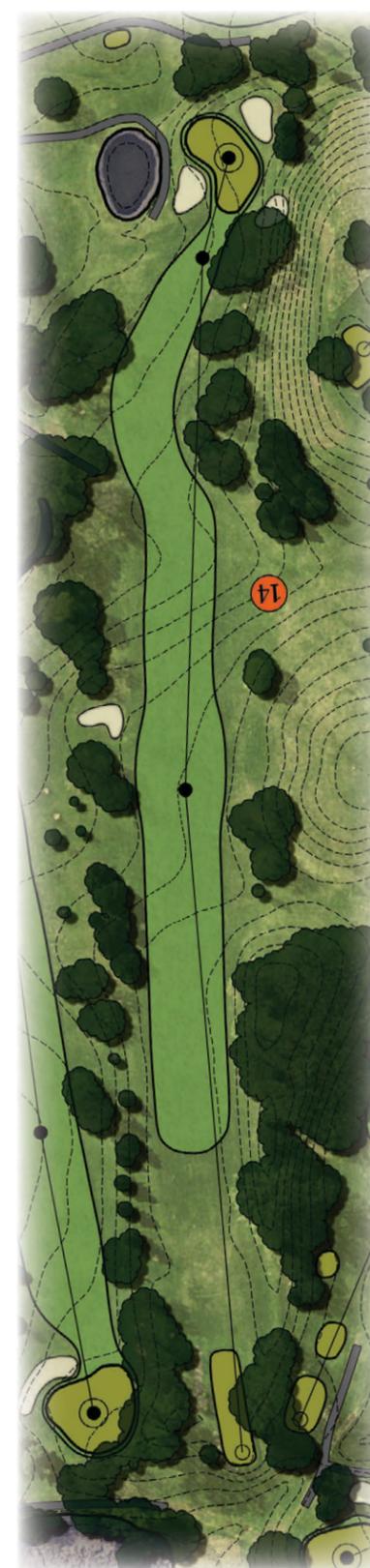
VIEW FROM TEES



VIEW FROM LANDING AREA



VIEW OF GREEN



DESIGN ISSUES:

- Tee shot is blind.
- Front tee forces golfer to aim left toward a blind bunker left of the first landing area.
- Trees on both sides pinch first landing area.
- Trees right of second landing area force all golfers to play left.
- Second landing area is too narrow and bordered by rough on left.
- Mounds to right of second landing area look artificial.
- Right front green-side bunker is penal and concealed by trees.
- Back green-side bunker does not come into play.
- The cart path is between the pond and the green.

MAINTENANCE ISSUES:

- Two trees behind green create shade and root problems.

485 - 476 - 456 - 406 YARDS

PROPOSED HOLE #4

PAR 5

M

RICHARD
MANDELL
GOLF ARCHITECTURE

Making the current fourteenth hole the new fourth hole helps balance the overall yardage of both the Castle and Hays nines. Raising the tees will improve visibility to the fairway.

Other than removing the blind sand bunker left of the first landing area, very little needs to be changed until one reaches the second landing area. The high natural ridge on the right allows for a rare double fairway opportunity enhanced simply by replacing the trees and mounds on the right with a series of sand bunkers built into the hillside.

Instead of forcing every golfer to a narrow neck of fairway left of the trees, multiple options are presented which allow golfers to choose a route that best fits their own ability and imagination. A central hazard sets the tone for those who choose to play along the lower fairway, requiring one to make a distance control decision in setting up a third shot or going for the green in two.

For those who want to avoid the central bunker and the pond to the left, the higher fairway to the right is much more accessible; it is just not as visible for an uphill shot and requires a longer third shot approach, albeit downhill and devoid of bunkers crossing from that side.



SOLUTIONS:

- Re-number as the new fourth hole for the Castle nine (IM).
- Raise tees to improve visibility of fairway (IM).
- Eliminate blind fairway bunker left of first landing area (IM).
- Remove select trees along right side of first landing area and widen fairway on that side (IM).
- Remove trees and mounds to right of second landing area and replace with a series of strategic bunkers (IM).
- Build alternate fairway on hillside to the right (MT).
- Remove trees to left of second landing area and extend fairway to left side from 100 yards in (IM).
- Move cart path to the left side of the pond and bring back to green from other side (MT).
- Remove existing back green-side sand bunker (IM).

508 - 459 - 398 - 359 - 321 - 275 YARDS

NO. 15

The current fifteenth hole is a simple dogleg to the left but is fraught with potential safety situations. The parallel fifth hole often attracts mis-hit approach shots. Tee shots, as well as a few stray recoveries from number five, end up in the fifteenth fairway or green. Both situations are a result of blind shots. Golfers on five cannot see shots from the fifteenth hole and golfers on the fifteenth green cannot see mis-hit shots from five.

Strategically, the configuration of the fairway and trees along the ridge to the left beyond the landing area force all golfers to play to the right of the tee. There is no design incentive to cut the corner of the dogleg. The view from the landing area is blind with the exception of the flagstick.

EXISTING HOLE

PAR 4

VIEW FROM TEES



VIEW FROM LANDING AREA



VIEW OF GREEN FROM BEHIND



DESIGN ISSUES:

- Long walk from current fourteen green to the tees.
- Cart path is visually distracting on tee shots.
- Many tee shots from the current fifth hole end up in the fairway, creating a safety buffer issue.
- Conversely, a safety buffer issue is a concern when second shots are hit too far to the right into the current fifth fairway.
- Many golfers feel the green complex is boring.
- Right green-side bunker looks artificial.
- The back right of the green doesn't hold approach shots.

MAINTENANCE ISSUES:

- Area between tees and fairway is sometimes wet.

411 - 396 - 363 - 316 YARDS

PROPOSED HOLE #5

PAR 4

M

RICHARD
MANDELL
GOLF ARCHITECTURE

The logic in making the current fifteenth hole the new fifth hole comes in reducing congestion when leaving the green. The new configuration allows golfers to walk directly to the existing sixth tee instead of behind those tees and crossing past the fifth green to the current sixteenth tees.

The ridge separating the lower end of the fairway with the higher end of the fairway is the perfect natural topographic feature that can develop a split-fairway strategic option. By replacing the trees on top of the ridge with a series of bunkers into the slope and adding fairway farther left on the bottom, the golf hole can be transformed from one which forces everyone down a narrow chute to one that allows golfers to bite off as much of the corner as one can. The farther left one plays off the tee, the longer the carry over sand.

Yet a shorter, visible approach is the reward. In addition, the golfer will have an open shot to the green because the only sand around the green is guarding the right side.

Those who want to avoid the sand off the tee altogether will have plenty of fairway to play to but a longer, less visible approach will be one trade-off. Negotiating the sand on the right side of the green is the other trade-off. The green-side bunkers will also aid in keeping mis-hit shots from going down hill toward the old fifth fairway.



SOLUTIONS:

- Make hole the new fifth hole for the Castle nine (IM).
- Move cart path to the right, out of the golfer's cone of vision (MT).
- Clear trees along top of ridge and replace with a series of sand bunkers built into the slope below (IM).
- Extend fairway to the left to create double fairway strategy (IM).
- Move green 25 yards to the right to provide more buffer from number six tees (MT).
- Remove blind front-left green-side sand bunker to reward golfers who cut the corner off the tee (IM).

418 - 383 - 345 - 315 - 265 - 213 YARDS

NO. 6

The sixth hole at Braemar Golf Course is a straight par four played from elevated tees to the floodplain below. Along with the adjacent sixteenth fairway, it was lowered and is very wet as a result.

Tee shots often are sliced into the sixteenth landing area and tee shots from sixteen tees are often hooked into the sixth hole's landing area. The only strategy off the tee is to play down the right side to avoid being blocked in from the left by a large American Basswood tree on that side. Playing from the right side does provide a better angle into the green, which is protected on the right side by a pond. Bunkers in front and to the left are nothing but penalty.

EXISTING HOLE

PAR 4



VIEW FROM TEES



VIEW FROM LANDING AREA



VIEW OF GREEN



DESIGN ISSUES:

- Hole was switched from a 229-yard par 3 to a par 4 in 1974.
- The front tees block the view of the front of the fairway.
- Some tee shots slice into the landing area of sixteen fairway.
- The hole is a very long par four for the women.
- The pond to the left makes golfers aim to the right.
- Trees along both sides of the fairway make the hole too narrow.
- The American Basswood tree left of the fairway (about one-hundred yards from the green) blocks approaches from that side.
- Very narrow approach.
- Sand bunker on right in front of green only catches mis-hit shots.
- Left green-side bunker is penal because it is too far from putting surface edge.
- The pond behind the green is an eyesore and screened by trees.

MAINTENANCE ISSUES:

- The fairway developed drainage issues as a result of being lowered (along with the fairway of sixteen).
- The fairway is extremely wet from 140 yards in to the green.
- Water from the pond to the right of the green backs up into fairway.
- Trees behind green impede turf growth.

411 - 402 - 382 - 370 YARDS

PROPOSED HOLE #6

PAR 4

M

RICHARD
MANDELL
GOLF ARCHITECTURE

Extending the tees backward twenty yards, coupled with work on the sixteenth hole, will offset landing areas on both holes, lessening conflict between mis-hit tee shots on both holes as currently designed.

The subtle strategy on this hole can still be to avoid the Basswood on the left and have a better angle into the green from the right side. The development of a less penal, but more interesting green complex, and improved drainage will transform this hole into one of the more underrated challenges at Braemar.



SOLUTIONS:

- Extend tee complex back fifteen yards and lower front tees to improve visibility of fairway from back tees (MT).
- Install catch basins and internal drainage throughout fairway to minimize standing water (IM).
- Bring cart path left of American Basswood (MT).
- Remove penal sand bunkers in front of and to left of green (IM).
- Raise and push green back fifteen yards to gain length (MT).
- Clear trees behind green to provide more shade and open up view of pond (IM).

439 - 392 - 354 - 331 - 274 - 219 YARDS

NO. 7

This par three is very similar to the third hole in terms of yardage as well as its inability to allow running tee shots to get to the green. Shots that do reach the green often roll off the back edge. In addition, the front half of the front bunker only penalizes poor shots. The trees, service road, and blind bunker to the left don't allow for a favorable bounce onto the green.

EXISTING HOLE

PAR 3



DESIGN ISSUES:

- Hole was switched from a par 4 to a par 3 in 1974.
- Green design and yardage is very similar to the third hole.
- Hole plays too long for most ladies.
- Condition of inlet in front of tee is an eyesore.
- Woods to left are too close, penalizing too many mis-hits.
- Service road on left is a distraction and does not allow golf shots hit to the left off the tee to bounce onto the green.
- Blind bunker to left of green also denies a member's bounce recovery.
- Too many sand bunkers surround such a long hole.
- Right side bunker is too large. Front half is penal.
- Approach is too narrow.
- Balls hit short of the green have no chance to roll on.
- Green doesn't hold anything more than a nine iron.

MAINTENANCE ISSUES:

- Trees behind hole impede sunlight in morning.

177 - 165 - 150 - 118 YARDS

PROPOSED HOLE #7

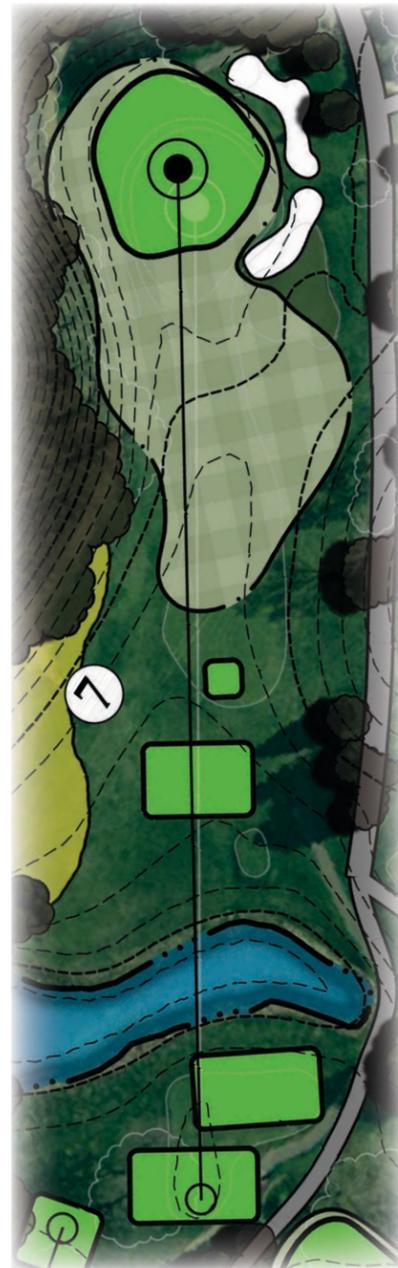
PAR 3

M

RICHARD
MANDELL
GOLF ARCHITECTURE

Redesigning this green complex to be more receptive to more tee shots and eliminating penal bunkers will go a long way to improvement.

Removing the service road and blind bunker on the left and creating a slope to kick shots onto the green from that side will be the connection to the ground this hole also needs.



1" = 100' - 0"

SOLUTIONS:

- Lower green complex and re-design putting surface to be more receptive to approach shots (MT).
- Clear trees to left of hole to provide more bail-out off tee (IM).
- Remove service road and blind bunker to left of green (IM).
- Eliminate front half of front right green-side sand bunker to be less penal (MT).
- Remove some trees behind green to allow for recovery from that area (IM).

189 - 167 - 156 - 147 - 113 - 94 YARDS

NO. 8

The eighth hole is a classic example of everything designed working against everything else designed. The golf hole is intended to go in one direction, yet the lay of the land goes in the opposite direction. This happens not just in the landing area, where the ground slopes from right-to-left yet the hole goes right, but also in front of the green where the hole moves left but the approach is sloped from left-to-right.

To compound matters further, the golfer who ends up on the left off the tee because that is how the slope of the fairway took the ball then has to play a shot to a blind green over trees with a blind sand bunker protecting the approach from that side.

EXISTING HOLE

PAR 4



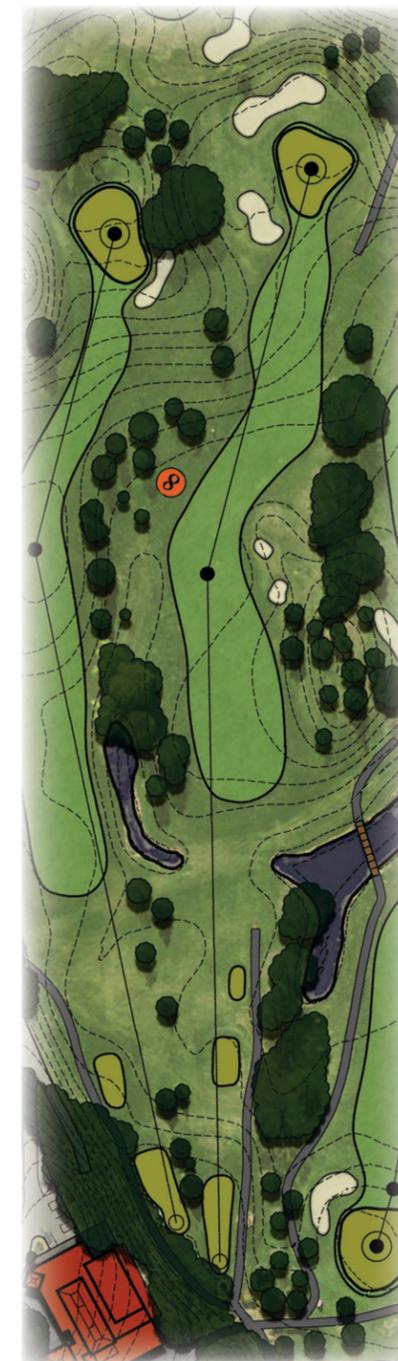
VIEW FROM TEES



VIEW FROM LANDING AREA



VIEW OF GREEN



DESIGN ISSUES:

- Knoll on right collects many tee shots on this hole and number nine.
- Bunkers on right are blind from the lower front tees.
- Rough behind the right fairway bunkers is penal, eliminating any strategic reason to play over the bunkers.
- Ridge in corner of dogleg looks artificial.
- Golfers who try to avoid the bunkers on the right off the tee end up on the left side because of the severe right-to-left slope of the fairway at that spot.
- Tee shots hit to the left land in very deep rough.
- Left front green-side bunker is blind when approaching from the left side.
- Trees also block any approach from the left side.
- Hard to reach in regulation for most golfers.
- #8 green was rebuilt to the right of the original green when Clunie nine was built in 1994. Golfers prefer the original green location.
- Cannot run shot up onto the green because of the left-to-right slope.
- Green slopes severely from left-to-right and bunker on left side makes it difficult to play to that side to compensate.
- Back green-side sand bunker serves no purpose.
- Many tee shots from #23 tees come close to the green.

MAINTENANCE ISSUES:

- Back tee box is too compacted.
- Drainage issues between tee and beginning of fairway.

395 - 380 - 330 - 290 YARDS

PROPOSED HOLE #8

PAR 4

M

R I C H A R D
M A N D E L L
G O L F A R C H I T E C T U R E

Holes #19 and #20 prevent the opportunity to move the eighth green back to its original location, but there is some opportunity to move it back to the left about forty feet.

In further re-design of the green, the blind bunker on the left shall be eliminated and the bunker behind will be removed as well. In addition, the fairway will be re-shaped sufficiently enough to minimize the right-to-left slope for those who choose to avoid the bunkers. Most importantly, creating fairway beyond the properly constructed ridge of sand bunkers on the right corner of the fairway will reward golfers who choose to cut the corner to gain an advantage.



SOLUTIONS:

- Re-shape fairway landing area to reduce severe right-to-left slope (MT).
- Re-shape sand bunker/ridge complex in right corner of dogleg to appear more natural and be easier to maintain (IM).
- Extend fairway beyond sand bunker/ridge complex to reward the golfer who successfully chooses to cut the corner of the dogleg (IM).
- Remove trees on left between fairway and green (IM).
- Remove blind sand bunker left of the green (IM).
- Rebuild green complex forty feet to the left of existing green (MT).

414 - 383 - 345 - 315 - 265 - 213 YARDS

NO. 9

This short par five is an anomaly in that it is very easy for the lower-handicappers due to its length, yet the location of the tees and creek does not allow most golfers to carry the creek in two shots. Despite that impossible situation faced by most golfers on a daily basis, the view takes precedence over a more playable option.

There is virtually no strategic value to the hole. Not only do the tee locations render the creek penal, but the fairway bunker to the right only catches poor shots. Trees along the left side off the tee force golfers to hit right at the bunker. If one is lucky enough to avoid the bunker and stay in the right half of the fairway off the tee, trees beyond that bunker force a shot to the left.

Cattails make any approach from the fairway blind and the second landing area is one of the wettest spots on the whole property. At least the hole is short.

EXISTING HOLE

PAR 5



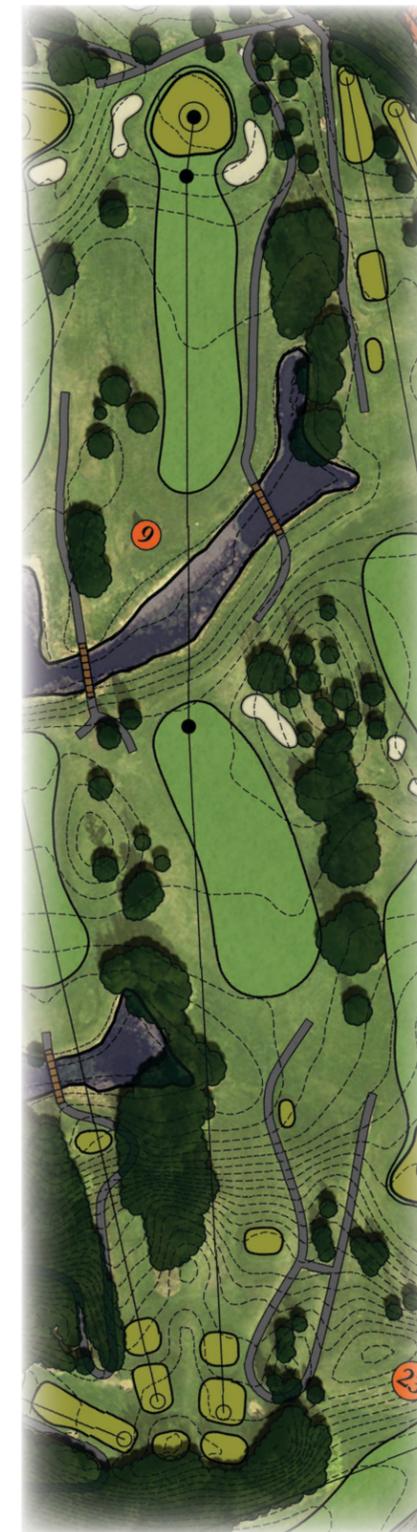
VIEW FROM TEES



VIEW FROM LANDING AREA



VIEW OF GREEN



DESIGN ISSUES:

- Tees were moved to the left when Clunie nine was built in 1994.
- The hole is easy for low-handicappers due to the short length yet too hard for high-handicappers due to the carry over the creek, particularly for the women. It usually takes three shots to get over the water for many players.
- The hole has one of the nicest views at Braemar. Some higher handicappers place more value on the view more than improving playability of the hole from that location.
- Left tree line blocks out left side of hole from the tees.
- Tee boxes line golfers down the right side of rough.
- Right fairway bunker is penal.
- Tree beyond right fairway bunker blocks out most tee shots that land right of center.
- Green slopes from front to back.

MAINTENANCE ISSUES:

- Cattails slow play down for many golfers because it renders the fairway on the green-side of the creek blind.
- Too much rough on the left side and not enough fairway.
- Area between water and green is one of the wettest at Braemar.

488 - 471 - 405 - 364 YARDS

PROPOSED HOLE #9

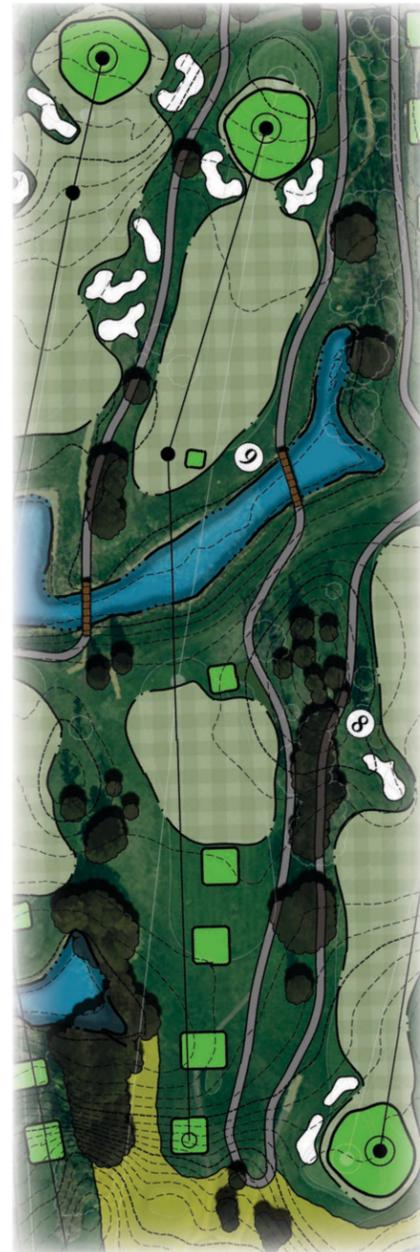
PAR 4

M

RICHARD
MANDELL
GOLF ARCHITECTURE

The only way to make this hole playable for most golfers is to move the tees up and make the hole a par four which will allow golfers to carry the creek on the tee shot instead of the second shot as the current design demands.

Moving the eighth green to the left allows the ninth tee complex to move to the right fifty yards which transforms the hole into a heroic dogleg right for those who want to take the shorter route down the right side. This requires the golfer to bite off as much of the water down the right side as possible to get as close to the green as possible. Golfers who choose to avoid the water altogether can take the longer route down the left side.



SOLUTIONS:

- Build new tee complex fifty yards to the right of the existing tees and forward to convert the hole to a par four (IM).
- Clear trees down left side of hole in front of the tees (IM).
- Fill in fairway bunker on the right side of the hole and remove tree placed beyond that hazard as well (IM).
- Widen fairway on both sides of the creek as much as possible (IM).
- Remove invasive species along both sides of the creek to improve views and install more appropriate low-growing native plantings (IM).
- Install catch basins and drainage on the green-side of the creek (IM).
- Rebuild green fifty feet closer to creek (LI).

376 - 349 - 305 - 273 - 241 - 190 YARDS

NO. 10

The tenth hole is a narrow, mid-length par four. In 1986, the tees were moved down off the hillside because golfers didn't like the walk. The result is a very flat, straightforward par four to the smallest green on the golf course, yet it may also be the most interesting.

The challenge begins with an approach to a small target and then some moderate putting challenge on the green. This hole has a distinct character derived from the green complex that isn't experienced anywhere else at Braemar.

EXISTING HOLE

PAR 4



DESIGN ISSUES:

- Tee shots roll to the right a bit too much and sometimes end up in the first fairway.
- Tee shots from the first hole end up in the tenth fairway.
- Smallest green on the course.

MAINTENANCE ISSUES:

- Tee boxes are uneven.

401 - 381 - 359 - 337 YARDS

PROPOSED HOLE #10

PAR 5

M

RICHARD
MANDELL
GOLF ARCHITECTURE

The current location of the tenth hole is another opportunity to create a par five in order to increase the overall par of the golf course. The reason is to provide a seamless transition for golfers regardless of the nines they play for a full eighteen hole experience. The tees can be pushed back to gain the necessary yardage without returning them to the top of the hill as they were prior to 1986. The green location will remain in the same general location.

Fairway bunkers to the right of each landing area guard the slightly shorter route on this dogleg right and may help keep stray shots out of the first fairway. The reward for playing down that side is an open approach as the green is guarded by a single sand bunker at the front left corner of the putting surface.



SOLUTIONS:

- Push tees back to make the hole a par five (IM).
- Selectively clear trees on both sides and widen fairway (IM).
- Add fairway sand bunkers to the right of each landing area (IM).
- Rebuild green with sand bunker at front left and chipping area to the right (MT).

509 - 460 - 398 - 359 - 321 - 275 YARDS

NO. 11

This short dogleg left par four is another example of a golf hole whose corner is blocked out by trees, forcing everyone to a very narrow neck of fairway, thereby eliminating any interesting strategy. Yet the big hitters can easily carry all the trees planted in the corner. The lesser-skilled, on the other hand, find themselves in a jail of deep rough on that side.

EXISTING HOLE

PAR 4



VIEW FROM TEES



VIEW FROM LANDING AREA



VIEW OF GREEN



DESIGN ISSUES:

- There is an 11-yard difference between the back three tee boxes.
- Narrow landing area surrounded by deep rough.
- Trees along left side force golfers to the right off the tee.
- Trees on right narrow the hole as well.
- Fairway sand bunkers at left corner and trees create a double hazard.
- Trees and invasive species screen out the creek that runs along the right side of the hole.
- Green complex is very flat.
- Front left green-side sand bunker is too big.

MAINTENANCE ISSUES:

- There is standing water at the beginning of the fairway.
- The right side of the fairway is always wet.
- Right side is also very bumpy.
- Green surrounds seem to always be soggy.

343 - 337 - 332 - 297 YARDS

PROPOSED HOLE #11

PAR 4



R I C H A R D
M A N D E L L
G O L F A R C H I T E C T U R E

This hole can become one of the great short par fours by simply eliminating all the trees on the corner of the dogleg and adding a series of three sand bunkers just past that corner. The strategy that is exposed is a classic “cut the corner” one for all talent levels. For those lesser-skilled who hit short tee shots to that side, an open shot to advance the ball is now possible with the absence of trees.

Exposing the creek on the right will provide an additional hazard for those who play too safely, yet with a wider fairway before the hazards, this hole will be very playable for those who need the assistance.

Moving the green slightly up into the hillside provides a green setting that is not found elsewhere at Braemar and provides a bit of depth to replace the very flat green complex that currently exists.



SOLUTIONS:

- Move tee complex thirteen yards to the right to provide additional safety buffer from the tenth green (MT).
- Install catch basins and internal drainage from in front of tees all the way to the corner of the landing area and to the right rough (IM).
- Replace the trees on the left with a series of sand bunkers to provide a strategic hazard for all talent levels (IM).
- Remove invasive species along the creek on the right to improve views and install more appropriate low-growing native plantings (IM).
- Rebuild the green complex up into the hillside (MT).
- Install additional drainage at base of hillside green complex (MT).

371 - 344 - 302 - 268 - 237 - 186 YARDS

NO. 12

This downhill hole is a bit underwhelming although almost any par three with this much downhill elevation change is a pretty fun hole to play. That said, the sand bunkers in front seem to be out of proportion to the putting surface. The approach is out of proportion to all the features of the hole, literally appearing as a small tongue with very little opportunity to help a short tee shot stay out of rough. The tees are much too small to be effective as well. The good news is that the trees on the right off the tee conceal the cul-de-sac that is much too close to the green.

EXISTING HOLE

PAR 3

VIEW FROM TEES



VIEW OF GREEN



1" = 100' - 0"

DESIGN ISSUES:

- Current tee locations provide little distance variation.
- Trees on right side off the tee block the view of the right side of the green complex.
- Plantings in front of the tees block the view of the front of the hole.
- Very steep walk down the hill.
- Tongue fairway approach looks unnatural.

MAINTENANCE ISSUES:

- Very little tee square footage for such a short par three. Much of the tee area is lost to the change in levels.
- Tee complex is surrounded by trees on three sides, severely limiting the amount of sunlight these areas need in order to establish a sufficient amount of turf.

141 - 120 - 115 - 98 YARDS

PROPOSED HOLE #12

PAR 3



RICHARD
MANDELL
GOLF ARCHITECTURE

This hole needs to be modernized in terms of length, tee space, and character. Creating a classic green with interesting contours and surrounding bunkers will bring some much needed character to the hole beyond the elevation change.



1" = 100' - 0"

SOLUTIONS:

- Build additional tees farther up the hill to increase yardage and provide much needed square footage (IM).
- Combine the multiple tees at each of the current elevations into one big tee box each (IM).
- Clear trees to the right of the tees to open up the view of the right side of the green complex. Some of the branches overhanging the cart path need to be removed sooner than later as they can be a safety hazard (IM).
- Additional trees still must be cleared along hill behind the new tees for sufficient grass establishment (IM).
- Remove invasive species along the creek on the right to improve views and install more appropriate low-growing native plantings (IM).
- Remove cul-de-sac near green (MT).
- Rebuild green with sand bunkers surrounding the putting surface and challenging contours to balance the short distance (LT).

160 - 154 - 138 - 115 - 98 - 85 YARDS

NO. 13

Another straightforward par four, the thirteenth hole has the pleasing appearance of a hole that has grown accustomed to its surroundings as mature trees on both sides of the fairway define the character and direction of the hole. The putting surface is similar to the tenth hole and provides sufficient challenge and interest.

That said, some trees provide nothing but penalty for mis-hit shots. The creek to the right and the pond behind the hole are completely screened from golfers as well, ignoring additional land features that could further define the hole's memorability.

EXISTING HOLE

PAR 4

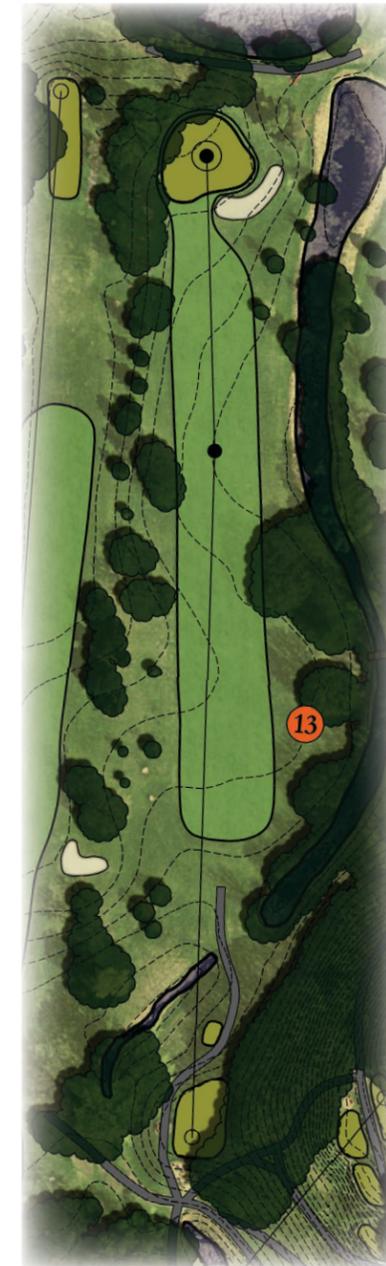
VIEW FROM TEES



VIEW FROM LANDING AREA



VIEW OF GREEN



DESIGN ISSUES:

- Hole is too long for most lesser-skilled.
- Most tee shots land in the most narrow spot on an already narrow fairway.
- Cart path is an eyesore.
- Bunker near green is too large.
- Two trees on right about fifty yards short of green are penal.

MAINTENANCE ISSUES:

- Fairway is rocky and bumpy.
- Little area behind green to move equipment and tree shade there inhibits turf growth.

358 - 351 - 335 - 312 YARDS

PROPOSED HOLE #13

PAR 4

M

RICHARD
MANDELL
GOLF ARCHITECTURE

Little needs to be done to number thirteen as it is a fine hole with the exception of clearing out the creek on the right and the pond behind to provide better views and improved air circulation. Moving the green back ten yards will help with length and also bring the pond a bit closer to the golfer.

The trees on both sides of the landing area provide a narrow “thread the needle” strategy which is acceptable in small doses. It already works quite well here. Additional trees on the right between the landing area and the green which pinch the fairway should be removed for playability, though.



SOLUTIONS:

- Fine-shape the fairway to smooth out the bumps and remove rocks yet preserve the original roll of the ground (MT).
- Remove invasive species along the creek on the right and the pond behind the green to improve views and install more appropriate low-growing native plantings (IM).
- Remove trees along right fairway edge about fifty yards in front of the green (IM).
- Reduce size of front right green-side sand bunker (IM).
- Lower and rebuild green ten yards closer to the pond. Utilize material to raise new #4 tees (IM).

378 - 355 - 311 - 278 - 246 - 194 YARDS

NO. 4

The existing fourth hole demands a long, accurate tee shot to a fairway that slopes left-to-right. Yet the trees and left rough do not allow the golfer to work the ball on a left-to-right trajectory to keep the ball in the fairway.

The approach to the green is just as challenging due to the same left-to-right slope in front of the green, an uphill trajectory, and a narrow target pinched by a semi-blind sand bunker on the left. This hole plays from right-to-left yet the ground it occupies goes from left-to-right.

EXISTING HOLE

PAR 4

VIEW FROM TEES



VIEW FROM LANDING AREA



VIEW OF GREEN



DESIGN ISSUES:

- The tee boxes slope too much from back to front.
- Cart path dead ends straight into fairway.
- There are too many trees on the right that are penal and catch many tee shots one-hundred yards off the tee.
- Trees on left side of fairway pinch the target as well.
- Maintenance facility is a visual distraction from the tees.
- Fairway slopes left-to-right yet there is not enough room to work the ball to the right.
- The road near the swale on the right collects balls and is an eyesore.
- The approach slopes to the right like the fairway, kicking short second shots in that direction down the hill.
- Front left green-side sand bunker is too big and penal on left side.
- Hard to run ball onto the green because of the narrow approach, uphill direction, and left-to-right slope. Green-side bunker narrows the approach as well.

MAINTENANCE ISSUES:

- Steps to tee box are failing and unnecessary.
- First half of fairway holds water.
- There are drainage issues 75 yards from green.
- There is a lot of maintained turf between holes four and fourteen that rarely comes into play.

432 - 426 - 400 - 371 YARDS

PROPOSED HOLE #14

PAR 4

M

RICHARD
MANDELL
GOLF ARCHITECTURE

Changing the existing fourth hole to the new fourteenth hole will require golfers to walk behind the new fourth tee from the existing thirteenth hole but is necessary to improve circulation at the existing fifth and fifteenth greens and sixth and sixteenth tees.

Although it currently is a challenging hole, much of that challenge comes from the fact that the hole direction and the topography are in conflict with each other. Moving the green to the other side of the swale allows the hole to naturally flow in the same left-to-right direction as the lay of the land.

The new number fourteen becomes a classic golden-age hole routed around natural drainage patterns. The hillside on the left can provide a friendly bounce as it should rather than kick balls across a sloping fairway farther away from the hole's intended direction.



SOLUTIONS:

- Change hole number to new #14 in conjunction with other hole re-numbering previously noted (IM).
- Trees on both sides of the hole just before the fairway starts shall be cleared to open up the tee shot and allow for a left-to-right trajectory (IM).
- Screen the maintenance facility on the right (IM).
- Bring fairway on the left up the hillside to allow for more of a favorable bounce (IM).
- Install catch basins and internal drainage at base of fairway 75 yards from the green (IM).
- Remove road on the right and replace with a grass swale (MT).
- Rebuild new green to the right side of the swale (IM).
- Convert much of the rough between this hole and the newly re-numbered fourth hole to Oak Savanna (IM).

404 - 379 - 336 - 299 - 259 - 210 YARDS

NO. 5

The fifth hole plays from an elevated tee to a ribbon fairway which has no relationship to the surrounding valley it occupies. Shots from the fifteenth hole create a safety issue with golfers playing the hole. In addition, the green is partially blind and is sandwiched between other golf holes and the hillside.

EXISTING HOLE

PAR 4



VIEW FROM TEES



VIEW FROM LANDING AREA



VIEW OF GREEN



DESIGN ISSUES:

- Golfers waiting at the front tee cannot see golfers hitting from the back tees.
- Extremely narrow approach to green.
- Green is partially blind and has nothing defining the back of the putting surface.

MAINTENANCE ISSUES:

- Drainage issues from 150 yards in to the green.

414 - 406 - 376 - 303 YARDS

PROPOSED HOLE #15

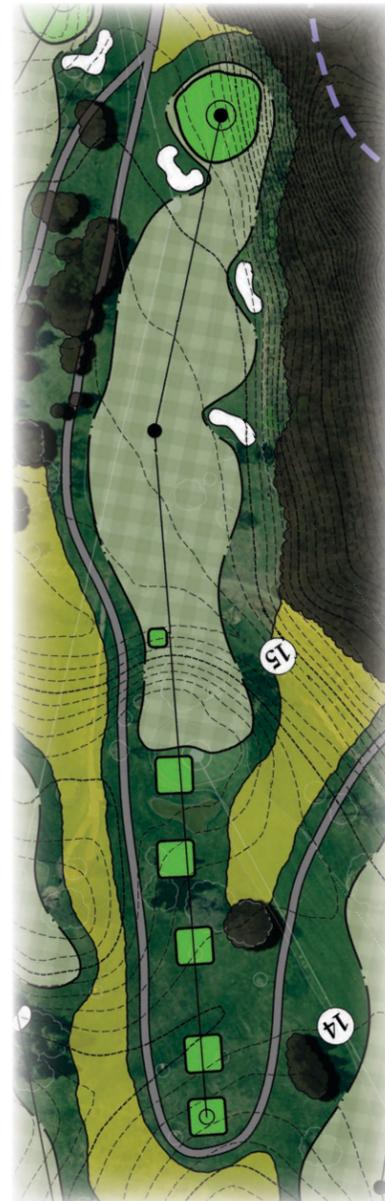
PAR 4



RICHARD
MANDELL
GOLF ARCHITECTURE

Changing the existing fifth hole to the new fifteenth hole eliminates having to cross between holes to get to the next tee. Golfers can avoid walking uphill near the existing fifteenth green to get to the next tee.

Because the confluence of the existing fifth fairway and green and the existing fifteenth fairway and green is a dangerous safety issue, it is better to build a new hole into the hillside on the right. This will increase the current safety buffer from the existing fifteenth green to the centerline of hole number five from 135 feet to a situation where both greens are no closer than 215 feet apart, without one green located out of view below the other green.



SOLUTIONS:

- Change hole number to new #15 in conjunction with other hole re-numbering previously noted (IM).
- Install catch basins and internal drainage in fairway from landing area to the existing green (IM).
- Clear along right side of green and use hill on right for a member's bounce (IM).
- Build new hole as a slight dogleg right par four with the green in the hillside to create a safety buffer from adjacent holes. This must be completed in conjunction with re-locating the new fourteenth green in its new location (IM).

369 - 350 - 305 - 273 - 241 - 190 YARDS

NO. 16

The sixteenth hole is literally a mirror-image of the adjacent sixth hole with the exception of the water to the right of the green found on six. Both holes have large trees on the left that block almost all approaches from that side. Tee shots from each hole interfere with golfers playing the opposite hole. The greens complexes both have flat putting surfaces and sand bunkers that are only penal. Both holes play the same relative distances with sixteen about ten yards longer.

EXISTING HOLE

PAR 4

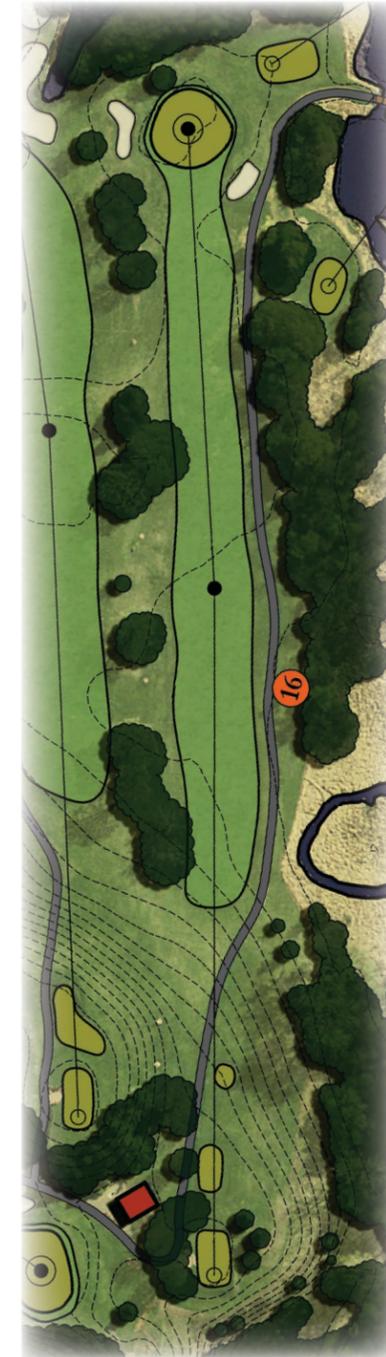
VIEW FROM TEES



VIEW FROM LANDING AREA



VIEW OF GREEN



DESIGN ISSUES:

- Golf hole plays too long for many players.
- Many tee shots slice into the woods on the right, slowing play down.
- Balls hit to the middle of the fairway end up in the right rough.
- Elm on left blocks approaches from that side.
- The hole has a flat, boring green complex.
- Sand bunker left of the green is too far from the green and blind.

MAINTENANCE ISSUES:

- The fairway developed drainage issues when it was lowered along with the sixth fairway. In particular, there are wet areas along the left side.
- Water backs up to the fairway from the woods on the right only after major storms yet the entire area is always soggy.
- The 1992 USACE permit for the Clunie nine required the addition of a 0.37 acre wetland mitigation area to the right of the fairway. The area is completely wooded and begins 115 yards from the center of the green and ends 33 yards from the center of the green (eighteen paces from the front right edge of green).
- The National Wetlands Inventory shows additional wetlands along the right side. Only at the base of the hill does it pinch toward the fairway (sixty feet). The majority of the remaining wetlands is 175 feet into the woods from the fairway. These lines must be further delineated and verified.

420 - 413 - 384 - 348 YARDS

PROPOSED HOLE #16

PAR 5

M

RICHARD
MANDELL
GOLF ARCHITECTURE

The hillside behind the existing tees is a perfect location to build new tees. The new hole can become a par five to replace the current fourteenth hole which shall be moved to the Castle nine and re-numbered as number four.

Pending further delineation and verification, the wetlands along the right side of the hole will act as the right boundary of the golf hole allowing the hole to widen to that side. This will provide a bit more buffer from six fairway. By moving the tees back, neither landing area for sixteen will be adjacent to the landing area for the sixth hole, creating less golfer congestion.

The large Elm and a fairway bunker left of the second landing area will now challenge the golfer who tries to take the shorter route to the green along that side. By moving the hole more to the right, the golfer has the option to play around the large Elm tree on the left side which currently blocks all approaches from that side.



SOLUTIONS:

- Add a bench and ball washer to front tees (IM).
- Extend tees back to hillside to convert hole to a par five (IM).
- Delineate all wetlands along the right side of the hole to verify exact wetlands and wetland buffer (IM).
- Based on available wetland information, move the fairway to the right but not any closer than the sixty-foot wetland buffer as possibly required by the Nine Mile Creek Watershed District (MT).
- Install catch basins and internal drainage along both sides of fairway (IM).
- Add fairway bunker to the left of the second landing area to protect the shorter route to the green along that side (IM).
- Build new green complex twenty-five feet to the left of existing green (MT).

525 - 488 - 428 - 379 - 341 - 287 YARDS

NO. 17

Number seventeen was moved far left of its original location as part of construction of the Clunie nine. The resulting hole has great potential as it plays at a diagonal over a water feature. Unfortunately, the water has been overgrown by invasive species that render it practically invisible from the golfer's view. In addition, the plantings make the target invisible as well.

The green complex is the most distinctively foreign green of the original Castle and Hays holes with wild contours not found on other putting surfaces and immense size (matched only by #13 over 7,000 square feet). Perpetual drainage issues plague a hole where no run-up is possible and the fairway is too short for many lesser-skilled golfers to reach with their golf shots.

EXISTING HOLE

PAR 3



VIEW FROM TEES



VIEW OF GREEN



1" = 100' - 0"

DESIGN ISSUES:

- The hole was moved 75 yards to the left when the Clunie nine addition was built.
- Old tee just right of the sixteenth green is out of play now because of an overhanging tree, water and sand bunker to carry.
- Newer back tee is rarely used.
- Cattails block views from tees.
- No way to run ball onto green along the ground.
- Fairway is hard to reach for the lesser-skilled.
- Severely undulating green. The green doesn't match the style of the rest of the original holes. Toughest and largest green on the course.
- Bunker behind green does not come into play.

MAINTENANCE ISSUES:

- There is a large area of maintained turf grass left of the green which comes into play very infrequently.
- Shots hit short of green stick in soggy ground.
- Too many trees behind the green create shade issues.

227 - 170 - 152 - 119 YARDS

PROPOSED HOLE #17

PAR 3

M

RICHARD
MANDELL
GOLF ARCHITECTURE

Rebuilding this green to match the rest of the golf holes and improving drainage will go great lengths to improving the experience. The presence of Clunie hole #26 prohibits the reclamation of the original hole location.

By extending the fairway back, clearing invasive species, and trimming a few trees, the tee to the right of sixteen green can once again provide the most heroic shot over water for the players who want that challenge. Additional tees with enough dry fairway and open views will find the hole much more enjoyable as well.



1" = 100' - 0"

SOLUTIONS:

- Rebuild new back tee to the right of sixteen green (IM).
- Remove invasive species around the pond and behind the forward tees to improve views and install more appropriate low-growing native plantings (IM).
- Re-grade golf hole to create positive drainage. Install catch basins and internal drainage as needed (IM).
- Extend fairway back toward the forward tees to improve playability (IM).
- Build new green complex to more appropriately match the other holes (IM).
- Selectively clear behind green to increase sunlight without sacrificing safety buffer (IM).

195 - 171 - 160 - 150 - 122 - 98 YARDS

NO. 18

Once the Clunie nine was built, the new eighteenth hole was moved to the left and severely shortened. Although there is nothing wrong with a short finishing hole, the design is less than inspiring and is only challenging from what many golfers consider a tricked-up green (the most unpopular green at Braemar). The hole has the feel and appearance that it is crammed into a wasted, almost-forgotten space.

EXISTING HOLE

PAR 4



VIEW FROM TEES



VIEW FROM LANDING AREA



VIEW OF GREEN



DESIGN ISSUES:

- #18 was relocated for the Clunie nine addition and doesn't match the other holes.
- The hole has a very narrow landing area.
- The better angle to the green is from the right although it's a blind shot from there.
- Very wet in front of and to the right of the green.
- Narrow entrance to green.
- Severely undulating green is only similar to seventeen green, but not large enough to handle the contours. Most unpopular green on the course.

MAINTENANCE ISSUES:

- Wet areas creep up the fairway from the pond.

316 - 300 - 221 - 162 YARDS

PROPOSED HOLE #18

PAR 4



RICHARD
MANDELL
GOLF ARCHITECTURE

Widening and re-grading the eighteenth fairway will eliminate the cramped feeling of the hole and open up some strategic options. Cutting two fairway bunkers into the hillside will challenge big hitters to run their tee shots onto the green. Yet the fairway short of the sand will be wide enough to provide a positive finish for the lesser-skilled.

Enlarging the green will accommodate dramatic contours in a putting surface that will gain further protection by fronting the wetlands on the left, making the natural hazard an integral part of the golf hole. It currently only acts as a non-descript treeline.



SOLUTIONS:

- Widen fairway on both sides and re-grade to improve drainage and create a challenging landing area (IM).
- Cut two fairway bunkers into natural hillside short of the green and bring fairway in between both hazards (IM).
- Remove invasive species right of the pond to improve views, bring edge into play more, and install more appropriate low-growing native plantings (IM).
- Build new green that better matches the other greens on the course and can accommodate more dramatic putting surface contours (IM).

323 - 300 - 258 - 229 - 201 - 160 YARDS

NO. 19

This dogleg right par four plays from a slightly elevated tee to a slightly raised landing area to an uphill green. The entire hole works well in that sense yet does possess some tree issues that make the hole more penal than it first appears. Approaches from the right side are blocked in by trees and the same is often true of some approaches played from the left side.

Usually that just means that a hole requires precision off the tee but in this case, the fairway landing area deflects most tee shots into the rough on both sides, making the hole penal. There is also no point in having a dogleg if one cannot gain an advantage cutting the corner.

EXISTING HOLE

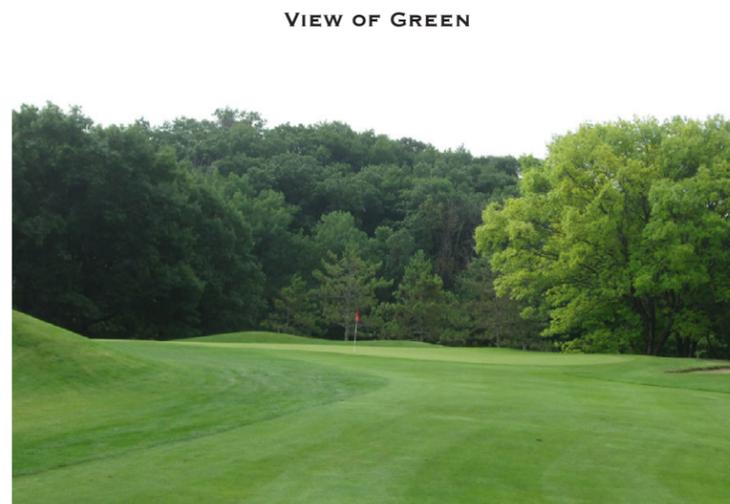
PAR 4



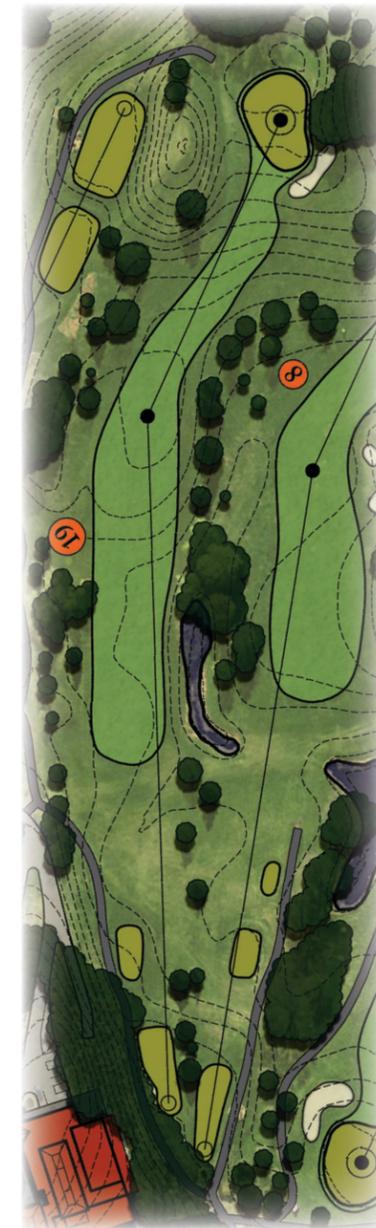
VIEW FROM TEES



VIEW FROM LANDING AREA



VIEW OF GREEN



DESIGN ISSUES:

- Ridge in landing area deflects many tee shots into left rough.
- Trees along right side block approaches from that side.
- Tree on hillside in front of green blocks approaches from left side.
- Golfers play to eight fairway off the tee to gain an advantage.
- Balls roll into the wetland on the right off the tee.
- Severe back to front slope on green.

MAINTENANCE ISSUES:

- No cart path at the green but golfers drive along left side anyway, creating compaction.
- Fairway is too bumpy.

372 - 361 - 322 - 313 YARDS

PROPOSED HOLE #19

PAR 4

M

RICHARD
MANDELL
GOLF ARCHITECTURE

The solution to improving this hole is to simply eliminate the factors that make it penal, starting with prudent tree removal on both sides of the fairway. In addition, widening the fairway will soften the challenge of negotiating the ridge in the middle of the fairway instead of deciding to eliminate the ridge altogether, which would eliminate some much needed character.

Rebuilding the greens complex to reward an approach from one side or the other of the fairway will subtly provide the hole's strategy and character.



SOLUTIONS:

- Build new back tee to lengthen the hole (LT).
- Selectively clear trees on both sides of fairway to allow for approaches from both sides without sacrificing safety buffer (IM).
- Fine grade fairway to eliminate bumps (IM).
- Soften ridge in middle of fairway and tie large hill to left of green into the shaping of the golf hole to look more natural (IM).
- Build cart path down left side of hole (LT).
- Remove invasive species surrounding wetland on the right and install more appropriate low-growing native plantings (IM).

392 - 373 - 327 - 290 - 252 - 203 YARDS

NO. 20

The first par three on the Clunie nine is a straightforward hole with two bunkers protecting the left side. Unfortunately that is the side the cart path is located. The cart path runs across the golfer's view from the right of the tees. The pond behind is screened by overgrown vegetation.

EXISTING HOLE

PAR 3



VIEW FROM TEES



VIEW OF GREEN



1" = 100' - 0"

DESIGN ISSUES:

- Another par three playing a similar yardage.
- Cart path crosses hole between tee and green.
- Shrubs block view of left side of the green.
- Left half of front bunker is penal.
- Well house to right of hole is visible from tees and does not allow for widening of the fairway on that side.

MAINTENANCE ISSUES:

- Woods northeast of the putting surface blocks morning sun.

181 - 164 - 140 - 128 YARDS

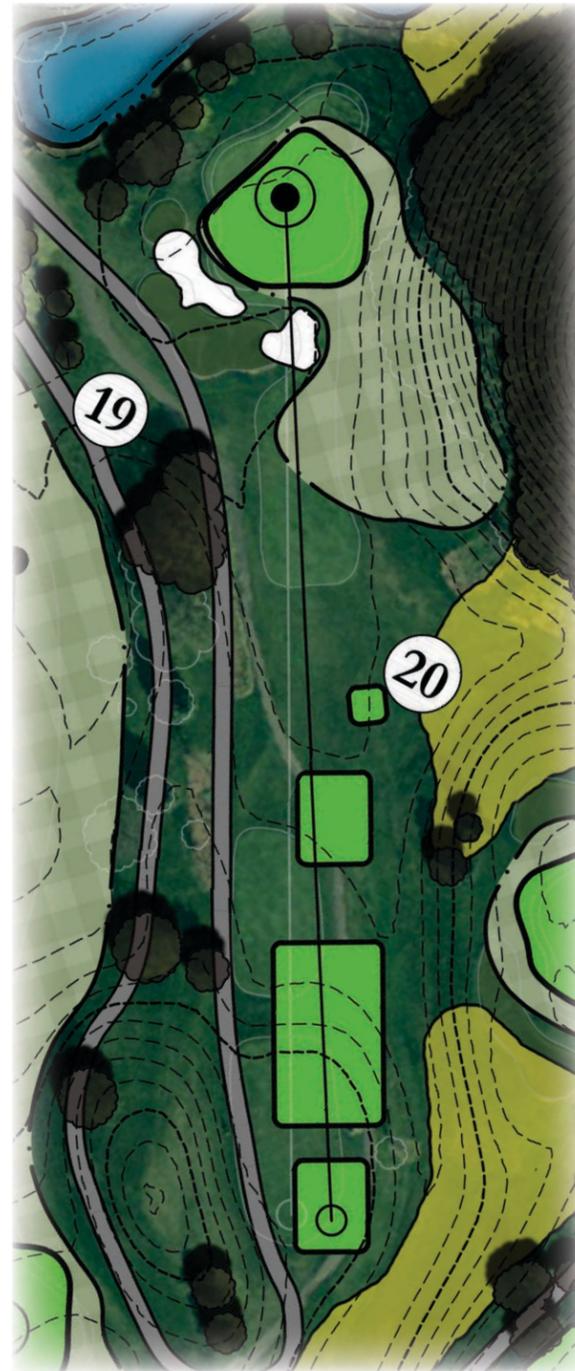
PROPOSED HOLE #20

PAR 3

M

RICHARD
MANDELL
GOLF ARCHITECTURE

Not much can, or needs to be, done to improve hole #20. Unfortunately the well house structure prevents widening of the hole to that side and incorporating much of a member's bounce off the hillside. Rebuilding the green complex to incorporate two sand bunkers on the left side that are less penal than the current sand bunker will improve playability.



1" = 100' - 0"

SOLUTIONS:

- Move cart path to the left of the tee complex (MT).
- Screen well house from tees (IM).
- Build two new bunkers to left of golf hole to improve playability and improve access/egress (MT).

187 - 167 - 156 - 147 - 113 - 94 YARDS

NO. 21

The same vegetation found behind hole number 20 creates a blind tee shot from the back tees with very little depth perception of the end of the fairway on this severe dogleg-right. The golf hole plays around the base of the hill from left to right straight uphill to a partially blind green.

EXISTING HOLE

PAR 4

VIEW FROM TEES



VIEW FROM LANDING AREA



VIEW OF GREEN



DESIGN ISSUES:

- Invasive species block the view of the hole from the tees.
- The fairway slopes from right-to-left off tee in the opposite direction of the golf hole.
- Lack of definition at end of the fairway. Landing area is more wide open than it looks.
- Tee shots hit with a driver can run through the corner of the fairway.
- Cart path crosses fairway.
- Extreme uphill approach is difficult for lesser-skilled and hard to negotiate for walkers.
- Green is blind from bottom of hill.
- Front right green-side bunker is penal.

MAINTENANCE ISSUES:

- Trees left of tees will cause shade issues and inhibit mowing.

377 - 351 - 322 - 295 YARDS

PROPOSED HOLE #21

PAR 4

M

RICHARD
MANDELL
GOLF ARCHITECTURE

Although moving the green down the hill to the left shortens the distance of the hole, it is still a much better solution than a straight uphill hole with twenty-eight feet of elevation change on a public golf course. Placing a sand bunker at the inside corner of the dogleg challenges the golfer who wants to cut the corner to gain an advantage.



SOLUTIONS:

- Remove invasive species surrounding the wetland in front of the tees and on the left. Install more appropriate low-growing native plantings (IM).
- Bring cart path all the way down the left side so it doesn't cross the fairway (MT).
- Build new sand bunker at the inside corner of the dogleg (IM).
- Remove front right green-side sand bunker as it is only penal (IM).
- Rebuild green farther downhill and to the left (IM).

362 - 349 - 305 - 273 - 241 - 190 YARDS

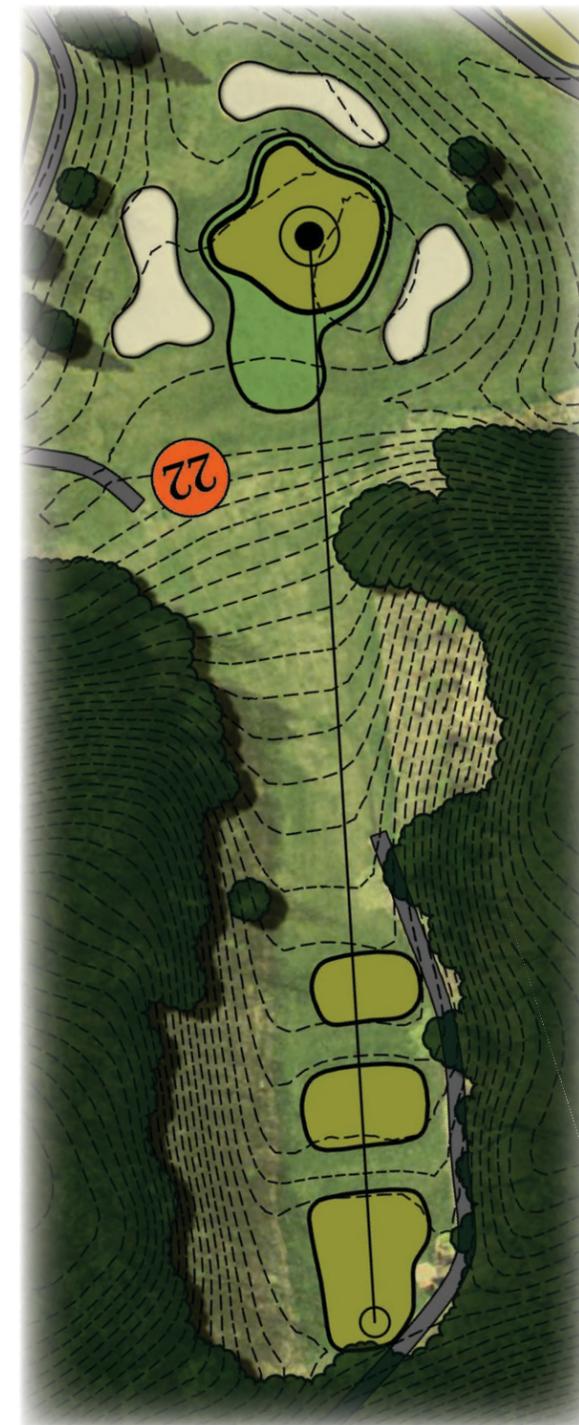
NO. 22

The second par three on the Clunie nine has a very claustrophobic feeling to it because of the tee complex enclosure within the trees on all sides, the way the front of each tee box blocks the view of the front of the hole, and how the right treeline screens the right half of the green complex.

Strategically, there is not much to describe here as the entire putting surface is surrounded by sand.

EXISTING HOLE

PAR 3



DESIGN ISSUES:

- Front of tees block view of front approach from back tees.
- Sand bunkers are much too large and provide no strategic interest.
- Right bunker is blind off tee yet keeps balls out of hole #20.

MAINTENANCE ISSUES:

- The tee complex is in poor condition due to shade issues.

195 - 185 - 164 - 142 YARDS

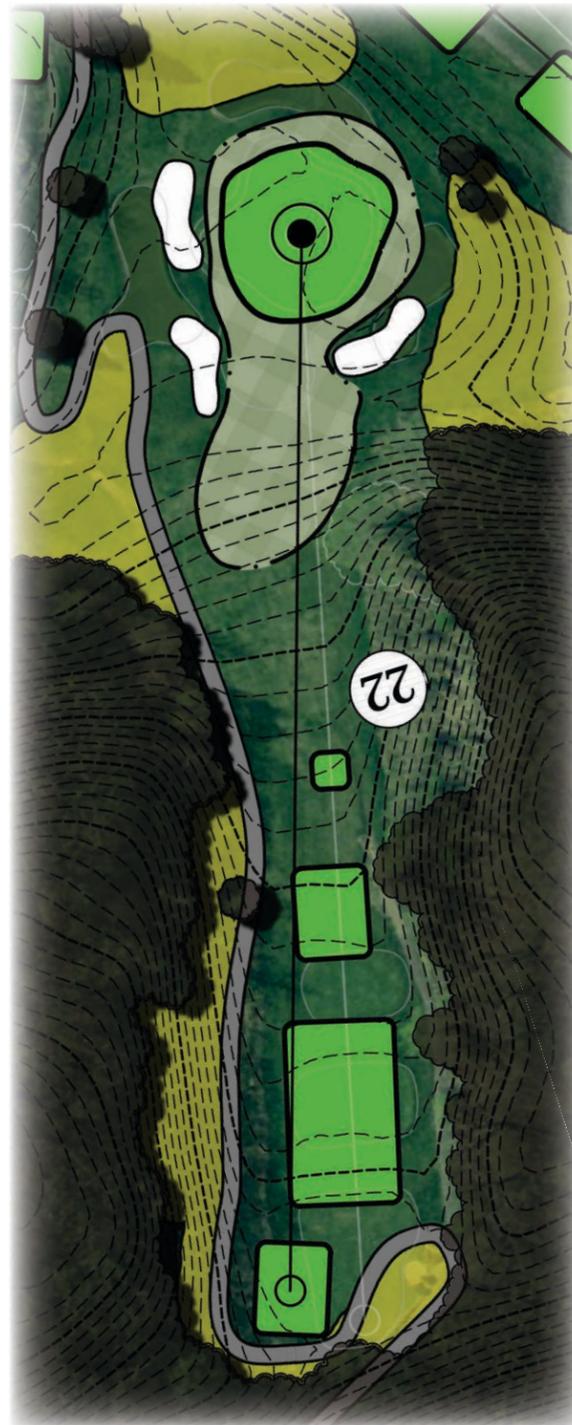
PROPOSED HOLE #22

PAR 3

M

RICHARD
MANDELL
GOLF ARCHITECTURE

Updating this hole in terms of design style and a reduction in sand bunker size will go a long way to improve the golf hole's aesthetic and strategy. Rebuilding the tees to improve visibility will create a more open feel to the current claustrophobic setting.



1" = 100' - 0"

SOLUTIONS:

- Thin trees surrounding the tee complex to provide more sunlight and air circulation (IM).
- Clear trees to the right to open up full view of green complex (IM).
- Rebuild tee complex for better Tee Shot Distance Equity and provide more visibility of the front of the green complex (MI).
- Update green complex by rebuilding features with a more pleasing style and provide more variety in its surrounds (LI).

194 - 177 - 168 - 157 - 132 - 104 YARDS

NO. 23

The 23rd hole is the oddest hole on the golf course. Even though it seems to have much strategic merit, it is very penal. The tee shot is quite narrow and brings the eighth green into play from a safety buffer standpoint.

The second landing area opens up to the left beyond the wood line. However, because the hole leading up to that point is so densely wooded and narrow and the second landing area is blind, golfers cannot access this area.

The result is a narrow, penal hole with few realistic options for the golfer. In fact, the fairway bunker in the corner of the dogleg and the bunkers in front of the green are almost penal in nature because golfers cannot see the wider portion of the second landing area to the left. The approach here is also needlessly narrow, further rendering any potential strategic options moot.

EXISTING HOLE

PAR 5



DESIGN ISSUES:

- This hole is very narrow off the tee mostly because the tree line has crept downhill to the fairway over time.
- Many tee shots are sliced toward the eighth green.
- There is not much strategic risk/reward.
- Trees on the right block the view of the sand bunker to the right of the first landing area.
- Fairway bunker in first landing area is also unattractive.
- Second landing area is blind from the first landing area.
- Left fairway bunker is blind and far away from the line of play.
- Golfers don't go for it in two because they are afraid to hit into the woods on the left.
- Trees in second corner on the right block the view of the green from 225 yards out.
- Bunkers along the right in front of green are penal since the fairway is so narrow. The fairway to the left is almost not even accessible for the golfer because the fairway is so narrow from tee to green.
- The fairway is too narrow in front of the green.
- There are limited pin placements on the green.

MAINTENANCE ISSUES:

- There is no topsoil on the golf hole. As a result, turf establishment has been poor since initial construction of the Clunie nine. With the exception of the woods just behind the green complex, this hole is not within the floodplain.
- There are shade issues along both sides of the golf hole due to the dense woodland.
- The area in front of the green is always wet.

511 - 497 - 443 - 404 YARDS

PROPOSED HOLES #23 & #24

PAR 4 & 3



RICHARD
MANDELL
GOLF ARCHITECTURE

PROPOSED HOLE #23:

The best way to improve a penal, downhill, blind par five on a public course is to re-design the hole to be a manageable par four. For starters, by moving the tees back, the landing area is not in such direct conflict with the eighth green regarding safety.

In addition, the new green location eliminates any blind situations previously creating slow play and playability problems for the lesser-skilled. Converting this hole into a par four solves many of the other design issues found in the current par five design.

PROPOSED HOLE #24:

Proposed hole #24 will be a short par three played from a tee box set in the base of the hillside to the left of the existing 23rd second landing area and play to a new green in the same location as the existing #23 green.

This proposed par three will replace the existing island green hole #25, which is a fine hole but the space it occupies is better served as the tee complex for an improved hole #26.



#23: 426 - 388 - 349 - 324 - 272 - 217 YARDS

SOLUTIONS FOR PROPOSED #23:

- Build new back tee complex to convert hole into a par four and move the landing area farther away from the eighth green for safety buffer reasons (IM).
- Build new green at crest of hill (IM).

SOLUTIONS FOR PROPOSED #24:

- Build new tee complex at base of hillside to the left of the existing second landing area for current hole #23 (IM).
- Build new green in same location as current #23 green (IM).



1" = 100' - 0"

#24: 141 - 135 - 119 - 97 - 85 - 72 YARDS

NO. 24

The oddest of the holes at Braemar Golf Course is immediately followed by one of the most difficult holes at Braemar. Number 24 is the narrowest of holes on all three nines and also one of the longest. To make matters more difficult, this downhill hole requires a forced carry off the tee and another forced carry on the second (and sometimes third or fourth for some) shot as well. Both of those shots have the potential for being completely blind due to the invasive plantings that border both water crossings.

The invasives are the only decent stand of vegetation on the hole, which also happens to be the worst grass-growing environment on site. The topsoil was gone when the hole was first built; there is little sunlight and even less air circulation.

Strategically speaking, the hole's narrowness contributes to a penal runway strategy. No matter how talented the golfer is, if a shot isn't hit straight down the middle, the result will be unplayable.

EXISTING HOLE

PAR 5

VIEW FROM TEES



VIEW FROM LANDING AREA



VIEW OF GREEN



DESIGN ISSUES:

- This hole is the most difficult and narrow hole at Braemar Golf Course.
- The hole plays as a par 6 for most women because of the forced carries over water.
- The front tees block views of the water and the beginning of the fairway.
- Some people aim for #26 fairway off the tee, creating a dangerous situation.
- Tee shots to the right side go farther right.
- Trees along both sides make a narrow hole seem even more narrow. Fairway especially needs widening beyond the second carry over water.
- Plantings at the second creek are too tall for some golfers to carry and block the view of the green.
- Left green-side sand bunker is too big.
- Trees to the right are too close to the green.

MAINTENANCE ISSUES:

- There is no topsoil on the golf hole. As a result, turf establishment has been poor since initial construction of the Clunie nine.
- If topsoil were to be added, six inches of material would need to be excavated and then topsoil added as the Nine Mile Creek flood plain would not allow any elevation increases on this hole.
- This hole is the worst grass-growing environment of all the holes at Braemar Golf Course. It is a very humid hole and has much turf disease as a result of wet conditions, lack of topsoil, sunlight, and air circulation.
- There is too much shade around the green to grow grass.

504 - 484 - 444 - 390 YARDS

PROPOSED HOLE #25

PAR 4



RICHARD
MANDELL
GOLF ARCHITECTURE

By converting this hole to a par four, albeit a long one, the tees can be moved forward enough to soften the first forced carry and improve visibility from the tees, greatly improving the safety of golfers who cannot be seen from those tees currently.

But with such a difficult environment for a successful golf hole, in terms of growing conditions and the actual environment, there is little opportunity to greatly change the fairway setting.

What can be done is the following: selective clearing as much as possible to provide more sunlight and air circulation, the removal of all sand bunkers in order to speed up play, and the widening of as much fairway as the wetland buffers allow.

In addition, removal of all invasive species of vegetation along the wetland margins and replaced with lower-growing plantings will give the hole a wider appearance.

The only physical change to the hole which will improve things is moving the green seventy feet to the right, away from the woods and wetland to the south of the property.



SOLUTIONS:

- Build new tee complex to improve Tee Shot Distance Equity, lessen the first forced carry on the hole, and improve visibility (IM).
- Remove all sand bunkers (IM).
- Remove invasive species surrounding all the wetlands on the hole and install more appropriate low-growing native plantings (IM).
- Widen the fairway as much as the wetland buffers will allow (IM).
- Re-shape the fairway and install catch basins and internal drainage in order to minimize wet conditions and make the fairway as receptive to golf shots as possible (IM).
- Excavate six inches of material in the fairway and import six inches of suitable growing topsoil to improve grass growing conditions (IM).
- Rebuild the green seventy feet to the right (MT).

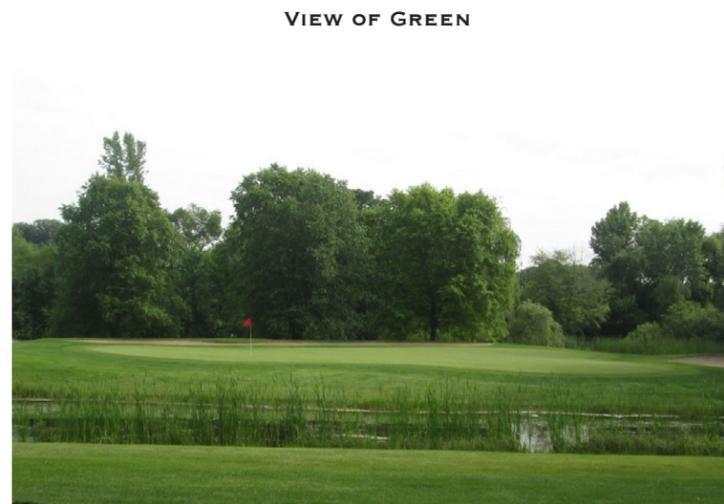
443 - 395 - 358 - 334 - 283 - 223 YARDS

NO. 25

The current 25th hole is a short island par three that lacks visibility; a decent stand of turf due to poor soils, sunlight, and air circulation; and has little character from its oversized, yet flat, putting surface and sand bunkers.

EXISTING HOLE

PAR 3



DESIGN ISSUES:

- Trees on right come in to play from the blue tees.
- Water is not visible from tees.
- Green is too big and flat.
- Bunker on the right only catches mis-hit shots.

MAINTENANCE ISSUES:

- Hole #25 is a very humid hole and needs extensive clearing for air circulation.
- There is not enough sunlight to grow a sufficient stand of grass on the tees.
- There is no topsoil on the golf hole. As a result, turf establishment has been poor since initial construction of the Clunie nine.
- If topsoil were to be added, six inches of material would need to be excavated and then topsoil added as the Nine Mile Creek flood plain would not allow any elevation increases on this hole.

1" = 100' - 0"

146 - 129 - 101 - 85 YARDS

PROPOSED HOLE #26 TEES

PAR 4

M

RICHARD
MANDELL
GOLF ARCHITECTURE

In order to make hole #26 more playable, the island where the current green for hole #25 sits shall be converted to the tee complex for #26. The entire hole will be described on the following pages.



SOLUTIONS:

- Convert island to tee complex for new hole #26 (IM).

423 - 388 - 349 - 324 - 272 - 217 YARDS

NO. 26

With the possible exception of hole number 24, this hole may be the most difficult on the golf course. For starters, the hole is much too narrow to allow for anything but a perfectly straight tee shot. To compound matters, the vegetation in front of the tees and a little rise in the fairway are just enough to make the fairway and sand bunkers on the left blind.

Despite playing less than 400 yards from the back tees, the elevated green (16' above the fairway) makes the hole play much longer. That said, the fairway stops 285 yards from the back tees, forcing almost everyone to lay up from whatever set of tees they may be playing. The fairway bunkers and wetlands make the landing area very narrow as well (just over twenty yards wide). Coupled with a demanding uphill approach, this hole can be the most difficult on the course.

EXISTING HOLE

PAR 4



VIEW FROM TEES



VIEW FROM LANDING AREA



VIEW OF GREEN



DESIGN ISSUES:

- Toughest hole on the course because it is so narrow off the tee. Trees prohibit a draw or fade.
- This is the hole where golfers lay up the most to a very small area.
- Hooked tee shots can land on 17 green and 18 tee.
- Cart path dead ends into beginning of fairway.
- Rise in fairway makes landing area and bunkers blind.
- Trees on both sides make fairway too narrow. Trees on left side block approach to green from that side.
- Too much rough on the left side.
- Bunkers on left side are penal.
- Fairway narrows to a point and then forces a carry.

MAINTENANCE ISSUES:

- Green location lacks sufficient air circulation.
- There is no topsoil on the golf hole. As a result, turf establishment has been poor since initial construction of the Clunie nine.
- If topsoil were to be added, six inches of material would need to be excavated and then topsoil added as the Nine Mile Creek flood plain would not allow any elevation increases on this hole.

388 - 377 - 280 - 213 YARDS

PROPOSED HOLE #26

PAR 3

M

RICHARD
MANDELL
GOLF ARCHITECTURE

It seems counter-intuitive to lengthen the most difficult hole on the golf course but by moving the tees to the current island, golfers will have better visibility of their target and will also be able to swing more freely without worrying that the fairway will get narrower and stop without providing for a full swing tee shot.

More importantly will be the removal of the fairway bunkers and widening of the fairway to be more receptive to tee shots. Even though a demanding uphill approach is still required, lowering the green a bit and providing a bigger, more receptive target will help ease some pressure. Providing more bailout fairway in front of the green will lessen some worries as well.



SOLUTIONS:

- Remove invasive species surrounding all the wetlands on the hole and install more appropriate low-growing native plantings (IM).
- Eliminate fairway sand bunkers and extend fairway as far as the wetland buffers will permit (IM).
- Rebuild green at a lower elevation to be more receptive to approach shots (LI).
- Clear trees surrounding green complex to increase sunlight and air circulation (IM).

423 - 388 - 349 - 324 - 272 - 217 YARDS

NO. 27

The final hole of the Clunie Nine is a short par five requiring forced carries over water on both the tee shot and second shot. This hole is a mirror-image of the adjacent ninth hole. It, too, is the easiest hole for the better golfers yet the most difficult hole for everyone else, based solely on the forced carries over the water.

EXISTING HOLE

PAR 5



VIEW FROM TEES



VIEW FROM LANDING AREA



VIEW OF GREEN



DESIGN ISSUES:

- Trees on both sides pinch the hole directly off the tee.
- Front tees are built up too much and block the creek.
- Mound to right of back tees block vista in that direction.
- Underbrush right of tees obscures vista as well.
- Cart path comes into play on green-side of second carry.
- Tree on left near green pinch the hole.
- Bunkers guarding green lack interest.
- This hole has the only tiered green on all 27 holes.

MAINTENANCE ISSUES:

- There is no topsoil on the golf hole. As a result, turf establishment has been poor since initial construction of the Clunie nine.
- The only floodplain on the hole is the first half of the second landing area beyond the water. If topsoil were to be added in that location, six inches of material would need to be excavated and then topsoil added as the Nine Mile Creek flood plain would not allow any elevation increases on this hole.

486 - 468 - 403 - 372 YARDS

PROPOSED HOLE #27

PAR 5

M

RICHARD
MANDELL
GOLF ARCHITECTURE

Similar to the solution for hole number 26, by pulling the tees back, the first landing area can be moved back as well, reducing the need to keep the driver in the bag and subsequently forcing an even tougher second shot carry for the lesser-skilled. By moving the tees farther right, the hole becomes more of a dogleg, which will introduce strategic choices off the tee with the reward of a shorter route as a possibility.

Sand bunkers along the right side of the second landing area further challenge the golfer who takes the shorter route. In addition to a shorter distance, a second reward is an opening to the green from that side.



SOLUTIONS:

- Move the tees back and twenty yards to the right to lessen the forced carry off the tees and create a dogleg right hole (IM).
- Clear trees around tee complex to improve turf conditions and provide less of a “chute” feeling of the tee (IM).
- Remove invasive species surrounding all the wetlands on the hole and install more appropriate low-growing native plantings (IM).
- Widen the fairway from tee to green (IM).
- Add right side fairway sand bunkers to challenge the golfer who cuts the corner on their second shot (MT).
- Add left side fairway sand bunkers to provide buffer from the eighteenth fairway (MT).
- Rebuild green complex to better match the overall character of the other putting greens on the course (LI).

502 - 459 - 398 - 359 - 321 - 275 YARDS

EXISTING PRACTICE AREA

The large putting green fits well in its surroundings as a buffer between the first tee and the driving range. The chipping area also seems well-situated and seems to attract practicing golfers.

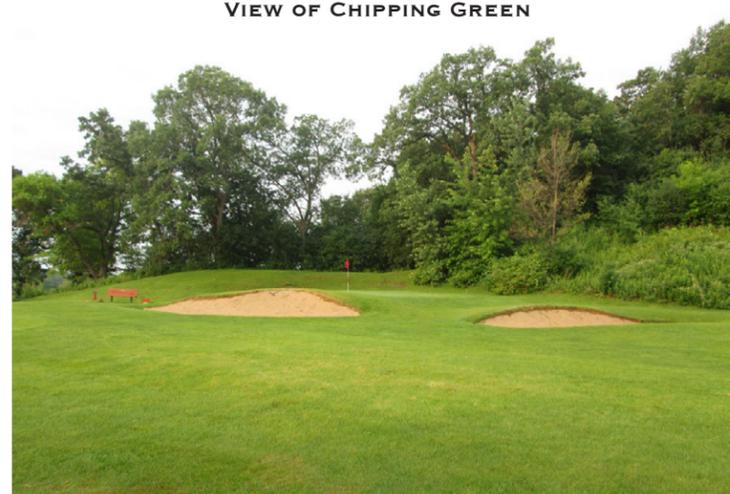
VIEW OF LARGE PUTTING GREEN



VIEW OF SMALL PUTTING GREEN



VIEW OF CHIPPING GREEN



DESIGN ISSUES:

- Practice greens don't reflect the slope and speed of the other greens.
- The chipping areas and sand bunkers do not reflect the course design.

MAINTENANCE ISSUES:

- The composition of the greens is not the same as the other greens so they cannot provide a playing surface that is consistent with the rest of the golf course.

PROPOSED PRACTICE AREA

M

RICHARD
MANDELL
GOLF ARCHITECTURE

With the expansion of the tenth hole to a par five, it is necessary to utilize the land where the chipping area currently sits for the new tee complex. The cart path will run behind the tees and down the left side, which will open up a more contiguous area for a larger putting green in the general location of the existing small green behind the first tee.

The green between the first tee and the driving range will be expanded from 11,928 square feet to 20,628 square feet. The vision is to create a Himalayas Putting Course that will allow for expanded use of the green for putting tournaments, clinics, and additional practice. An area of the green will be built perfectly level to allow golfers the chance to practice their putting stroke.



SOLUTIONS:

- Utilize the chipping area for new back tees of the par five tenth hole (IM).
- Build a new practice putting green behind the first tee in conjunction with construction of the first tee and tenth tee complexes (IM).
- Build a Himalayas Putting Green between the first tee and driving range (IM).

BRAEMAR GOLF COURSE DESIGN STYLE

Renovations at Braemar Golf Course center around upgrading the infrastructure of the golf course to provide a more interesting and playable golf course as well as modernize the golf course infrastructure to improve playing conditions. The overriding goal for future renovation work is to expand the market to include golfers of all ages and all abilities. Creating a golf course with interest and challenge can easily be achieved through meaningful selection and placement of hazards as well as providing wider fairways.

Braemar Golf Course was built in the early 1960s, a period in golf architecture heavily influenced by Robert Trent Jones' interpretation of modern golf course architecture. That interpretation strayed from the golden age principles of developing challenge and interest through thought-provoking strategy. Instead, brute strength and extreme accuracy were the only ways to overcome difficulty. Landing areas were pinched by sand. A proliferation of mounding often deflected golf balls away from playing areas, compounding the average golfer's problems.

Despite being a municipal golf course from its inception, Braemar Golf Course was intentionally designed with difficulty in mind rather than with strategic interest for all. In fact, Warren Hyde, City Manager at the time of Braemar's development, publicly stated that the original layout should "*politely discourage the golfer*".

Whether the golf course achieved Hyde's goal or not, slow play quickly became a factor despite being relatively wide open with a reasonable number of sand bunkers. The water features and extreme topographic change were the primary contributors to the slow play and difficulty of a virtually treeless golf course.

It is NOT Richard Mandell Golf Architecture's intention to inject a design style that promotes difficult playing conditions and slow play. Instead, the proposed design style for Braemar will include more prudent use of hazards to keep penalty at a minimum. Instead, hazards will be placed to challenge the golfer, not penalize the golfer. There will be very few forced carries and the greens will be open in front as much as possible.

That said, the aesthetic appearance of Braemar Golf Course will reflect the same aesthetic design style of the 1960s. Design features from this era included large putting surfaces and smooth-edged sand bunkers with serpentine curves and high-flashing sand faces. Sand bunker shapes at Braemar will be composed of broad curving lines that reflect this original '60s styling. Elaborate rough-hewn lines, fingers, or noses will not be part of the design style as they are not of the era and are also high-maintenance for a small staff.

In addition, bunkers will be rebuilt with just enough sand flashing in the faces to ensure visibility from the shot being played instead of the more era-appropriate higher flashes. They will also have slightly concave sand bottoms. Bunker shapes will be kept as simple as possible and at a manageable size so as not to be too visually distracting from the lay of the land.

The primary putting surface areas will be in the 2% to 4% range with the majority of slopes being closer to the lower percentage. This will be a reduction from the original dominant slopes in the 6% - 7% range (too severe for modern green speeds measured at ten or more with a stimpmeter). Steeper slopes will be limited to where ridges enter the putting surface or where the natural topography may tie into the greens.

New grass hollows in conjunction with the more typical mounding of the era will provide short game challenges that are currently limited to just sand and deep rough around the greens. Overall, the proposed design style for Braemar will have a '60s appearance to the primary features, but with much more strategic interest around the greens and through the placement of sand bunkers.

PROPOSED COURSE SETUP

Renovation goals for Braemar Golf Course staff are to minimize daily maintenance tasks to compensate for a small staff as well as improve infrastructure. With a re-construction of the golf course infrastructure to modernize the facility, the maintenance staff can better spend their time maintaining the golf course features instead of splitting time between repair work and maintenance due to use of superior materials including drainage improvements, proper grasses, and improved construction techniques.

The proposed design style for the golf course has specifically been developed to keep daily maintenance efforts at a minimum as well. Course set up shall promote pace of play and fair playing conditions. RMGA proposes maintaining a golf course that is more dry than wet. In other words, a golf course that plays fast and firm will help promote more short game options and allow golfers to experience roll on their golf shots. A golf course under these conditions will also have a healthier stand of grass. Irrigation will only be used to provide the necessary moisture to maintain a healthy stand of turf and not to maintain color.

A variety of grass heights is NOT recommended for Braemar Golf Course. RMGA proposes fairways be cut at a height of 1/2 inch to 3/4 of an inch high and the rough be cut no higher than 1 1/2 to 2 inches high. Tall grasses and the difficulty they incur for the average golfer should never be confused with challenge.

Areas around green complexes shall be cut closer to fairway heights in order to provide visual interest, provide the golfer with a variety of short game club choices, and maintain proper pace of play. With low grass heights a golfer can use any club from putter to wedge to low iron around the greens. If the surrounds are composed of deep rough, then many of the features will be rendered irrelevant yet difficulty increased.

RMGA advises that the grass portion of sand bunker faces is kept just long enough to promote a healthy stand of grass and nothing more. Deep rough on bunker faces will only slow play. Mowing frequency of the bunker faces shall be in line with typical rough-mowing schedules. Bunker floors should be maintained by hand to increase the life-expectancy of the bunkers.

Fairway landing areas shall generally average forty-five to fifty yards wide. Shorter holes may be narrowed slightly less and there is no reason why fairways cannot be wider in other places. This will increase pace of play and not affect the low handicapper, whose challenge awaits around the greens, not necessarily on every tee.

Specific fairway lines will reflect the natural topography of each golf hole. The variation in that topography will be the final factor in where fairway lines are established. It is RMGA's intent that many undulating fairway areas will promote shotmaking by allowing golfers to use the lay of the land to direct their shots more so than playing target golf. Regardless, all proposed fairway areas will be mowable with the golf course's equipment.

RMGA recommends a stimpmeter reading of nine for regular play. Anything above nine could contribute to pace of play issues and are not necessary to enjoy the game (currently the greens regularly roll at 10+). Green approaches shall be expanded to a 20-30 yard width to allow more of a ground game approach for golfers and provide a better transition from the wider fairways and topography into each greens complex.

Golf course conditioning at Braemar shall promote a fun challenge, not a penalizing experience. The low handicappers who play Braemar Golf Course after renovation efforts will find plenty of challenge in properly placed hazards off the tee and a variety of short game challenges around the greens. Yet golfers of all ages, abilities, and gender will find the challenge that best matches their own games at Braemar.



ECOLOGICAL MANAGEMENT PLAN

In conjunction with Barr Engineering's Natural Resources Information Summary (NRIS) dated February 2015, Richard Mandell Golf Architecture recommends the following ecological enhancements:

WETLAND BUFFERS

- Restore wetland buffers as appropriate in areas that do not slow play by eliminating invasive species. Fairway grasses within these buffers that provide playing areas for golfers shall remain.
- Increase wetland buffers as much as possible (beyond the mandated limits) which will not negatively impact the golf course playing areas to compensate for areas which need to remain playable fairways or rough. Wetland buffers will, at a minimum, average 60' surrounding high value wetlands, 40' surrounding medium value wetlands, and 20' surrounding low value wetlands.
- Re-establish wetland buffers with Prairie Moon Nursery's Short Sedge Meadow Seed Mix. The mix components follow:

Short Sedge Meadow Seed Mix ©		
		Seeding Rate: 302 seeds/sq. ft.
		lbs per Acre: 6.86 lbs/Acre
WILDFLOWERS		
Scientific Name	Common Name	% by wt.
Asclepias incarnata	Rose Milkweed	7.29
Aster puniceus	Swamp Aster	0.99
Bidens aristosa	Swamp Marigold	1.36
Boltonia asteroides	False Aster	0.99
Eupatorium perfoliatum	Boneset	0.46
Gentiana andrewsii	Bottle Gentian	0.91
Iris versicolor	Northern Blue Flag	3.64
Liatris pycnostachya	Prairie Blazing Star	9.92
Lobelia cardinalis	Cardinal Flower	2.73
Lobelia siphilitica	Great Blue Lobelia	1.82
Lysimachia quadriflora	Prairie Loosestrife	0.46
Lythrum alatum	Winged Loosestrife	0.68
Melanthium virginicum	Bunch Flower	0.99
Mimulus ringens	Monkey Flower	0.40
Pycnanthemum virginianum	Mountain Mint	0.40
Ranunculus scleratus	Annual Buttercup	0.91
Rudbeckia hirta	Black-eyed Susan	3.97
Solidago graminifolia	Grass-leaved Goldenrod	0.91
Solidago riddellii	Riddell's Goldenrod	1.98
Sparganium eurycarpum	Great Bur Reed	14.57
Verbena hastata	Blue Vervain	4.10
Zizia aurea	Golden Alexanders	4.10
	Total % by wt. WILDFLOWERS:	63.58%



GRASSES, SEDGES & RUSHES		
Scientific Name	Common Name	% by wt.
Bromus ciliatus	Fringed Brome PLS	14.57
Carex comosa	Bristly Sedge	1.82
Carex hystericina	Porcupine Sedge	2.73
Carex stipata	Common Fox Sedge	5.46
Carex vulpinoidea	Brown Fox Sedge	2.73
Elymus virginicus	Virginia Wild Rye PLS	5.46
Glyceria striata	Fowl Manna Grass	0.92
Juncus effusus	Common Rush	0.91
Juncus interior	Inland Rush	0.91
Scirpus atrovirens	Dark-green Bulrush	0.91
	Total % wt. GRASSES, SEDGES & RUSHES:	36.42%

- It is imperative that maintenance is budgeted and planned for these buffer areas to control invasive species such as narrow-leaf cattail, purple loosestrife, and reed canary grass.
- Refer to Section 3 of Barr Engineering's NRIS for more information.



Short Sedge Meadow Mix
Images Courtesy of Prairie Moon Nursery

OAK WOODLAND & OAK SAVANNA RESTORATION

- Restore the Oak Woodland to the east of the golf course by removing invasive species such as Buckthorn and restoring appropriate understory plantings of native sedges, forbs, and grasses with specific areas of wildflower plantings no taller than two to three feet.
- Restore the Oak Woodland to the west of the golf course by removing invasive species such as Buckthorn and restoring appropriate understory plantings of native sedges, forbs, and grasses with specific areas of wildflower plantings no taller than two to three feet.
- Develop areas within the golf course to restore Oak Savanna with the planting of Bur Oaks, Northern Pin Oaks, Red Oaks and Shortgrass Woods Edge Savanna Seed Mix (outlined on the following page).
- Provide a monthly woodland and savanna maintenance budget separate from the golf course maintenance budget as well as staff to remove invasive species on a regular basis as part of a long-term management plan.

Shortgrass Woods Edge Savanna Seed Mix ©		
Seeding Rate: 113 seeds/sq. ft.		
lbs per Acre: 10.56/acre		
WILDFLOWERS		
Scientific Name	Common Name	% by wt.
Agastache foeniculum	Anise Hyssop	2.37
Allium canadense	Wild Garlic	3.55
Anemone virginiana	Tall Thimbleweed	1.29
Aquilegia canadensis	Columbine	2.37
Aster prenanthoides	Crooked-stemmed Aster	1.18
Blephilia ciliata	Downy Wood Mint	0.59
Campanula americana	Tall Bellflower	1.78
Dodecatheon meadia	Midland Shooting Star	1.18
Echinacea purpurea	Purple Coneflower	2.58
Gentiana flavida	Cream Gentian	0.64
Kuhnia eupatorioides	False Boneset	1.29
Osmorhiza claytonii	Sweet Cicely	4.65
Penstemon digitalis	Foxglove Beardtongue	1.18
Polemonium reptans	Jacob's Ladder	1.78
Polygonatum biflorum	Solomon's Seal	4.14
Polygonum virginianum	Woodland Knotwood	2.37
Pycnanthemum verticillatum var. pilosum	Hairy Mountain Mint	2.37
Rudbeckia hirta	Black-eyed Susan	2.96
Rudbeckia triloba	Brown-eyed Susan	1.78
Scrophularia marilandica	Late Figwort	1.18
Silene stellata	Starry Campion	1.29
Smilacina racemosa	Solomon's Plume	4.73
Taenidia integerrima	Yellow Pimpernel	0.64
Zizia aurea	Golden Alexanders	3.55
	Total % by wt. WILDFLOWERS:	51.44%
GRASSES, SEDGES & RUSHES		
Scientific Name	Common Name	% by wt.
Bromus kalmii	Prairie Brome	7.73
Bromus pubescens	Hairy Wood Chess	9.47
Carex blanda	Common Wood Sedge	1.18
Carex gracilescens	Slender Wood Sedge	1.18
Carex molesta	Field Oval Sedge	2.37
Diarrhena obovata	Beak Grass	4.74
Elymus virginicus	Virginia Wild Rye	10.04
Elymus hystrix	Bottlebrush Grass	6.69
Schyzachyrium scoparium	Little Bluestem	5.16
	Total % wt. GRASSES, SEDGES & RUSHES:	48.56%



OTHER CONSIDERATIONS



Shortgrass Woods Edge Savanna Mix
Images Courtesy of Prairie Moon Nursery

- Provide a permanent, yet non-obtrusive, system of delineation of the Oak Savanna Restoration Areas to avoid accidental alteration of the areas within the golf course.
- Develop signage within Oak Savanna areas and alongside wetland buffers available to golfers as well as others who may have access from the walking trails surrounding the golf course for educational purposes.
- Establish a trail network surrounding the park with sufficient safety buffers from golf course playing areas. Trails within the golf course utilized as connector points to adjacent properties must not cross golf course playing corridors and must have sufficient safety buffers from golf course playing areas.
- There may be grants available for which the City of Edina can apply to help offset the cost of the restoration plantings.

BENEFITS OF THE ECOLOGICAL MANAGEMENT PLAN TO THE PUBLIC

The suggestions outlined in the above Ecological Management Plan, in conjunction with Barr Engineering's NRIS dated February 2015, for Braemar Golf Course is a template for how golf and ecology can be a symbiotic relationship. First and foremost, the opportunity to minimize manicured golf turf and create additional Oak Savanna habitat is a clear win-win for both non-golfers and golfers alike. By minimizing outputs on the golf course side, the carbon footprint of Braemar Golf Course can decrease. In addition, non-golfing citizens of Edina as well as golfers will be able to enjoy the benefits of an increased Oak Savanna habitat:

- Native plant communities (wetland, Oak savanna, and Oak woodland) offer many benefits over maintained turf or unmaintained/overgrown natural areas. Well-established native plant communities require fewer inputs for maintenance, fertilizer and pest control because they are well adapted to Minnesota's climate. The native plant communities provide habitat for birds, wildlife, and pollinators which promote healthy and diverse ecological systems.
- Native plant communities provide a benefit to water in Edina. Areas with native plant communities increase stormwater infiltration, which reduces erosion and recharges groundwater. They also stabilize steep slopes and shorelines, further preventing erosion. This leads to cleaner surface water and healthier systems.
- In addition to the ecological benefits, people value native plant communities for their beauty and the opportunities they afford for viewing wildlife and birds. Residents of Edina have expressed a strong desire for more trails and accessible open spaces. Native plant communities provide an attractive and welcoming background for these activities. There are also many educational opportunities in these areas, including educational signage and potential for park- or school-programmed activities.

Restoring and connecting native habitats within the Braemar property to the larger context of the ecological area comprised by the City of Edina will strengthen and make more resilient the natural systems that provide a vibrant and healthy environment for Edina's citizens. Likewise, connecting and expanding the existing trails at Braemar to the Hennepin County network represents a broader, more systematic approach that invites more users to enjoy the amenities Braemar provides its citizens.

TEE RENOVATION SOLUTIONS & PRIORITIES

* All of the distances outlined here are based on an 18 hole average of the three 18-hole configurations possible at Braemar.

Upon completion of the Tee Shot Distance Equity Analysis (TSDEA), five sets of tee boxes will provide the proper spacing to create equity among the golfers at Braemar. The goal of tee relocation for TSDE is to create a situation where each golfer experiences the same (or very similar) approach shots provided average tee shots were played from the correct set of tees. The new tee boxes will yield more distance equity by increasing the overall distance spacing from each tee box to 587 yards from the existing spacing of 315 yards, rendering one current tee box combination from the current six-tee system unnecessary.

Tee Shot Distance Equity will be accomplished by consolidating the White and Silver Combo tee boxes to a yardage of 6,017 and accomplishing the same with the Red and Green Combo tees to 5,344 yards. The Gold tee distance is still represented with a new distance of 4,835 yards and a new forward tee box at 4,178 yards will be added. We have also created a set of junior tees at 3,400 yards (based upon TSDE) to be represented as simple markers within the established fairway of each hole. Following are the current average 18 hole equivalents and the proposed equivalents:

Current		Proposed	
Blue:	6,508 yards	A:	6,527 yards
White:	6,230 yards	B:	6,017 yards
Silver:	5,917 yards	C:	5,344 yards
Red:	5,531 yards	D:	4,835 yards
Green:	5,365 yards	E:	4,178 yards
Gold:	4,923 yards		

There is a variation in actual yardage differences among each tee box due to topographical limits, yet more equity has been achieved, particularly for golfers playing from the front tees. Additional tee renovation solutions are as follows:

- In conjunction with TSDE, many front tee boxes will be relocated to reduce the distance of forced carries over water, thereby reducing the need to lay up off the tee where a tee shot is impossible to play due to the long carry. These tee boxes will eliminate the need to lay up off the tee, instead allowing for more aggressive tee shots and more reasonable approach shots.
- Increase the average tee complex size per golf hole at Braemar from 5,785 square feet to 8,140 square feet to spread out wear and provide a better stand of turf.
- Laser-level all tee boxes to ensure a level stance for all golfers.
- Develop square/rectangular shapes for all tee boxes to maximize usable square footage while minimizing wasted maintenance efforts (which is vital for a small maintenance staff).



Following is a prioritized listing of tee complexes for renovation consideration. Each tee complex is prioritized in three ways: Immediate (IM), Mid-Term (MT), and Long-Term (LT). Further explanation of prioritization follows:

IM: Renovating these tees will have an immediate impact in one of three considerations below or better utilize the City's funds by being part of a related immediate project:

- Safety -** These tees need to be moved because they are too close to other course features.
- Maintenance -** These features are located in such an environment that grass cannot grow properly or simple mowing cannot be performed without excessive effort. These tee complexes also may be too small.
- Playability -** These tees can be moved to greatly improve sight lines to fairways or improve playability for golfers who cannot otherwise play the hole fairly due to Tee Shot Distance Equity issues.

MT: These tee complexes will benefit from improvement based on both maintenance and playability or may be better completed as part of other mid-term projects that best utilize the City's funds.

LT: These tees can be completed with a long-term outlook. They do not have the same impact in terms of maintenance and playability, but eventually need renovation. Certain tees may have a more urgent impact in terms of maintenance, playability, and even safety, but renovation of these features is dependent upon larger and more long-range renovation tasks. Some of these tees may be moved up in the priority list based upon other priority choices.

TEES FOR IMMEDIATE (IM) CONSIDERATION:

1. #9 - The difficulty of the existing ninth hole as a par five stems mostly from the awkward carries over water from the current tee configuration. Most of the lesser-skilled golfers find it very difficult to carry the water off the tee and are forced to lay up. In response to the forced lay up, those same golfers are faced with a very long second shot with virtually no chance to reach the green in regulation. Converting the hole to a par four will help make the hole more manageable. Changing the par for this hole is contingent upon moving holes 4 & 5 to the Hays nine and moving holes 14 & 15 to the Castle nine.
2. #27 - A similar problem exists with this par five as well but a different solution will greatly improve TSDE. By lengthening the hole and moving the first landing area back, there will be enough room for the lesser skilled golfers to swing away off the tee without the worry of always putting their tee shots in the water. Nor will a forced lay up create such a long second shot with no chance of reaching the green in regulation. The new tee configuration will actually increase the less-skilled golfer's chances of reaching the green in regulation on a regular basis.

The following changes to holes 23-26 are all contingent upon each other as one current hole (#25) will be eliminated in the process and a brand new hole (#24) must take its place. As a result, all four of these holes must be built simultaneously. Since this is the corner of the Clunie nine that can create the most impact for the golfers, this work is prioritized ahead of most other work proposed within the RBP.

3. #23 - One of the more difficult golf holes at Braemar, the first landing area for the current hole is adjacent to the eighth green and many sliced tee shots interfere with golfers on that green. By converting the hole to a par four, it becomes more manageable and eliminates a blind situation that slows play down by moving the landing area back to. (it will cut down on the number of stray tee shots threatening the eighth green). Rebuilding the tee complex is a crucial part of converting this hole to a par four.
4. #24 - Along with converting hole #23 to a par four, the latter half of that hole will become the new par three #24. This hole, including the tee complex, must be built at the same time as holes #23, 25, and 26.
5. #25 - Of holes 23-26, #25 is the one hole that could be renovated independently of the others if needed. That said, the forced carries and blind component of the current tee boxes make this tee complex a high priority, whether as a par four (recommended) or a par five (existing).
6. #26 - Proposed tee complex construction for hole #26 is dependent upon the construction of proposed hole #24 as it will replace the current hole #25, which is the proposed location for the new tees. New tees extended backward (from the island) will lessen forced carries followed by unreasonable second shots. For most lesser-skilled golfers, the current tee configuration makes it almost impossible to reach the green in regulation.
7. #1 - In the effort to improve pace of play at Braemar, it is necessary to change the first hole to a par five and the second hole to a par four. Rebuilding new tee boxes behind the existing first tee complex is a component of this conversion and can be done independently of moving the green at a later date.
8. #2 - The tees for the second hole can only be rebuilt once the first hole is converted to a par five but their construction is a necessary component of improving pace of play sooner than later.
9. #10 - Working in conjunction with other hole changes that affect the overall par of the golf course, it will be necessary to convert this hole to a par five sooner than later as well.
10. #12 - There is a dearth of tee space on this downhill par three. In theory, this hole needs the most tee space on the golf course because it is such a short par three. The way to increase the amount of tee space is by cutting some tee box levels and filling others to create larger areas that will spread out wear and provide a better stand of turf.
11. #16 - Sixteen is another hole that must be converted to a par five with new tees to be built into the hillside behind the existing tees.
12. #4* - The newly re-numbered 14th hole is a par five with a landing area that is blind off the tee. By raising the tees, the fairway can be more visible and improve safety and pace of play. The material for this task should most likely come from pushing back and lowering the thirteenth green.



TEES FOR MID-TERM (MT) CONSIDERATION:

13. #3 - Moving this tee complex 25 yards to the right will create more buffer and reduce congestion from the second green.
14. #17 - Raised tee boxes built in conjunction with drainage will greatly improve one of the more unsightly areas of the golf course. In addition, restoring the old tee location to the right and behind the sixteenth green will greatly enhance the challenge of this par three for the better golfers.
15. #13 - Additional front tee boxes will allow more golfers to reach this green more often in regulation and greatly improve TSDE.
16. #5* - The newly re-numbered 15th hole needs more tee space and will improve TSDE with relocated forward tees.
17. #6 - Additional front tee boxes will allow more golfers to reach this green more often in regulation and greatly improve TSDE.
18. #11 - Moving the tee complex thirteen yards to the right, adjacent to the wetland buffer, will provide additional safety buffer from the tenth green.
19. #22 - Lowering some of the front tees on this hole will improve visibility to the approach of the green from the back tees. Additional front tee boxes will improve TSDE.

TEES FOR LONG - TERM (LT) CONSIDERATION:

20. #8 - Separating these tee boxes from each other will improve TSDE. Moving them farther from #19 tees will help reduce congestion. These tees should be rebuilt as one unit along with #19 tees.
21. #19 - Separating these tee boxes from each other will improve TSDE. Moving them farther from #8 tees will help reduce congestion. These tees should be rebuilt as one unit along with #8 tees.
22. #15* - The newly re-numbered 5th hole severely lacks TSDE as one tee box sits on top of the hill and the other tee boxes are located all the way on the bottom with 75 yards between. Relocated tee boxes will greatly improve TSDE.
23. #14* - Building additional front tee boxes for the newly re-numbered 4th hole will allow more golfers to reach this green more often in regulation, greatly improving TSDE.
24. #21 - Re-shaping these tee boxes to improve alignment for the golfers will improve pace of play.
25. #18 - Increased tee space and re-alignment will improve playing conditions. An added front tee box on the green-side of the water will greatly improve TSDE.
26. #7 - Increased tee space and re-alignment will improve playing conditions. Additional front tee boxes on the green-side of the water will greatly improve TSDE.
27. #20 - Increased tee space and re-alignment will improve playing conditions. Additional front tee boxes will greatly improve TSDE.

* - Proposed re-numbered holes.

SAND BUNKER RENOVATION SOLUTIONS & PRIORITIES

It is Richard Mandell Golf Architecture's recommendation that a complete re-design of all the sand bunkers at Braemar Golf Course shall be undertaken to develop a cohesive strategic plan, minimize penalty, and improve the aesthetic appearance of the features. A bunker re-design will minimize daily maintenance practices and improve the quality of the sand. All sand bunkers shall be rebuilt per the Renovation Business Plan in the following manner:

- Generally reduced in size to be more in proportion to the other features of the golf course.
- A general serpentine shape utilizing strong arcs with clean edges to reflect the design style of the '60s era in which Braemar was built.
- Build the bunkers into natural topography and utilize mounds to determine actual shapes and some vertical dimension instead of laying the bunkers flat on top of the ground.
- Raise the bunker floors enough to ensure positive drainage of the subsurface pipe to a proper outlet.
- Utilize new construction materials, including liner, to minimize washes and rock migration.
- Flash just the minimal amount of sand to be visible from the shot played to each target.

Following is a prioritization of all sand bunker work. This list is to help guide the City of Edina in determining which bunkers to renovate first **only** if an overall renovation project is **not** undertaken. This prioritization list may vary if the City chooses to undertake renovation based on other priority listings included here (tees, greens, specific projects). Some bunker renovation priorities were determined with the consideration of completing all bunkers on one entire hole to minimize construction movement across the golf course.

NOTE: Only existing bunkers slated for removal or conversion to grass hollows are included in the below prioritization. Existing bunkers which are directly incorporated into new bunkers or green renovation projects are not listed. These suggestions include removing existing bunkers on current holes 4, 5, 14, and 15 and building proposed bunkers on re-numbered holes 4, 5, 14, and 15. Prioritizing sand bunkers will fall into the following categories:

IM: Existing bunkers which are the most high maintenance planned for removal or renovation and new bunkers which provide the most impact regarding both playability and aesthetics.

MT: These bunkers, either new or existing, are not as high maintenance or provide as much impact as the above bunkers, but will still lessen daily maintenance activities and create strategic challenge.

LT: Long-term bunkers are all remaining bunkers that shall simply be renovated in place and are the least difficult to maintain. Some long-term bunkers are also ones which have no effect on any other proposed renovation projects.

SAND BUNKERS FOR IMMEDIATE (IM) CONSIDERATION (to remove ("E" bunkers) and build/renovate ("P" bunkers))

P1 - P2 (#1), E3 (#3), P10 - P14 (#5), E6 - E8 (#6), E10 (#7), P17 (#8), E13 - E14 (#8), E15 (#9), P22 - P24 (#10), E26 (#14), P34 - P36 (#14), E32 (#15), P37 - P39 (#15), P40 (#16), P42 - P44 (#17), P45 - P46 (#18), P49 - P50 (#21), E47 (#23), P54 (#23), P55 - P56 (#24), E52 - E54 (#24), E58 - E59 (#26)

SAND BUNKERS FOR MID-TERM (MT) CONSIDERATION

P3 (#2), P4 (#3), P5 - P9 (#4), P15 - P16 (#7), P18 - P19 (#8), P20 - P21 (#9), P25 - P28 (#11), P29 - P32 (#12), P33, (#13), P41 (#16), E40 (#19), P47 - P48 (#20), P51 - P53 (#22), E46 (#22), P57 (#25), P58 - P59 (#26), P60 -P65 (#27)

SAND BUNKERS FOR LONG-TERM (LT) CONSIDERATION

Due to the poor condition of the bunkers at Braemar Golf Course, RMGA recommends all bunker work be done no later than in the next few years if not right away.

PUTTING GREEN RENOVATION SOLUTIONS & PRIORITIES

It is Richard Mandell Golf Architecture's recommendation that all the greens at Braemar Golf Course should be rebuilt to USGA recommendations for the following reasons:

- To provide a consistent design theme for all 27 greens complexes. Over the years, greens have been built in a piecemeal fashion to varying design standards and styles. In particular, the construction of the Clunie greens precipitated new greens construction for existing holes 8, 17, and 18. These greens are among the most criticized greens at Braemar.
- To provide a consistent construction specification and age for all the putting surfaces. The majority are native soil push-up greens with no internal drainage and a slow percolation rate built at different times, prompting the maintenance staff to manage greens in a variety of complicated ways.

GREENS PROPOSED FOR IMMEDIATE (IM) CONSIDERATION:

1. #23 - As part of the re-design of the Clunie nine holes, this green will be part of an entire hole change breaking the existing 23rd hole into a par four and a par three. The new holes will have the greatest impact on improving the Clunie nine.
2. #24 - As part of the re-design of the Clunie nine holes, this green will be part of an entire hole change breaking the existing 23rd hole into a par four and a par three. The new holes will have the greatest impact on improving the Clunie nine.
3. #21 - Moving the existing green down the hill and to the left will have a tremendous impact on playability and visibility for this hole, playing a great part in improving the Clunie nine.
4. #18 - By creating a more interesting putting surface, the finishing hole for the original eighteen at Braemar will be greatly improved. The existing hole is one of the more criticized ones on the golf course since the addition of the Clunie nine.
5. #17 - The existing 17th green is the most dramatically different green of all twenty-seven greens at Braemar and stands out in a very negative way as a result.

6. #14* - The new fourteenth green will be built into the hillside to the right of the existing fourth hole and will greatly improve the hole by bringing a natural swale into play and following the lay of the land better than the existing fourth hole.
7. #15* - By moving this green up into the hillside, the safety buffer between this hole and the re-numbered fifth hole will be greatly improved. By switching hole numbers, congestion will be reduced as well.
8. #1 - Converting this hole to a par five with a new green location, coupled with converting the second hole to a par four, will greatly improve pace of play. The existing second green can remain in place.
9. PGs - Both new practice greens shall be rebuilt in conjunction with the adjacent tee complexes for both the first and tenth holes, which are immediate tees in order to increase par for both holes from fours to fives.
10. #13 - This green must be moved back and lowered so material can be generated to raise the proposed 4th tees (existing fourteen). Raising these tees are of immediate concern to eliminate blind tee shots.

GREENS PROPOSED FOR MID-TERM (MT) CONSIDERATION

- 11.#5* - Moving this green twenty-five yards to the right will provide more safety buffer from the sixth tees. This will be possible once the new fifteenth hole moves up into the hillside.
12. #25 - The next step to improve the Clunie nine is to make the new 25th hole (existing 24th) more playable. A secondary part of that process is straightening the hole out with the green moved twenty-three yards to the right.
13. #11 - Moving the eleventh green up into the hillside will make a great difference in the interest of this greens complex as well as improve drainage. In conjunction with the fairway bunkers, this hole will be one of the more dramatic improvements at Braemar.
14. #4* - Another hole which will undertake a dramatic strategic improvement is the new fourth hole (re-numbered from the existing fourteenth hole). The green shall be moved back eighteen yards as part of the renovation work.
15. #8 - The eighth green is one of the more criticized greens on the golf course. Moving the green thirteen yards left (in the direction of its original location) and matching it closer to its original design will increase the enjoyment of the hole.
16. #6 - In conjunction with re-working the bunkers to be less penal, the sixth green shall be moved back fifteen yards. The green will also relate more to the surrounding water feature.
17. #16 - There is room to move the green to the left about eight yards, which will provide buffer from the re-installed back tee for the seventeenth hole to the right of the green.
18. #2 - The second green shall be moved back fourteen yards and slightly to the right to provide buffer from the third tees.

19. #10 - Converting the tenth hole to a par five helps to increase the overall par of the original eighteen in conjunction with switching holes 4 & 5 with holes 14 & 15. The green stays in the same place.
20. #7 - Rebuilding the seventh green will make the putting surface more visible from the tees and increase the length of the hole by seven yards.

GREENS PROPOSED FOR LONG-TERM (LT) CONSIDERATION

21. #3 - Moving the third green back twenty-eight yards will bring the green closer to the pond behind.
22. #26 - This green will be lowered slightly and enlarged to improve access, visibility, and playability.
23. #12 - The twelfth green will remain in its current location.
24. #19 - This green will also remain in place but a re-design will tie the large mound to the left of the green into the putting surface and eliminate the sand bunker on the right.
25. #20 - Access and egress for the putting surface will improve for the twenty-second green which will remain in its current location.
26. #22 - Better integration of the surrounding sand bunkers into the putting surface will improve this greens complex, which stays in its current location also.
27. #27 - Improving playability of this hole will be achieved by new tee locations more than a new green. Moving the green back fifty yards will provide needed length, but it can be done at a later date.
28. #9 - Conversion of the ninth hole to a more manageable par four from a par five will be achieved by new tee locations. Moving the green forward eighteen yards will help, but can be done at a later date as well.

* - Proposed re-numbered holes.



RENOVATION BUSINESS PLAN PHASING OPTIONS

There are many ways to implement a Renovation Business Plan, yet all options fall into one of two general applications: The Horizontal Application and the Vertical Application. All projects adopt one of these options in renovation, yet many times a blend of each application is utilized.

HORIZONTAL APPLICATION (SINGLE TASKS APPLIED TO ENTIRE COURSE):

The horizontal approach to phasing tasks implements each project element (greens, tees, bunkers, drainage, etc.) throughout all eighteen holes. The advantage of the horizontal approach is that construction costs can be spread out and all the golf holes can remain open for play (with some disturbance) depending upon the chosen task. Specific problems can be solved without affecting other areas. This method is only effective when a specific element is at issue (i.e. all the bunkers need renovation).

The disadvantage of the horizontal approach is that there is more disruption spread throughout the golf course at one time and when the next phase of renovation occurs (i.e. tee renovation) many of the same areas are disturbed again, spreading out the amount of time it takes to complete renovation. Other disadvantages with this method are that previously completed areas run the risk of being disturbed by new construction activities and that a golf hole never looks finished (i.e. bunkers are new, yet the green or tees are still outdated).

Undergoing a horizontal approach never creates the best final product because of the difficulty of tying in new construction with existing conditions. Also, limiting the disturbance always impedes the ability to produce a final product which absolutely solves all of the issues. This mostly applies to safety and maintenance in the sense that a larger area to work with will allow for proper grade changes and relocation of all affected areas as well as address a drainage issue from its genesis to its final outlet. Only in specific cases where one element (just bunkers, for example) is at issue and there is absolutely no plan for further renovation should a horizontal approach be considered.

VERTICAL APPLICATION (MULTIPLE TASKS TO SPECIFIC AREAS OF COURSE):

The vertical approach to phasing a renovation project is to implement all tasks at once in a specific area of the golf course. This approach will effectively close down the area for a period of time in which no golf would be available.

The advantage of this approach is that an area is completely shut down and the limits of disturbance are not spread throughout a golf course in a random way. Golfers are not subject to continually encounter construction throughout their rounds. The chosen limits of disturbance are affected only once and not subject to construction activities on a recurring basis. The project is completely finished and appears as a cohesive product.

The vertical approach allows the contractor to tie the disturbed areas into their surrounds more effectively and provides the freedom to properly grade all features, guaranteeing the success of the project in regards to safety, drainage, and overall appearance. This approach is more cost-effective in the long run. Mobilization costs, grow-in costs, and repair work are kept at an absolute minimum. By completing work in one defined area, there is no chance of damage from future construction activities. The disadvantage to the vertical approach is that a defined area is shut down for a period of time without any access for golf.

RECOMMENDED RENOVATION OPTION

Based upon the findings included within this Renovation Business Plan Report, Richard Mandell Golf Architecture recommends a horizontal approach to a complete renovation of Braemar Golf Course. The following recommendation reflects the primary renovation goals outlined by golfers and City staff which includes new tee complexes to improve TSDE, a full sand bunker renovation, a full greens renovation, a new irrigation system (including new pumps), new cart path based upon the recommended changes and other needs, drainage work, and all associated tree clearing.

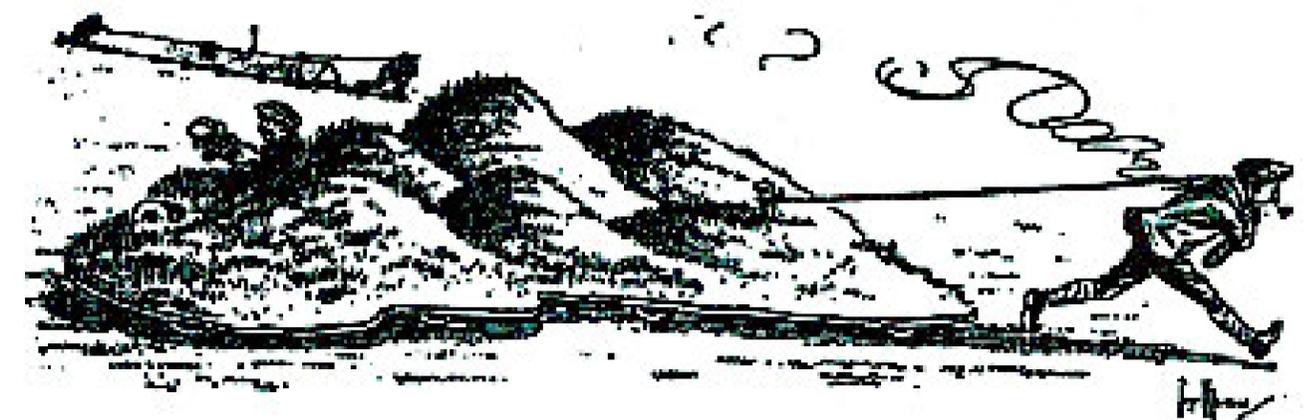
In addition, RMGA recommends implementing an Ecological Management Plan based on the Renovation Business Plan and the work completed by Barr Engineering to include removal of all invasive species surrounding water features and wetlands and planting more appropriate native species as well as Oak Savanna additions and Oak Woodland Restoration.

The cost estimates following this recommendation include the very minimum amount of work as well as additional projects that can easily be added in a logical sequence based upon finite costs and clear project delineations with a full renovation project as the most complete alternative. In addition, specific project addenda are included to be considered.

That said, based upon the thoroughness of the recommended project above, Richard Mandell Golf Architecture recommends the City of Edina consider a complete re-design of the facility based upon the alternative designs outlined in the following sections. The recommendation is based on the fact that since the entire site is being disturbed for the recommended RBP, there is very little cost added when re-routing certain holes is part of the scope of work. There is great value in pursuing one of the alternative designs as only then can the Clunie nine truly become equal to the Castle and Hays nines.

Based upon pro-formas to be completed by City Staff (not part of RMGA's scope of work), Richard Mandell Golf Architecture recommends that the City pursues Option 1 (the best new 27 holes possible) for consideration. Based solely on the fact that golf rounds dropped at Braemar long before the recession of 2008 affected the business, it is clear that there is a market for golf at Braemar that could utilize a better 27 hole layout than the current design.

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G O L F A R C H I T E C T U R E



**FOLLOWING IS A PRELIMINARY COST ESTIMATE FOR THE
COMPLETE RENOVATION BUSINESS PLAN OPTION:**

Item	Unit Cost	Quantity	Unit	Total
PROJECT PREPARATION				
Mobilization (LS)	\$ 190,000.00	1.00	LS	\$ 190,000.00
Layout/Staking	\$ 2,731.52	27.00	EA	\$ 73,751.04
CLEARING				
Spray and Rotovate Existing Turf (AC)	\$ 2,552.00	101.58	AC	\$ 259,232.16
Tee & Fairway Fumigation	\$ 3,168.00	47.71	AC	\$ 151,145.28
Bulk Clearing	\$ 15,000.00	3.92	AC	\$ 58,800.00
Selective Clearing (By Tree)	\$ 440.00	510.00	EA	\$ 224,400.00
EROSION CONTROL				
Silt Fence	\$ 3.30	35,000.00	LF	\$ 115,500.00
Fairway Erosion Control Blankets	\$ 9,680.00	5.00	AC	\$ 48,400.00
Tree Protection	\$ 2.77	1,890.00	LF	\$ 5,239.08
Inlet Protection	\$ 97.02	94.00	EA	\$ 9,119.88
Construction Entrance	\$ 5,280.00	2.00	EA	\$ 10,560.00
TOPSOIL MANAGEMENT				
6" Onsite - Stripping and Stockpiling (CY)	\$ 2.20	79,000.00	CY	\$ 173,800.00
6" Onsite - Replacement and Spreading	\$ 2.99	79,000.00	CY	\$ 236,368.00
BULK EARTHWORK				
Bulk Earthwork (CY)	\$ 2.82	52,500.00	CY	\$ 147,840.00
SHAPING				
All Feature Shaping	\$ 310,000.00	1.00	EA	\$ 310,000.00
DRAINAGE				
2" Perforated HDPE Pipe	\$ 4.40	49,500.00	LF	\$ 217,800.00
6" Solid HDPE Pipe (N-12 ADS)	\$ 9.90	3,653.00	LF	\$ 36,164.70
8" Solid HDPE Pipe (N-12 ADS)	\$ 11.44	3,814.00	LF	\$ 43,632.16
10" Solid HDPE Pipe (N-12 ADS)	\$ 13.20	1,730.00	LF	\$ 22,836.00
12" Solid HDPE Pipe (N-12 ADS)	\$ 14.52	475.00	LF	\$ 6,897.00
18" Solid HDPE Pipe (N-12 ADS)	\$ 20.68	500.00	LF	\$ 10,340.00
Drainage Inlets	\$ 242.00	92.00	EA	\$ 22,264.00
Catch Basins	\$ 748.00	2.00	EA	\$ 1,496.00
GREEN CONSTRUCTION				
Greens Construction (SF)	\$ 3.96	212,285.00	SF	\$ 840,648.60
TEE CONSTRUCTION				
Tee Construction	\$ 0.48	228,774.00	SF	\$ 110,726.62
SAND BUNKER CONSTRUCTION				
Bunker Removal (SF)	\$ 1.00	94,568.00	SF	\$ 94,568.00
Bunker Construction (SF)	\$ 5.50	75,562.00	SF	\$ 415,591.00
CART PATH REMOVAL & CONSTRUCTION				
Removal of 8' Cart Path (Onsite LF)	\$ 2.29	22,543.00	LF	\$ 51,578.38
Removal of 14' Cart Path (Onsite LF)	\$ 4.01	922.00	LF	\$ 3,699.80
8' Asphalt Cart Path Const. (LF)	\$ 21.60	38,300.00	LF	\$ 827,433.20
12' Asphalt Cart Path Const. (LF)	\$ 30.49	1,304.00	LF	\$ 39,761.57
Asphalt Cart Path Turn-Arounds (SF)	\$ 3.43	1,845.00	SF	\$ 6,332.04
SEEDBED PREPARATION				
Seedbed Prep (AC)	\$ 2,873.20	89.72	AC	\$ 257,783.50
GRASSING				
Seed Green Surrounds	\$ 0.13	46,830.00	SF	\$ 6,181.56
Sod rough areas	\$ 0.39	1,000,000	SF	\$ 387,200.00
Seeding Greens (007 Bent)	\$ 0.08	212,285.00	SF	\$ 16,812.97
Seeding Tees (Bent)	\$ 0.12	228,774.00	SF	\$ 27,681.65



Seeding Fairways (Bent)	\$ 2,112.00	42.46	AC	\$ 89,675.52
Seeding Rough Blend	\$ 1,738.00	16.30	AC	\$ 28,329.40
Oak Savanna Restoration Areas	\$ 2,398.00	16.20	AC	\$ 38,847.60
TREE PLANTING/LANDSCAPING				
2.5" Dia. (Large & Medium Deciduous)	\$ 378.40	130	EA	\$ 49,040.64
Wetland Plantings	\$ 75,000.00	1.00	EA	\$ 75,000.00
DRIVING RANGE NETTING				
Driving Range Net Construction (LF)	\$ 70.40	975.00	LF	\$ 68,640.00
IRRIGATION				
Irrigation/Pump Station/Pumphouse	\$ 2,000,000.00	1.00	LS	\$ 2,000,000.00
Sub-Total				\$ 7,811,117.36
SOFT COSTS				
10% of Costs			LS	\$ 781,111.74
Total				\$ 8,592,229.10

ALTERNATIVE RENOVATION OPTIONS

ALTERNATIVE 1: GREEN COMPLEXES, SAND BUNKERS, SELECT CLEARING ONLY:

Item	Unit Cost	Quantity	Unit	Total
PROJECT PREPARATION				
Mobilization (LS)	\$ 64,838.40	1.00	LS	\$ 64,838.40
Layout/Staking	\$ 819.46	27.00	EA	\$ 22,125.31
CLEARING				
Spray and Rotovate Existing Turf (AC)	\$ 2,552.00	13.21	AC	\$ 33,711.92
Selective Clearing (By Tree)	\$ 440.00	510.00	EA	\$ 224,400.00
EROSION CONTROL				
Silt Fence	\$ 3.30	35,000.00	LF	\$ 115,500.00
Construction Entrance	\$ 5,280.00	2.00	EA	\$ 10,560.00
TOPSOIL MANAGEMENT				
6" Onsite - Stripping and Stockpiling (CY)	\$ 2.20	5,000.00	CY	\$ 11,000.00
6" Onsite - Replacement and Spreading	\$ 2.99	5,000.00	CY	\$ 14,960.00
SHAPING				
All Feature Shaping	\$ 164,653.87	1.00	EA	\$ 164,653.87
GREEN CONSTRUCTION				
Greens Construction (SF)	\$ 3.96	212,285.00	SF	\$ 840,648.60
SAND BUNKER CONSTRUCTION				
Bunker Removal (SF)	\$ 1.00	94,568.00	SF	\$ 94,568.00
Bunker Construction (SF)	\$ 5.50	75,562.00	SF	\$ 415,591.00
SEEDBED PREPARATION				
Seedbed Prep (AC)	\$ 2,873.20	8.34	AC	\$ 23,962.49
GRASSING				
Seed Green Surrounds	\$ 0.13	46,830.00	SF	\$ 6,181.56
Sod rough areas	\$ 0.39	363,409	SF	\$ 140,711.96
Seeding Greens (007 Bent)	\$ 0.08	212,285.00	SF	\$ 16,812.97
Sub-Total				\$2,200,226.08
SOFT COSTS				
10% of Costs			LS	\$ 220,022.61
Total				\$2,420,248.69

ALTERNATIVE 2: GREENS, SAND BUNKERS, SELECT CLEARING, TEE COMPLEXES, AND A NEW IRRIGATION SYSTEM:

Item	Unit Cost	Quantity	Unit	Total
PROJECT PREPARATION				
Mobilization (LS)	\$ 108,064.00	1.00	LS	\$ 108,064.00
Layout/Staking	\$ 1,365.76	27.00	EA	\$ 36,875.52
CLEARING				
Spray and Rotovate Existing Turf (AC)	\$ 2,552.00	33.82	AC	\$ 86,308.64
Tee & Fairway Fumigation	\$ 3,168.00	5.25	AC	\$ 16,632.00
Selective Clearing (By Tree)	\$ 440.00	510.00	EA	\$ 224,400.00
EROSION CONTROL				
Silt Fence	\$ 3.30	35,000.00	LF	\$ 115,500.00
Fairway Erosion Control Blankets	\$ 9,680.00	2.00	AC	\$ 19,360.00
Construction Entrance	\$ 5,280.00	2.00	EA	\$ 10,560.00
TOPSOIL MANAGEMENT				
6" Onsite - Stripping and Stockpiling (CY)	\$ 2.20	10,000.00	CY	\$ 22,000.00
6" Onsite - Replacement and Spreading	\$ 2.99	10,000.00	CY	\$ 29,920.00
BULK EARTHWORK				
Bulk Earthwork (CY)	\$ 2.82	20,000.00	CY	\$ 56,320.00
SHAPING				
All Feature Shaping	\$ 310,000.00	1.00	EA	\$ 310,000.00
GREEN CONSTRUCTION				
Greens Construction (SF)	\$ 3.96	212,285.00	SF	\$ 840,648.60
TEE CONSTRUCTION				
Tee Construction	\$ 0.48	228,774.00	SF	\$ 110,726.62
SAND BUNKER CONSTRUCTION				
Bunker Removal (SF)	\$ 1.00	94,568.00	SF	\$ 94,568.00
Bunker Construction (SF)	\$ 5.50	75,562.00	SF	\$ 415,591.00
SEEDBED PREPARATION				
Seedbed Prep (AC)	\$ 2,873.20	21.96	AC	\$ 63,095.47
GRASSING				
Seed Green Surrounds	\$ 0.13	46,830.00	SF	\$ 6,181.56
Sod rough areas	\$ 0.39	750,000	SF	\$ 290,400.00
Seeding Greens (007 Bent)	\$ 0.08	212,285.00	SF	\$ 16,812.97
Seeding Tees (Bent)	\$ 0.12	228,774.00	SF	\$ 27,681.65
Seeding Rough Blend	\$ 1,738.00	4.74	AC	\$ 8,238.12
IRRIGATION				
Irrigation/Pump Station/Pumphouse	\$ 2,000,000.00	1.00	LS	\$ 2,000,000.00
Sub-Total				\$ 4,909,884.15
SOFT COSTS				
10% of Costs			LS	\$ 490,988.42
Total				\$5,400,872.57



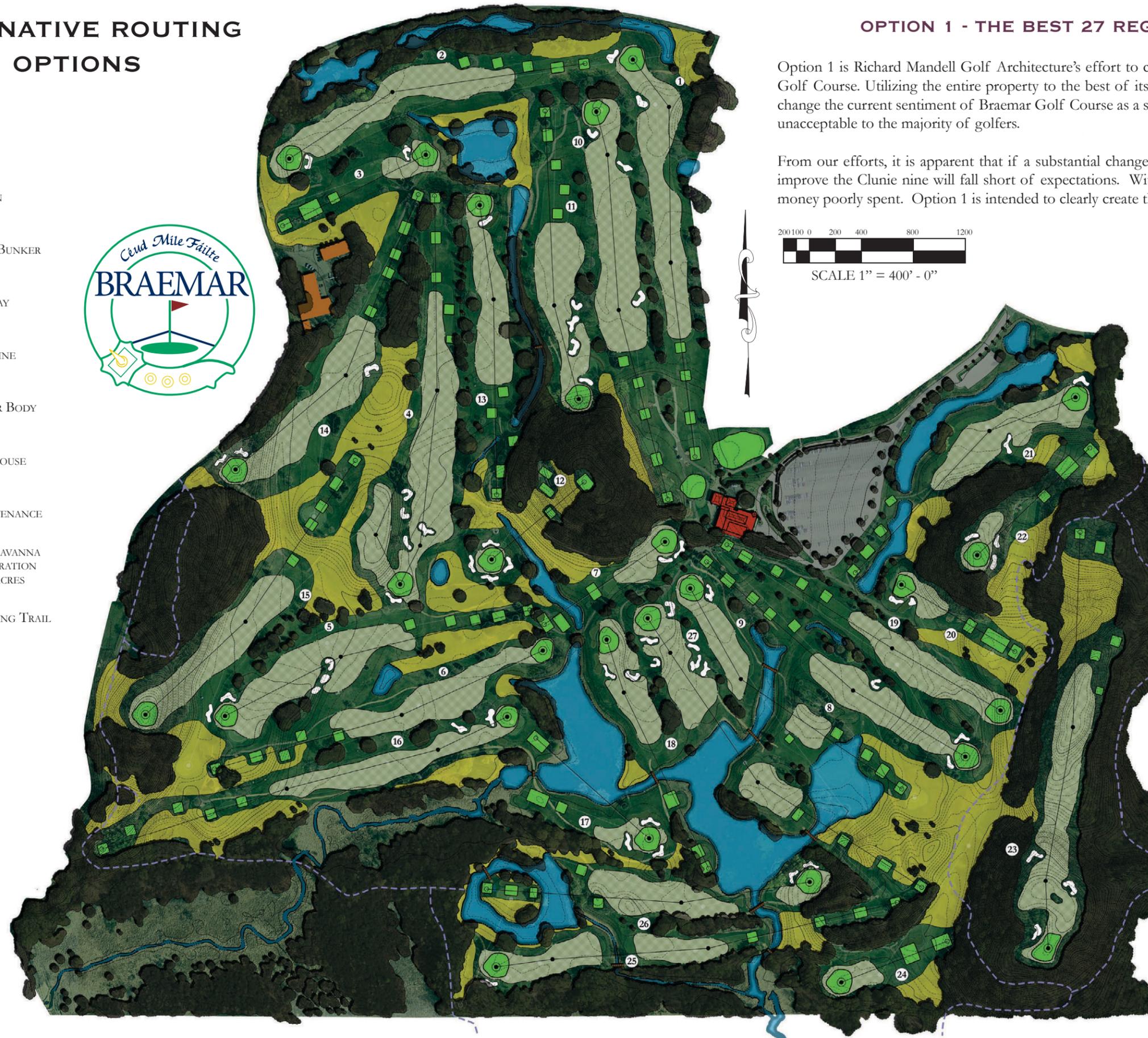
ALTERNATIVE 3: GREENS, SAND BUNKERS, SELECT CLEARING, TEE COMPLEXES, NEW IRRIGATION SYSTEM, WALL TO WALL CART PATHS, AND ALL PROPOSED OAK SAVANNA AND OAK WOODLAND RESTORATION AREAS:

Item	Unit Cost	Quantity	Unit	Total
PROJECT PREPARATION				
Mobilization (LS)	\$ 190,000.00	1.00	LS	\$ 190,000.00
Layout/Staking	\$ 2,731.52	27.00	EA	\$ 73,751.04
CLEARING				
Spray and Rotovate Existing Turf (AC)	\$ 2,552.00	101.58	AC	\$ 259,232.16
Tee & Fairway Fumigation	\$ 3,168.00	47.71	AC	\$ 151,145.28
Selective Clearing (By Tree)	\$ 440.00	510.00	EA	\$ 224,400.00
EROSION CONTROL				
Silt Fence	\$ 3.30	35,000.00	LF	\$ 115,500.00
Fairway Erosion Control Blankets	\$ 9,680.00	5.00	AC	\$ 48,400.00
Tree Protection	\$ 2.77	1,890.00	LF	\$ 5,239.08
Inlet Protection	\$ 97.02	94.00	EA	\$ 9,119.88
Construction Entrance	\$ 5,280.00	2.00	EA	\$ 10,560.00
TOPSOIL MANAGEMENT				
6" Onsite - Stripping and Stockpiling (CY)	\$ 2.20	79,000.00	CY	\$ 173,800.00
6" Onsite - Replacement and Spreading	\$ 2.99	79,000.00	CY	\$ 236,368.00
BULK EARTHWORK				
Bulk Earthwork (CY)	\$ 2.82	20,000.00	CY	\$ 56,320.00
SHAPING				
All Feature Shaping	\$ 310,000.00	1.00	EA	\$ 310,000.00
GREEN CONSTRUCTION				
Greens Construction (SF)	\$ 3.96	212,285.00	SF	\$ 840,648.60
TEE CONSTRUCTION				
Tee Construction	\$ 0.48	228,774.00	SF	\$ 110,726.62
SAND BUNKER CONSTRUCTION				
Bunker Removal (SF)	\$ 1.00	94,568.00	SF	\$ 94,568.00
Bunker Construction (SF)	\$ 5.50	75,562.00	SF	\$ 415,591.00
CART PATH REMOVAL & CONSTRUCTION				
Removal of 8' Cart Path (Onsite LF)	\$ 2.29	22,543.00	LF	\$ 51,578.38
Removal of 14' Cart Path (Onsite LF)	\$ 4.01	922.00	LF	\$ 3,699.80
8' Asphalt Cart Path Const. (LF)	\$ 21.60	38,300.00	LF	\$ 827,433.20
12' Asphalt Cart Path Const. (LF)	\$ 30.49	1,304.00	LF	\$ 39,761.57
Asphalt Cart Path Turn-Arounds (SF)	\$ 3.43	1,845.00	SF	\$ 6,332.04
SEEDBED PREPARATION				
Seedbed Prep (AC)	\$ 2,873.20	89.72	AC	\$ 257,783.50
GRASSING				
Seed Green Surrounds	\$ 0.13	46,830.00	SF	\$ 6,181.56
Sod rough areas	\$ 0.39	1,000,000	SF	\$ 387,200.00
Seeding Greens (007 Bent)	\$ 0.08	212,285.00	SF	\$ 16,812.97
Seeding Tees (Bent)	\$ 0.12	228,774.00	SF	\$ 27,681.65
Seeding Fairways (Bent)	\$ 2,112.00	42.46	AC	\$ 89,675.52
Seeding Rough Blend	\$ 1,738.00	16.30	AC	\$ 28,329.40
Oak Savanna Restoration Areas	\$ 2,398.00	16.20	AC	\$ 38,847.60
TREE PLANTING/LANDSCAPING				
2.5" Dia. (Large & Medium Deciduous)	\$ 378.40	130	EA	\$ 49,040.64
IRRIGATION				
Irrigation/Pump Station/Pumphouse	\$ 2,000,000.00	1.00	LS	\$ 2,000,000.00
Sub-Total				\$ 7,155,727.50
SOFT COSTS				
10% of Costs			LS	\$ 715,572.75
Total				\$ 7,871,300.25

ALTERNATIVE ROUTING OPTIONS

LEGEND

-  TEE
-  GREEN
-  SAND BUNKER
-  FAIRWAY
-  TREELINE
-  WATER BODY
-  CLUBHOUSE
-  MAINTENANCE
-  OAK SAVANNA RESTORATION
30.3 ACRES
-  WALKING TRAIL



OPTION 1 - THE BEST 27 REGULATION HOLES POSSIBLE

Option 1 is Richard Mandell Golf Architecture's effort to create the three best possible nine hole loops for Braemar Golf Course. Utilizing the entire property to the best of its ability, the sole objective is to create three equal nines to change the current sentiment of Braemar Golf Course as a solid and enjoyable original eighteen holes with a third nine unacceptable to the majority of golfers.

From our efforts, it is apparent that if a substantial change to the third nine is not made, then any smaller effort to improve the Clunie nine will fall short of expectations. With that thought, the money spent on anything less will be money poorly spent. Option 1 is intended to clearly create three equal nines.

HOLE	PAR	A	B	C	D	E
1	5	526	480	422	384	351
2	4	407	374	336	299	259
3	3	204	166	161	151	128
4	5	521	475	415	376	338
5	4	416	376	342	310	261
6	4	448	391	358	334	283
7	3	187	163	156	147	113
8	4	417	376	341	312	262
9	4	383	356	312	277	242
CASTLE	36	3509	3157	2843	2590	2237
Castle to Hays	72	6840	6171	5533	5024	4347
10	5	507	450	393	352	315
11	4	374	345	305	273	241
12	3	155	146	134	111	94
13	4	373	342	300	269	238
14	4	435	388	354	331	274
15	4	425	384	349	324	272
16	5	548	502	441	400	357
17	3	193	162	156	145	118
18	4	321	295	258	229	201
HAYS	36	3331	3014	2690	2434	2110
Hays to Clunie	72	6593	5983	5335	4809	4184
19	4	389	361	317	281	246
20	3	169	154	147	131	104
21	4	368	338	298	266	235
22	3	199	166	160	150	122
23	5	549	505	445	403	361
24	3	145	141	125	103	88
25	5	523	477	418	379	341
26	4	417	379	345	315	265
27	5	503	448	390	347	312
CLUNIE	36	3262	2969	2645	2375	2074
Clunie to Castle	72	6771	6126	5488	4965	4311

CASTLE NINE

Hole #1 - par 5, 526 yards - Hole #1 is extended to a par five to allow for an easier and speedier start to the round.

Hole #2 - par 4, 407 yards - Hole #2 is shortened to a par four to make it easier for golfers to carry the narrow neck of fairway where the water feature is piped with their golf shots as well as also creating a more manageable start to the round.

Hole #3 - par 3, 204 yards - Hole #3's tees move to the right of the existing tees to provide more buffer from the second green. The hole will play to the existing third green.

Hole #4 - par 5, 521 yards - The fourth hole is the existing fourteenth hole but will be moved to the front nine to improve congestion with adjacent golf holes and help create more balance between the Castle and Hays nines in terms of overall yardage. This hole also contributes to a more manageable start to the round. This hole has an alternative upper fairway from the second landing area to the green for variety.

Hole #5 - par 4, 416 yards - This hole is the existing fifteenth hole and like the previous hole, congestion will be reduced by moving this hole to the Castle nine. The congestion improvement will be experienced at the green going to the existing sixth hole. It also helps to balance out yardages between the Castle and Hays nines.

Hole #6 - par 4, 448 yards - This hole location remains unchanged from the existing sixth hole.

Hole #7 - par 3, 187 yards - This hole location remains unchanged from the existing seventh hole.

Hole #8 - par 4, 417 yards - The eighth hole will play to the original eighth green location that was utilized prior to the addition of the Clunie nine. This reflects many golfer's wishes for a return to that green site as well as allowing for more safety buffer from the ninth tees.

Hole #9 - par 4, 383 yards - This hole becomes an heroic par four asking the golfer to cut the corner of the water to gain an advantage. By converting the hole to a par four and moving the tees closer to the water features, many golfers will be able to manage their shots with less forced carry on both the tee and the approach.

HAYS NINE

Hole #10 - par 5, 507 yards - The tenth hole will become a par five in order to increase the par of the Hays nine to a 36 and allow for improving pace of play for that nine.

Hole #11 - par 4, 374 yards - This hole remains in place other than extending the green slightly up into the hillside to improve visibility and drainage. The tees will be moved to the right to provide more safety buffer from the tenth green.

Hole #12 - par 3, 155 yards - This hole location remains unchanged from the existing twelfth hole except for adding additional tees farther up the hill.

Hole #13 - par 4, 373 yards - This hole location remains unchanged from the existing thirteenth hole.

Hole #14 - par 4, 435 yards - The fourteenth hole is the existing fourth hole but will be moved to the Hays nine to help balance the overall yardage of both the Castle and Hays nines and improve overall congestion at the fifth/sixth and fifteenth/sixteenth holes. The green is moved to the right so that the hole plays with the lay of the land instead of against it (where the existing green sits) and also allows for the existing swale to become a strategic hazard on the golfer's approach.

Hole #15 - par 4, 425 yards - The fifteenth hole is generally in the existing fifth hole's corridor. The tees will play farther back than the existing fifth tees and more along the line of the existing fourth green (to the right). The hole will dogleg to the right with the green placed in the hillside farther away from the existing fifteenth green. This will double the safety buffer between each green location from the existing locations. Also, it improves circulation so golfers can walk directly from the new green location to the new sixteenth tee without crossing behind another hole.

Hole #16 - par 5, 548 yards - The tees for sixteen will be extended farther back and up the hill. The fairway will shift farther right than its current location (and will be improved for drainage), and the green will move slightly back and to the left. Moving the fairway to the right will increase safety buffer from the sixth fairway. In addition to increasing overall par on the Hays nine, making the hole a par five allows for staggered landing areas with the adjacent sixth hole, thereby minimizing conflicting stray shots. Moving the green to the left also allows for the restoration of the original seventeenth tee.

Hole #17 - par 3, 193 yards - The seventeenth hole moves slightly to the right of its existing location.

Hole #18 - par 4, 321 yards - This hole location remains unchanged from the existing eighteenth hole but can be transformed into a much better strategic challenge through smart design.

CLUNIE NINE

Hole #19 - par 4, 389 yards - The nineteenth hole will have a tee extended backward and uphill. The hole will play straightaway to a green located where the existing #20 tees are located. This allows for more safety buffer from the proposed eighth green location.

Hole #20 - par 3, 169 yards - The new tees will play from the left of the existing 22nd green yet the green location remains unchanged from the existing #20 green location. This allows us to also extend the playing distance of the hole since the existing 22nd hole will be moved as well.

Hole #21 - par 4, 368 yards - The 21st hole will play to a new green location downhill and to the left of the existing green, eliminating the severe dogleg of the existing hole as well as a blind green.

Hole #22 - par 3, 199 yards - A new par three will play from the existing 21st green to a location across an existing ravine to a natural plateau green location.

Hole #23 - par 5, 549 yards - The new 23rd hole will be a straight par five along the top of the ridge to the left of the existing 23rd hole. This will provide more safety buffer from the eighth green and ninth tees as well as eliminate the blindness of the existing hole. This hole will incorporate natural plateaus for the first landing area, second landing area, and green location, allowing for the natural drainage patterns of the land to be preserved and will require minimal earthwork to create sufficient playing corridors and a great natural hole.

Hole #24 - par 3, 145 yards - The new 24th hole will be a downhill par three from the corner of the second landing area of the existing 23rd hole to the existing 23rd green location. The hole does not encroach on any wetland buffers.

Hole #25 - par 5, 523 yards - The tees for the proposed par five will play from the front tees of the existing hole to a landing area short of the second creek crossing. The green will be slightly to the right of the existing 24th green. Converting this hole to a par four and moving the tees up makes the carries over both water features much more manageable for the majority of golfers.

Hole #26 - par 4, 417 yards - This hole will play from the old island green location to the existing 26th green location. By moving the tees to the island, the golf hole can be straightened out, be less blind off the tees, and also bring the landing area back away from the creek crossing, allowing for a more ample landing area for the golfers.

Hole #27 - par 5, 503 yards - The 27th hole will play from the existing ninth tees. These tee locations will help to minimize the forced carries for the majority of golfers by bringing the landing areas farther back away from the water crossings. The green will remain in its existing location.

Castle Nine: par 36 - 3,510 yards
Hays Nine: par 36 - 3,331 yards
Clunie Nine: par 36 - 3,261 yards

Castle to Hays: par 72 - 6,841 yards
Hays to Clunie: par 72 - 6,592 yards
Clunie to Castle: par 72 - 6,771 yards

Option 1 Oak Savanna Restoration Areas:

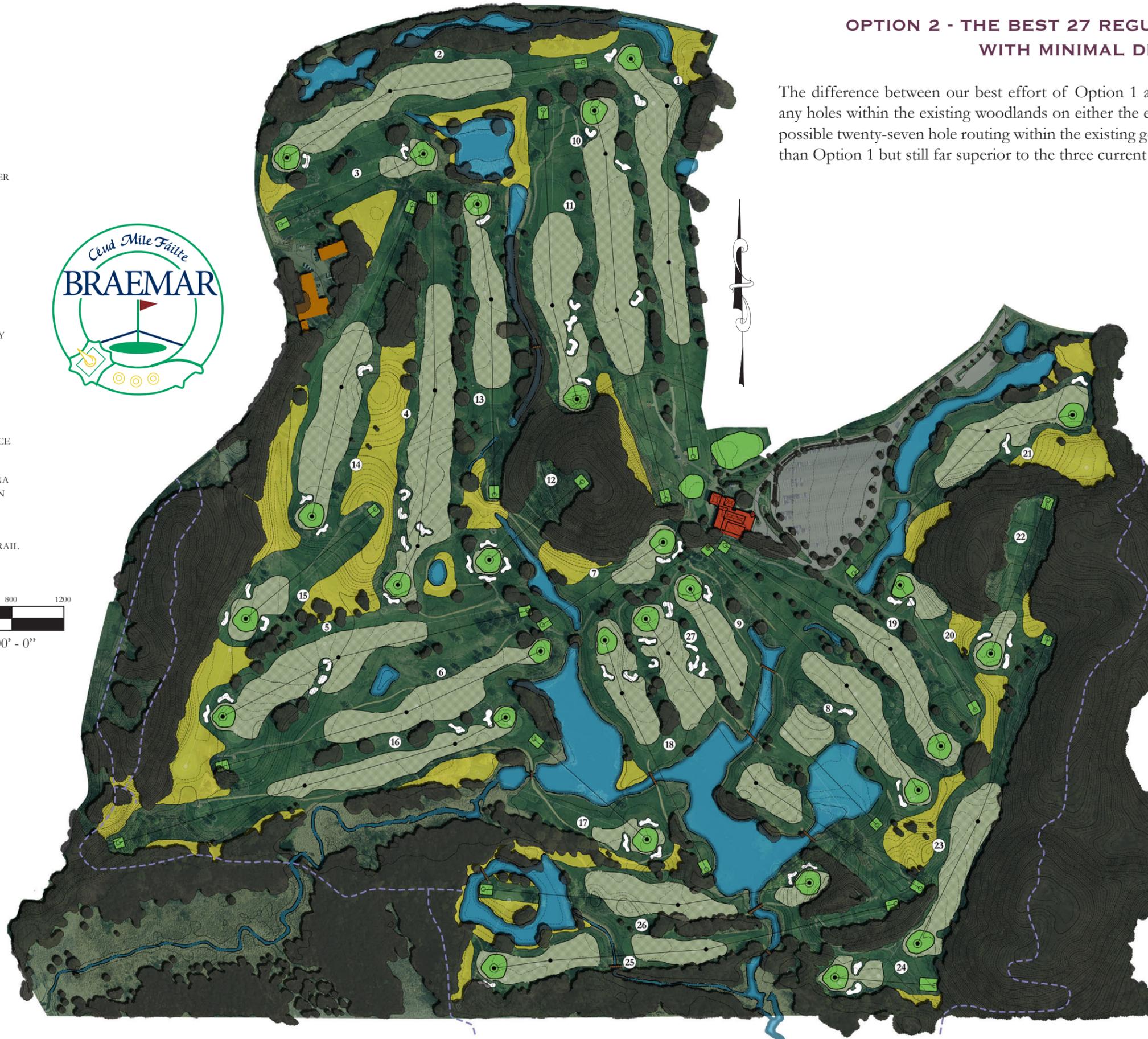
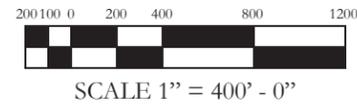
Proposed Tree Removal: 15.18 acres
Oak Savanna Restoration Areas: 30.3 acres (15.15 acres of actual Oak canopy)

PRELIMINARY ESTIMATED COST: \$9,331,956.51

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GOLF ARCHITECTURE

LEGEND

-  TEE
-  GREEN
-  SAND BUNKER
-  FAIRWAY
-  TREELINE
-  WATER BODY
-  CLUBHOUSE
-  MAINTENANCE
-  OAK SAVANNA RESTORATION
17.66 ACRES
-  WALKING TRAIL



OPTION 2 - THE BEST 27 REGULATION HOLES POSSIBLE WITH MINIMAL DISTURBANCE

The difference between our best effort of Option 1 and Option 2 is that number two does not have any holes within the existing woodlands on either the east nor west sides. Instead, Option 2 is the best possible twenty-seven hole routing within the existing golf course land. As a result, this option is shorter than Option 1 but still far superior to the three current nines.

HOLE	PAR	YARDS
1	5	526
2	4	407
3	3	204
4	5	521
5	4	416
6	4	438
7	3	187
8	4	412
9	4	374
CASTLE	36	3486
Castle to Hays	71	6571

HOLE	PAR	YARDS
10	5	507
11	4	374
12	3	155
13	4	373
14	4	419
15	3	217
16	5	523
17	3	196
18	4	321
HAYS	35	3086
Hays to Clunie	70	6230

HOLE	PAR	YARDS
19	4	390
20	3	186
21	4	360
22	3	209
23	4	424
24	3	129
25	5	523
26	4	421
27	5	503
CLUNIE	35	3144
Clunie to Castle	71	6630

CASTLE NINE

Hole #1 - par 5, 526 yards - Hole #1 is extended to a par five to allow for an easier and speedier start to the round.

Hole #2 - par 4, 407 yards - Hole #2 is shortened to a par four to make it easier for golfers to carry the narrow neck of fairway where the water feature is piped with their golf shots as well as also creating a more manageable start to the round.

Hole #3 - par 3, 204 yards - Hole #3's tees move to the right of the existing tees to provide more buffer from the second green. The hole will play to the existing third green.

Hole #4 - par 5, 521 yards - The fourth hole is the existing fourteenth hole but will be moved to the front nine to improve congestion with adjacent golf holes and help create more balance between the Castle and Hays nines in terms of overall yardage. This hole also contributes to a more manageable start to the round. This hole does not have an alternative upper fairway from the second landing area to the green for variety.

Hole #5 - par 4, 416 yards - This hole is the existing fifteenth hole and like the previous hole, congestion will be reduced by moving this hole to the Castle nine. The congestion improvement will be experienced at the green going to the existing sixth hole. It also helps to balance out yardages between the Castle and Hays nines.

Hole #6 - par 4, 438 yards - This hole location remains unchanged from the existing sixth hole.

Hole #7 - par 3, 187 yards - This hole location remains unchanged from the existing seventh hole.

Hole #8 - par 4, 412 yards - This hole location remains unchanged from the existing eighth hole.

Hole #9 - par 4, 374 yards - This hole becomes an heroic par four asking the golfer to cut the corner of the water to gain an advantage. By converting the hole to a par four and moving the tees closer to the water features, many golfers will be able to manage their shots with less forced carry on both the tee and the approach.

HAYS NINE

Hole #10 - par 5, 507 yards - The tenth hole will become a par five in order to increase the par of the Hays nine to a 36 and allow for improving pace of play for that nine.

Hole #11 - par 4, 374 yards - This hole remains in place other than extending the green slightly up into the hillside to improve visibility and drainage. The tees will be moved to the right to provide more safety buffer from the tenth green.

Hole #12 - par 3, 155 yards - This hole location remains unchanged from the existing twelfth hole except for adding additional tees farther up the hill.

Hole #13 - par 4, 373 yards - This hole location remains unchanged from the existing thirteenth hole.

Hole #14 - par 4, 419 yards - This hole location remains unchanged from the existing fourth hole.

Hole #15 - par 3, 217 yards - The fifteenth hole is generally in the existing fifth hole's corridor but reduced to a par three to eliminate the dangerous buffer situation the current fifth hole creates with the existing fifteenth hole and remains out of the woodland to the west.

Hole #16 - par 5, 523 yards - The tees for sixteen will be extended farther back and up the hill. The fairway will shift farther right than its current location (and will be improved for drainage), and the green will move slightly back and to the left. Moving the fairway to the right will increase safety buffer from the sixth fairway. In addition to increasing overall par on the Hays nine,

making the hole a par five allows for staggered landing areas with the adjacent sixth hole, thereby minimizing conflicting stray shots. Moving the green to the left also allows for the restoration of the original seventeenth tee.

Hole #17 - par 3, 196 yards - The seventeenth hole moves slightly to the right of its existing location.

Hole #18 - par 4, 321 yards - This hole location remains unchanged from the existing eighteenth hole but can be transformed into a much better strategic challenge through smart design.

CLUNIE NINE

Hole #19 - par 4, 390 yards - This hole location remains unchanged from the existing nineteenth hole.

Hole #20 - par 3, 186 yards - This hole location remains unchanged from the existing twentieth hole.

Hole #21 - par 4, 360 yards - The 21st hole will play to a new green location downhill and to the left of the existing green, eliminating the severe dogleg of the existing hole as well as a blind green.

Hole #22 - par 3, 209 yards - This hole location remains unchanged from the existing twenty-second hole.

Hole #23 - par 4, 424 yards - The new 23rd hole will be a straight par four along the corridor of the existing par five #23. The green will be relocated to the top of the hill where the turning point of the second landing area is currently located.

Hole #24 - par 3, 129 yards - The new 24th hole will be a downhill par three from the corner of the second landing area of the existing 23rd hole to the existing 23rd green location. The hole does not encroach on any wetland buffers.

Hole #25 - par 5, 523 yards - The tees for the proposed par five will play from the front tees of the existing hole to a landing area short of the second creek crossing. The green will be slightly to the right of the existing 24th green. Converting this hole to a par four and moving the tees up makes the carries over both water features much more manageable for the majority of golfers.

Hole #26 - par 4, 421 yards - This hole will play from the old island green location to the existing 26th green location. By moving the tees to the island, the golf hole can be straightened out, be less blind off the tees, and also bring the landing area back away from the creek crossing, allowing for a more ample landing area for the golfers.

Hole #27 - par 5, 503 yards - The 27th hole will play from the existing ninth tees. These tee locations will help to minimize the forced carries for the majority of golfers by bringing the landing areas farther back away from the water crossings. The green will remain in its existing location.

Castle Nine:	par 36 - 3,486 yards
Hays Nine:	par 36 - 3,086 yards
Clunie Nine:	par 35 - 3,144 yards

Castle to Hays:	par 71 - 6,571 yards
Hays to Clunie:	par 70 - 6,230 yards
Clunie to Castle:	par 71 - 6,630 yards

Option 2 Oak Savanna Restoration Areas:

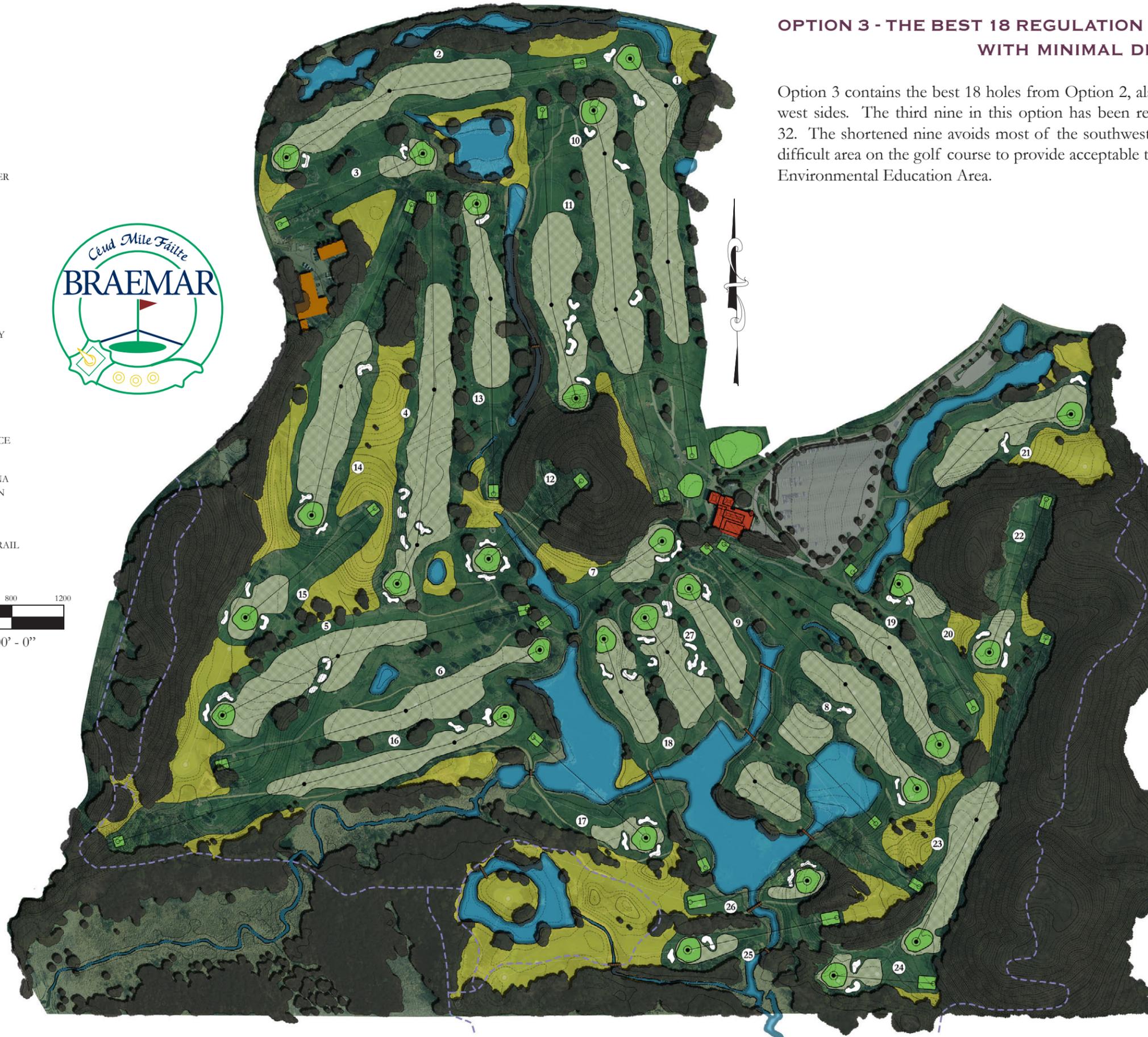
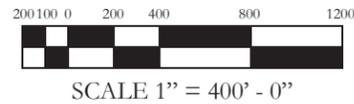
Proposed Tree Removal:	1.44 acres
Oak Savanna Restoration Areas:	17.66 acres (8.83 acres of actual Oak canopy)

PRELIMINARY ESTIMATED COST: \$8,829,195.79



LEGEND

-  TEE
-  GREEN
-  SAND BUNKER
-  FAIRWAY
-  TREELINE
-  WATER BODY
-  CLUBHOUSE
-  MAINTENANCE
-  OAK SAVANNA RESTORATION
23.42 ACRES
-  WALKING TRAIL



OPTION 3 - THE BEST 18 REGULATION HOLES & EXECUTIVE 9 POSSIBLE WITH MINIMAL DISTURBANCE

Option 3 contains the best 18 holes from Option 2, also avoiding the woodlands on both the east and west sides. The third nine in this option has been reduced to an executive nine playing to a par of 32. The shortened nine avoids most of the southwest corner of the golf property which is the most difficult area on the golf course to provide acceptable turfgrass conditions. This can be converted to an Environmental Education Area.

HOLE	PAR	YARDS
1	5	526
2	4	407
3	3	204
4	5	521
5	4	416
6	4	438
7	3	187
8	4	412
9	4	374
CASTLE	36	3486
Castle to Hays	71	6571

HOLE	PAR	YARDS
10	5	507
11	4	374
12	3	155
13	4	373
14	4	419
15	3	217
16	5	523
17	3	196
18	4	321
HAYS	35	3086
Hays to Clunie	67	5635

HOLE	PAR	YARDS
19	4	390
20	3	186
21	4	360
22	3	209
23	4	424
24	3	129
25	3	196
26	3	152
27	5	503
CLUNIE	32	2549
Clunie to Castle	68	6035

CASTLE NINE

Hole #1 - par 5, 526 yards - Hole #1 is extended to a par five to allow for an easier and speedier start to the round. This concept shows the green for the hole tucked into the base of the hillside to the right of the existing hole as an alternative.

Hole #2 - par 4, 407 yards - Hole #2 is shortened to a par four to make it easier for golfers to carry the narrow neck of fairway where the water feature is piped with their golf shots as well as also creating a more manageable start to the round.

Hole #3 - par 3, 204 yards - Hole #3's tees move to the right of the existing tees to provide more buffer from the second green. The hole will play to the existing third green.

Hole #4 - par 5, 521 yards - The fourth hole is the existing fourteenth hole but will be moved to the front nine to improve congestion with adjacent golf holes and help create more balance between the Castle and Hays nines in terms of overall yardage. This hole also contributes to a more manageable start to the round.

Hole #5 - par 4, 416 yards - This hole is the existing fifteenth hole and like the previous hole, congestion will be reduced by moving this hole to the Castle nine. The congestion improvement will be experienced at the green going to the existing sixth hole. It also helps to balance out yardages between the Castle and Hays nines.

Hole #6 - par 4, 438 yards - This hole location remains unchanged from the existing sixth hole but with the tees extended back farther than in Concepts 1 and 2.

Hole #7 - par 3, 187 yards - This hole location remains unchanged from the existing seventh hole.

Hole #8 - par 4, 412 yards - This hole location remains unchanged from the existing eighth hole.

Hole #9 - par 4, 374 yards - This hole becomes an heroic par four asking the golfer to cut the corner of the water to gain an advantage. By converting the hole to a par four and moving the tees closer to the water features, many golfers will be able to manage their shots with less forced carry on both the tee and the approach.

HAYS NINE

Hole #10 - par 5, 507 yards - The tenth hole will become a par five in order to increase the par of the Hays nine to a 36 and allow for improving pace of play for that nine.

Hole #11 - par 4, 374 yards - This hole remains in place other than extending the green slightly up into the hillside to improve visibility and drainage. The tees will be moved to the right to provide more safety buffer from the tenth green.

Hole #12 - par 3, 155 yards - This hole location remains unchanged from the existing twelfth hole.

Hole #13 - par 4, 373 yards - This hole location remains unchanged from the existing thirteenth hole.

Hole #14 - par 4, 419 yards - The fourteenth hole is the existing fourth hole but will be moved to the Hays nine to help balance the overall yardage of both the Castle and Hays nines and improve overall congestion at the fifth/sixth and fifteenth/sixteenth holes.

Hole #15 - par 3, 217 yards - The fifteenth hole is generally in the existing fifth hole's corridor but reduced to a par three to eliminate the dangerous buffer situation the current fifth hole creates with the existing fifteenth hole and remain out of the woodland to the west.

Hole #16 - par 5, 523 yards - The tees for sixteen will be extended farther back and up the hill. The fairway will shift farther right than its current location (and will be improved for drainage), and the green will move slightly back and to the left. Moving

the fairway to the right will increase safety buffer from the sixth fairway. In addition to increasing overall par on the Hays nine, making the hole a par five allows for staggered landing areas with the adjacent sixth hole, thereby minimizing conflicting stray shots. Moving the green to the left also allows for the restoration of the original seventeenth tee.

Hole #17 - par 3, 196 yards - The seventeenth hole moves slightly to the right of its existing location and farther back.

Hole #18 - par 4, 321 yards - This hole location remains unchanged from the existing eighteenth hole but can be transformed into a much better strategic challenge through smart design.

CLUNIE NINE

Hole #19 - par 4, 390 yards - This hole location remains unchanged from the existing nineteenth hole.

Hole #20 - par 3, 186 yards - This hole location remains unchanged from the existing #20 hole.

Hole #21 - par 4, 360 yards - The 21st hole will play to a new green location downhill and to the left of the existing green, eliminating the severe dogleg of the existing hole as well as a blind green.

Hole #22 - par 3, 209 yards - This hole location remains unchanged from the existing #22 hole.

Hole #23 - par 4, 424 yards - The new 23rd hole will be a straight par four along the corridor of the existing par five #23. The green will be relocated to the top of the hill where the turning point of the second landing area is currently located.

Hole #24 - par 3, 129 yards - The new 24th hole will be a downhill par three from the corner of the second landing area of the existing 23rd hole to the existing 23rd green location. The hole does not encroach on any wetland buffers.

Hole #25 - par 3, 196 yards - The new 25th hole will be a downhill par three playing from the front tees of the existing 24th hole to between just beyond the first creek crossing and short of the existing hole's first landing area. The hole does not encroach on any wetland buffers.

Hole #26 - par 3, 152 yards - This hole will play uphill from the end of the existing landing area of the current 26th hole to the hole's existing green as well.

Hole #27 - par 5, 503 yards - The 27th hole will play from the existing ninth tees. These tee locations will help to minimize the forced carries for the majority of golfers by bringing the landing areas farther back away from the water crossings. The green will remain in its existing location.

Castle Nine:	par 36 - 3,486 yards
Hays Nine:	par 35 - 3,086 yards
Clunie Nine:	par 32 - 2,549 yards

Castle to Hays:	par 71 - 6,571 yards
Hays to Clunie:	par 67 - 5,635 yards
Clunie to Castle:	par 68 - 6,035 yards

Option 3 Oak Savanna Restoration Areas:

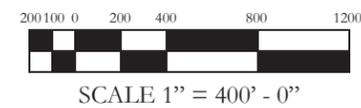
Proposed Tree Removal:	1.44 acres
Oak Savanna Restoration Areas:	23.42 acres (11.71 acres of actual Oak canopy)

PRELIMINARY ESTIMATED COST: \$8,910,738.12

M
R I C H A R D
M A N D E L L
GOLF ARCHITECTURE

LEGEND

-  TEE
-  GREEN
-  SAND BUNKER
-  FAIRWAY
-  TREELINE
-  WATER BODY
-  CLUBHOUSE
-  MAINTENANCE
-  OAK SAVANNA RESTORATION
45.1 ACRES
-  WALKING TRAIL



OPTION 4 - NEW EIGHTEEN HOLE REGULATION GOLF COURSE

This option is Richard Mandell Golf Architecture's effort to create the best possible eighteen hole golf course that the current Braemar Golf Course property will yield. The reduction in holes allows for the southwest corner of the golf course to be converted to a 7.50 acre Environmental Education Area. It also provides for a Multi-Use Area close to the parking lots and clubhouse that can be used for Disc Golf, Fling Golf, Foot Golf, Walking Trails, Picnic Areas, Field Games, Water Activities, and Sledding or Tubing.

HOLE	PAR	A	B	C	D	E
1	4	411	380	345	305	273
2	4	403	369	333	294	263
3	3	177	160	149	138	115
4	5	505	451	395	342	308
5	3	236	216	181	171	158
6	5	540	475	415	359	321
7	3	162	150	144	129	106
8	5	508	467	414	361	338
9	4	388	346	323	288	249
OUT	36	3330	3014	2699	2387	2131
10	4	437	410	374	336	299
11	5	625	570	521	457	411
12	4	447	410	374	336	299
13	3	187	170	154	147	131
14	4	435	400	369	327	290
15	4	425	387	356	313	277
16	5	566	512	451	397	354
17	3	169	154	144	133	110
18	4	426	390	361	317	281
IN	36	3717	3403	3104	2763	2452
TOTAL	72	7047	6417	5803	5150	4583

CASTLE NINE

Hole #1 - par 4, 411 yards - Hole #1 is essentially the existing tenth hole.

Hole #2 - par 4, 403 yards - Hole #2 plays from the right of the existing eleventh tees to the eleventh fairway but then doglegs to the right over the creek to a new green site at the base of the existing thirteenth fairway. The intention for this hole is to clean out the creek that plays along the right side of the fairway and allow it to be a strategic hazard challenging golfers to bite off as much of the creek as possible off the tee (for the longer hitters) or play as close to it as possible for the shortest possible approach.

Hole #3 - par 3, 177 yards - The third hole is a par three playing from the landing area of the existing thirteenth hole (between the trees that pinch the fairway) to the existing thirteenth green, which will be perched up in front of the pond.

Hole #4 - par 5, 505 yards - The fourth hole is the existing fourteenth hole.

Hole #5 - par 3, 236 yards - The proposed fifth hole is a downhill par three playing from the existing fifth tees to the fairway landing area of the existing fifth hole. This hole can be a “Cathedral” hole, utilizing the hillside as a backdrop.

Hole #6 - par 5, 540 yards - This hole will be a downhill dogleg left playing within the existing fourth hole in reverse. The fairway will play around the large hillside that currently separates the existing fourth and fourteenth holes. The green will be at the base of the existing fourth tees.

Hole #7 - par 3, 162 yards - The seventh hole is located where the third hole is but in reverse. The green will be just to the right of the existing third tees.

Hole #8 - par 5, 508 yards - The eighth hole will be a par five playing from the existing second green along the second fairway to a green set in front of the pond that currently separates the existing back tees for the second hole and the fairway. This hole fits perfectly in its setting and will be much more manageable for most golfers as the piped creek crossing is much easier to carry off the tees for most talent levels than crossing it in its current configuration.

Hole #9 - par 4, 388 yards - The proposed ninth hole will play from the hillside to the right of the existing first green back down the existing first fairway to a green site just in front of the existing first tee.

HAYS NINE

Hole #10 - par 4, 437 yards - The tenth hole will be where the existing nineteenth hole sits but with a tee extended backward and uphill. The hole will dogleg to the left to a green located where the existing #22 green is located.

Hole #11 - par 5, 625 yards - The new eleventh hole will be a double-fairway par five with the longer option playing along the top of the ridge to the left of the existing 23rd hole, incorporating natural plateaus for the first and second landing areas along this fairway.

The alternate lower fairway will be a shorter, more heroic direction with the alternate second landing area playing through the valley of the existing 23rd fairway. The green will be perched on the hillside at the intersection of the tee complexes for the existing ninth, twenty-fourth, and twenty-seventh holes. This routing will allow natural drainage patterns of the land to be preserved and will require minimal earthwork to create sufficient playing corridors and a great natural hole.

Hole #12 - par 4, 447 yards - The proposed twelfth hole will be a par four playing from just in front of the water to the area between the existing eighteenth and twenty-seventh fairways. The green will be located where the existing seventh fairway starts. This hole will require a much more manageable carry off the tees for all talent levels than the existing holes in this area.

Hole #13 - par 3, 187 yards - This hole location remains unchanged from the existing twelfth hole except for adding tees farther up the hill and to the left.

Hole #14 - par 4, 435 yards - This hole is the existing fifteenth hole.

Hole #15 - par 4, 425 yards - The fifteenth hole will be a par four playing from tees up in the hillside behind the existing sixteenth tees to a fairway and green that is located between the existing sixth and sixteenth greens.

Hole #16 - par 5, 566 yards - This hole will be a heroic par five with the back tees located where the existing sixth green sits and additional forward tees located near the existing sixteenth green and where existing tees for hole seventeen are located. The fairway will encompass both the existing seventeenth and twenty-sixth holes as well as a portion of the existing twenty-fourth fairway. The green will be the existing twenty-sixth green location.

This hole will challenge all golfers to bite off as much of the water as possible on their second shots if they choose to go for the green in two or play down the safer yet longer right side.

Hole #17 - par 3, 169 yards - The seventeenth hole will start just left of the middle tees of the existing ninth hole and play downhill to the existing eighth green.

Hole #18 - par 4, 426 yards - The final hole for the proposed new eighteen hole routing will be a heroic par four playing from the edge of the existing eighth fairway, crossing over the water at a diagonal to the existing ninth fairway. The tees will be located so that the more aggressive golfer can take the shorter route to gain an advantage, but will have to face a longer carry over the water in order to gain the reward. The green will be located at the existing seventh green.

Castle Nine:	par 36 - 3,329 yards
Hays Nine:	par 36 - 3,719 yards
Total:	par 72 - 7,048 yards

Option 4 Oak Savanna Restoration Areas:

Proposed Tree Removal:	12.21 acres
Oak Savanna Restoration Areas:	45.1 acres (20.08 acres of actual Oak canopy)

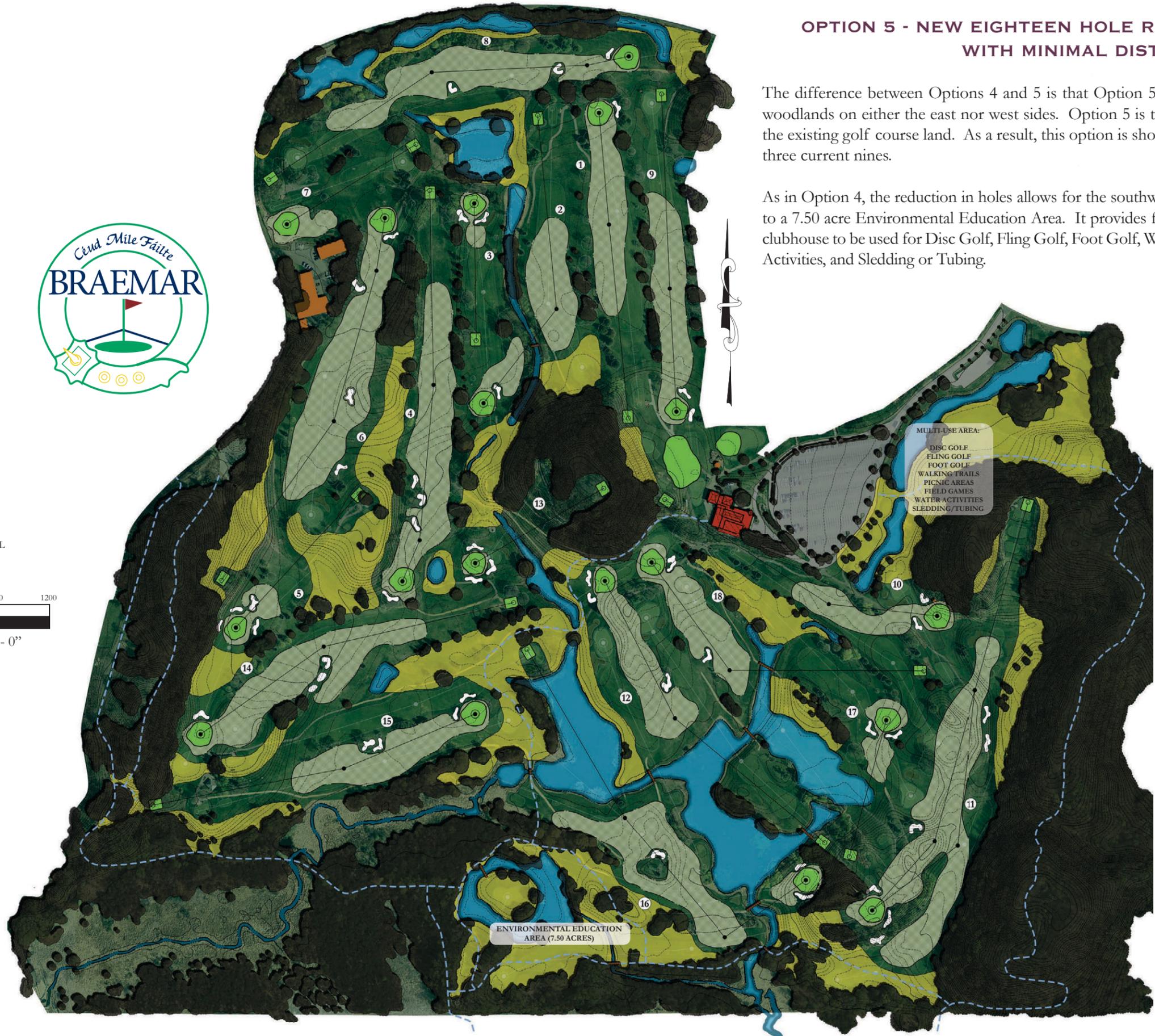
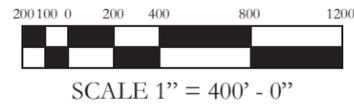
PRELIMINARY ESTIMATED COST: \$6,983,688.75

M

R I C H A R D
M A N D E L L
GOLF ARCHITECTURE

LEGEND

-  TEE
-  GREEN
-  SAND BUNKER
-  FAIRWAY
-  TREELINE
-  WATER BODY
-  CLUBHOUSE
-  MAINTENANCE
-  OAK SAVANNA RESTORATION
32.75 ACRES
-  WALKING TRAIL



OPTION 5 - NEW EIGHTEEN HOLE REGULATION GOLF COURSE WITH MINIMAL DISTURBANCE

The difference between Options 4 and 5 is that Option 5 does not have any holes within the existing woodlands on either the east nor west sides. Option 5 is the best possible eighteen hole routing within the existing golf course land. As a result, this option is shorter than Option 4 but still far superior to the three current nines.

As in Option 4, the reduction in holes allows for the southwest corner of the golf course to be converted to a 7.50 acre Environmental Education Area. It provides for a Multi-Use Area near the parking lots and clubhouse to be used for Disc Golf, Fling Golf, Foot Golf, Walking Trails, Picnic Areas, Field Games, Water Activities, and Sledding or Tubing.

MULTI-USE AREA:
 DISC GOLF
 FLING GOLF
 FOOT GOLF
 WALKING TRAILS
 PICNIC AREAS
 FIELD GAMES
 WATER ACTIVITIES
 SLEDDING/TUBING

HOLE	PAR	YARDS
1	4	393
2	4	403
3	3	177
4	5	507
5	3	233
6	5	501
7	3	194
8	5	520
9	4	408
CASTLE	36	3336

HOLE	PAR	YARDS
10	4	390
11	5	587
12	4	448
13	3	191
14	4	444
15	4	432
16	5	576
17	3	181
18	4	421
HAYS	36	3670
TOTAL	72	7007

CASTLE NINE

Hole #1 - par 4, 371 yards - Hole #1 is essentially the existing tenth hole.

Hole #2 - par 4, 403 yards - Hole #2 plays from the right of the existing eleventh tees to the eleventh fairway but then doglegs to the right over the creek to a new green site at the base of the existing thirteenth fairway. The intention for this hole is to clean out the creek that plays along the right side of the fairway and allow it to be a strategic hazard challenging golfers to bite off as much of the creek as possible off the tee (for the longer hitters) or play as close to it as possible for the shortest possible approach.

Hole #3 - par 3, 177 yards - The third hole is a par three playing from the landing area of the existing thirteenth hole (between the trees that pinch the fairway) to the existing thirteenth green, which will be perched up in front of the pond.

Hole #4 - par 5, 507 yards - The fourth hole is the existing fourteenth hole.

Hole #5 - par 3, 208 yards - The proposed fifth hole is a downhill par three playing from the existing fifth tees to the fairway landing area of the existing fifth hole. This hole can be a “Cathedral” hole, utilizing the hillside as a backdrop.

Hole #6 - par 5, 501 yards - This hole will be a shortened downhill dogleg left playing along the existing fourth hole in reverse. The fairway will play around the large hillside that currently separates the existing fourth and fourteenth holes. The green will be at the base of the existing fourth tees.

Hole #7 - par 3, 172 yards - The seventh hole is located where the third hole is but in reverse. The green will be just to the right of the existing third tees.

Hole #8 - par 5, 520 yards - The eighth hole will be a par five playing from the existing second green along the second fairway to a green set in front of the pond that currently separates the existing back tees for the second hole and the fairway. This hole fits perfectly in its setting and will be much more manageable for most golfers as the piped creek crossing is much easier to carry off the tees for most talent levels than crossing it in its current configuration.

Hole #9 - par 4, 381 yards - The proposed ninth hole will play from the hillside to the right of the existing first green back down the existing first fairway to a green site just in front of the existing first tee.

HAYS NINE

Hole #10 - par 4, 374 yards - The tenth hole will be where the existing nineteenth hole is located. The new hole will have a tee extended backward and uphill. The hole will dogleg to the left to a green located in the hillside right of existing hole twenty.

Hole #11 - par 5, 586 yards - The new eleventh hole will be a double-fairway par five with the shorter, heroic route playing along the top of the ridge to the right of the existing 23rd hole, incorporating natural plateaus for the first and second landing areas along this fairway.

The alternate lower fairway will be a longer, safer direction with the alternate second landing area playing through the valley of the existing 23rd fairway. The green will be perched on the hillside at the intersection of the tee complexes for the existing ninth, twenty-fourth, and twenty-seventh holes. This routing will allow natural drainage patterns of the land to be preserved and will require minimal earthwork to create sufficient playing corridors and a great natural hole.

Hole #12 - par 4, 448 yards - The proposed twelfth hole will be a par four playing from just in front of the water to the area between the existing eighteenth and twenty-seventh fairways. The green will be located where the existing seventh fairway starts. This hole will require a much more manageable carry off the tees for all talent levels than the existing holes in this area.

Hole #13 - par 3, 187 yards - This hole location remains unchanged from the existing twelfth hole except for adding tees farther up the hill and to the left.

Hole #14 - par 4, 435 yards - This hole is the existing fifteenth hole.

Hole #15 - par 4, 402 yards - The fifteenth hole will be a par four playing from tees up in the hillside behind the existing sixteenth tees to a fairway and green that is located between the existing sixth and sixteenth greens.

Hole #16 - par 5, 566 yards - This hole will be a heroic par five with the back tees located where the existing sixth green sits and additional forward tees located near the existing sixteenth green and where existing tees for hole seventeen are located. The fairway will encompass both the existing seventeenth and twenty-sixth holes as well as a portion of the existing twenty-fourth fairway. The green will be the existing twenty-sixth green location.

This hole will challenge all golfers to bite off as much of the water as possible on their second shots if they choose to go for the green in two or play down the safer yet longer right side.

Hole #17 - par 3, 178 yards - The seventeenth hole will start just left of the middle tees of the existing ninth hole and play downhill to the existing eighth green.

Hole #18 - par 4, 379 yards - The final hole for the proposed new eighteen hole routing will be a heroic par four playing from the edge of the existing eighth fairway, crossing over the water at a diagonal to the existing ninth fairway. The tees will be located so that the more aggressive golfer can take the shorter route to gain an advantage, but will have to face a longer carry over the water in order to gain the reward. The green will be located at the existing seventh green.

Castle Nine:	par 36 - 3,239 yards
Hays Nine:	par 36 - 3,556 yards
Total:	par 72 - 6,795 yards

Option 5 Oak Savanna Restoration Areas:

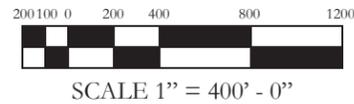
Proposed Tree Removal:	2.02 acres
Oak Savanna Restoration Areas:	32.75 acres (16.38 acres of actual Oak canopy)

PRELIMINARY ESTIMATED COST: \$6,995,473.25

M
R I C H A R D
M A N D E L L
GOLF ARCHITECTURE

LEGEND

-  TEE
-  GREEN
-  SAND BUNKER
-  FAIRWAY
-  TREELINE
-  WATER BODY
-  CLUBHOUSE
-  MAINTENANCE
-  OAK SAVANNA RESTORATION 30.87 ACRES
-  WALKING TRAIL



OPTION 6 - NEW EIGHTEEN HOLE REGULATION GOLF COURSE AND FOUR - HOLE PRACTICE LOOP WITH MINIMAL DISTURBANCE

Option 6 is a shortened eighteen-hole layout to make room for a four-hole practice loop. The practice loop is conveniently located at the northeast corner of the golf course so it is accessible from the parking lot at multiple points yet it also starts and finishes within walking distance of the clubhouse. All twenty-two holes remain within the existing golf course layout without interfering with the woodland areas to the east and west sides of the property.

PRACTICE HOLE LOOP/
MULTI-USE AREA:
DISC GOLF
FLING GOLF
FOOT GOLF
WALKING TRAILS
PICNIC AREAS
FIELD GAMES
WATER ACTIVITIES
SLEDDING/TUBING

ENVIRONMENTAL EDUCATION AREA (7.50 ACRES)

HOLE	PAR	YARDS
1	4	372
2	4	383
3	3	186
4	4	361
5	5	505
6	4	413
7	3	172
8	5	508
9	4	388
CASTLE	36	3287

HOLE	PAR	YARDS
10	4	428
11	3	193
12	4	368
13	4	412
14	3	120
15	5	559
16	3	240
17	4	389
18	5	527
HAYS	35	3237
TOTAL	71	6524

HOLE	PAR	YARDS
P1	4	398
P2	3	86
P3	3	183
P4	4	409

CASTLE NINE

Hole #1 - par 4, 372 yards - Hole #1 is essentially the existing tenth hole.

Hole #2 - par 4, 383 yards - This hole remains in place other than extending the green slightly up into the hillside to improve visibility and drainage. The tees will be moved to the right to provide more safety buffer from the tenth green.

Hole #3 - par 3, 186 yards - This hole is the existing twelfth hole.

Hole #4 - par 4, 361 yards - The fourth hole is the existing thirteenth hole.

Hole #5 - par 5, 505 yards - The fifth hole is the existing fourteenth hole.

Hole #6 - par 4, 413 yards - This hole will be a downhill dogleg right playing along the existing fourth hole in reverse with the tees playing from the existing fifth tees. The fairway will be to the left of the large hillside that currently separates the existing fourth and fourteenth holes. The green shall sit at the base of the existing fourth tees.

Hole #7 - par 3, 172 yards - The seventh hole is located where the third hole is but in reverse. The green will be just to the right of the existing third tees.

Hole #8 - par 5, 508 yards - The eighth hole will be a par five playing from the existing second green along the second fairway to a green set in front of the pond that currently separates the existing back tees for the second hole and the fairway. This hole fits perfectly in its setting and will be much more manageable for most golfers as the piped creek crossing is much easier to carry off the tees for most talent levels than crossing it in its current configuration.

Hole #9 - par 4, 388 yards - The proposed ninth hole will play from the hillside to the right of the existing first green back down the existing first fairway to a green site just in front of the existing first tee.

HAYS NINE

Hole #10 - par 4, 428 yards - The tenth hole will begin up the hillside from the existing seventh green to the existing fifteenth fairway. The green will be placed in the hollow just past the pond that separates the existing fifteenth and sixth fairways.

Hole #11 - par 3, 193 yards - The new eleventh hole will be a par three starting at the upper portion of the existing fifteenth fairway playing uphill to the existing fourth green complex.

Hole #12 - par 4, 368 yards - The proposed twelfth hole will be a par four playing from the hillside right of the existing fourth fairway downhill to the existing fifth fairway. The existing fifteenth green complex will be the new twelfth green.

Hole #13 - par 4, 412 yards - This hole location remains unchanged from the existing sixteenth hole except for adding tees farther up the hill and to the left and a green located in front and slightly left of the current sixteenth green.

Hole #14 - par 3, 120 yards - This short par three plays from the old back seventeenth tee to the existing sixth green.

Hole #15 - par 5, 559 yards - This hole will be a heroic par five with the back tees located where the existing eighteenth green sits and additional forward tees located where existing tees for hole seventeen are located. The fairway will encompass both the existing seventeenth and twenty-sixth holes as well as a portion of the existing twenty-fourth fairway. The green will be the existing twenty-sixth green location.

This hole will challenge all golfers to bite off as much of the water as possible on their second shots if they choose to go for the green in two or play down the safer yet longer right side.

Hole #16 - par 3, 240 yards - The sixteenth hole will play downhill from the existing ninth tees to a green located in the first landing area of the existing twenty-seventh hole.

Hole #17 - par 4, 389 yards - The seventeenth hole will start just right of the twenty-seventh fairway northwest of the lake and play back to the southeast across the existing ninth fairway to a green situated in the first landing area of hole twenty - three.

Hole #18 - par 5, 527 yards - The final hole for the proposed new eighteen hole routing will be a heroic par five playing from just into the hillside east of hole number twenty-three tees to the first landing area in the existing eighth fairway. The second shot will challenge the golfer to cut the corner over the water to the existing ninth fairway. The green will be located just beyond the existing ninth green.



Castle Nine:	par 36 - 3,287 yards
Hays Nine:	par 35 - 3,237 yards
Total:	par 72 - 6,524 yards

Practice Hole #P1 - par 4, 398 yards - Practice hole P1 is the existing hole twenty-one playing straightaway to a green downhill and to the left of the existing green.

Practice Hole #P2 - par 3, 86 yards - This short par three will play directly uphill to the existing twenty-first green.

Practice Hole #P3 - par 3, 183 yards - This hole is the existing hole number twenty-two.

Practice Hole #P1 - par 4, 409 yards - The final practice hole will play from the front tees of the existing hole twenty-three down the nineteenth fairway in reverse to a new green just below the clubhouse.

Option 6 Oak Savanna Restoration Areas:

Proposed Tree Removal:	2.37 acres
Oak Savanna Restoration Areas:	30.87 acres (15.44 acres of actual Oak canopy)

PRELIMINARY ESTIMATED COST: \$ 7,425,786.39

ALTERNATIVE ROUTING OPTIONS

OPTION 1 - THE BEST 27 REGULATION HOLES POSSIBLE:

Item	Unit Cost	Quantity	Unit	Total
PROJECT PREPARATION				
Mobilization (LS)	\$ 190,000.00	1.00	LS	\$ 190,000.00
Layout/Staking	\$ 2,731.52	27.00	EA	\$ 73,751.04
CLEARING				
Spray and Rotovate Existing Turf (AC)	\$ 2,552.00	72.32	AC	\$ 184,560.64
Tee & Fairway Fumigation	\$ 3,168.00	57.25	AC	\$ 181,368.00
Bulk Clearing	\$ 15,000.00	15.18	AC	\$ 227,700.00
Selective Clearing (By Tree)	\$ 440.00	510.00	EA	\$ 224,400.00
EROSION CONTROL				
Silt Fence	\$ 3.30	35,000.00	LF	\$ 115,500.00
Fairway Erosion Control Blankets	\$ 9,680.00	5.00	AC	\$ 48,400.00
Tree Protection	\$ 2.77	1,890.00	LF	\$ 5,239.08
Inlet Protection	\$ 97.02	94.00	EA	\$ 9,119.88
Construction Entrance	\$ 5,280.00	2.00	EA	\$ 10,560.00
TOPSOIL MANAGEMENT				
6" Onsite - Stripping and Stockpiling (CY)	\$ 2.20	86,300.00	CY	\$ 189,860.00
6" Onsite - Replacement and Spreading	\$ 2.99	86,300.00	CY	\$ 258,209.60
BULK EARTHWORK				
Bulk Earthwork (CY)	\$ 2.82	93,000.00	CY	\$ 261,888.00
POND CONSTRUCTION				
Pond Construction (CY) - dewatering	\$ 9.64	30,000.00	CY	\$ 289,080.00
SHAPING				
All Feature Shaping	\$ 310,000.00	1.00	EA	\$ 310,000.00
DRAINAGE				
2" Perforated HDPE Pipe	\$ 4.40	49,500.00	LF	\$ 217,800.00
6" Solid HDPE Pipe (N-12 ADS)	\$ 9.90	3,653.00	LF	\$ 36,164.70
8" Solid HDPE Pipe (N-12 ADS)	\$ 11.44	3,814.00	LF	\$ 43,632.16
10" Solid HDPE Pipe (N-12 ADS)	\$ 13.20	1,730.00	LF	\$ 22,836.00
12" Solid HDPE Pipe (N-12 ADS)	\$ 14.52	475.00	LF	\$ 6,897.00
18" Solid HDPE Pipe (N-12 ADS)	\$ 20.68	500.00	LF	\$ 10,340.00
Drainage Inlets	\$ 242.00	92.00	EA	\$ 22,264.00
Catch Basins	\$ 748.00	2.00	EA	\$ 1,496.00
GREEN CONSTRUCTION				
Greens Construction (SF)	\$ 3.96	212,276.00	SF	\$ 840,612.96
TEE CONSTRUCTION				
Tee Construction	\$ 0.48	228,774.00	SF	\$ 110,726.62
SAND BUNKER CONSTRUCTION				
Bunker Removal (SF)	\$ 1.00	94,568.00	SF	\$ 94,568.00
Bunker Construction (SF)	\$ 5.50	72,286.00	SF	\$ 397,573.00
CART PATH REMOVAL & CONSTRUCTION				



Removal of 8' Cart Path (Onsite LF)	\$ 2.29	22,543.00	LF	\$ 51,578.38
Removal of 14' Cart Path (Onsite LF)	\$ 4.01	922.00	LF	\$ 3,699.80
8' Asphalt Cart Path Const. (LF)	\$ 21.60	38,300.00	LF	\$ 827,433.20
12' Asphalt Cart Path Const. (LF)	\$ 30.49	1,304.00	LF	\$ 39,761.57
Asphalt Cart Path Turn-Arounds (SF)	\$ 3.43	1,845.00	SF	\$ 6,332.04
SEEDBED PREPARATION				
Seedbed Prep (AC)	\$ 2,873.20	103.60	AC	\$ 297,663.52
GRASSING				
Seed Green Surrounds	\$ 0.13	46,830.00	SF	\$ 6,181.56
Sod rough areas	\$ 0.39	1,000,000	SF	\$ 387,200.00
Seeding Greens (007 Bent)	\$ 0.08	212,276.00	SF	\$ 16,812.26
Seeding Tees (Bent)	\$ 0.12	228,774.00	SF	\$ 27,681.65
Seeding Fairways (Bent)	\$ 2,112.00	52.00	AC	\$ 109,824.00
Seeding Rough Blend	\$ 1,738.00	9.70	AC	\$ 16,858.60
Oak Savanna Restoration Areas	\$ 2,398.00	30.30	AC	\$ 72,659.40
TREE PLANTING				
2.5" Dia. (Large & Medium Deciduous)	\$ 378.40	242	EA	\$ 91,724.16
Wetland Plantings	\$ 75,000.00	1.00	EA	\$ 75,000.00
DRIVING RANGE NETTING				
Driving Range Net Construction (LF)	\$ 70.40	975.00	LF	\$ 68,640.00
IRRIGATION				
Irrigation/Pump Station/Pumphouse	\$ 2,000,000.00	1.00	LS	\$ 2,000,000.00
				Sub-Total
				\$ 8,483,596.82
SOFT COSTS				
10% of Costs			LS	\$ 848,359.68
				Total
				\$ 9,331,956.51

OPTION 2 - THE BEST 27 REGULATION HOLES POSSIBLE WITH MINIMAL DISTURBANCE:

Item	Unit Cost	Quantity	Unit	Total
PROJECT PREPARATION				
Mobilization (LS)	\$ 190,000.00	1.00	LS	\$ 190,000.00
Layout/Staking	\$ 2,731.52	27.00	EA	\$ 73,751.04
CLEARING				
Spray and Rotovate Existing Turf (AC)	\$ 2,552.00	100.95	AC	\$ 257,624.40
Tee & Fairway Fumigation	\$ 3,168.00	46.97	AC	\$ 148,800.96
Bulk Clearing	\$ 15,000.00	1.44	AC	\$ 21,600.00
Selective Clearing (By Tree)	\$ 440.00	510.00	EA	\$ 224,400.00
EROSION CONTROL				
Silt Fence	\$ 3.30	35,000.00	LF	\$ 115,500.00
Fairway Erosion Control Blankets	\$ 9,680.00	5.00	AC	\$ 48,400.00

Tree Protection	\$ 2.77	1,890.00	LF	\$ 5,239.08
Inlet Protection	\$ 97.02	94.00	EA	\$ 9,119.88
Construction Entrance	\$ 5,280.00	2.00	EA	\$ 10,560.00
TOPSOIL MANAGEMENT				
6" Onsite - Stripping and Stockpiling (CY)	\$ 2.20	77,000.00	CY	\$ 169,400.00
6" Onsite - Replacement and Spreading	\$ 2.99	77,000.00	CY	\$ 230,384.00
BULK EARTHWORK				
Bulk Earthwork (CY)	\$ 2.82	36,500.00	CY	\$ 102,784.00
POND CONSTRUCTION				
Pond Construction (CY) - dewatering	\$ 9.64	30,000.00	CY	\$ 289,080.00
SHAPING				
All Feature Shaping	\$ 310,000.00	1.00	EA	\$ 310,000.00
DRAINAGE				
2" Perforated HDPE Pipe	\$ 4.40	49,500.00	LF	\$ 217,800.00
6" Solid HDPE Pipe (N-12 ADS)	\$ 9.90	3,653.00	LF	\$ 36,164.70
8" Solid HDPE Pipe (N-12 ADS)	\$ 11.44	3,814.00	LF	\$ 43,632.16
10" Solid HDPE Pipe (N-12 ADS)	\$ 13.20	1,730.00	LF	\$ 22,836.00
12" Solid HDPE Pipe (N-12 ADS)	\$ 14.52	475.00	LF	\$ 6,897.00
18" Solid HDPE Pipe (N-12 ADS)	\$ 20.68	500.00	LF	\$ 10,340.00
Drainage Inlets	\$ 242.00	92.00	EA	\$ 22,264.00
Catch Basins	\$ 748.00	2.00	EA	\$ 1,496.00
GREEN CONSTRUCTION				
Greens Construction (SF)	\$ 3.96	217,817.00	SF	\$ 862,555.32
TEE CONSTRUCTION				
Tee Construction	\$ 0.48	228,774.00	SF	\$ 110,726.62
SAND BUNKER CONSTRUCTION				
Bunker Removal (SF)	\$ 1.00	94,568.00	SF	\$ 94,568.00
Bunker Construction (SF)	\$ 5.50	73,335.00	SF	\$ 403,342.50
CART PATH REMOVAL & CONSTRUCTION				
Removal of 8' Cart Path (Onsite LF)	\$ 2.29	22,543.00	LF	\$ 51,578.38
Removal of 14' Cart Path (Onsite LF)	\$ 4.01	922.00	LF	\$ 3,699.80
8' Asphalt Cart Path Const. (LF)	\$ 21.60	38,300.00	LF	\$ 827,433.20
12' Asphalt Cart Path Const. (LF)	\$ 30.49	1,304.00	LF	\$ 39,761.57
Asphalt Cart Path Turn-Arounds (SF)	\$ 3.43	1,845.00	SF	\$ 6,332.04
SEEDBED PREPARATION				
Seedbed Prep (AC)	\$ 2,873.20	90.45	AC	\$ 259,880.94
GRASSING				
Seed Green Surrounds	\$ 0.13	48,052.00	SF	\$ 6,342.86
Sod rough areas	\$ 0.39	1,000,000	SF	\$ 387,200.00
Seeding Greens (007 Bent)	\$ 0.08	217,817.00	SF	\$ 17,251.11
Seeding Tees (Bent)	\$ 0.12	228,774.00	SF	\$ 27,681.65
Seeding Fairways (Bent)	\$ 2,112.00	41.72	AC	\$ 88,112.64
Seeding Rough Blend	\$ 1,738.00	18.73	AC	\$ 32,552.74
Oak Savanna Restoration Areas	\$ 2,398.00	17.66	AC	\$ 42,348.68
TREE PLANTING				
2.5" Dia. (Large & Medium Deciduous)	\$ 378.40	141	EA	\$ 53,460.35
Wetland Plantings	\$ 75,000.00	1.00	EA	\$ 75,000.00



RICHARD
MANDELL
GOLF ARCHITECTURE

DRIVING RANGE NETTING				
Driving Range Net Construction (LF)	\$ 70.40	975.00	LF	\$ 68,640.00
IRRIGATION				
Irrigation/Pump Station/Pumphouse	\$ 2,000,000.00	1.00	LS	\$ 2,000,000.00
				Sub-Total
				\$ 8,026,541.63
SOFT COSTS				
10% of Costs			LS	\$ 802,654.16
				Total
				\$ 8,829,195.79

OPTION 3 - THE BEST 18 REGULATION HOLES & EXECUTIVE 9 POSSIBLE WITH MINIMAL DISTURBANCE:

Item	Unit Cost	Quantity	Unit	Total
PROJECT PREPARATION				
Mobilization (LS)	\$ 190,000.00	1.00	LS	\$ 190,000.00
Layout/Staking	\$ 2,731.52	27.00	EA	\$ 73,751.04
CLEARING				
Spray and Rotovate Existing Turf (AC)	\$ 2,552.00	108.49	AC	\$ 276,866.48
Tee & Fairway Fumigation	\$ 3,168.00	44.09	AC	\$ 139,677.12
Bulk Clearing	\$ 15,000.00	1.44	AC	\$ 21,600.00
Selective Clearing (By Tree)	\$ 440.00	510.00	EA	\$ 224,400.00
EROSION CONTROL				
Silt Fence	\$ 3.30	35,000.00	LF	\$ 115,500.00
Fairway Erosion Control Blankets	\$ 9,680.00	5.00	AC	\$ 48,400.00
Tree Protection	\$ 2.77	1,890.00	LF	\$ 5,239.08
Inlet Protection	\$ 97.02	94.00	EA	\$ 9,119.88
Construction Entrance	\$ 5,280.00	2.00	EA	\$ 10,560.00
TOPSOIL MANAGEMENT				
6" Onsite - Stripping and Stockpiling (CY)	\$ 2.20	80,000.00	CY	\$ 176,000.00
6" Onsite - Replacement and Spreading	\$ 2.99	80,000.00	CY	\$ 239,360.00
BULK EARTHWORK				
Bulk Earthwork (CY)	\$ 2.82	33,000.00	CY	\$ 92,928.00
POND CONSTRUCTION				
Pond Construction (CY) - dewatering	\$ 9.64	30,000.00	CY	\$ 289,080.00
SHAPING				
All Feature Shaping	\$ 310,000.00	1.00	EA	\$ 310,000.00
DRAINAGE				
2" Perforated HDPE Pipe	\$ 4.40	49,500.00	LF	\$ 217,800.00
6" Solid HDPE Pipe (N-12 ADS)	\$ 9.90	3,653.00	LF	\$ 36,164.70
8" Solid HDPE Pipe (N-12 ADS)	\$ 11.44	3,814.00	LF	\$ 43,632.16
10" Solid HDPE Pipe (N-12 ADS)	\$ 13.20	1,730.00	LF	\$ 22,836.00
12" Solid HDPE Pipe (N-12 ADS)	\$ 14.52	475.00	LF	\$ 6,897.00

18" Solid HDPE Pipe (N-12 ADS)	\$ 20.68	500.00	LF	\$ 10,340.00
Drainage Inlets	\$ 242.00	92.00	EA	\$ 22,264.00
Catch Basins	\$ 748.00	2.00	EA	\$ 1,496.00
GREEN CONSTRUCTION				
Greens Construction (SF)	\$ 3.96	217,817.00	SF	\$ 862,555.32
TEE CONSTRUCTION				
Tee Construction	\$ 0.48	228,774.00	SF	\$ 110,726.62
SAND BUNKER CONSTRUCTION				
Bunker Removal (SF)	\$ 1.00	94,568.00	SF	\$ 94,568.00
Bunker Construction (SF)	\$ 5.50	74,929.00	SF	\$ 412,109.50
CART PATH REMOVAL & CONSTRUCTION				
Removal of 8' Cart Path (Onsite LF)	\$ 2.29	22,543.00	LF	\$ 51,578.38
Removal of 14' Cart Path (Onsite LF)	\$ 4.01	922.00	LF	\$ 3,699.80
8' Asphalt Cart Path Const. (LF)	\$ 21.60	38,300.00	LF	\$ 827,433.20
12' Asphalt Cart Path Const. (LF)	\$ 30.49	1,304.00	LF	\$ 39,761.57
Asphalt Cart Path Turn-Arounds (SF)	\$ 3.43	1,845.00	SF	\$ 6,332.04
SEEDBED PREPARATION				
Seedbed Prep (AC)	\$ 2,873.20	96.52	AC	\$ 277,321.26
GRASSING				
Seed Green Surrounds	\$ 0.13	48,052.00	SF	\$ 6,342.86
Sod rough areas	\$ 0.39	1,000,000	SF	\$ 387,200.00
Seeding Greens (007 Bent)	\$ 0.08	217,817.00	SF	\$ 17,251.11
Seeding Tees (Bent)	\$ 0.12	228,774.00	SF	\$ 27,681.65
Seeding Fairways (Bent)	\$ 2,112.00	38.84	AC	\$ 82,030.08
Seeding Rough Blend	\$ 1,738.00	22.71	AC	\$ 39,469.98
Oak Savanna Restoration Areas	\$ 2,398.00	23.42	AC	\$ 56,161.16
TREE PLANTING				
2.5" Dia. (Large & Medium Deciduous)	\$ 378.40	187	EA	\$ 70,897.02
Wetland Plantings	\$ 75,000.00	1.00	EA	\$ 75,000.00
DRIVING RANGE NETTING				
Driving Range Net Construction (LF)	\$ 70.40	975.00	LF	\$ 68,640.00
IRRIGATION				
Irrigation/Pump Station/Pumphouse	\$ 2,000,000.00	1.00	LS	\$ 2,000,000.00
			Sub-Total	\$ 8,100,671.02
SOFT COSTS	10% of Costs		LS	\$ 810,067.10
			Total	\$ 8,910,738.12

OPTION 4 - NEW EIGHTEEN HOLE REGULATION GOLF COURSE:

Item	Unit Cost	Quantity	Unit	Total
PROJECT PREPARATION				
Mobilization (LS)	\$ 190,000.00	1.00	LS	\$ 190,000.00



Layout/Staking	\$ 2,731.52	18.00	EA	\$ 49,167.36
CLEARING				
Spray and Rotovate Existing Turf (AC)	\$ 2,552.00	100.56	AC	\$ 256,629.12
Tee & Fairway Fumigation	\$ 3,168.00	39.94	AC	\$ 126,529.92
Bulk Clearing	\$ 15,000.00	12.21	AC	\$ 183,150.00
Selective Clearing (By Tree)	\$ 440.00	510.00	EA	\$ 224,400.00
EROSION CONTROL				
Silt Fence	\$ 3.30	35,000.00	LF	\$ 115,500.00
Fairway Erosion Control Blankets	\$ 9,680.00	5.00	AC	\$ 48,400.00
Tree Protection	\$ 2.77	1,890.00	LF	\$ 5,239.08
Inlet Protection	\$ 97.02	94.00	EA	\$ 9,119.88
Construction Entrance	\$ 5,280.00	2.00	EA	\$ 10,560.00
TOPSOIL MANAGEMENT				
6" Onsite - Stripping and Stockpiling (CY)	\$ 2.20	28,250.00	CY	\$ 62,150.00
6" Onsite - Replacement and Spreading	\$ 2.99	28,250.00	CY	\$ 84,524.00
BULK EARTHWORK				
Bulk Earthwork (CY)	\$ 2.82	74,500.00	CY	\$ 209,792.00
POND CONSTRUCTION				
Pond Construction (CY) - dewatering	\$ 9.64	30,000.00	CY	\$ 289,080.00
SHAPING				
All Feature Shaping	\$ 220,000.00	1.00	EA	\$ 220,000.00
DRAINAGE				
2" Perforated HDPE Pipe	\$ 4.40	49,500.00	LF	\$ 145,200.00
6" Solid HDPE Pipe (N-12 ADS)	\$ 9.90	3,653.00	LF	\$ 24,109.80
8" Solid HDPE Pipe (N-12 ADS)	\$ 11.44	3,814.00	LF	\$ 29,088.11
10" Solid HDPE Pipe (N-12 ADS)	\$ 13.20	1,730.00	LF	\$ 15,224.00
12" Solid HDPE Pipe (N-12 ADS)	\$ 14.52	475.00	LF	\$ 4,598.00
18" Solid HDPE Pipe (N-12 ADS)	\$ 20.68	500.00	LF	\$ 6,893.33
Drainage Inlets	\$ 242.00	92.00	EA	\$ 14,842.67
Catch Basins	\$ 748.00	2.00	EA	\$ 997.33
GREEN CONSTRUCTION				
Greens Construction (SF)	\$ 3.96	148,802.00	SF	\$ 589,255.92
TEE CONSTRUCTION				
Tee Construction	\$ 0.48	152,516.00	SF	\$ 73,817.74
SAND BUNKER CONSTRUCTION				
Bunker Removal (SF)	\$ 1.00	94,568.00	SF	\$ 94,568.00
Bunker Construction (SF)	\$ 5.50	53,479.00	SF	\$ 294,134.50
CART PATH REMOVAL & CONSTRUCTION				
Removal of 8' Cart Path (Onsite LF)	\$ 2.29	22,543.00	LF	\$ 51,578.38
Removal of 14' Cart Path (Onsite LF)	\$ 4.01	922.00	LF	\$ 3,699.80
8' Asphalt Cart Path Const. (LF)	\$ 21.60	38,300.00	LF	\$ 551,622.13
12' Asphalt Cart Path Const. (LF)	\$ 30.49	1,304.00	LF	\$ 26,507.71
Asphalt Cart Path Turn-Arounds (SF)	\$ 3.43	1,845.00	SF	\$ 4,221.36
SEEDBED PREPARATION				
Seedbed Prep (AC)	\$ 2,873.20	104.62	AC	\$ 300,594.18
GRASSING				

Seed Green Surrounds	\$ 0.13	32,827.00	SF	\$ 4,333.16
Sod rough areas	\$ 0.39	750,000	SF	\$ 290,400.00
Seeding Greens (007 Bent)	\$ 0.08	148,802.00	SF	\$ 11,785.12
Seeding Tees (Bent)	\$ 0.12	152,516.00	SF	\$ 18,454.44
Seeding Fairways (Bent)	\$ 2,112.00	36.44	AC	\$ 76,961.28
Seeding Rough Blend	\$ 1,738.00	24.95	AC	\$ 43,363.10
Oak Savanna Restoration Areas	\$ 2,398.00	45.10	AC	\$ 108,149.80
TREE PLANTING				
2.5" Dia. (Large & Medium Deciduous)	\$ 378.40	361	EA	\$ 136,526.72
Wetland Plantings	\$ 75,000.00	1.00	EA	\$ 75,000.00
DRIVING RANGE NETTING				
Driving Range Net Construction (LF)	\$ 70.40	975.00	LF	\$ 68,640.00
IRRIGATION				
Irrigation/Pump Station/Pumphouse	\$ 1,200,000.00	1.00	LS	\$ 1,200,000.00
				Sub-Total
				\$6,348,807.96
SOFT COSTS				
10% of Costs			LS	\$ 634,880.80
				Total
				\$6,983,688.75

**OPTION 5 - NEW EIGHTEEN HOLE REGULATION GOLF COURSE
WITH MINIMAL DISTURBANCE:**

Item	Unit Cost	Quantity	Unit	Total
PROJECT PREPARATION				
Mobilization (LS)	\$ 190,000.00	1.00	LS	\$ 190,000.00
Layout/Staking	\$ 2,731.52	18.00	EA	\$ 49,167.36
CLEARING				
Spray and Rotovate Existing Turf (AC)	\$ 2,552.00	106.73	AC	\$ 272,374.96
Tee & Fairway Fumigation	\$ 3,168.00	39.97	AC	\$ 126,624.96
Bulk Clearing	\$ 15,000.00	2.02	AC	\$ 30,300.00
Selective Clearing (By Tree)	\$ 440.00	510.00	EA	\$ 224,400.00
EROSION CONTROL				
Silt Fence	\$ 3.30	35,000.00	LF	\$ 115,500.00
Fairway Erosion Control Blankets	\$ 9,680.00	5.00	AC	\$ 48,400.00
Tree Protection	\$ 2.77	1,890.00	LF	\$ 5,239.08
Inlet Protection	\$ 97.02	94.00	EA	\$ 9,119.88
Construction Entrance	\$ 5,280.00	2.00	EA	\$ 10,560.00
TOPSOIL MANAGEMENT				
6" Onsite - Stripping and Stockpiling (CY)	\$ 2.20	82,300.00	CY	\$ 181,060.00
6" Onsite - Replacement and Spreading	\$ 2.99	82,300.00	CY	\$ 246,241.60
BULK EARTHWORK				
Bulk Earthwork (CY)	\$ 2.82	52,500.00	CY	\$ 147,840.00
POND CONSTRUCTION				



R I C H A R D
M A N D E L L
G O L F A R C H I T E C T U R E

Pond Construction (CY) - dewatering	\$ 9.64	30,000.00	CY	\$ 289,080.00
SHAPING				
All Feature Shaping	\$ 220,000.00	1.00	EA	\$ 220,000.00
DRAINAGE				
2" Perforated HDPE Pipe	\$ 4.40	49,500.00	LF	\$ 145,200.00
6" Solid HDPE Pipe (N-12 ADS)	\$ 9.90	3,653.00	LF	\$ 24,109.80
8" Solid HDPE Pipe (N-12 ADS)	\$ 11.44	3,814.00	LF	\$ 29,088.11
10" Solid HDPE Pipe (N-12 ADS)	\$ 13.20	1,730.00	LF	\$ 15,224.00
12" Solid HDPE Pipe (N-12 ADS)	\$ 14.52	475.00	LF	\$ 4,598.00
18" Solid HDPE Pipe (N-12 ADS)	\$ 20.68	500.00	LF	\$ 6,893.33
Drainage Inlets	\$ 242.00	92.00	EA	\$ 14,842.67
Catch Basins	\$ 748.00	2.00	EA	\$ 997.33
GREEN CONSTRUCTION				
Greens Construction (SF)	\$ 3.96	148,802.00	SF	\$ 589,255.92
TEE CONSTRUCTION				
Tee Construction	\$ 0.48	152,516.00	SF	\$ 73,817.74
SAND BUNKER CONSTRUCTION				
Bunker Removal (SF)	\$ 1.00	94,568.00	SF	\$ 94,568.00
Bunker Construction (SF)	\$ 5.50	52,952.00	SF	\$ 291,236.00
CART PATH REMOVAL & CONSTRUCTION				
Removal of 8' Cart Path (Onsite LF)	\$ 2.29	22,543.00	LF	\$ 51,578.38
Removal of 14' Cart Path (Onsite LF)	\$ 4.01	922.00	LF	\$ 3,699.80
8' Asphalt Cart Path Const. (LF)	\$ 21.60	38,300.00	LF	\$ 551,622.13
12' Asphalt Cart Path Const. (LF)	\$ 30.49	1,304.00	LF	\$ 26,507.71
Asphalt Cart Path Turn-Arounds (SF)	\$ 3.43	1,845.00	SF	\$ 4,221.36
SEEDBED PREPARATION				
Seedbed Prep (AC)	\$ 2,873.20	100.62	AC	\$ 289,101.38
GRASSING				
Seed Green Surrounds	\$ 0.13	32,827.00	SF	\$ 4,333.16
Sod rough areas	\$ 0.39	750,000	SF	\$ 290,400.00
Seeding Greens (007 Bent)	\$ 0.08	148,802.00	SF	\$ 11,785.12
Seeding Tees (Bent)	\$ 0.12	152,516.00	SF	\$ 18,454.44
Seeding Fairways (Bent)	\$ 2,112.00	36.47	AC	\$ 77,024.64
Seeding Rough Blend	\$ 1,738.00	30.92	AC	\$ 53,738.96
Oak Savanna Restoration Areas	\$ 2,398.00	32.75	AC	\$ 78,534.50
TREE PLANTING				
2.5" Dia. (Large & Medium Deciduous)	\$ 378.40	262	EA	\$ 99,140.80
Wetland Plantings	\$ 75,000.00	1.00	EA	\$ 75,000.00
DRIVING RANGE NETTING				
Driving Range Net Construction (LF)	\$ 70.40	975.00	LF	\$ 68,640.00
IRRIGATION				
Irrigation/Pump Station/Pumphouse	\$ 1,200,000.00	1.00	LS	\$ 1,200,000.00
				Sub-Total
				\$ 6,359,521.14
SOFT COSTS				
10% of Costs			LS	\$ 635,952.11
				Total
				\$6,995,473.25

**OPTION 6 - NEW EIGHTEEN HOLE REGULATION GOLF COURSE
AND FOUR - HOLE PRACTICE LOOP WITH MINIMAL DISTURBANCE:**

Item	Unit Cost	Quantity	Unit	Total
PROJECT PREPARATION				
Mobilization (LS)	\$ 190,000.00	1.00	LS	\$ 190,000.00
Layout/Staking	\$ 2,731.52	22.00	EA	\$ 60,093.44
CLEARING				
Spray and Rotovate Existing Turf (AC)	\$ 2,552.00	104.04	AC	\$ 265,510.08
Tee & Fairway Fumigation	\$ 3,168.00	39.77	AC	\$ 125,991.36
Bulk Clearing	\$ 15,000.00	2.37	AC	\$ 35,550.00
Selective Clearing (By Tree)	\$ 440.00	510.00	EA	\$ 224,400.00
EROSION CONTROL				
Silt Fence	\$ 3.30	35,000.00	LF	\$ 115,500.00
Fairway Erosion Control Blankets	\$ 9,680.00	5.00	AC	\$ 48,400.00
Tree Protection	\$ 2.77	1,890.00	LF	\$ 5,239.08
Inlet Protection	\$ 97.02	94.00	EA	\$ 9,119.88
Construction Entrance	\$ 5,280.00	2.00	EA	\$ 10,560.00
TOPSOIL MANAGEMENT				
6" Onsite - Stripping and Stockpiling (CY)	\$ 2.20	80,000.00	CY	\$ 176,000.00
6" Onsite - Replacement and Spreading	\$ 2.99	80,000.00	CY	\$ 239,360.00
BULK EARTHWORK				
Bulk Earthwork (CY)	\$ 2.82	68,000.00	CY	\$ 191,488.00
POND CONSTRUCTION				
Pond Construction (CY) - dewatering	\$ 9.64	30,000.00	CY	\$ 289,080.00
SHAPING				
All Feature Shaping	\$ 250,000.00	1.00	EA	\$ 250,000.00
DRAINAGE				
2" Perforated HDPE Pipe	\$ 4.40	49,500.00	LF	\$ 145,200.00
6" Solid HDPE Pipe (N-12 ADS)	\$ 9.90	3,653.00	LF	\$ 24,109.80
8" Solid HDPE Pipe (N-12 ADS)	\$ 11.44	3,814.00	LF	\$ 29,088.11
10" Solid HDPE Pipe (N-12 ADS)	\$ 13.20	1,730.00	LF	\$ 15,224.00
12" Solid HDPE Pipe (N-12 ADS)	\$ 14.52	475.00	LF	\$ 4,598.00
18" Solid HDPE Pipe (N-12 ADS)	\$ 20.68	500.00	LF	\$ 6,893.33
Drainage Inlets	\$ 242.00	92.00	EA	\$ 14,842.67
Catch Basins	\$ 748.00	2.00	EA	\$ 997.33
GREEN CONSTRUCTION				
Greens Construction (SF)	\$ 3.96	174,855.00	SF	\$ 692,425.80
TEE CONSTRUCTION				
Tee Construction	\$ 0.48	186,408.00	SF	\$ 90,221.47
SAND BUNKER CONSTRUCTION				
Bunker Removal (SF)	\$ 1.00	94,568.00	SF	\$ 94,568.00
Bunker Construction (SF)	\$ 5.50	50,599.00	SF	\$ 278,294.50
CART PATH REMOVAL & CONSTRUCTION				
Removal of 8' Cart Path (Onsite LF)	\$ 2.29	22,543.00	LF	\$ 51,578.38
Removal of 14' Cart Path (Onsite LF)	\$ 4.01	922.00	LF	\$ 3,699.80



8' Asphalt Cart Path Const. (LF)	\$ 21.60	38,300.00	LF	\$ 551,622.13
12' Asphalt Cart Path Const. (LF)	\$ 30.49	1,304.00	LF	\$ 26,507.71
Asphalt Cart Path Turn-Arounds (SF)	\$ 3.43	1,845.00	SF	\$ 4,221.36
SEEDBED PREPARATION				
Seedbed Prep (AC)	\$ 2,873.20	96.95	AC	\$ 278,556.74
GRASSING				
Seed Green Surrounds	\$ 0.13	38,574.00	SF	\$ 5,091.77
Sod rough areas	\$ 0.39	850,000	SF	\$ 329,120.00
Seeding Greens (007 Bent)	\$ 0.08	174,855.00	SF	\$ 13,848.52
Seeding Tees (Bent)	\$ 0.12	186,408.00	SF	\$ 22,555.37
Seeding Fairways (Bent)	\$ 2,112.00	35.50	AC	\$ 74,976.00
Seeding Rough Blend	\$ 1,738.00	25.93	AC	\$ 45,066.34
Oak Savanna Restoration Areas	\$ 2,398.00	30.87	AC	\$ 74,026.26
TREE PLANTING				
2.5" Dia. (Large & Medium Deciduous)	\$ 378.40	247	EA	\$ 93,449.66
Wetland Plantings	\$ 75,000.00	1.00	EA	\$ 75,000.00
DRIVING RANGE NETTING				
Driving Range Net Construction (LF)	\$ 70.40	975.00	LF	\$ 68,640.00
IRRIGATION				
Irrigation/Pump Station/Pumphouse	\$ 1,400,000.00	1.00	LS	\$ 1,400,000.00
				Sub-Total
				\$ 6,750,714.90
SOFT COSTS				
10% of Costs			LS	\$ 675,071.49
				Total
				\$7,425,786.39

ADDENDA

ADDENDUM 1 - NEW HOLES #1 & 2:

Item	Unit Cost	Quantity	Unit	Total
PROJECT PREPARATION				
Mobilization (LS)	\$ 15,000.00	1.00	LS	\$ 15,000.00
Layout/Staking	\$ 2,731.52	2.00	EA	\$ 5,463.04
CLEARING				
Spray and Rotovate Existing Turf (AC)	\$ 2,552.00	8.60	AC	\$ 21,947.20
Tee & Fairway Fumigation	\$ 3,168.00	5.36	AC	\$ 16,980.48
EROSION CONTROL				
Silt Fence	\$ 3.30	6,600.00	LF	\$ 21,780.00
BULK EARTHWORK				
Bulk Earthwork (CY)	\$ 2.82	6,000.00	CY	\$ 16,896.00
SHAPING				
All Feature Shaping	\$ 23,000.00	1.00	EA	\$ 23,000.00
GREEN CONSTRUCTION				

Greens Construction (SF)	\$ 3.96	13,978.00	SF	\$ 55,352.88
TEE CONSTRUCTION				
Tee Construction	\$ 0.48	16,584.00	SF	\$ 8,026.66
SAND BUNKER CONSTRUCTION				
Bunker Removal (SF)	\$ 1.00	4,305.00	SF	\$ 4,305.00
Bunker Construction (SF)	\$ 5.50	4,054.00	SF	\$ 22,297.00
CART PATH REMOVAL & CONSTRUCTION				
Removal of 8' Cart Path (Onsite LF)	\$ 2.29	947.00	LF	\$ 2,166.74
8' Asphalt Cart Path Const. (LF)	\$ 21.60	3,127.00	LF	\$ 67,555.71
SEEDBED PREPARATION				
Seedbed Prep (AC)	\$ 2,873.20	7.80	AC	\$ 22,410.96
GRASSING				
Seed Green Surrounds	\$ 0.13	3,179.00	SF	\$ 419.63
Sod rough areas	\$ 0.39	106,000	SF	\$ 41,043.20
Seeding Greens (007 Bent)	\$ 0.08	13,978.00	SF	\$ 1,107.06
Seeding Tees (Bent)	\$ 0.12	16,584.00	SF	\$ 2,006.66
Seeding Fairways (Bent)	\$ 2,112.00	4.90	AC	\$ 10,348.80
Seeding Rough Blend	\$ 1,738.00	0.50	AC	\$ 869.00
DRIVING RANGE NETTING				
Driving Range Net Construction (LF)	\$ 70.40	975.00	LF	\$ 68,640.00
			Sub-Total	\$ 427,616.01
SOFT COSTS				
10% of Costs			LS	\$ 42,761.60
			Total	\$ 470,377.61



All Feature Shaping	\$ 11,500.00	1.00	EA	\$ 11,500.00
GREEN CONSTRUCTION				
Greens Construction (SF)	\$ 3.96	7,139.00	SF	\$ 28,270.44
TEE CONSTRUCTION				
Tee Construction	\$ 0.48	8,293.00	SF	\$ 4,013.81
SAND BUNKER CONSTRUCTION				
Bunker Removal (SF)	\$ 1.00	1,594.00	SF	\$ 1,594.00
Bunker Construction (SF)	\$ 5.50	3,584.00	SF	\$ 19,712.00
CART PATH REMOVAL & CONSTRUCTION				
Removal of 8' Cart Path (Onsite LF)	\$ 2.29	247.00	LF	\$ 565.14
8' Asphalt Cart Path Const. (LF)	\$ 21.60	2,015.00	LF	\$ 43,532.06
SEEDBED PREPARATION				
Seedbed Prep (AC)	\$ 2,873.20	5.13	AC	\$ 14,739.52
GRASSING				
Seed Green Surrounds	\$ 0.13	1,600.00	SF	\$ 211.20
Sod rough areas	\$ 0.39	58,200	SF	\$ 22,535.04
Seeding Greens (007 Bent)	\$ 0.08	7,139.00	SF	\$ 565.41
Seeding Tees (Bent)	\$ 0.12	8,293.00	SF	\$ 1,003.45
Seeding Fairways (Bent)	\$ 2,112.00	2.17	AC	\$ 4,583.04
Seeding Rough Blend	\$ 1,738.00	3.75	AC	\$ 6,517.50
			Sub-Total	\$ 254,515.33
SOFT COSTS				
10% of Costs			LS	\$ 25,451.53
			Total	\$ 279,966.86

ADDENDUM 2 - NEW HOLE #14:

Item	Unit Cost	Quantity	Unit	Total
PROJECT PREPARATION				
Mobilization (LS)	\$ 15,000.00	1.00	LS	\$ 15,000.00
Layout/Staking	\$ 2,731.52	1.00	EA	\$ 2,731.52
CLEARING				
Spray and Rotovate Existing Turf (AC)	\$ 2,552.00	5.57	AC	\$ 14,214.64
Tee & Fairway Fumigation	\$ 3,168.00	2.36	AC	\$ 7,476.48
Bulk Clearing	\$ 15,000.00	0.80	AC	\$ 12,000.00
EROSION CONTROL				
Silt Fence	\$ 3.30	3,190.00	LF	\$ 10,527.00
Fairway Erosion Control Blankets	\$ 9,680.00	1.00	AC	\$ 9,680.00
Tree Protection	\$ 2.77	1,890.00	LF	\$ 5,239.08
BULK EARTHWORK				
Bulk Earthwork (CY)	\$ 2.82	6,500.00	CY	\$ 18,304.00
SHAPING				

ADDENDUM 3 - NEW HOLE #15:

Item	Unit Cost	Quantity	Unit	Total
PROJECT PREPARATION				
Mobilization (LS)	\$ 15,000.00	1.00	LS	\$ 15,000.00
Layout/Staking	\$ 2,731.52	1.00	EA	\$ 2,731.52
CLEARING				
Spray and Rotovate Existing Turf (AC)	\$ 2,552.00	5.43	AC	\$ 13,857.36
Tee & Fairway Fumigation	\$ 3,168.00	2.07	AC	\$ 6,557.76
Bulk Clearing	\$ 15,000.00	0.50	AC	\$ 7,500.00
EROSION CONTROL				
Silt Fence	\$ 3.30	2,840.00	LF	\$ 9,372.00
Tree Protection	\$ 2.77	1,890.00	LF	\$ 5,239.08
BULK EARTHWORK				
Bulk Earthwork (CY)	\$ 2.82	9,000.00	CY	\$ 25,344.00
SHAPING				
All Feature Shaping	\$ 11,500.00	1.00	EA	\$ 11,500.00

GREEN CONSTRUCTION				
Greens Construction (SF)	\$ 3.96	7,139.00	SF	\$ 28,270.44
TEE CONSTRUCTION				
Tee Construction	\$ 0.48	8,293.00	SF	\$ 4,013.81
SAND BUNKER CONSTRUCTION				
Bunker Removal (SF)	\$ 1.00	1,594.00	SF	\$ 1,594.00
Bunker Construction (SF)	\$ 5.50	3,296.00	SF	\$ 18,128.00
CART PATH REMOVAL & CONSTRUCTION				
Removal of 8' Cart Path (Onsite LF)	\$ 2.29	570.00	LF	\$ 1,304.16
8' Asphalt Cart Path Const. (LF)	\$ 21.60	1,318.00	LF	\$ 28,474.07
SEEDBED PREPARATION				
Seedbed Prep (AC)	\$ 2,873.20	5.00	AC	\$ 14,366.00
GRASSING				
Seed Green Surrounds	\$ 0.13	1,600.00	SF	\$ 211.20
Sod rough areas	\$ 0.39	57,400	SF	\$ 22,225.28
Seeding Greens (007 Bent)	\$ 0.08	7,139.00	SF	\$ 565.41
Seeding Tees (Bent)	\$ 0.12	8,293.00	SF	\$ 1,003.45
Seeding Fairways (Bent)	\$ 2,112.00	1.86	AC	\$ 3,928.32
Seeding Rough Blend	\$ 1,738.00	1.79	AC	\$ 3,111.02
Sub-Total				\$ 224,296.89
SOFT COSTS				
10% of Costs			LS	\$ 22,429.69
Total				\$ 246,726.57



ADDENDUM 4 - NEW HOLE # 21:

Item	Unit Cost	Quantity	Unit	Total
PROJECT PREPARATION				
Mobilization (LS)	\$ 15,000.00	1.00	LS	\$ 15,000.00
Layout/Staking	\$ 2,731.52	1.00	EA	\$ 2,731.52
CLEARING				
Spray and Rotovate Existing Turf (AC)	\$ 2,552.00	3.04	AC	\$ 7,758.08
Tee & Fairway Fumigation	\$ 3,168.00	1.96	AC	\$ 6,209.28
Bulk Clearing	\$ 15,000.00	0.67	AC	\$ 10,050.00
EROSION CONTROL				
Silt Fence	\$ 3.30	2,610.00	LF	\$ 8,613.00
Tree Protection	\$ 2.77	1,890.00	LF	\$ 5,239.08
BULK EARTHWORK				
Bulk Earthwork (CY)	\$ 2.82	4,500.00	CY	\$ 12,672.00
SHAPING				
All Feature Shaping	\$ 11,500.00	1.00	EA	\$ 11,500.00
GREEN CONSTRUCTION				

Greens Construction (SF)	\$ 3.96	7,139.00	SF	\$ 28,270.44
TEE CONSTRUCTION				
Tee Construction	\$ 0.48	8,293.00	SF	\$ 4,013.81
SAND BUNKER CONSTRUCTION				
Bunker Removal (SF)	\$ 1.00	973.00	SF	\$ 973.00
Bunker Construction (SF)	\$ 5.50	1,287.00	SF	\$ 7,078.50
CART PATH REMOVAL & CONSTRUCTION				
Removal of 8' Cart Path (Onsite LF)	\$ 2.29	1,160.00	LF	\$ 2,654.08
8' Asphalt Cart Path Const. (LF)	\$ 21.60	1,910.00	LF	\$ 41,263.64
SEEDBED PREPARATION				
Seedbed Prep (AC)	\$ 2,873.20	2.66	AC	\$ 7,642.71
GRASSING				
Seed Green Surrounds	\$ 0.13	1,600.00	SF	\$ 211.20
Sod rough areas	\$ 0.39	51,300	SF	\$ 19,863.36
Seeding Greens (007 Bent)	\$ 0.08	7,139.00	SF	\$ 565.41
Seeding Tees (Bent)	\$ 0.12	8,293.00	SF	\$ 1,003.45
Seeding Fairways (Bent)	\$ 2,112.00	1.77	AC	\$ 3,738.24
Sub-Total				\$ 197,050.81
SOFT COSTS				
10% of Costs			LS	\$ 19,705.08
Total				\$ 216,755.89

ADDENDUM 5 - NEW HOLES #23, 24, & 26:

Item	Unit Cost	Quantity	Unit	Total
PROJECT PREPARATION				
Mobilization (LS)	\$ 15,000.00	1.00	LS	\$ 15,000.00
Layout/Staking	\$ 2,731.52	3.00	EA	\$ 8,194.56
CLEARING				
Spray and Rotovate Existing Turf (AC)	\$ 2,552.00	9.40	AC	\$ 23,988.80
Tee & Fairway Fumigation	\$ 3,168.00	4.28	AC	\$ 13,559.04
Bulk Clearing	\$ 15,000.00	1.44	AC	\$ 21,600.00
EROSION CONTROL				
Silt Fence	\$ 3.30	7,387.00	LF	\$ 24,377.10
Tree Protection	\$ 2.77	1,890.00	LF	\$ 5,239.08
BULK EARTHWORK				
Bulk Earthwork (CY)	\$ 2.82	5,000.00	CY	\$ 14,080.00
SHAPING				
All Feature Shaping	\$ 34,500.00	1.00	EA	\$ 34,500.00
GREEN CONSTRUCTION				
Greens Construction (SF)	\$ 3.96	21,417.00	SF	\$ 84,811.32
TEE CONSTRUCTION				
Tee Construction	\$ 0.48	24,879.00	SF	\$ 12,041.44

SAND BUNKER CONSTRUCTION				
Bunker Removal (SF)	\$ 1.00	14,718.00	SF	\$ 14,718.00
Bunker Construction (SF)	\$ 5.50	5,355.00	SF	\$ 29,452.50
CART PATH REMOVAL & CONSTRUCTION				
Removal of 8' Cart Path (Onsite LF)	\$ 2.29	2,700.00	LF	\$ 6,177.60
8' Asphalt Cart Path Const. (LF)	\$ 21.60	3,775.00	LF	\$ 81,555.10
Asphalt Cart Path Turn-Arounds (SF)	\$ 3.43	615.00	SF	\$ 2,110.68
SEEDBED PREPARATION				
Seedbed Prep (AC)	\$ 2,873.20	8.21	AC	\$ 23,588.97
GRASSING				
Seed Green Surrounds	\$ 0.13	4,800.00	SF	\$ 633.60
Sod rough areas	\$ 0.39	150,000	SF	\$ 58,080.00
Seeding Greens (007 Bent)	\$ 0.08	7,139.00	SF	\$ 565.41
Seeding Tees (Bent)	\$ 0.12	8,293.00	SF	\$ 1,003.45
Seeding Fairways (Bent)	\$ 2,112.00	3.71	AC	\$ 7,835.52
Seeding Rough Blend	\$ 1,738.00	1.00	AC	\$ 1,738.00
			Sub-Total	\$ 484,850.17
SOFT COSTS	10% of Costs		LS	\$ 48,485.02
			Total	\$ 533,335.19

ADDENDUM 6 - DRAINAGE WORK:

Item	Unit Cost	Quantity	Unit	Total
PROJECT PREPARATION				
Mobilization (LS)	\$ 50,000.00	1.00	LS	\$ 50,000.00
Layout/Staking	\$ 2,731.52	1.00	EA	\$ 2,731.52
EROSION CONTROL				
Silt Fence	\$ 3.30	10,000.00	LF	\$ 33,000.00
DRAINAGE				
2" Perforated HDPE Pipe	\$ 4.40	49,500.00	LF	\$ 217,800.00
6" Solid HDPE Pipe (N-12 ADS)	\$ 9.90	3,653.00	LF	\$ 36,164.70
8" Solid HDPE Pipe (N-12 ADS)	\$ 11.44	3,814.00	LF	\$ 43,632.16
10" Solid HDPE Pipe (N-12 ADS)	\$ 13.20	1,730.00	LF	\$ 22,836.00
12" Solid HDPE Pipe (N-12 ADS)	\$ 14.52	475.00	LF	\$ 6,897.00
18" Solid HDPE Pipe (N-12 ADS)	\$ 20.68	500.00	LF	\$ 10,340.00
Drainage Inlets	\$ 242.00	92.00	EA	\$ 22,264.00
Catch Basins	\$ 748.00	2.00	EA	\$ 1,496.00
			Sub-Total	\$ 447,161.38
SOFT COSTS	10% of Costs		LS	\$ 44,716.14
			Total	\$ 491,877.52

RENOVATION OPTIONS SUMMARY

1. Recommended Project: \$ 8,592,229.10
2. Alternative Renovation Option 1: Greens, Sand Bunkers, Select Clearing \$ 2,420,248.69
3. Alternative Renovation Option 2: Add Tee Complexes and Irrigation System \$ 5,400,872.57
4. Alternative Renovation Option 3: Add Cart Path and Oak Areas \$ 7,871,300.25
5. Alternative Routing Option 1: The Best 27 Holes Possible \$ 9,331,956.51
6. Alternative Routing Option 2: The Best 27 Holes Possible w/Min. Disturbance \$ 8,829,195.79
7. Alternative Routing Option 3: Best 27 with 9 Hole Executive Course \$ 8,910,738.12
8. Alternative Routing Option 4: New 18 Hole Regulation Course \$ 6,983,688.75
9. Alternative Routing Option 5: New 18 Holes with Minimal Disturbance \$ 6,995,473.25
10. Alternative Routing Option 6: New 18 & Four-Hole Practice Loop \$ 7,425,786.39
11. Addendum 1: New Holes 1 & 2 \$ 470,377.61
12. Addendum 2: New Hole 14 \$ 279,966.86
13. Addendum 3: New Hole 15 \$ 246,726.57
14. Addendum 4: New Hole 21 \$ 216,755.89
15. Addendum 5: New Holes 23, 24, & 26 \$ 533,335.19
16. Addendum 6: Drainage Work \$ 491,877.52



Renovation Business Plan Master Quantities List

Existing Conditions

Hole	Tees (SF)	Greens (SF)	Fairways (AC)	Bunkers (EA)	Bunkers (SF)
1	9,731	4,667	1.57	1	2,517
2	3,948	4,308	2.41	1	1,788
3	4,502	5,540	0.32	1	1,355
4	3,973	5,458	1.69	1	1,594
5	3,061	5,375	1.45	1	1,124
6	4,333	5,545	1.57	3	6,842
7	4,787	5,362	0.28	2	2,720
8	4,850	5,477	1.21	4	5,579
9	6,438	6,348	1.48	3	4,825
10	6,087	3,433	1.82	2	1,966
11	2,797	5,775	1.28	3	2,234
12	4,630	4,707	0.05	2	2,173
13	4,755	7,164	1.48	1	1,973
14	4,354	5,314	1.95	4	5,057
15	4,761	4,655	1.65	3	3,330
16	3,772	5,760	1.43	2	2,018
17	9,182	7,005	0.26	3	8,002
18	6,671	5,565	0.80	2	4,408
19	4,430	5,807	1.11	1	1,171
20	9,997	6,343	0.19	2	2,899
21	7,493	6,807	1.09	1	973
22	9,213	5,636	0.10	3	7,012
23	6,915	4,779	1.62	5	9,245
24	8,923	4,516	1.32	2	4,206
25	6,836	6,600	0.04	2	3,035
26	4,779	4,357	0.86	2	2,437
27	5,000	6,968	1.10	2	1,699
Short Game Area	0	3,710	0.08	2	1,036
Small Putting Green	0	4,012	0.03	0	0
Large Putting Green	0	11,928	0.05	0	0
Totals	156,218	168,921	30.29	61	93,218

Overall Task Checklist

Hole	Bulk Clearing	Select Clearing	Tees	Earthwork	Rock Earthwork	Fairway Shaping	Fairway Bunkers/ Mounds	Green	Green Bunkers	Drainage Work	Cartpath
1		■	■	■		■	■	■	■	■	■
2		■	■	■				■	■	■	■
3		■	■					■	■		■
4		■	■	■		■	■	■	■	■	■
5		■	■				■	■	■		■
6		■	■					■		■	■
7		■	■					■	■		■
8		■	■				■	■	■	■	■
9		■	■					■	■	■	■
10		■	■	■			■	■	■		■
11		■	■	■			■	■	■	■	■
12	■	■	■	■				■	■		■
13		■	■	■				■	■	■	■
14	■	■	■	■		■	■	■	■	■	■
15	■	■	■	■		■	■	■	■	■	■
16		■	■	■			■	■	■	■	■
17		■	■					■	■	■	■
18		■	■				■	■	■	■	■
19		■	■					■			■
20		■	■					■	■		■
21		■	■	■			■	■	■		■
22		■	■					■	■		■
23		■	■					■	■		■
24		■	■	■				■	■		■
25		■	■	■				■	■	■	■
26		■	■	■				■	■	■	■
27		■	■				■	■	■		■
Small Putting Green								■			■
Large Putting Green								■			■

Proposed Features

Hole	Tees (SF)	Greens (SF)	Fairways (AC)	Bunkers (SF)	Bunkers (EA)	Earthwork (CY)	Import Topsoil (CY)	2" Pipe(LF)	6" Pipe(LF)	8" Pipe(LF)	10" Pipe(LF)	12" Pipe(LF)	18" Pipe(LF)	Drop Inlets	Catch Basins	Sod (SF)	New Cartpath - 8' (LF)	New Cartpath - 12' (LF)	Clearing (Tree)	Cartpath to Remove(LF)	Limits of Disturbance(AC)
1	8,415	6,838	2.63	2,839	2	3,000	2,500	3,800	653	163	0	0	0	8	0	55,853	1,693	0	21.0	1,083	4.58
2	8,295	7,139	2.35	1,215	1	3,000	0	3,800	315	589	290	0	0	12	0	51,103	1,346	0	36.0	242	4.08
3	8,335	6,609	0.33	1,109	1	0	0	0	0	0	0	0	0	0	0	49,885	883	0	15.0	68	2.51
4	7,595	7,139	3.96	5,889	5	3,500	0	0	0	0	0	0	340	1	0	62,325	2,071	0	53.0	627	8.00
5	8,295	5,782	2.54	5,332	5	0	0	0	0	0	0	0	0	0	0	60,740	1,297	296	8.0	325	5.01
6	8,295	5,670	1.93	0	0	0	2,500	3,800	217	500	0	0	0	6	0	44,520	1,497	0	15.0	1,496	4.42
7	7,935	7,139	0.51	2,275	2	0	0	0	0	0	0	0	0	0	0	52,843	183	566	4.0	1,521	1.68
8	8,295	7,139	1.72	2,578	2	0	0	3,800	338	103	0	0	0	4	0	55,192	1,361	0	15.0	813	4.15
9	7,595	7,139	1.47	2,666	2	0	0	3,800	265	282	214	0	0	8	0	52,656	1,277	0	17.0	1,097	4.53
10	8,295	7,139	3.14	3,897	3	2,000	0	0	0	0	0	0	0	0	0	59,149	1,842	0	21.0	586	6.57
11	8,295	7,139	1.91	5,265	4	3,000	0	3,800	280	287	200	0	0	7	0	63,253	1,259	0	17.0	870	4.49
12	7,415	7,139	0.07	4,723	4	3,000	0	0	0	0	0	0	0	0	0	58,107	1,732	0	11.0	1,986	2.08
13	8,295	6,727	1.69	1,128	1	3,500	0	0	102	42	0	0	0	2	0	50,018	1,447	0	20.0	613	3.72
14	8,295	7,139	2.17	3,584	3	6,500	0	0	220	165	208	0	0	3	0	58,210	1,714	0	25.0	190	5.57
15	7,895	7,139	1.85	3,297	3	9,000	0	3,800	587	436	279	258	0	9	2	55,749	1,638	0	tbd	430	5.46
16	8,295	5,528	1.92	2,701	2	3,500	2,500	3,800	0	339	223	130	0	7	0	52,339	2,007	0	tbd	1,280	3.99
17	9,535	7,139	0.36	3,641	3	0	0	3,800	321	80	0	0	0	5	0	63,341	1,002	0	tbd	868	2.08
18	7,415	6,174	1.10	2,362	2	0	0	3,800	406	0	0	0	0	4	0	49,094	1,050	0	tbd	654	2.27
19	8,295	7,139	1.59	0	0	0	0	0	0	0	0	0	0	0	0	47,458	1,368	0	tbd	614	4.10
20	9,935	5,531	0.35	1,817	2	0	0	0	0	0	0	0	0	0	0	56,253	796	0	tbd	864	2.17
21	7,195	7,139	1.77	2,564	2	4,500	0	0	0	0	0	0	0	0	0	50,750	1,912	0	tbd	1,133	3.04
22	9,935	7,139	0.31	3,024	3	0	0	0	0	0	0	0	0	0	0	63,090	1,024	0	tbd	528	2.61
23	8,295	7,148	1.72	907	1	0	2,200	0	0	0	0	0	0	0	0	50,197	1,406	0	tbd	684	4.06
24	7,660	7,139	0.35	2,572	2	2,000	1,800	0	0	0	0	0	0	0	0	52,634	434	0	tbd	235	1.84
25	6,815	7,139	1.63	1,186	1	3,000	2,300	3,800	51	562	179	0	0	11	0	45,096	1,890	0	tbd	1,683	3.87
26	6,715	7,139	1.65	1,876	2	3,000	1,900	3,800	0	266	135	87	0	5	0	46,766	1,985	0	tbd	1,320	3.53
27	8,095	7,139	2.23	7,114	6	0	2,500	3,800	0	0	0	0	0	0	0	68,000	1,798	0	tbd	766	4.67
Short Game Area	0	0	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	tbd	0	0.00
Small Putting Green	0	7,139	0.04	0	0	0	0	0	0	0	0	0	0	0	0	14,278	0	0	tbd	313	0.48
Large Putting Green	0	20,628	0.06	0	0	0	0	0	0	0	0	0	0	0	0	41,256	0	0	tbd	0	0.90
Totals	219,730	212,276	43.35	75,561	64	52,500	18,200	49,400	3,755	3,814	1,728	475	340	92	2	1,530,155	37,912	862	278.0	22,889	106.46

M

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