

GOLF COACHING

AND

GOLF COURSE CONSTRUCTION

&

MAINTENANCE

PGA OF NIGERIA QUALIFYING SCHOOL TRAINING MANUAL

GOLF COACHING

WHAT IS GOLF

The game of golf is all about getting the golf ball into each of the 18 holes in the fewest strokes possible. In another way, golf is a game in which a player using special clubs attempts to sink a ball with as few strokes as possible into each of the 9 or 18 successive holes on a course.

Golf, although not requiring brutal strength, is a sport. Golf is a legitimate sport because it is highly competitive, requires mental capacity, and demands physical exertion and muscle use.

Golf is a game in which a player strikes a small ball with various clubs from a series of starting points (teeing grounds) into a series of holes on a course. The player who holes his ball in the fewest strokes wins. It is played on a large open-air field (course). It is a self-regulating game.

It must be known that the game of golf has transcended mere sport. It has become a vehicle for changing our lives, transforming our society, creating job, developing our youth, and a veritable tools for brand development. It is a business in modern time.

TEACHING & COACHING GOLF

Teaching and coaching golf require patience. Of importance are three key words that must be uppermost in thoughts and practice. These are:

1. EXPLANATION – Explain the content of the day's lesson
2. DEMONSTRATION- Follow the explanation with demonstration
3. APPLICATION –Student do the job after he/she has understood what has been explained and demonstrated.

In teaching golf the following sequence should always be followed. This applies to whether teaching a beginner or established player or when curing faults:

1. Aim
2. Grip
3. Ball Position

4. Stance and Body Alignment
5. Posture
6. The Swing

PLANNING & ORGANISING GOLF COACHING SESSION

Planning is an essential part of golf coaching. It determines a successful coaching session. For every one hour of golf coaching, 20 minutes should be used for planning. For a group coaching session a long time planning will be required. Safety is essential in the planning and execution of plans. Safety of the students, other golfers and non-golfers around should be considered in every session. The following should be considered in all planning:

Lesson plans should be done ahead of time.

Identify and select coaching activities and students drills before the arrival of your students.

Keep your staff or other coaches working with you on the same page with your lesson plans.

Develop plans for good rapport with your student(s).

Coaching sessions and duration should be fixed in agreement with student(s) or parents in some cases.

Number of coaching sessions should be fixed and agreed on.

Method of payment and amount for lessons should be planned ahead and communicated in a professional way to the student(s) or parents as the case may be.

Feedback mechanism on students' progress should be developed and communicated to the students

CONDUCTING AN EFFECTIVE GOLF COACHING SESSION

An effective golf coaching session is one where the relationship between the coach and the student has resulted into accomplishing set goals which had been set before the commencement of the session. Such relationship is voluntary and both parties agreed to play their specific roles for the purpose of accomplishing the set goals.

There are five basic steps that must be followed before a coaching session can be effective. These are:

STEP 1- Interview the student. Ask him how long he has played golf. Does he have any physical limitations or injuries, time, and what type of instruction he has had in the past. Advice on set of clubs he uses if found inappropriate.

STEP 2 – Establish goals for the lesson with the help of the student. Ask him what he hopes to accomplish in the lesson and ultimately, for his golf game. Help the student to clarify and set very specific and achievable goals.

STEP 3 – Clarify the task to be performed, using the three learning methods: **verbal, visual and kinesthetic**. Tell the student what the task is, show him how to perform it, and provide drills to allow him to feel the new technique.

STEP 4 – Guide the student as he attempts to perform the task or drill you have provided. You have reached the heart of the lesson. Allow the student time to practice, and provide positive feedback, focusing on what the student is doing properly. Offer corrections when necessary.

STEP 5 – Summarize the lesson. Discuss the goal you and the student set at the beginning of the lesson and the steps you took to work towards that goal. Give him advice for practicing on his own and explain steps he will need to take, such as specific drills or additional lessons.

EVALUATING GOLF COACHING

The vast majority of golf coaches and PGA Pros are extremely competent in coaching how to swing a club so that the outcome is to their pupil's liking. However, how much attention do they give to how they are coaching their client? How often do they assess the effectiveness of their coaching style and ask themselves whether they could be even more effective than they already are?

It is in an attempt to provide answers to these questions that the **'performance criteria for coaches'** is hereby attached for your consideration. (See attached leaflet).

Thirteen questions are posed and all are based on an analysis of effective coaching. In other words, if a golf coach could honestly tick 'Yes' to the four questions that require either a 'Yes' or 'No' answer and tick the 'Always/Every Opportunity' box for each of the remaining nine questions then he/she can lay claim to being a very effective coach.

The first two questions relate to the way coaches present themselves and their knowledge to their pupils in advance of a coaching session. Unfortunately, so many coaches take a booking from their pupils without discussing with them what they want to improve. Thus, the coach is now in the unfortunate position of having to ask the pupil to 'play a few shots' before they can begin the coaching session.

Now there is nothing wrong with this, except for the fact that the coach is left to identify a starting point for the session and thereby has no time to set a main aim and how the session is to be developed. Can you imagine a Football Coach or an Athletics Coach working in this way?

'Preparation is the key to success'.

The third question identifies a formal term, 'Distributed Practice', that has been proved to improve performance in every sport. Basically, it means that the Main Aim is pursued in no more than three equal chunks of time during the coaching session.

So, after a warm-up (10% of the time available) the coach would pursue a practice, or a series of related practices, with the player for the next 20% of the time available. The coach would then insist on a short break (10%) during which they would ask the player to do something entirely unrelated to what was pursued in the first 20%. But, after the break, the coach would

ask the pupil to return to the practice undertaken in the first 20% part of the session and repeat it exactly as before.

Once completed, the pupil would be asked again do something (10%) that is unrelated to the first and second 20% parts of the session overall. Finally, the coach would ask the pupil to repeat for a second time (third 20% part session in total) what was asked for earlier in the session and, for the final 10% of the session the pupil would be invited to practice 'what he/she likes doing best'; to end in this manner represents what is known as 'the recency effect' – that which is practiced last is best remembered.

Question 4 is about how a practice is developed and 'Successive Approximation' is the term given to the process by which the coach moves a practice on to the next level of difficulty.

If the coach thinks of a ladder with ten rungs then whichever rung the player is on in terms of their development as a golfer (a judgment made by the coach and pupil together), the coach should move up one rung at a time and never more. To jump two rungs in one go is to raise the probability of failure.

Question 5 is straightforward in that if a practice represents something that is NOT required in a competitive round of golf then it is nothing more than a 'time-filler'. It is the coach's role to explain precisely how and when the practice being undertaken is a behaviour that has to be demonstrated by the pupil at least occasionally when playing golf.

Questions 6 and 7 are related in that they need to be asked and answered before the player begins the first practice because they focus attention on precisely what is required and why.

Question 8 reflects the old adage, 'A picture paints a thousand words'. It means that the coach should be able to physically demonstrate the coaching points being made and those that he/she wants the player to replicate.

If the coach cannot do this, then they need to find a golfer who can and ask the pupil to watch this golfer execute precisely what is wanted. If such a golfer is not available then a video recording of the desired technical points

being executed to a high standard is the next best method and should be shown as soon as possible.

Questions 9 to 12 are self-explanatory but often abused. The recommendation here is that the coach should allow the pupil to play at least three shots before offering any feedback and, initially, should begin this interchange by asking the pupil what they thought of their own efforts before offering feedback. This gives the player an opportunity to think about what was achieved and, more importantly, why it was achieved.

The final question may be self-explanatory but it is extremely important that the coach is able to tick the 'Yes' box after the session. This is because the pupil must go away with a clear understanding of what they believe they achieved, what is needed to be worked on and what can be expected in the next coaching session.

SWING INSTRUCTION

Golf instruction is the art of equipping and training golfers to play better golf through improved awareness of swing cause and effects as a result of the actions by their body, the club, and their effect on the golf ball. Most great golfers have a few common elements that make them great including:

1. Proper intentionality
2. Swing repeatability to produce an action that fits the golfer's intentionality
3. A strong level of automaticity for long enjoyment and winning in the game of golf.

REQUIRED SKILLS

Golf instruction consists of five primary skills: shots from a tee (most notable: driving that uses a driver), full shots from the ground (mostly known as "iron shots", pitching (or 3/4 shots designed for distance control, chipping (short shots around the green they require less than a full swing), putting (1 club preferably "the putter") and course strategy or gamesmanship. Proficiency in teaching golf instruction requires not only

technical and physical ability, but also knowledge of the [rules and etiquette of the game](#).

FORMS OF GOLF INSTRUCTION

Golf instruction can be wide ranging, but many great modern day instructors are able to diagnose and prescribe swing frustrations accurately and present a clear fix that encourages the golfer in the discovery of lasting repeatability from the specific ailment that "plagued" them from a sound repeatable swing to play a golf course successfully. Many modern instructors include the following in their diagnosis:

1. Visual feedback through video and bio motion analysis
2. Personalized golf club fitting for individual body and swing types
3. On-course play under real conditions
4. Mental performance development
5. Golf specific body conditioning for optimal golf bio-mechanics

Beginning players can start lesson in several ways, but most do so in either a group or individual setting, covering the five primary skills of golf as noted above [golf swing](#). Golf is an asymmetrical exercise that can break body balances, requiring also adequate exercises to keep the balance in muscles. Experienced recreational players often return for instruction, either to fix a specific problem they are encountering or to improve their game. Reconstruction of a golf swing to reach a high level of play often involves series of lessons over an extended period of time. Junior golfers often begin receiving instruction by age 10 or younger, and often retain private teachers even when coached on a high school golf team.

ROLES OF A GOLF INSTRUCTOR

The roles of golf instructors varied but generally they perform all of the following roles:

1. Give lessons
2. Coach golf teams

3. Plan golf coaching session.
4. Assist golfers and spectators to prevent accidents and manage injury.
5. Advice students/clients on golf clubs and proper fittings
6. Work on students swing and club use.
7. Watches students in action and point out errors such as poor alignment, unnatural rhythm in swing, feet position, improper bending of elbow,
8. Give advice on how to use clubs-whether iron or wood on the fairway or rough.
9. Help to improve putting skills.
10. Teaching rules and golf etiquette.
11. Teaching how to score.

TEACHING A BEGINNER

Always take a left and right handed club when taken a beginner for the first lesson. A number 7 or 8 iron is appropriate.

On the way to the range or teaching area, explain certain features of the course – greens, tees, bunkers etc. Explain golf dressing, the term 'Fore'. Follow-up with explanation on any feature of the course the student has shown interest. All these conversation will make the student to be at ease.

Explain the game. That it is a two-phased exercise:

1. Learning to strike the ball and the movements necessary to achieve this.
2. Playing the game around the course (at some stage make the student aware of the rules and etiquette of the game)

Explain briefly the numbering of clubs and how the trajectory of shot is varied by using different numbered clubs of varying shaft lengths and lofts.

Display interest in any points the student may make and strive to ensure before lesson starts that the student appreciates yours competence to develop his game on the right lines.

In starting your lesson explain that you are going to show the student how to aim and grip the club, taking up the correct stance and body alignment and the correct posture.

All explanation should be followed by demonstration and the student should then be asked to do what has been explained and demonstrated.

Explanation, Demonstration and Application are essential factors in teaching golf.

TEACHING AN ESTABLISHED PLAYER

Of concern to any golf coaching programme are three essential skills. These are:

BALL CONTROL – Ability to control the direction, distance, curvature and trajectory of a golf ball.

DECISION MAKING – Having a sound strategy to play with on the golf course and managing your expectations.

MIND CONTROL – Learning to manage all those emotions that can help or harm your game.

Planning to achieve skills sets, a pathway comprising of 3 steps have been identified. These are:

Step 1 – Game Evaluation

- Building coach/student relationship.
- Ascertaining and assessing student's strength and weaknesses.
- Setting smart and achievable goals.
- Assessing players technique, identifying natural movements and to benchmark different skill sets

Step 2 – Coaching Sessions

This is where the bulk of work lies. Attention is basically to develop the three essential skills – ball control, decision making and mind control. Mixture of different training sessions which cover all of the different shots and topics such as skills acquisition and purposeful practice, training under pressure, golf course play and much more. Distance control shots and

different strategies needed to execute different shots faced by players on day to day basis.

Scoring Zone (100 yards and in): this focuses on short game: putting, chipping, pitching and bunker shots.

Long game sessions- including tee-shot and approach play strategy as well as improving impact skills that include: strike, club face and low point control.

Step 3 – Golf Course Transference- Transferring skills to the golf course. A playing session with the coach will enable the student to discuss his course decision making process. And the coach will see short game execution and current ball control skills. On course coaching sessions provides excellent learning environment and opportunity to develop sound strategy for scoring well.

Ways a Golf Coach Will Improve Your Game and Lower Your Handicap.

It's one of the most important decisions you will ever face in your golfing career. Your handicap's stalled at 15, 19 or 23 and no matter how many buckets of balls you beat on the range, all those niggly little swing kinks just won't go away. In such times, a question flashes across your mind: should I see a golf pro? It's a tough decision, especially with such high-profile self-taught golfers as Bubba Watson and Bryson DeChambeau tearing up the PGA Tour, but my experience is that, if you're serious about improving your golf game, a golf coach is a necessary investment. To help bring you round to the benefits of taking lessons, here's 10 reasons why a good coach will add quality to your game and shave shots from your scores.

1 – Swing Changes

First and foremost, a golf coach can help identify faults in your swing and correct them, leading to less botched shots and more impressive scores. Whilst the proliferation of do-it-yourself coaching tech, like swing recording apps and, for the more affluent among us, launch monitors, may lead you to conclude that you're better off doing this alone, don't be fooled. Even the best swing monitoring technology is no match for the expertise of a real-life coach. If you're serious about sorting those swing flaws, a PGA-qualified teacher should be your first port of call.



2 – Putting

Another area in which a golf coach can help improve your game is in putting. A mixture of factors, including putting's apparent simplicity (compared to a full swing), as well as its relative lack of glamour, cause many players to overlook this crucial element of the game and the ways in which a PGA-qualified coach can help improve it. As with a fuller swing, while there are plenty of great putting aids on the market, these ought to be supplemented with the eye of a coach. A good PGA professional will be able to pick up on things that you wouldn't even think of – an asymmetry between your shoulders and the putter head, or a small but important inconsistency in your address – as well as advising on drills and other exercises to help make the yips a thing of the past.



3 – Short Game

A lot of amateurs don't realise this, but a good short game is mostly technique. Like with putting, the shortness and relative simplicity of the chipping and pitching action can mislead players about its importance and the benefits of getting it right. Set up, for example, is pivotal. Play the ball too far back in your stance and you increase the risk of thinning or flubbing one. Ditto if you play the ball too far forward. Getting the right bounce is also important and will provide a significant margin for error when you don't manage to strike it quite flush. Finally, a good pro can also help train you in developing correct shot and club selection – knowing what shot to play and with what club to do it is half the battle, and one you're more likely to win under the tutelage of a short-game savvy pro.

4 – Club Fitting

A PGA professional's expertise isn't just limited to technical problems, they also know a heck of a lot about club fitting. The benefits about finding the right tools for your game are numerous – chronic slicers can have their banana shots reined in by a driver with a closed face, while getting the right shaft for your swing-speed is an easy way to optimise ball flight. If you get really thick with your pro, he might even give you a discount, and many shops make club fitting's complementary if they end in a significant buy. Don't overlook the importance of a properly fitted set of clubs. It's one of the quickest ways of improving your game.

5 – Technology

Moving on from the point about club fitting, a pro can also be worth seeing for their technology. These days more and more pros are investing in state-of-the-art equipment such as launch monitors, golf simulators and various high-tech swing trackers to help them get the low down on their students' games. Depending on the precise item of equipment, these can be prohibitively costly to purchase yourself and may be difficult to properly interpret without a PGA pro's expertise. With the guidance of a trusted professional, however, this technology can work wonders for improving your swing. It may be worth a trip to the pros for a go on these monitors alone.

6 – Nutrition, Training and Exercise

As you've probably started to glean from this article, today's PGA pros have a really eclectic knowledge base which stretches far beyond identifying a good swing. Many can even provide instruction on things like nutrition and training and exercise regimes. With players like 'Beef' Johnson and Kevin Stadler swinging heavy on the PGA and European Tours, it's easy to kid yourself that when it comes to golf, fitness doesn't really matter. But it does. Things like shedding fat for muscle and improving flexibility can cause dramatic improvements in power and swing quality, as well as your ability to keep swinging strong in a round's final holes. A PGA Pro can be your gateway to making this change.

7 – Course Management

One often underutilised aspect of a PGA-professional is the on-course playing-lesson. While such lessons are often more expensive than a half-hour touch up on the driving range, the value of going out and playing a few holes in your pro's company shouldn't be underestimated. Watching a top player go about making a score is a great way to learn how to do it yourself. Sure, you may not be able to spank 300-yard drives or get up and down from every which way to Sunday, but you can certainly pick up a thing or two about course management from watching a pro plot his way around the course. At the same time, a good pro will also be able to assess how you go about making a score, improving your course management and getting you into other low-score-friendly habits.



8 - Positive Thinking

Bobby Jones famously said that “competitive golf is played mainly on a five-and-a-half-inch course, the space between your ears”. And this too is another key area in which a lesson with a PGA pro can pay dividends. A clued-up pro can put you onto all sorts of great habits including keeping a diary of good shots (in order to help stay positive on every swing), and various other techniques to make sure that your headspace stays conducive to getting the absolute best out of your game.



9 – Confidence

Perhaps most simply, having regular lessons with a PGA pro is likely to improve your confidence. It may be a bit of a placebo effect, but just knowing that a high-quality instructor is invested in improving your game can provide a mental edge (which may save you a couple of shots). Everyone knows that fresh-off-a-lesson feeling and the wonders it does for your ball-striking. Short term and long term, such confidence is bound to result in lower rounds.



10 – A Friend

It might not improve your game, but one final way in which a golf coach can add to your life is just by being an extra friend. It's a great feeling to be able to rock up at the range and have someone to share a laugh and a joke with, or to bitch to after a less-than-ideal round. The best student-coach relationships develop into these kinds of friendships and while this may not shave shots from your score, it will certainly add to the quality to your golfing life.

Source: **Will Trinkwon, 2019.**

GOLF COURSE CONSTRUCTION AND MAINTENANCE

INTRODUCTION

A golf course is a living and breathing thing. Creating a quality golf course does not end the day the construction team leaves. Rather, it is a lifelong process – to which the greatest attention needs to be given. If the most beautiful golf course is left unattended to for 30 days not less than 20% of the investment would have gone down the drain.

The creation of a golf course can turn even an otherwise insignificant tract of land into a highly valuable property. The golf course architect's artistic skill and the builder's expertise can transform a desert, idle farmland — even an old landfill, into an attractive asset that beckons golfers.

However, a golf course is a special kind of asset – one that requires attentive management. So, while an architect and builder lay the groundwork for a truly spectacular golf course, without skilled management, a course will never achieve its full potential. Worse, without competent management, a course will progressively deteriorate.

The design and execution of a golf course project, whether a new course or the renovation of an existing one, can be a complex undertaking. Every course and client is different, though much of the process remains similar.

New course design is unique from renovation or remodeling of an existing course, the Design Section is divided to allow for easier access.

New Course Design

Here are a number of areas to be addressed by the developer for every new golf course. Please note, the order can vary by project.

SITE SELECTION AND EVALUATION

The choice of a site for your golf course can make or break a project. It is unfortunate that in many cases, the golf course property is already set without the advice of the golf course architect. The process of selection and evaluation of property as being suitable for a golf course is multifaceted and there will often be several options. Each option may have a different level of viability and appeal – both objective and subjective. Developers of new golf facilities are urged to closely examine the following items regarding the site before proceeding with a project:

- Site Selection & Evaluation Criteria
- Economic & Market Analysis
- Physical Features Evaluation
- Site Zoning, Permits & Approvals Required
- Off-Site Influences

The golf course architect/expert, if engaged early enough, can play an important role in selecting the construction site or evaluating alternative sites. The architect can quickly assess whether a prospective site has the necessary character for a golf course or if it has critical issues that would make development as a golf course a problem. Such factors as steep terrain, poor soils, difficult access, zoning and approvals opposition, adverse off-site conditions, lack of adequate water supply and other items should be identified as early as possible to avoid choosing a site that cannot produce a quality golf course.

Also, environmental issues such as wetlands must be considered. The site must allow an environmentally responsible approach to the development of the new golf course. The source of water for irrigation, topography, overall site drainage and underlying soil condition are major considerations. The location of the site relative to population centers, accessibility, strong area demographics supporting golf and compatible surrounding land uses must be examined. An in-depth site analysis will usually involve a team of professionals such as the golf course architect, civil engineer, land planner, market analyst and legal counsel to provide accurate assessment of the most critical development factors.

Alternative Type Sites

Despite the usual desire to find spectacular sites for golf, there are more cases today where golf is being used for remediation of degraded sites. We are finding that golf can be a very useful tool to restore value to sites that have had environmental issues. Golf has been instrumental in the restoration of landfill sites, old mining operations, abandoned farms and other degraded properties. For example, Chambers Bay in Tacoma, Washington, the venue for the 2015 US Open Championship and an abandoned mining operation.

Typical Site Criteria

A standard 18-hole golf course requires about 175 acres of usable land in order to have space for safe golf corridors. This area can increase if the site is very open and subject to high wind speeds and can decrease if the course is well contained by topography or trees. Flat is better than too steep, but gently rolling is best. Sites with underlying rock strata or other poor soil conditions can be very expensive to construct. Open fields without too many trees are preferred to reduce clearing costs. The land configuration should not be too irregular with a lot of sharp angles that create difficult spaces for golf routing. Adequate golf play corridors must be provided for safety reasons and to allow for a good relationship between golf and adjacent uses. Having surface waters such as flowing streams

or large ponds is a distinct advantage, both for aesthetic and strategic reasons and to provide a reliable source of irrigation water.

On-site review with project team

Generally, a 20-acre contiguous piece of land is needed for the clubhouse site, 1st and 10th tees, 9th and 18th greens and the practice range. The site should allow for orientation away from the sun when starting, finishing and practicing. Typically, architects and developers strive for a nice panoramic view from the clubhouse. Sites that allow for returning nines are best for operational efficiency. Outstanding natural site features separate a great site from a good one. Simply put, the more and the bigger, the better.

Factors such as location relative to new growth nearby, markets that are underserved by existing golf or where there is demand for a specific niche in the market that has not been filled can all be candidates for good golf sites. Care should be taken by new course developers to do at least preliminary research on what issues may be associated with a site regarding the ability to obtain all of the permits, approvals and zoning that is necessary to construct a new course. It is good to know if a site has too many wetlands that may be impacted or neighbors who are opposed to new development in their area before proceeding too far. All sites possess their own positive and negative characteristics. Site analysis by a golf course architect will lead to the selection of a site best suited for quality golf.

MARKET DEMAND AND FEASIBILITY

All golf course projects begin with a vision. However, an important early step in building a golf course is determining whether this vision is financially sound. The lingering question of “Should we do this?” is best answered by bringing together a team of experts to analyze the facts. Of course, the developer should have already done some internal research that makes him feel that the project can be a success before he begins to secure property and spend money on moving forward.

Where To Begin?

At this stage, a golf course architect that fits the project needs should have been selected along with a specific site. Development considerations vary greatly depending on whether the proposed golf course is to be a public/municipal course, private course, resort facility or part of a real estate development. But there are key elements common to all types of courses that need to be considered. Gaining more detailed knowledge of whether the project is economically feasible and under what terms is critical at this juncture before too much is invested in a dream that is not supported by reality.



Making an Informed Decision



If the developer is to be able to proceed with a high degree of confidence, he will require Information from market analysis, feasibility studies and the economic impact analysis. Producing these documents is critical to decision making on a potential project. Once this preliminary information has been gathered and the data seems favorable, preparing a master plan can begin. Usually, the project will require production of the following reports:

- **Market Analysis** – This document will examine the existing golf facilities within the market area, look at demographic data and try to identify market factors that will influence the ability to compete for new members or additional golf play.
- **Feasibility Study** – This document will be the heart of the reports produced. It will take the market data and analyze it in relation to the specifics of the proposed project and make observations about the economic viability. If the findings are not supportive of the project as proposed, most studies will recommend changes to the project such as reducing costs or filling a different niche in the market.
- **Economic Impact Analysis** – The information found here will be important during the Entitlements phase of the project as it will show how construction of the project will impact the local economy through the amount of jobs created,

spending impacts from construction and operations and additional tax revenues generated for local government use.

It will be very important later in the process of obtaining financing for the project that the information presented in the Market and Feasibility Reports is as accurate and creditable as possible. If these documents are to be used for loan financing or investor presentations, a respected and non-interested third party must prepare them. Members of The Society of Golf Appraisers (SGA) are often used for this purpose because, like the ASGCA, members of SGA must attain high standards within the industry. It is recommended that the market feasibility and financial aspects of the golf portion of a project be prepared separately from the real estate component, if it is to be part of a community or resort.

What is the Cost of a Golf Course?

A key component of any Feasibility Study for golf development is what it will cost to construct the course, clubhouse and other related facilities. Additionally, the cost of ongoing maintenance and operations of the course will be considered in the analysis. While the Market Study may indicate the need for additional golf to serve the area, the proposed course must be designed and built to fit within the price for greens fees or memberships that the demographics of the region justify. There are typically 4 distinct components of “the cost of a golf course” as listed below:

- The cost to purchase the land
- All of the up-front costs of acquiring the permits and approvals, master planning, market/feasibility studies, environmental assessments, preliminary site assessments, engineering and golf routings that must be carried by the developer until financing is obtained. This is the most difficult part of estimating golf course costs due to the extreme uncertainty of the public approval process.
- The cost involved with physical construction of the golf course by the contractor(s) such as earthworks, shaping, feature construction, irrigation and so

on. These are the costs most people think of when asking about the cost of a golf course.

- Ancillary items like the clubhouse, maintenance facility and equipment, pre-opening expenses, turf grow-in, restrooms & shelters, course furnishings, infrastructure costs for site access, power and many other items must be included.

FINANCING

Securing financing for new golf course development on terms that are acceptable to a developer is one of the biggest challenges of building a new facility. Without necessary funding and the proper investment, there are likely to be significant challenges to completing a new golf course development. The goal is to understand these challenges and address them early in the process. The ability to overcome the obstacles to getting funding for a project will depend on many of the other steps being successfully resolved as described below:

Site Selection – The site for the golf development must be suitable for the development of the project, both for golf and any other proposed uses. The location, physical features and other elements of the land have to satisfy the lender as meeting their criteria for lending.

Feasibility – The market feasibility study must support the demand for a new golf facility and this report of feasibility should be prepared by a reputable third-party with high credibility in the golf industry.

Master Plan – A master plan that creatively uses the assets of the land and has the proper relationships between all the proposed uses such that high value for golf and real estate are generated is a must.

Permits & Approvals – Most financing terms will require all permits and other governmental approvals to be in hand before they will finalize any long-term construction loan.

Operations & Management – It is very important for the lender to know that someone with successful golf management experience will operate the facility for which they are lending money.

Financial Strength of the Developer – This is probably one of the requirements that should be given great attention at the beginning of any new golf course development. Because a significant amount of up-front capital will be required before the developer will be able to get the construction loan, the developer must realize the cash needs of the project he will have to provide personally. Typically, the developer of a new course will have to be prepared to cover the cost of down payments for the property, planning and design costs, hiring of consultants for environmental surveys, preparation of market feasibility studies, costs of acquiring permits and approvals and other expenses before getting permanent financing. In addition, most lenders will expect the developer to have a significant percentage of their own money in the deal and will only loan 60% – 80% of the total costs.

Type of Financing Available

Financing is needed for four core components:

- Land acquisition
- Pre- construction costs – Hiring consultants (market appraisers, environmental consultants, engineers, golf architect, land planner, attorney for zoning and permitting work and others) will be required to be retained before the loan for building the course can be finalized.
- Construction, grow-in and start-up costs

- Construction and purchase of ancillary items such as clubhouse, maintenance facility, on-course restrooms, maintenance equipment, course furnishings and other necessary items.

Of the 4 major financing components listed above, the 2nd item (Pre-construction costs) is the most difficult to finance. The costs to go from project inception to having all the necessary work done that will meet lending requirements is very hard to determine because of the uncertainty of acquiring permits and approvals. Funding for this part of a project is generally done by the developer, either out-of-pocket or by sale of shares in the project to investors. These funds for pre-construction costs are high-risk loans as the money may be spent and key approvals may not be granted.

There are many ways in which the necessary capital can be generated for land acquisition and construction financing. Some of the more popular include:

- Traditional bank lending
- Bond funding
- Installment purchase contracts
- Enterprise funds
- Lease agreements
- Real estate development agreements

The details of financing a golf course are very complex and are specific to each project and developer. It is highly recommended by ASGCA members that the advice of financial consultants and other golf developers be obtained very early in the process to help guide the project in the right direction.

CONSTRUCTION DOCUMENTS

Once a routing plan has been completed that fits into the overall master plan and that meets the criteria of the developer, a preliminary set of golf course construction documents is often produced. This set of drawings usually contains enough detail to get an idea of earthworks quantity, and to see how the course will fit with environmental measures. Later, after the approval and financing parts

of the project are more set, the architect/builder will then need to complete a full set of construction documents.

If construction of a new golf course is to be successful, a set of plans that contain the following types of documents should typically be produced:

- Strategy plan
- Staking and layout plan
- Clearing Types and Limits
- Contour/Grading
- Cut and Fill Quantity plans
- Fairway Drainage
- Greens detail plans
- Feature construction of tees, bunkers and greens
- Grassing
- Construction details
- Drainage and Irrigation plans

In addition, such items as irrigation plans, cart path construction, master storm drainage, landscape design, environmental protection and others may be produced by other team members or by the architect depending on their individual expertise. However, even if some plans are not actually done by the architect, their production will still be coordinated by the designer to fit within the theme and style of the golf course.

Often, adjustments will have to be made to the plans in response to environmental issues that come up during the approval or construction phases. The architect must be able to find a solution to the issue that will protect the environment and still keep the course strategy intact.

Other services that are done by most architects include producing a full set of specifications, cost estimates and assistance with contractor selection and bid evaluation.

GOLF COURSE RENOVATION, ALTERATION AND REMODELLING

Most of the above will still need to be considered when engaging in any of these.

Most often attention would need to be given to the following:

- Golf green reconstruction or repositioning
- Golf tee renovation and laser leveling
- Golf bunker renovation and remodeling
- Golf hole extension or realignment

GOLF COURSE DRAINAGE AND IRRIGATION

These projects are often very common in most course renovation, alteration and remodeling. Hence it will be essential for golf course builder to consider the following points:

- Primary and secondary land drainage schemes
- Sand and gravel banding
- Irrigation system design, specification and installation
- Irrigation system upgrades and extensions
- Irrigation storage tanks

GOLF COURSE MAINTENANCE

INTRODUCTION

Golf courses endure high levels of wear and tear caused by excessive use and climatic conditions. Regular maintenance ensures they continue to meet the expectations of members and visitors. Attention should be given to the following for a good maintenance practices:

- Deep tine aeration
- Hollow tining and core collection
- Overseeding
- Top dressing
- Scarification
- Verti cutting

GOLF COURSE TURF SELECTION

Grass selection for the course is an important aspect that requires attention be it a new course or an old one. There are different kinds of grass. The key point here is to use the kind of grass that will be cheaper to maintain and endure test of the weather and soil conditions in the area. The green turf requires more attention than any other aspect of the course. Different kinds of grass are available but key point is to consider certain factors such as

1. Availability of water.
2. Soil condition.
3. Weather condition.
4. Fund availability for maintenance.
5. Flood path ways, and so on.

TYPES OF GRASSES FOR GOLF COURSE

There are different types of grass, each with different traits and adaptable to different climate. Another name for these grasses is turf grass, due to the fact that they are traditionally tough and known to withstand immense traffic. The following are common turf grass on the golf course.

1. Bermuda

This is one of the most popular turf grasses. It is used in hot climate golf location. It is known to withstand heat, drought resistant and also repairs quickly. The dis-advantage associated with it is that it cannot survive in a cold weather, and it sometimes overgrows and fill in the golf holes.

2. Bent grass

This is available in wide varieties, it's a cool season grass with clean blades, it has a fine texture and is known for its beauty. It can also stand up to constant and low mowing, . But due to the fact that bent grass cannot survive in withering heat, it needs a lot of water when temperature increases.

3. Perennial Ryegrass

A longtime favorite for use on golf courses. It can be found in nearly any cool-summer region. Ryegrass has a fine texture and is a clumping rather than running grass, it grows straight. This grass must be heavily planted for tight, hole-free turf.

4. Zoysia

Zoysia can be used in a wide range of climates, with the exception of desert or cold western locations because of its range. Zoysia is a popular

choice throughout the country. This grass, which is a member of the poa family, is deep-rooted, clumping and holds its colour well. The blades are fine and may be mowed to 3/4 of an inch. The dis-advantage is they are sticky and when you think you've hit a nice ball, it could just grab it.

TREATMENT OF TURF GRASS

Herbicides and fertilizer used

Pesticides, herbicides, and insecticides are all chemicals used to maintain the idyllic appeal of a lush green golf course. Though one might think it needs a special fertilizer but it just the regular nitrogen, phosphorus, potassium it requires in large quantity.

COMMON EQUIPMENT NEEDED FOR COURSE MAINTENANCE

Equipment needed to maintain a golf course are:

1. Fairway mowers

The fairway is the closely mown area of grass between the teeing ground and the green on a golf hole. Specialized mowers are required to maintain the fairway.

2. Walking green mowers

These are helpful because they maintain an extremely tight cut to the ground.

3. Bunkers rake

These attachments rake and disperse sand in bunkers so that they always look great. Grass bunkers are hallow areas filled with grass instead of sands

4. Commercial mowers

Commercial mowers can be useful across any course, so not only can they be used for fairways and the grass surrounding, but also for areas around the clubhouse and more to maintain a clean-cut look.

5. Riding green mowers

These types are made gentle enough so the greens are not destroyed. It enables precision and ease of use for operators

HAND TOOLS

There are several hand tools that you need. Some of these are:

Rakes

Prybars

Brooms

Shovels

Picks

Steam cleaner

Edger

Trimmers

Metal detector

Wire tracer

Other Equipment Includes

1. Chainsaw

Mower are not enough when it comes to golf course maintenance. You need chainsaw to trim down trees in the area.

2. Hoses and Nozzles

Even if you have a proper irrigation and sprinkler system installed in the course, you still have to have hoses and nozzles to ensure proper and timely distribution of water.

3. Portable Soil Moisture Meter

Monitoring moisture in the soil is essential to ensure you don't end up ruining grass and its texture by watering too much or too low. Grass needs

a specific amount of water depending on weather conditions in your area. It can check soil temperature up to a certain depth.

5.Grinder

It is used for grinding to get smooth or a desired surface.

6.Handheld and Backpack Blowers

Blowers let you remove leaves, debris, and grass cuttings from the field. Handheld and backpack are the two major types of blowers.

6.Hydraulic Lifter

Useful for lifting equipment and tools. Can also be used to move fault machines

7. Utility vehicle

For transportation and movement of tools and equipment across the greens