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FELLOW OF THE AMERICAN SOCIETY OF GOLF COURSE ARCHITECTS



SPECIFICATIONS
&
INSTRUCTIONS TO CONTRACTOR

For

TAHOE DONNER
GOLF COURSE

11509 Northwoods Blvd.
Truckee, CA 96161

Prepared By:

CARY BICKLER, INC.
Golf Course Design

Date: August 26, 2019

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SECTION "A"

SCOPE OF IMPROVEMENTS

SCOPE OF IMPROVEMENTS

FOR THE FOLLOWING HOLES

(Holes #1, #2, #4, #5, #8, #10, #11, #12 #15-A, & #16)

Build per Plans & Specifications prepared by: CARY BICKLER, INC. Golf Course Design (CBI)

1. SITE PREPARATION/ DEMO AND CLEARING

2. RENOVATION OF THE FOLLOWING:

HOLE #1

- Enlarge two forward tee boxes left towards the fairway. Import 100 cy of soil.

HOLE #2

- Expand and relocate the upper forward tee box to the lower left of the fairway. Export cut soil from the upper tee to the new lower tee.

HOLE #4

- Add interesting contours in a new collection area left of green. This will add visual interest, as well as challenge the player with uneven lies and interesting putting from the collection area.
- Raise high point of the mound behind and left of green for improved balance and green complex framing
- Enlarge two forward tee boxes

HOLE #5

- Enlarge the green tee box

HOLE #8

- Improve depth perception from the tee to the dogleg right fairway by:
- Reconfiguring mounding to left of fairway landing area to mirror the mountain vistas in the backdrop
- This will also help disguise the cart path from view at the tee
- Enlarge 2 forward tees

HOLE #10

- Improve the drainage in the fairway landing area for better playing conditions

- Install sub-drainage in the fairway
- Cap fill material with 1-foot of sand
- Sod fairway

HOLE #11

- Eliminate 900 lineal feet of asphalt cart path on the right.
- Reshape this area back to original character resulting in a wider fairway, improved aesthetics and playability.
- By eliminating the cart path, the hole will be transformed in to one of the most beautiful holes on the golf course.
- Haul road stabilization (of ½ inch rock/ 3 inches deep) to be laid on slope between #2 tees and #11 tees.
- Reroute 1,000 lineal feet of new asphalt cart path left of the fairway hiding it from view.
- Cap work area with 6 inches of clean native sandy loam soil.
- Re-contour the slope on right 130 yards out from the green to match the character of slope being created in front of it in the area from the tees to the green.
- Relocate 2 forward tees closer to the cart path after import soil has been placed.

HOLE #12

- Widen and enlarge the silver and green tees by combining three small tees into one tee at the same level with a 1.4% pitch front to back. Install a concrete block retaining wall and stairsteps. Cover with native stone veneer (to be found on-site.)

HOLE #15-A

- Redesign first landing area between the 2 drainage ditches and add mounds on the right side of fairway.

HOLE #16

- Widen the back tee at Hole #16 approximately 15-feet towards the cart path. Install a concrete block retaining wall and stairsteps between the tee and the cart path. Cover with native stone veneer (to be found on-site)
- Improve golf cart traffic wear and tear on the right side of the fairway, short right of the green. Regrade the fairway subgrade (minus 2 inches) and cap with 4 inches of sand.

- Widen the Hole #16 back tee approximately 15-feet toward the cart path.
 - Install (on-site) native rock wall between the tee and cart path.
 - Expand green and blue tee boxes.
3. BEGIN WORK NO LATER THAN **MAY 2020**
 4. THE CONTRACTOR SHALL PREPARE A GPS SURVEY GRADE FOR TOPOGRAPHY at .50 contour intervals (prior to beginning demo work on #10 fairway.) These measurements shall be submitted to the Golf Course Designer.

SCOPE OF IMPROVEMENTS - NOTES:

The golf course renovation is “earthwork balance” (*dependent on Import Soil*)

- The import balance per the CBI Grading Plan is approximately **4,865 cy**
- The work is more specifically outlined in the Plans & Specifications.

BID INFORMATION For The CONTRACTOR

IMPORTANT DATES

PRE-BID MEETING DATE: *Wednesday September 4, 2019 at 8:00 AM (PST)*

BID DEADLINE: *(no later than) Monday September 9, 2019 at 2:00 PM (PST)*

Return Bid via email to:

BRIAN YOHN, CCAM

Tahoe Donner Golf Course
Email: byohn@tahoedonner.com
Office: (530) 582-9671

And

KEVIN KUEHNE, Golf Course Superintendent

Email: kkuehne@tahoedonner.com
Cell: (530) 448-9075

And

CARY BICKLER, Golf Course Designer

Email: cb@bickler.com
Cell: (619) 884-3551

Questions During the Bidding Period:

- Please email any questions regarding the Bid Package and the project to Cary Bickler. All questions & answers will be forwarded to all the bidders.
- Tahoe Donner Association shall make a Contractor selection after reviewing Bids

PHASING OF CONSTRUCTION

Start the Renovation Project, & Complete the Project

- **The first week of May 2020** - Start The Renovation Project
- **August 2020** - Complete The Project

LIST OF ITEMS TO BE INCLUDED IN THE BID

To Be Provided By
➤ The GOLF COURSE CONSTRUCTION CONTRACTOR

The GOLF COURSE CONSTRUCTION CONTRACTOR shall submit the following:

1. CONSTRUCTION DATES: (Fill in Dates)

Completion Date - Golf Course Renovation _____ 2020

2. DETAILED CONSTRUCTION SCHEDULE: (Refer to Page 10)

3. CONTRACTOR'S TEAM INFORMATION:

Provide the Resumes for the Construction Superintendent & Lead Shaper

NOTE: The Construction Superintendent shall:

- Remain with the project daily for the entirety of the work
- Have a minimum of (5) years supervisory experience in the rebuilding of greens, tees and bunkers
- Supervised a minimum of (3) 18-Hole golf course renovation projects

4. BID SHEET: (Provided as a separate attachment in Word as a Worksheet for Bidding)

Complete the CB Inc. Bid Sheet by providing a Grand Total for the Bid.

End of Section

SECTION "B"

INSTRUCTIONS TO THE CONTRACTOR

INSTRUCTIONS TO CONTRACTOR

DEFINITIONS

Wherever used in the Specification General Conditions or in the other Contract Documents, the following terms have the meanings indicated with are applicable to both the singular and plural thereof, and apply to persons or their successors as designated pursuant to the Contract Agreement:

CONTRACTOR – The selected Golf Course Construction Company who is awarded the Contract through the bidding process.

GOLF COURSE DESIGNER - The corporation named as such, known as CARY BICKLER, INC., Golf Course Design (**CBI**)

CLIENT – Tahoe Donner Association (**TDA**) for work described herein at Tahoe Donner Golf Course (**TDGC**) in Truckee, CA

1. TAXES

State law provides that the CONTRACTOR or subcontractor who installs a purchased material is the consumer. As such, he is responsible to pay the prevailing material use tax. Such tax on materials and other items is included in the quoted bid price.

2. CONSTRUCTION WATER

TDA will pay all fees and costs for water for construction.

3. CUTS/FILLS

The CONTRACTOR will be responsible to balance cuts and fills on site. All necessary sub-grade fill material required to be provided on site by the CONTRACTOR.

CONTRACTOR is responsible for grading of tees, fairways, and mounding, as well as shaping and fine grading all proposed landforms within construction limits. (**Refer to: Grading Plan**).

4. ARCHITECTURAL FREEDOM

CARY BICKLER, INC., retains certain architectural freedom normally enjoyed by working with select, experienced CONTRACTORS with respect to minor adjustments to grades and elevations, etc.

5. CONTRACTOR

To remove and replace all irrigation system within limits of work.

6. QUALITY CONTROL

CONTRACTOR is to take whatever measures necessary to achieve the specified finished products.

7. COORDINATION OF RELATED SITE WORK

Golf Course CONTRACTOR to coordinate his efforts with all other site work being performed.

8. USUAL AND CUSTOMARY SERVICES

The parties acknowledge and agree that the extent of the services set forth herein include only the service that are usual and customary services to be performed by Golf Course Designers in the business of designing golf courses and does not include any extraordinary matters. TDA hereby acknowledges and agrees that many of the items set forth herein including but not limited to, Grading & Drainage Plans, engineering and Specifications, may require additional work by other consultants and engineers and that any and all costs and expenses of such other technical work shall be the sole responsibility and obligation of TDA and not the GOLF COURSE DESIGNER.

9. EXECUTION, PROGRESS & ARTISTIC EFFECT OF THE PROJECT

The GOLF COURSE DESIGNER shall be the interpreter of the requirements of the Construction Contract Documents and the impartial judge of the performance by the CONTRACTOR there under. The GOLF COURSE DESIGNER shall make decisions on all claims relating to the execution and progress of the work and on all matters and questions related thereto. The GOLF COURSE DESIGNER'S decisions in matters related to artistic effect shall be consistent with the intent of the Construction Contract Documents and shall be final.

10. SELECTION OF LEAD SHAPER

The GOLF COURSE DESIGNER shall have the authority to approve the stripping and stockpiling of topsoil, rough grading and the final grading and finishing of the golf course. In this regard, the GOLF COURSE DESIGNER retains the right of approval pertaining to the selection of the specific Shaper who will perform the rough and final grading. Nothing contained herein or elsewhere in the Agreement shall cause the GOLF COURSE DESIGNER to be responsible for the means, methods, techniques, sequences of procedures, or for safety precautions or programs in connection with the construction of the golf course or any other aspect of the TDA project.

11. PRE-CONSTRUCTION CONFERENCES

Before the start of construction, the TDA REPRESENTATIVE shall arrange to meet with the Golf Course CONTRACTOR to discuss the requirements of such matters as project supervision, on site inspection, progress, schedules and reports, payments to the CONTRACTOR, safety and other items pertinent to the project. At this conference, all parties should be prepared to discuss any anticipated problems.

Personnel to be present at this meeting are the TDA REPRESENTATIVES, PROJECT MANAGER, GOLF COURSE DESIGNER, CONTRACTOR and his Superintendent, and the Sub-contractors and their responsible Foremen or Superintendents that are requested to be present by TDA or the GOLF COURSE DESIGNER.

The CONTRACTOR shall be prepared to discuss timing, sequencing, procedures for a smooth job progress, items requiring clarification, distribution of documents and correspondence with the GOLF COURSE DESIGNER.

12. PROGRESS MEETINGS

A "construction progress" meeting to assess the overall status of the project shall be held not less than twice each month during the entire course of the work. Personnel to be present at this meeting are the TDA REPRESENTATIVE, golf course designer, the CONTRACTOR'S Superintendent, and other responsible Consultants and Sub-contractor's Representatives to be present as requested by TDA or the GOLF COURSE DESIGNER.

13. CONSTRUCTION SCHEDULE

The CONTRACTOR will provide construction schedules for the project.

The CONTRACTOR shall notify local authorities and utility companies of his intent to begin the work **at least 2 (two) days** before work is begun. The CONTRACTOR shall cooperate with local authorities relative to handling traffic through the area.

14. CONTRACTOR'S SCHEDULE

The CONTRACTOR shall submit with his **BID**, a **DETAILED CONSTRUCTION SCHEDULE** for the golf course.

The golf course **DETAILED CONSTRUCTION SCHEDULE** must be a time-scales, project schedule that reflects (at a minimum): earthwork; shaping & drainage; golf course irrigation; cap material; stabilization; golf course planting; landscape; and irrigation of the areas in the surrounds of the project.

The CONTRACTOR'S **DETAILED CONSTRUCTION SCHEDULE** must reflect how the milestone dates will be achieved.

The GOLF COURSE DESIGNER prior to a Notice To Proceed being issued must approve the CONTRACTOR'S Detailed Construction Schedule. The GOLF COURSE DESIGNER may reject any CONTRACTOR **DETAILED CONSTRUCTION SCHEDULE** at his discretion. In this event, the CONTRACTOR shall submit a Revised Schedule, which meets the approval of the GOLF COURSE DESIGNER **within 10 (ten) days** of receiving notice from the GOLF COURSE DESIGNER that the original Schedule has been disapproved.

15. CONSTRUCTION TIME LIMIT

Golf Course CONTRACTOR shall complete all construction of golf course improvements **2020**. Specifically, the CONTRACTOR'S work shall be completed and ready to turn over to the responsibility of the TAHOE DONNER GOLF COURSE MAINTENANCE CREW to grow-in turf.

16. LABOR, EQUIPMENT, SUPERVISION & MATERIALS COST

Golf Course CONTRACTOR shall provide labor, equipment, coordination and supervision.

17. DRAWINGS FORM A PART OF THE CONTRACT INCLUDING:

Title Sheet
General Plans
Detail Drawings

18. CONTRACT DOCUMENTS: INTENT AND REUSE

The Contract Documents are complimentary; what is called for by one is as binding as if called for by all. In case of conflicts between the Drawings & Specifications, the Specifications shall govern. Figure dimensions on Drawings shall govern over scale dimensions and detail Drawings shall govern over General Drawings. Any discrepancies found between the Drawings & Specifications and site conditions or any inconsistencies, conflicts, error or ambiguities in the Contract Documents shall be reported immediately to the GOLF COURSE REPRESENTATIVES in writing, with copies to the GOLF COURSE DESIGNER. Any work performed by the CONTRACTOR prior to receiving a written revision of the Contract Documents shall be done at the CONTRACTOR'S sole risk and expense, assuming total responsibility for correction of the work as required to conform to the revised Documents.

19. REUSE OF DOCUMENTS

Neither TDGC (including employees thereof) nor TDA, and/or any TDA SUCCESSORS, nor any CONTRACTOR, subcontractor, engineer, manufacturer, fabricator, supplier or distributor shall have or acquire any title to or ownership right in any of the Drawings, Specifications or other documents (or copies of any thereof) prepared by the GOLF COURSE DESIGNER whether hand-drawn or copied as digitized and computerized by any ENGINEER or other person; and they shall not reuse any of them on extensions of the Project or any other project.

20. DUTIES OF THE GOLF COURSE DESIGNER

During the construction process, the GOLF COURSE DESIGNER shall provide services in accordance with the GOLF COURSE DESIGNER'S Contract Agreement with TDA.

21. LIMITATIONS ON RESPONSIBILITIES

The GOLF COURSE DESIGNER will not be responsible for the CONTRACTOR'S means, methods, techniques, sequences of procedures of construction, or the safety precautions and programs incident thereto, and the GOLF COURSE DESIGNER will

not be responsible for the CONTRACTOR'S failure to perform the work in accordance with the Contract Documents.

The GOLF COURSE DESIGNER will not be responsible for the acts or omissions of the CONTRACTOR or of any sub-consultants, or of the agents or employees of any CONTRACTOR or any subcontractor, or of any other persons at the site or otherwise performing any of the work.

22. CHANGES IN THE WORK

The GOLF COURSE DESIGNER may authorize changes in the work not involving an adjustment in the Contract price or the Contract time, which are consistent with the overall design concept as set forth in the Contract Documents. The CONTRACTOR will approve any such changes in the work as having no cost impact prior to proceeding.

23. GOLF COURSE CLOSED FOR PLAY (MAY – AUGUST 2020)

For the Renovation/Restoration Work

End of Section

SECTION "C"

SOIL, TURF & PLANT – TECHNICAL SPECIFICATIONS

SOIL, TURF & PLANT – TECHNICAL SPECIFICATIONS

GENERAL

1.0 SURVEYS AND LAYOUT OF THE WORK

TDA shall be responsible for providing only:

1. Temporary benchmarks
2. Property lines where applicable
3. Horizontal and vertical location of major drainage systems
4. Utilities
5. Any applicable easements or right of ways and road centerlines.

All other survey, engineering and staking required to properly install the work as drawn and specified is to be by the CONTRACTOR.

CONTRACTOR The Contractor shall prepare a GPS survey grade for topography at .50 contour intervals (prior to beginning demo work on #10 fairway.)

2.0 PROJECT RECORD DOCUMENTS

CONTRACTOR shall be responsible for the preparation of accurate **Project Record Document Drawings, (“As-Built” Drawings)** to be prepared and updated on materials supplied by the DESIGNER, of all irrigation pipe, valves, wire paths, and tile (as appropriate), and other drainage installed in surrounding areas.

- CONTRACTOR shall submit such **“As-Built”** Drawings with any application for payment involving such work.

Such **“As-Builts”** will be created through the use of a transit showing degrees from a designated location, such as a marked sprinkler or valve boxes. The distance as measured in feet and inches from the transit will be plotted to scale on a plan per feature.

CONTRACTOR will be responsible for furnishing detailed Project Record Documents provided by the GOLF COURSE DESIGNER and updated by the CONTRACTOR on a bi-weekly basis.

- 2.4 CONTRACTOR shall submit **“As-Built”** Drawings with any application for payment involving such work.

Updated Project Record Documents must be attached for each of the following listed categories with each **Application For Payment**.

- a) Site preparation
- b) Removal of warm and cool season grasses
- c) Rough grading
- d) Soil drainage
- e) Irrigation
- f) Feature development
- g) Repair of cart paths from any contractor damage
- h) Landscaping
- i) Grassing
- j) Turn over to grow-in to Golf Course SUPERINTENDENT.
- k) Updated Project Record Documents

3.0 SITE PREPARATION

TDA shall have existing sectional shut-off valves available prior to demo.

Parts of the golf course to be disturbed for reconstruction shall have removal of cool season gasses. The cool season turf shall be stripped off the soil by a roto-tiller or pulverized, or some other suitable equipment.

If roto-tilled, the grass debris collected during site preparation shall be hauled off-site on the property to a dump area (*to be determined*).

4.0 ROUGH GRADING – is done after clearing of brush and refuse. (*Refer to: SECTION “D” - EARTHWORK SPECIFICATIONS on Page 24*).

5.0 SECONDARY DRAINAGE - #10 FAIRWAY

Secondary drainage drains the # 10 fairway, and other depressions and shall be installed after rough grading. It consists of both solid pipe and slotted pipe. Drainage of these features shall be daylight to the original surface drainage patterns of the golf course as directed by the GOLF COURSE DESIGNER.

Outlet drainage pipe from #10 fairway shall be connected to existing drainpipe or to NDS #100 catch basins. (Refer to Plan Detail). Outlet drainage pipe shall be a solid pipe.

- 5..1 Install catch basins (NDS #100) with 3/8” gravel sump in collection areas. Catch basins shall be 3’ wide by 3’.

Areas to be drained are #10 fairway, greenside collection areas, and low points.

Construct the drainage system as diagramed in the Plans. At the low point of the drainage pipe in the #10 fairway, a solid pipe will carry the collected water away from foot traffic out of the play areas and surface down grade, where water

will flow on the surface of to primary drainage where practical was detailed in the Plans.

Dig trenches **12" (twelve inches)** deep for drain lines;

- No more than **15' (fifteen feet)** apart for greens
- No more than **15' (fifteen feet)** apart for bunkers
- No less than **12" (twelve inches)** deep.

Put a **4" (four inch)** bed of pea size gravel in trenches.

Set connected **4" (four inch)** diameter porous plastic drainpipes on bed of gravel.

Gravel shall envelop green drainpipes.

Drainpipes shall be on a grade falling no less than **1' / 100.0' (one foot in one hundred feet)**.

Connect drainpipes within green to a non-porous **4" (four inch)** diameter outlet pipe. It shall be located on the lowest elevation of the green. Clean-out opening at the top of drainage pipe shall be at the highest elevation with a cap to cover the opening. The water at the outlet shall flow into a "catch basin" with **2' (two feet)** depth filled with pea gravel. (**Refer to: #10 fairway Tile Drain Drawing**).

The depth of the drainpipe out of greens and bunkers shall be **6" (six inches)** below an irrigation pipe where the different lines intercept.

Ring sub-grade of the #10 fairway and main drain line with #14 copper wire. Connect to the nearest sprinkler head.

Trenches holding irrigation pipe and wire shall not be filled at intersections of the two lines until drainpipes are installed.

If not connected to existing drainpipe, soil drainage shall be installed in valleys or depressions in #10 fairways. The drainage system shall be located in the lowest point of a depression. The GOLF COURSE DESIGNER, as referenced in the Construction Documents, shall designate the exact location and the design of the system.

Catch basins shall be an HDPE plastic or concrete box with a steel grate of not less than **1 (one)** cubic foot. The box with a grate cover is to enclose a sump or catch basin. Connect the basin to a **4" (four inch)** diameter solid PVC pipe. Connect the 4.0" (four inch) solid PVC drainpipe to the main line outlet to daylight to existing good drainage away from golfer traffic. As an extension of the catch basin, install drainage pipe to the solid pipe in the areas of depressions.

The drainage pipe shall be porous, and the trench filled with pea size gravel to the soil surface. The CONTRACTOR is responsible for any crushed drainage.

6.0 GRADE TIE-INS WITH NEW RENOVATION WORK

Side slopes of tee, greens, fairways, and bunkers shall be graded to blend smoothly with the surrounding contours and tie in with the new golf feature elevations. GOLF COURSE DESIGNER to approve in the field.

Fairway and rough shall be graded so that surface water flows off and/or drains as rapidly as possible. A minimum of **2% (two percent)** slope for positive surface drainage is required for all areas. The CONTRACTOR will be required to shoot grades to demonstrate to the GOLF COURSE DESIGNER that the slopes are adequately flowing and tied in with the elevation of the renovation work.

Tees & fairways shall be shaped as directed by the GOLF COURSE DESIGNER.

GREEN SPECIFICATIONS – USGA

(To be applied to construction of #10 fairway)

PHASE ONE – Materials Selection & Definition Prior to Construction:

- Gravel Drainage Material
The gravel shall be washed pea stone or crushed stone that meets the following criteria, which shall bridge with USGA green sand.
- Root Zone Sand (100% sand/ no organic)
The root zone sand will be defined in this section and shall be selected as such. The CONTRACTOR'S testing agent will evaluate the root zone sand using test methods for putting green root zones. A sand sample shall be submitted to the CONTRACTOR'S testing agent and tested for adherence to the Specifications. Test results on the approved root zones sand will establish the Specification for approval or rejection of all subsequent quality control submittals during construction.

PHASE TWO – Quality Control During Construction:

- Gravel Drainage Material
A one-gallon sample from each 500 cubic yard lot of gravel shall be tested. Upon approval of each of the materials, the gravel shall be released for placement on the greens site.
- Root Zone Sand
After approval of the root zone sand, a one-gallon sample of the sand for every 500 tons of sand shall be submitted for testing, to include particle size analysis. Physical

performance testing may be required if the CONTRACTOR'S testing agent determines that there are discrepancies in the samples. Upon approval of the root zone sand, the material shall be released for placement on the green.

- Inspection Costs

The CONTRACTOR shall bear all costs for all submittals including testing and shipping of gravel or root zone mix.

- Sample Verification

A Representative must be present during the sampling and packaging of gravel and root zone sand. The sample shall consist of sub-sample, taken from a composite of samples taken from the top, bottom and sides of the stockpile. A one-gallon sample in a sealed plastic bag or container shall be packaged and sent to the CONTRACTOR'S testing agent. 7 to 10 (Seven to ten) samples shall be taken during the duration of construction. The CONTRACTOR shall be responsible for the costs of re-sampling of samples that do not meet Specifications.

Testing Agent shall be a company with certification from the USGA.

- Before and after sand is put into the green site (#10 fairway), each drain line must be tested by running water. The rate of flow must equal inlet flow, and less than that is unacceptable. Leaks and blockages shall be repaired at the CONTRACTOR'S expense. The GOLF COURSE DESIGNER and the TDA PROJECT MANAGER shall accept functioning of the drainage before the green is seeded.

7.0 RECONSTRUCT, RELOCATE, & ENLARGE TEE COMPLEXES

Holes #1, #2, #4, #5, #8, #11, #12, & #16

Tees shall be built on a smooth grade of smooth topsoil with no pockets at specified elevation in topographical Plans. Fall of sub-grade shall be **1% (one percent)** from right to left or vice versa in conformance with the Plans. Wherever possible, fall shall be away from golfer traffic. A **1% (one percent)** pitch will be required on all sub-grades and finish grades.

Side slopes of tees shall be graded to blend smoothly with the surrounding contours and permit mowing with riding power equipment except as other indicated by the GOLF COURSE DESIGNER.

Cover native soil on grade with tee sand 4" (four inch) depth, or as directed in the field by the GOLF COURSE DESIGNER.

8.0 GRASSING OF TEES

Grassing of tee tops and surrounds is done by sodding with **Blue Ryegrass blend**.

Roll newly sodded tees with a weighted roller.

Top-dress depressions with sand and repeat rolling and top-dressing until tee is smooth.

Final grade shall match sub-grade of native soil.

9.0 FAIRWAYS #8, #10, & #11

Fairways #8, #10, & #11 and roughs shall be graded so that surface water flows off and/or drains as rapidly as possible. A minimum of **1% (one percent)** slope for positive surface drainage is required for all areas. The CONTRACTOR will be required to shoot grades on all fairways to demonstrate to the GOLF COURSE DESIGNER that the fairway slopes are adequately flowing.

Fairway sub-grades shall be shaped as directed by the GOLF COURSE DESIGNER.

10.0 FINE GRADING

After topsoil is re-spread, all stones, roots and debris greater than **1" (one inch)** diameter shall be removed by stone pickers, rakes, or other devices that do not disturb grade or create water-holding pockets. At this point, the GOLF COURSE DESIGNER shall approve all fine grading.

11.0 AMENDMENTS & FERTILIZER

For inclusion into all areas of turf grasses by tillage at a rate of **10 (ten)** pounds per **1,000 s.f. (one thousand square feet)** of fertilizer 15-15-15.

12.0 TILLAGE

After areas to be sodded and seeded have been brought to the grades shown on the Drawings, they shall be thoroughly tilled to a depth of **8" (eight inches)** by plowing, disking, harrowing or other approved methods until the condition of the soil is acceptable. Works shall be performed only during periods when beneficial results are likely to be obtained. When conditions are not beneficial by reason of drought, excessive moisture or other factors, and when satisfactory results are not likely to be achieved, the CONTRACTOR shall refrain from such work.

13.0 FINISH GRADE

Fertilizer has been incorporated by tillage. Blade and float soil to a smooth surface on grade. There shall be no water-holding depressions. Stones and debris must be removed off surface.

Equipment shall have turf type tires without cleats. Surface soil shall be dry to prevent compaction.

14.0 GRASSING

Lay **Blue Ryegrass** sod, or equivalent as approved by the GOLF COURSE DESIGNER, at fairway, greens, bunkers, roughs, tee, slope and surrounds. Sod shall be laid around all newly landscaped areas as directed by the GOLF COURSE DESIGNER in the field.

15.0 GRASSING OF APRONS, GREENS, BUNKERS, TEES, FAIRWAYS & ROUGHS

This is the final construction operation after work described herein is completed to the satisfaction of the GOLF COURSE DESIGNER.

Plant only **Blue Ryegrass** sod or acceptable substitute that is “in good health”.

16.0 WORK TO BE DONE IN-HOUSE BY TDA SUPERINTENDENT & CREW

Dry out truck haul roads in advance of use. (To be coordinated with the Golf Course CONTRACTOR). Irrigate and maintain all turf not impacted by the construction.

The TDA understands the importance of timing and coordination with the CONTRACTOR and Sub-contractors and will cooperate in an expedient manner.

The seeding of 5 putting green surfaces.

17.0 “AS-BUILTS” FOR THE FAIRWAYS & TEES

Project Record Documents:

The CONTRACTOR shall be responsible for the preparation of accurate Project Document Drawings, to be prepared and updated upon the completion of each phase of the project as it is being constructed. “As-Builts” for the project to be drawn on the Construction Documents supplied by the GOLF COURSE DESIGNER.

18.0 GROW-IN

Grow-In shall be the responsibility of the TDGC Superintendent and will commence upon the approval of the CONTRACTOR’S grassing by the Green Superintendent and the GOLF COURSE DESIGNER.

19.0 ASPHALT CART PATHS - ASPHALT CART PATH REMOVAL, REALIGNMENT & REPLACEMENT: at Hole #11

Asphalt cart path construction shall precede finish grading. Locate and construct cart paths as indicated on Plans. It indicates approximate circulation of cart paths for proper flow of traffic and maintenance of road alignment.

Engineering or construction plans for cart paths, roadways or parking lots: The GOLF COURSE DESIGNER will be available to consult on the location of these elements of the project if requested, and will coordinate with other members of the planning team on the layout and traffic flow for these project elements, however, the GOLF COURSE DESIGNER will not have the design or planning responsibility, as these are engineering tasks.

The CONTRACTOR shall do construction of the asphalt cart paths. Scheduling of work shall be coordinated with the SUB-CONTRACTOR.

The existing asphalt cart paths designated for removal will be removed and hauled off site to a disposal area.

The finish-grading CONTRACTOR shall be responsible for asphalt grade work confined with areas of re-construction.

The CONTRACTOR shall establish all necessary elevations and grade stakes to provide a smooth and even surface true to grades shown on the Drawings. The CONTRACTOR shall immediately notify the PROJECT ENGINEER and the GOLF COURSE DESIGNER of any discrepancy of line and level. The PROJECT ENGINEER may approve changes in line or level to suit existing or developed conditions as recommended by the CONTRACTOR.

20.0 SCOPE OF WORK FOR ASPHALT CART PATHS

Remove existing pad up to 6" in depth and haul off-site. New paving to be 9' wide with 4" of 3/4" recycled base rock compacted, and 2" compacted 64-16 hot-mix asphalt.

21.0 BUILD A WALL MOCK-UP (2' X 4') OF THE THEME STONE VENEER FOR THE TEE RETAINING WALLS

22.0 INSTALL NEW CONCRETE STAIRS WITH HANDRAIL AT #12 TEE COMPLEX & #16 TEE (Refer to Engineer's drawing on Plans)

End Of Section

SUPPLIER & SUB-CONTACTOR - CONTACTS

ASPHALT - CONTACT:

If you need any additional information or clarification, please contact:

Ramon Martinez at (530) 277-4123 or

Jesse Adams at (530) 587-1125

SHAFFER PAVING

CSL #461657

P.O Box 3243

Truckee CA 96160

Office: 530-587-1125

Fax: 530-587-9154

Email: shafferpaving@gmail.com

SOD - CONTACT:

WEST COAST TURF

Greg Dunn

Cell: (209) 993-3329

GREENS SAND & TEE TOP CAPPING SAND - CONTACT:

WEST COAST SAND & GRAVEL, INC.

Joe Kurung

Cell: (916) 281-1698

Email: jkurung@wcsg.com

End Of Section

SECTION "D"

EARTHWORK SPECIFICATIONS

EARTHWORK SPECIFICATIONS - ROUGH GRADING

1.0 (PART 1 - GENERAL)

- This is done after site preparation/demo and clearing of the project.
 - Earthwork is estimated to be a balance on site.
1. The Golf Course CONTRACTOR shall supply a Superintendent to oversee the earthwork CONTRACTOR. He will be responsible for directing the earthwork CONTRACTOR as to where the cuts and fills will go. The Golf Course CONTRACTOR must also supply 2 (two) layout people. They will be responsible for setting all grades and doing all of the cut and fill staking, under the direction the Golf Course CONTRACTOR'S Superintendent.
 2. The work includes, but is not necessarily limited to, furnishing all materials and labor in the cut and fill operation including topsoil salvage and replacement, bulk cuts and fills, architectural cuts and fills, hourly dozer pushes, rock ripping and blasting. The GOLF COURSE DESIGNER will review all work in the field during periodic site inspections. The CONTRACTOR is required to meet with the GOLF COURSE DESIGNER and physically state the work as verbally outlined. Staking supplies such as wood stakes, flags, markers, and paint gun are to be supplied by the CONTRACTOR and be on site in sufficient supply at all times. The CONTRACTOR will also have a laser instrument and target rod on site at all times.
 3. The grading indicated on the Plans will be interpreted on site by the GOLF COURSE DESIGNER and verbally reviewed with the CONTRACTOR, his Forman and Operators. The GOLF COURSE DESIGNER will outline the areas of cut and fill and inform the CONTRACTOR on how to proceed.
 4. Prior to commencement of grading, the CONTRACTOR shall verify all cut and fill quantities to ensure a balance site. The accuracy of these calculations is the CONTRACTOR'S sole responsibility and shall take into consideration all compaction and shrinkage.
 5. If the CONTRACTOR estimates differ materially from those anticipated, relative grades might be raised or lowered to reestablish the initial balance. All such modification must receive prior written approval by the GOLF COURSE DESIGNER, and any such cost resulting from such changes shall be borne by the CONTRACTOR.
 6. Computerized earthwork analyses using a **10% (ten percent) to 15% (fifteen percent)** factor for losses due to shrinkage and subsidence indicate potential

material excess. The CONTRACTOR will not be required to export from the site. During the course of the project mass grading, the CONTRACTOR shall be allowed to balance an earthwork excess condition by the following methods:

7. Placement of excess material over the site in designated golf course areas for the golf feature development as directed by the GOLF COURSE DESIGNER.
8. The GOLF COURSE DESIGNER shall work with the CONTRACTOR so there is no substantial increase in the hauling distances and routes beyond those previously anticipated.
9. The CONTRACTOR shall screen, haul, and stockpile topsoil in a staging area near the fill areas of the project. This topsoil is currently located on the golf course in areas of grading.

2.0 SOURCES OF FILL MATERIAL

1. The source of fill material for the proposed construction is generally shown on the Grading Plan, however this Plan should in no way be construed as anything but approximate. The intent of the Plan is only to assist the CONTRACTOR in identifying his possible borrow areas. No guarantee of accuracy of total quantity of borrow material available at each site is made, but instead only loose estimates based on surface observation. Unless otherwise state, the CONTRACTOR shall assume that no fill material will need to be purchased and the "fill" requirements will be balance by available "cuts".
2. It is solely the CONTRACTOR'S responsibility to determine the quantity of cut and fill required to complete the work, the source of that material with the designated borrow areas, and the cost to execute the work.

3.0 CONDITIONS

1. The GOLF COURSE DESIGNER reserves the right to adjust any proposed grades of #1, #2, #4, #5, #8, #10, #11, #12, #15-A, #16, fairways and tees within the parameters of the earthwork estimates, to meet field conditions or to enhance the character of the golf course and/or to expedite construction.
2. Furthermore, the Golf Course CONTRACTOR shall not make any changes to the design that are requested by others, including representatives of the TDA, without prior written compliance by the GOLF COURSE DESIGNER for each change.
3. Communications between the TDA and the TDA Consultants shall be made through the GOLF COURSE DESIGNER, who shall in turn communicate to

the Golf Course CONTRACTOR and/or his Construction Superintendent, in all matters concerning golf course feature development and adjustments.

4. If at any time during the progress of the work that the CONTRACTOR finds any error, discrepancy, or confusion in the scope and/or quantity of the work, he must notify the GOLF COURSE DESIGNER immediately so a resolution of the problem can be made. No additional work should be done in the questionable area until a written authorization from TDA is obtained.
5. Haul distances and routes within the work area are the responsibility of the CONTRACTOR as long as they are coordinated and approved by the GOLF COURSE DESIGNER & GREEN SUPERINTENDENT before they are used. Naturally, all haul roads must be repaired as appropriate for their location in the final golf course Plan. The Golf Course CONTRACTOR shall coordinate the drying out of truck haul routes with the Green Superintendent in advance of use.

4.0 ARCHITECTURAL CUTS AND FILLS

1. In order to develop the finest possible golf course, the GOLF COURSE DESIGNER reserves the right to adjust the design and project grades. All shaping refinements will be verbally communicated to the CONTRACTOR on-site by the GOLF COURSE DESIGNER, and only by the GOLF COURSE DESIGNER.
 2. Although this is a lump-sum project, it should be recognized that the GOLF COURSE DESIGNER is expected to make refinements in the field.
 3. The GOLF COURSE DESIGNER reserves the right to speak directly to the CONTRACTOR'S Construction Manager, Shapers, and best operators on site to verbally explain the intent of architectural cuts and fills. The GOLF COURSE DESIGNER reserves the right to request specific operators to work on architectural cuts and fills.
 4. The CONTRACTOR'S Representative on site will receive prior notice of the GOLF COURSE DESIGNER'S site visit schedule to assist in the planning construction of architectural cuts and fills.
-

EARTHWORK SPECIFICATIONS - ROUGH GRADING

5.0 (PART 2 - EXECUTION)

1. EARTHMOVING as described below:
2. The CONTRACTOR shall complete all sub-grading within the areas to be covered with topsoil under this item necessary to bring the surface of the proposed sub-grade to the lines indicated on the Plan, and parallel to the proposed finished grade and compacted to **90% (ninety percent)** proctor. The surface of these sub-grade areas is to be free from rock or other foreign material of **3" (three inches)** or greater in any dimension. This operation is known as bulk earthmoving and the acceptable level of workmanship is **plus or minus 1' (one foot)**.
3. Suitable fill material is any soil, rock shale or random material that in non-compressible and lends itself to the raising of sub-grade to the specified level.
4. The material must not be larger than **4" (four inches)** in its largest dimension unless approved by the GOLF COURSE DESIGNER and must blend harmoniously with other fill materials to eliminate voids or air pockets that may cause continued settling.
5. Fill material should be reasonably free of organic matter and have a moisture content that lends itself to compaction.
6. The GOLF COURSE DESIGNER must approve all fill materials.
7. Tree stumps, concrete, brush, logs, wire and debris shall not be buried in any fill operation and shall be removed and hauled to the golf course dumpsite.
8. Fill material will be placed in layer not to exceed **8" (eight inches)** and each layer will be compacted by rolling wheel traffic, sprinkling, or natural rainfall before the next fill layer is laid upon it. This operation is known as earthmoving and the acceptable tolerance of workmanship is plus or minus **12" (twelve inches)**.
9. All fill areas should be thoroughly compacted as indicated in the Section below, and the adequately disked to loosen the top **1" (one inch)** of fill before topsoil is replace over sub-grade. All areas cut deeper than **12" (twelve inches)** shall be loosened **12" (twelve inches)** deep with ripping shanks on a dozer drawbar.

6.0 SHAPING & CONTOURING

1. This project will follow a sequence for shaping and contouring, and in an attempt to improve the method for completing shaping; the GOLF COURSE DESIGNER will require **3 (three)** separate delineations for this phase. The work will be split up into **3 (three)** separate pay items, all being completed under the Shaping part of the Contract.
2. Payment of shaping will be based on a project percent complete for each of the 3 (three) phases of shaping. The CONTRACTOR must use the enclosed form for the billing of shaping as an attachment to the pay application. Please note that actual percent completion will be subject to review by the GOLF COURSE DESIGNER.

7.0 ROUGH SHAPING

1. Rough shaping shall include the preliminary shaping of the entire project, all design features associated with the project and all drainage work associated with shaping. The GOLF COURSE DESIGNER will walk the project area and surrounds with the Shapers and explain the design concepts. **The CONTRACTOR is required to take sufficient notes to ensure accurate communication.** The Golf Course CONTRACTOR will stake out each feature to be shaped. The CONTRACTOR will provide all wooden stakes, wire flags, and paint gun for initial layout of the features.
2. Once the bulk fill is in place and compacted, the CONTRACTOR shall “shape” the fill into the desired golf features as shown on the Plan or as laid out in the field by the GOLF COURSE DESIGNER. This phase is also considered the “artistic” part of the “earth sculpture” of golf course construction that requires artistry in operating grading equipment. Many subtle changes should be expected in the form, shape, and size of golf features during this phase. The acceptable level of workmanship for shaping is ***plus or minus 4 – 6 (four to six) inches.***

8.0 CLEAN-UP SHAPING

1. Clean-up shaping will begin upon completion of the irrigation installation around the new golf course features.
2. Clean-up shaping will include any and all work required to return the project to the design concepts as outlined in the Rough Shaping. The CONTRACTOR will be required to repair the damages of all other work on the project, and return the holes to a smooth, well draining, and boxed-off condition.
3. The GOLF COURSE DESIGNER reserves the right to continue to make improvements to the shaping work during this phase. These revisions will be minor adjustments to help ensure that the original design concept has been maintained throughout the construction process.

9.0 DETAIL SHAPING, FINE GRADING, & FINISH

1. This detail shaping will be completed after all other work is done on the project and prior to cleaning and finishing grading. This is intended to ensure that GOLF COURSE DESIGNER'S right to make final revisions to the strategy of the golf hole. The Shapers and GOLF COURSE DESIGNER will walk the work at each area one more time and review all last-minute details of the shaping. The CONTRACTOR should at this time have the surrounds of the project in a boxed-off smoothed condition so that drainage and golf course appearance can be checked.
2. During the detail shaping, the GOLF COURSE DESIGNER will concentrate on swales, and grade tie-in revisions, cart path walk-ons, approach areas to greens and contouring mowing patterns. The CONTRACTOR will be required to complete the verbal instructions of the GOLF COURSE DESIGNER to ensure a playable, properly draining golf holes associated with the new golf features. This work will include bulldozer refinements to grades, as well as additional work by a Grade-All on the edges.
3. The final grading before planting shall be done when the condition of the soil is not too wet so as to allow tracking, or too dry that the seedbed is "fluffy" and not reasonable for compaction. Any areas on the property that have been compacted by construction equipment, trucks, tractors, or storage of materials, shall be plowed, disked, harrowed, fine graded, fertilized, and planted in accordance with the Specification for the area within which it is located. The acceptable level of workmanship for fine grading is **plus or minus 1/2" (one half inch)**.
4. The final grading on the project surround surface shall be done with a hand rake, sand trap rake, flexible mat drag, or a Harrow-Gator. The acceptable level of workmanship for sod preparation is **plus or minus 1/4" (one quarter inch)** and a minimum of **2% (two percent)** positive surface drainage unless otherwise specified.
5. All other areas to be planted shall be smoothed with a land leveler, Harrow-Gator, grader, or Scotch chain drag prior to seeding. On these areas, grade must meet an acceptable tolerance of **plus or minus 1/2" (one half inch)**. Allowances to depart from this standard must be in writing from the GOLF COURSE DESIGNER.
6. No other final grading tools will be permitted unless approved by the GOLF COURSE DESIGNER.

10.0 ROCK

1. The exact texture, depth, hardness and extent of any consolidated rock layers that may be encountered are unknown. Therefore, in the interest of fairness to both the CONTRACTOR and the TDA, both as part of this Contract shall accept the following definitions and conditions.
2. Consolidated rock layers shall be defined as rock that cannot be backhoed with a tractor or truck mounted hydraulic backhoe, to be ripped by a D-8 bulldozer with a ripper blade.
3. Any material that must be ripped by a D-8 dozer and hauled by a scraper or truck in accordance to the Plans shall not be paid for as an extra charge.
4. Any rock layer that can be backhoed or ripped shall be compensated as, and be considered, fill. TDA shall compensate for all other rock, which requires drilling and blasting, and/or special or unusual machines. TDA shall pay for all drilling, blasting, and hauling of rock **plus 10% (ten percent)** for profit and overhead. Any rock encountered during the grading process that requires blasting and hauling shall be paid for on a unit price per cubic yard basis agreed upon before construction commences.
5. All rock to be shot will be approved by the GOLF COURSE DESIGNER before demolition. There will be a **minimum of 2' (two feet)** of soil to finished grades for areas of the golf course. There shall be a **minimum of 1" (one foot)** in roughs and out-of-play areas, except in areas of irrigation lines where rock will be removed **6" (six inches)** below proposed pipe elevation.
6. The determination if an extra payment is justified rests solely with the GOLF COURSE DESIGNER and the CONTRACTOR must have written authorization from TDA before any work begins on rock excavation or hauling.
7. The liability for proper excavation and safety on any rock excavation rests solely with the CONTRACTOR. And is to include all personnel, people, livestock, or property, on or off that site, which may be damaged by excavation. Notification of proper authorities is mandatory, and all codes and manufacturers recommendations must be strictly adhered to.
8. In areas where rock excavation has taken place and will be within construction areas, they shall be capped with **at least 18" (eighteen inches)** of suitable fill and **6" (six inches)** of approved topsoil. In areas where rock is encountered in the path of irrigation lines, the rock will be removed in a depth that will permit at **least 6" (six inches)** of clean fill or sand bedding on all sides of the pipe and the required cover above it.
9. It should be expected that it is possible to encounter large rocks, and all sizes of rock could be encountered during earthmoving operations. The GOLF COURSE DESIGNER shall determine the final location and disposition of

rocks identified by the CONTRACTOR. The intent is to use the rocks as landscape features, such as stream banks or as located in the field by the GOLF COURSE DESIGNER. The maximum distance that these objects shall be moved is **600 (six hundred) yards**, and the final placement shall be at the sole discretion of the GOLF COURSE DESIGNER.

11.0 BORROW AREAS

1. All areas where soil or fill has been removed for borrow shall be graded in uniform smooth rolling slopes.
2. These areas shall be disked, harrowed, planted and fertilized in accordance with the Specifications for that area within which it is located.
3. All fill material to complete the project will be found on the site.
4. A principle source of borrow or fill may be generated from excavation of the new golf course features, etc. as generally shown on the Plans. The exact size, shape, dimensions, configuration, depth, location, and other physical features will be determined in the field by the GOLF COURSE DESIGNER. The CONTRACTOR should expect to encounter wet working conditions and plan to have available high flotation equipment or de-watering devices. No extra will be paid for wet working conditions unless a dragline or dredge are required and are authorized in writing by TDA.

12.0 SEDIMENT TRAPS

1. During construction, areas within limits of construction will be kept drained. Sediment traps will be utilized if necessary, to stop erosion from leaving the construction site. The CONTRACTOR is to follow the Sediment & Erosion Control Plan or any Local or State regulation for sediment control. Sediment traps may be a combination of silt fencing, sediment basins and sediment filter.

13.0 DRAINAGE

1. During the process of excavation and grading, all areas shall be maintained in such condition that they will drain well at all times.
2. All fairways and roughs in relationship to the new golf course features shall be graded so that surface water flows off and/or drains as rapidly as possible. A **minimum of 2% (two percent)** slope for positive surface drainage is required. The CONTRACTOR will be required to shoot grades on all swales to demonstrate to the GOLF COURSE DESIGNER that swale slopes area adequately flowing.

3. All surrounds shall be blended into tees, fairways, bunkers, and green grades to the satisfaction of the GOLF COURSE DESIGNER. All slopes and banks shall be constructed so that they can be maintained with power equipment, unless otherwise directed by the GOLF COURSE DESIGNER.

14.0 BENCHING & COMPACTION

1. GENERAL:

Control soil compaction during construction providing minimum percentage of density specified for each classification indicated below:

2. Minimum percentage of maximum density as determined by the Standard Proctor Moisture Density Test – ASTM D 698.

3. PERCENTAGE OF COMPACTION:

Compact soil to not less than the following:

- Bunkers, greens, tee, fairway and surrounds
90% (ninety percent)
- Slopes graded steeper than 3H:1V
80% (eighty percent)

NOTE: Fill soils under the slope, and above and below the slope a distance equal to the slope height shall be considered to compromise the slope.

4. MOISTURE CONTROL:

Embankment and sub-grade material, which does not contain sufficient moisture to be compacted, shall be moistened to within the range of **plus or minus 3% (three percent)** of optimum moisture.

5. Where sub-grade or layer of soil material must be moisture conditioned before compaction, uniformly apply water to the surface of the sub-grade, or layer of soil material, to prevent free water appearing on the surface during or subsequent to compaction operations.
6. Remove and replace, or scarify and air dry, soil material that is too wet to permit compaction to specified density.
7. Soil material that has been removed because it is too wet to permit compaction may be stockpiled or spread and allowed to dry. Assist drying by disking, harrowing, or pulverizing until content is reduced to a satisfactory value.

8. TDA shall test compaction. Subsequent lifts shall not be place until compaction has been verified, unless otherwise directed by the TDA Representative or the GOLF COURSE DESIGNER.

End of Section

SHAPING SPECIFICATIONS/ PROGRESS CHART (% COMPLETION)

NOTE: The GOLF COURSE DESIGNER, TDA and CONTRACTOR to agree to percentage complete each month indicating progress of and status of the work, and for billing purposes.

ROUGH SHAPING (@ 50%)				CLEAN-UP SHAPING	DETAIL SHAPING
Hole #	Fairways	Tees	Bunkers, Greens & Tee Surrounds	Adjustment to Design	Design Features
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					