




## Stonetree Golf Club Bunker Renovations

 Invitation For Bid



 Purchasing


 91225


**Project ID:** 24-38

**Release Date:** Monday, May 6, 2024

**Due Date:** Thursday, May 23, 2024 2:00pm

 Posted  Monday, May 6, 2024 8:14am

 Bid Unsealed Thursday, May 23, 2024 2:15pm by Lorianne Luciano

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*All dates & times in Central Time*

## 4. Bid Specifications

### SURVEY AND STAKING

The Contractor is responsible for all survey and staking for the project.

The Contractor shall provide 1" = 20' GPS as-built drawings (hard copies and AutoCAD files) of all bunkers and drainage infrastructure installed or modified in this project. As-builts must be submitted to Owner prior to release of final payment.

Prior to beginning work on any hole, the Contractor and the Owner shall determine the routes for access to each area of work and the Contractor shall install stakes with yellow nylon rope or other approved method to outline the limits of access. Any rutting or turf damage in these areas caused by the Contractor's construction activities shall be repaired to the satisfaction of the Owner. Payment for turf repair shall be covered under the allowance included in the bid proposal. There will be no separate payment for repair of rutting in non-turf areas. The Owner will minimize irrigation in the area of the access routes to minimize rutting. The contractor shall also place a minimum layer of 4 inches of native or removed bunker sand on top of any cart path areas that are included in the haul roads.

### **CLEARING, GRADING, AND REMOVAL**

**Bunkers** – The Contractor shall be responsible for removing bunker sand from the bunkers and stockpiling the sand in rough areas on each hole as designated by the golf course superintendent. The Contractor shall perform the sand removal operation so that no native soil, rock, or other material is removed from the bunker and placed in the roughs. The Contractor will be required to remove any deleterious material placed in the roughs as directed by the Owner. Contractor will be responsible for disposing of any damaged drainage pipe off-site. Gravel, sod, and fabric bunker liner shall be disposed of in bury pits at locations determined by the Owner.

Any damages to the existing irrigation system caused by the Contractor during any of the clearing, grading, or removal operations shall immediately be repaired by the Contractor to the satisfaction of the Owner and at no cost to the Owner. If the Contractor does not immediately make such repairs, the Owner reserves the right to make the repairs and deduct the cost of the repairs from any money due to the Contractor. The Contractor is responsible for making any elevation adjustments to the irrigation heads due to the proposed construction.

### **BUNKER CONSTRUCTION**

For all existing bunkers that are to remain, the Contractor is responsible for verifying functional drainage, re-establishing the edges, and re-contouring the floor of the bunker as necessary to ensure proper drainage. Solid or perforated drain pipe that has been

damaged, and determined by the Owner to need replacement, shall be removed and replaced as described below. Payment for such removal and replacement shall be per the allowances contained in the schedule of values. Sand bunker edges will be marked for trimming by the Owner. The edges shall be excavated vertically a minimum of 6 inches and the turf adjacent to the vertical edge will be sod cut and removed for a minimum of 12 inches beyond the vertical edge. In locations where sand has built up along the greenside edge of the bunker, the Contractor shall cut the existing sod, remove the excess sand build-up, and re-lay the existing sod or install new sod as directed by the Owner. The Owner shall determine in conjunction with the Contractor the extent of the re-contouring/re-shaping of the bunkers and bunker floors. Any re-contoured area shall be water settled and mechanically compacted with a hand-operated compacting machine to ninety-five (95) percent of maximum dry density as determined by ASTM D698 (Standard Proctor). Absolutely no loose soil shall remain in the bunker cavity prior to bunker liner and sand being placed.

After shaping of the bunkers per the approved plans has been completed, final bunker edges will be marked for trimming by the Owner. The edges shall be excavated vertically a minimum of 6 inches per the bunker detail. The bunker faces and floor shall be water settled and mechanically compacted with a hand-operated compacting machine to ninety-five (95) percent of maximum dry density as determined by ASTM D698 (Standard Proctor). Absolutely no loose soil shall remain in the bunker cavity prior to bunker liner and sand being placed.

All drain lines within sand bunkers shall be constructed with a drainage trench (minimum 9" x 9"). Each trench shall be backfilled with washed gravel of approved quality and consistency. The trench shall also contain a four (4) inch diameter perforated drain pipe (ADS N-12 Dual Wall or approved equal) bedded with a minimum of two (2) inches of gravel below the pipe and completely around and over the pipe within the trench per the project detail. Each drainage trench shall slope a minimum of one (1) percent, and the perforated portion of the drain pipe shall terminate at the low point of the sand bunker at a connection to a four (4) inch solid drainage discharge pipe (ADS N-12 Dual Wall or approved equal). Payment for perforated drainage pipes for new bunkers shall be included in the unit price per square foot for new bunker construction.

All drainage pipes shall be buried with an acceptable fourteen (14)-gauge direct burial tracer wire directly on top of the perforated pipe within the trench. The Contractor shall submit the tracer wire to be used for approval by Owner prior to installation.

No water will be permitted to stand in any portion of any bunker, which is to be accomplished by ensuring that bunker sub-grades drain to a low point. The low point of each sand bunker shall be connected to a four (4) inch diameter solid drainage pipe (ADS N-12 Dual Wall or equal) that shall extend to connect to the master drainage system or nearest outfall, unless otherwise indicated. Any low areas in the Capillary Concrete footer trench shall be drained by either the installation of a 4" perforated pipe in gravel or a 2" deep by 9" wide gravel trench dug from any low area in the footer trench to connect to a drainage trench in the bunker floor.

No liner or sand shall be placed in any bunker until the Owner has approved the bunker drainage, shape, depth, and compaction. Bunker liner shall be a combination of JM Evalith 013/140 in the bottoms of the bunkers and Capillary Concrete on the slopes per the detail provided and manufacturer's instructions. Hardware for anchoring Evalith shall be 60d 6" galvanized common nails with 5/16" x 1- 1/2" galvanized fender washers. Nails and washers shall be installed at 18" on center. If sub-grade conditions permit, 6" x 1" x 6" square head, chisel point, 8-gauge, galvanized staples may be substituted for nails/washers on the bunker floor at the Owner's sole discretion. After the nails or washers have been installed, Liquid Nail shall be placed over the top of each fastener.

After the installation of the Capillary Concrete, the Contractor shall install one strip of sod along the edge of the bunker with a minimum of 4" of the sod placed and pinned on the vertical face above the top of the Capillary Concrete, with the remainder of the sod rolled over the bunker edge and pinned around the edge of the bunker per the bunker detail.

After final approval of all drainage and lining, the sand shall be spread throughout the bunker at a minimum depth of four (4) inches on bunker faces and six (6) inches on bunker floors after compaction. Spreading of sand shall not be done until any surrounding area that has been disturbed has been re-sodded to prevent sediment contamination of the sand. If sediment contamination occurs, the Contractor will be required to remove all contaminated sand and replace with approved clean sand at Contractor's expense. If any sand bunker

has more than the required depth of sand, the Contractor shall be responsible for removing the excess sand at no cost to the Owner. If the sand is under the recommended depth, more sand must be added by the Contractor to ensure compliance to the specification, at no additional cost to the Owner.

The Contractor shall clean out each bunker prior to sand installation. This cleaning out work shall include removal of any leaves, organic matter or debris, or foreign objects that might be found in a given bunker. Should a delay occur which allows erosion of slopes and banks, silt-in of pipes, weed growth, or any other damage or contamination of the bunker between approval by the Owner of the bunker clean-up and edging and the installation of the liner and sand, it is the Contractor's responsibility to restore the bunker to the previously approved condition before the liner and sand are installed. The Contractor is responsible for controlling and removing any vegetative growth within sand bunkers during construction. This is to be done on a weekly basis.

Bunker sand is to be either Pro/Angle bunker sand produced by RW Sidley or BESTSAND Signature 900 bunker sand produced by Covia. The contractor shall supply to the Owner an initial bunker sand gradation analysis for use as a baseline prior to any sand being delivered to the site, and then obtain and provide the Owner a gradation analysis for every 500 tons of bunker sand delivered. The Owner retains the right to reject any bunker sand that differs significantly in composition or gradation from the original baseline test results.

Sand shall be placed in the bunker and compacted, using a hand-operated vibratory compaction machine, to a very firm, packed condition. Sand shall be installed at the following compacted depths:

<u>Area</u>	<u>Min. Depth</u>	<u>Max. Depth</u>
Center Portion of a Bunker	6"	6"
Back Lip of Bunker - Tee Side	4"	6"
Forward Lip - Flat Bunker	4"	6"
Forward Lip - Steep Slope Face	4"	6"

***NOTE: Measurements of bunker areas for billing purposes shall be based on the as-built two-dimensional measurements of the outside edges of the bunker and the edge of the Capillary Concrete liner within the bunker.***

## **GRASSING**

Grass - The source of all grass proposed for use by the Contractor must be approved in advance by the Owner.

Sod (Bermuda 419) - All sod will be certified free of weeds, pests, and as to the purity of the stated varieties. At the discretion of the Owner, the sod will be inspected prior to harvesting and installation of any sod. All sod shall be sand-based sod.

All sod shall be installed to provide a smooth transition from the surrounding turf or soil to the sod and from the sod. The Contractor shall provide and plant the sod by delivering it to the site, and having it planted on the ground within (48) forty-eight hours after it has been harvested. No gaps shall exist between sod squares. The Owner shall be final judge as to the condition of all planted areas after sodding, and all areas must meet the Owner's approval. All sodded areas will be rolled by the Contractor with a smooth type roller after planting.