

About Novagrass Golf Putting Greens . . .

In your desire to install a Golf Putting Green, there are a few items that will help you as follows:

- Before you construct your green, **you need to decide what type of green to build.** Selecting the best combination of turf and base construction for intended use of the green with desired performance and cost factors.
- It is important to know that the **synthetic turf comes in 12 ft. widths** by the length required. The material comes with salvage (manufacturing) to enable you to trim as needed.
- **Planning your green should be made on a grid sheet** to enable you to calculate the length and width of your green bearing in mind the dimensions above. Draw it out, including rounded edges and shape your desire in the area planned.
- **If you are planning to Do It Yourself (DIY)**, we have plans and instructions to assist you in accomplishing this task. These are the factors to bear in mind: (1) your soil conditions, (2) preparation of base for the green, (3) your skills in cutting and shaping the turf when received, (4) availability of appropriate silica sand (usually can be obtained from a sandblasting source, (5) drop spreader to spread the sand evenly over the laid turf, (6) a stiff bristle broom to manicure the sand into the synthetic turf fiber system to the desired level [This is the key to a excellent putting surface and speed of the ball, usually 9 to 11 on a stint meter.]
- **Bases for Putting Green:** *(May be of crushed stone, concrete or asphalt.)* Usually, the least expensive and **DIY easy is to use crushed stone.** This is done by removing the topsoil and organic substance, usually 4 to 6 inches. Replacing this with a crushed stone with fines left in the mix. Level the course, then use 1 to 2 inches of sand as a leveling course and forming undulations that you would like to give character to your putting green. This also enables you to set in place several golf cups at strategic places (permanent) into the base. Once the base is properly prepared, you should lightly wet the course so you can have it hold in place [Sometimes you can use a dusting of Portland cement to act as a binder.] Then slightly wet (sprinkle the surface) to hold it in place and to enable you to build the graceful undulations. This surface should be rolled to compact it as you have built it. Once this is done, you are now ready to lay the turf and topdressing it.
- Option to a DIY job is to have a landscape company perform the services. They may not have experience in this procedure but can readily follow instructions to completion if well qualified. Also, we have a skilled installation crew that can accomplish the task if needed.
- **Our Putting Green Surfaces are designed with you in mind. They consist of a sand-filled turf.** We have two styles with unique features to suit the individual golfer's needs.



Sandfilled Golf Putting Green



Surface Appearance of Green

A. **Pro-Putt Grasse**

This consists of a dense green pile (bent grass color) with a 5/8" pile height. May be laid over a crushed stone base with or without a granular rubber padding. Seams are butt-seamed together with seam tape (18" wide) and mastic adhesive. Care must be taken in the seaming process to that the pile looks seamless. The rubber granule underlayment will produce a very even top surface for putting. It adds to the cost of the material and produces long-term benefits for golfers. Also, a *NovaGreen topdressing sand* is available to be applied over the base sand for a more green effect.

B. **Course Green Grasse**

This style is a taller pile height which provides a softer bounce to absorb the ball impact from chipping shots onto the green. The pile height is 1 1/2". The denser and thicker sand in the fiber system provides for a softer ball bounce. The surface when finished has an excellent ball roll. The turf is seamed in the same manner as above for Pro-Putt Grasse but requires no rubber underlayment.

- Both are specially designed for great golf enjoyment and acclaimed by all who have them. Our putting greens are **the most advanced synthetic putting greens in the market today**. With over 18 years experience and with PGA Approval, we have excelled in green design. The fiber systems are UV-resistant and will withstand the effects of rain, snow, ice and the hot sun. **Each surface comes with a Limited Warranty of 5 to 7 years.**

What would a putting green be without a putting cup? We provide cups and flags with each putting green. Determine the number of cups for your design without being too close to each other.

Novagrasse Golf Surfacing Systems

GOLF PUTTING SURFACING INSTALLATION

POINTS TO CONSIDER AND GUIDELINES

GENERAL

This golf putting surface can provide a most enjoyable playing surface if careful attention is given to the following instructions:

1. The surface can be designed to play as challenging as any of the world's best course greens. However, keep in mind that steep, undulating greens do not always make for the best practice areas or the most fun to play.
2. Create your own design or choose from our list of recommended layouts. You can even select a scaled down model of a green from one of your favorite courses.
3. Decide on the best location for the green. Dependent upon the surface choice, select the best location for strictly putting, or one which will enable chipping and pitching to the green.
4. Avoid a design that allows surface water to drain across the green. Drainage of the green surface occurs through the top dressing, so pockets or low areas should not occur preventing drainage water from reaching the perimeter of the green. Construct your green so that the surrounding area will provide drainage away from the playing surface.
5. On a piece of graph paper, draw the area desired for the green in accordance with the square footage available. Actual square footage will be reduced approximately 10-15% since you will be trimming and shaping your corners for a smooth shape. The cup locations should be identified. They should not be drawn closer than five feet (5') from any edge and should be in areas that are relatively level and putt-able from many directions.
6. Even in desired level play areas the green should have a minimum of one half inch(1/2") of fall for each ten feet (10')of distance (1/2%). Sloped areas can have as much as one foot (1')in ten feet of run (10%), but such shaping should occur gradually, without sharp crests. Keep in mind that such areas may make it difficult to keep a ball on the green if your total area is less than 1,000 square feet or if these slopes are located near the green's edge.
7. To contain your prepared base, it is well to insert a 1.0" x 4-6.0" wood header around the green design. Also, it enables you to attach the turf at or down the header giving it a finished and secure look. Other materials may also be used to act as header. The top of the header will be the finished level of the soil (crushed stone) base. This header protects your base from erosion from weather and moisture.

8. In preparing your green, you should fine tune the leveling by use of a 300 lb. water roller rolling in all directions, adding slight moisture to the soil, in order to have a smooth even level to the base. Use of dry cement powder can be broadcast onto the surface and slightly watered to give your base a bonding binding. Allow to dry before proceeding with the laying of the turf. Also, locate and cut into the base where you want your cups placed and install the sleeve before laying the putting green turf. When laid you can easily cut out at the cups to install the actual cup itself, taking care with the trimming around the cup to allow easy fall of the golf ball.

INSTALLATION ORDER

- * Smooth and level base
- * Install sleeves for cups in base
- * Lay pad (optional)
- * Lay turf and seam
- * Trim turf and pad around green
- * Power broom and apply sand to turf
- * Roll turf (Course Green only)
- * Cut out holes and insert cups. (3.0' flag staff fits into cup.)

SLEEVES AND CUPS

Locate on the green the position of the cups. Dig a hole deep enough to insert the golf cup sleeve. Fill the hole back in making sure the top of the sleeve is level with the base. You should be able to find your holes after you have finished sanding the green. However, you can triangulate the position of each hole using three fixed positions outside and around the green, just in case you have trouble locating one.

Once you have sanded you can now cut out your hole. First locate the hole, make a cut in the middle of the hole area then insert a hacksaw blade. Use the sleeve as a guide to trim the turf (and pad) away from the sleeve and cut out the hole. Remove the insert and install the cup.

SHOCK PAD INSTALLATION (Optional)

Once your base is completed, lay and seam the shock pad in the opposite direction (90 degrees) from how the turf seams will occur. Duct tape works well seaming pad joints. The purpose is to securely hold the shock pad joint in place so when you are laying your green material it does not separate.

Make sure that all shock pad edges meet closely. All trash and debris should be removed by sweeping so that the duct tape will stick properly when applied.

Since you will be covering the cup sleeves at this point, mark them with chalk and provide reference points with stakes on the outside of your green perimeter.

YOU SHOULD NOT CUT YOUR GOLF HOLES OUT UNTIL YOU HAVE LAID YOUR GOLF SURFACING MATERIAL AND APPROXIMATELY _ OF YOUR TOP DRESSING HAS BEEN APPLIED. PRE-CUT CUP HOLES MAY SHIFT FROM THEIR DESIRED LOCATIONS WHEN THE SWEEPING IN OF YOUR TOP DRESSING BEGINS.

LAYING THE GOLF SURFACING MATERIAL

The golf turf surfacing material should be loose laid over the prepared base. The factory material edges should be cut off two to three seam rows inward to allow for a close seam fit, from one side of each roll of turf.

After the outer material is removed at the intended seam, cut edge on top of the un-trimmed edge with a carpet knife down the grain, using the top as a guide. Cut bottom piece of turf to create a tight seam (check material edges to see if there are gaps wider than 1/4" - repair as necessary). As a rule, the more slope and undulation built into the green, the more difficult it will be to match your seam edges.

SEAMING:

Fold back the edges of your seam approximately two feet and roll out a section of seaming tape, centering it equally within the joint. Pour just enough adhesive into a smaller bucket so that it can be handled easily. Trowel or bush it on to the tape. Begin folding in the Novagrass turf when the adhesive is stringy or tacky.

You may check the adhesive with a small scrap of material. This may be done within 5 to 10 minutes when temperatures are above 50 degrees

When bringing the joint together, do so from the middle to the edges. This prevents puckers in the joint when the turf material comes in contact with the adhesive as it will stick immediately. Corrections are virtually impossible without repeating the entire seaming process.

TRIMMING:

Trim the material to the desired boundaries using a utility knife or carpet cutter. Do not cut cup locations until you have applied the top dressing.

SAND INFILL

The sand infill material may be purchased in bulk or bags and can be shipped to your job site or location from local sources.

This material can be applied using a drop type fertilizer spreader, providing very light layers at a time. You should avoid covering fibers too heavily for they must be brushed up to standing. A power broom should be utilized to assist in standing the fibers up and working the sand in.

Sand infill must be kept dry at all times. Wet sand is virtually impossible to brush deep down into the fibers. Brush vigorously against the grain after each application of aggregate sand. It will take several passes with your spreader with thin applications over all areas, so steady brooming makes for a better green.

Fill the turf until 1/4 to 3/8 of an inch of fiber is left showing on the Golf Fringe Turf and 1/16" is left on the Golf Green material.

FRINGE GREEN ADDITIONAL INSTALLATION INSTRUCTIONS

The Fringe Green, [a 1' to 3' fringe around the putting green] surface installation differs slightly from the Golf Green system at this point, when you are at the sand infill state of

installation. As you have a higher pile height on the Fringe Green, additional sand is needed and the method for installation of the sand differs.

With the Fringe Green system, once the sand is dropped over the turf, the material must be power broomed or power tined to filtrate the sand into the fiber. A drag or hand brooming will not work for this system.

After the sand level is within 1/4 to 3/8 inches from the top of the fiber, it is time to roll the green. Using a 1.25 to 1.5 ton roller (preferably a two drum walk behind) roll the green in all directions edge to edge, until you can putt to each hole from any direction, with the ball displaying a smooth and true roll. If the ball does not roll smooth and true continue to roll the green until this is achieved. Once the ball roll is smooth you may set your stimp using your stimp meter and rolling to adjust the speed.

As always, should you have any questions during the installation of your golf green surface, please do not hesitate to contact our office at 1-800-833-8873. Our qualified staff will be more than ready to assist you with your installation.

THANK YOU FOR CHOOSING NOVAGRASS GOLF SYSTEMS.

SAND SPECIFICATION
GOLF GREEN SURFACING SYSTEM

SIEVE SIZE	RANGE OF INDIVIDUAL % RETAINED
20	0 - 10
30	55 - 65
40	24 - 47
50	1 - 10
70	- 0 -
100+	- 0 -

In securing the appropriate sand, you should contact an "Industrial Sand" supplier. One who has aggregate silica sand that is often used in sandblasting or other purposes. The sand should be washed, dried, and sized.

The above specifications will be known as #30 by most suppliers. The quantity that you need is usually within their inventory.

Do not use ordinary sand. This type has fines and organic in it and will not perform satisfactorily for our purposes.

ENJOY YOUR NOVAGRASS GOLF PUTTING GREEN...