

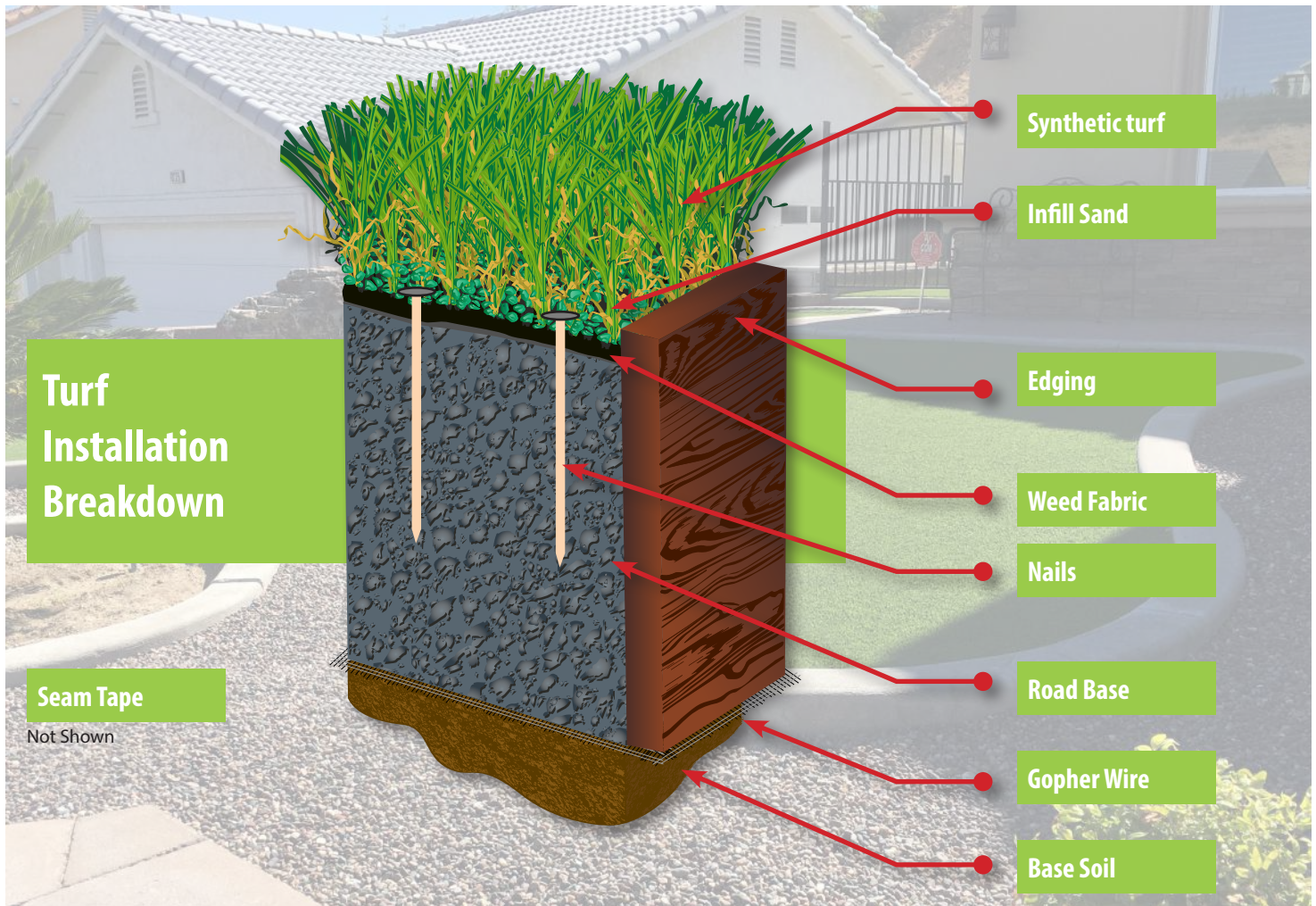


INSTALLING
Your path to perfect GREEN

IST Imperial
SYNTHETIC TURF
A Division of Imperial Sprinkler Supply



Turf Installation Breakdown



It is important to understand the different parts of a synthetic turf system and how they work together. While not every item here will be necessarily used(e.g. your customer may not want or need edging around their turf) Knowing how they work together will make you better installer and more apt to troubleshoot any problems in the future should they arrive.

- 1) **Synthetic Turf** - Your application will determine which turf you install.
- 2) **Infill Sand** - Your application will determine which infill sand you need.
- 3) **Edging** -
- 4) **Weed Fabric** - No weed fabric when there are pets around.
- 5) **Nails** - Hold the turf in place and keep the turf from buckling.
- 6) **Road Base** -
- 7) **Gopher Wire** - Optional
- 8) **Base Soil** -
- 9) **Seam Tape** - Do seaming as per class instruction.

Introduction

Guide Introduction:

The following steps will guide you towards a correct and complete installation of synthetic turf. Although not all aspects can be covered completely, these will put you on a path to success. Be sure not to skip over or take short cuts on any of these steps as it can make your installation be less than what you want it to be.



Objective:

We will guide you through, step by step, the installation from preparation to the finishing touches. This includes choosing the correct tools and materials, pre-installation preparation, setting expectations, installation preparation, installation, and maintenance suggestions.



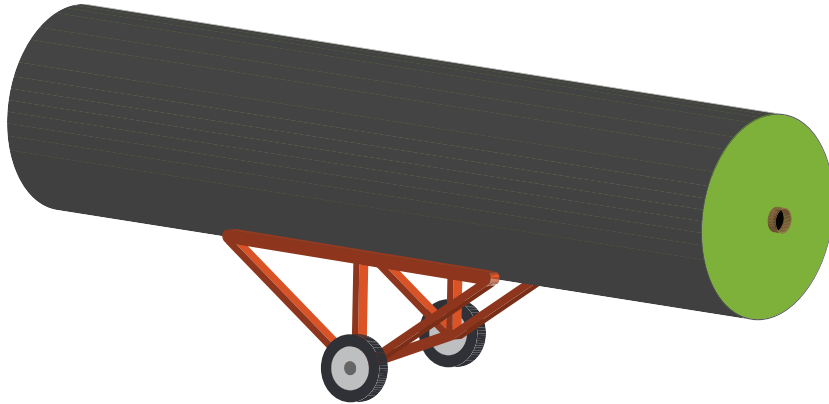
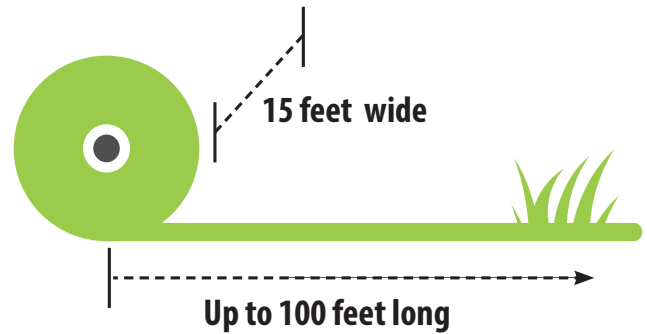


Have Ample Space

TURF ROLLS ARE LARGE

Turf is delivered on 4" cardboard rolls and are 15' long. The weight of the turf is half a pound per square ft. Keep this in mind when maneuvering the material. Use a dolly or other device to help you move the turf to the desired location.

Typical Roll Sizes



Make sure you have ample space to place your materials. Having a carpet dolly on hand will make moving around large turf rolls easier.



DELIVERY:

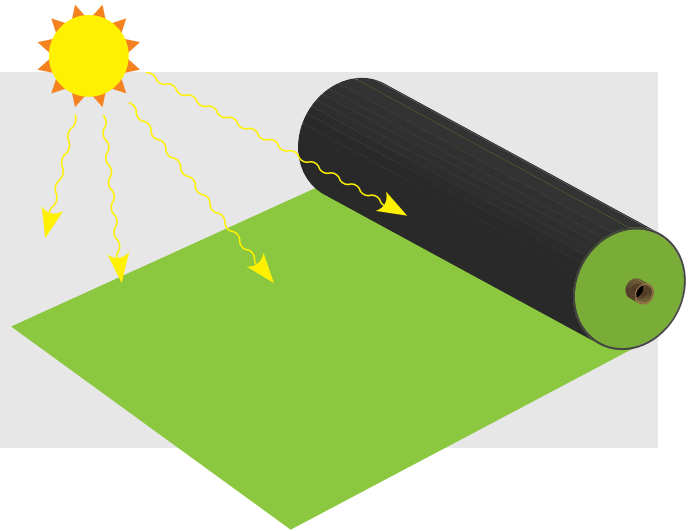
IST can deliver all the materials you need to complete your synthetic turf installation job right!

Warm Up Turf Before Installation



VERY IMPORTANT:

As soon as you receive the synthetic turf, open the rolls and roll the turf out and let it lay open for 1 – 2 hours. This will allow the turf to relax and acclimatize. Without allowing the turf to relax (installing it directly from the rolls they come in) could cause the turf to buckle.



PLEASE NOTE:

Sometimes turf rolls will have roll marks right near the end of the roll. When you see this, please leave the turf exposed in the sun for 40 – 60 minutes and the heat will (most the time) correct the turf on it's own.



Turf Installation, Sod Removal

Removing Sod

Use your sod cutter, hoe or shovel to cut the grass or current vegetation, this will allow for easy removal. Remove 3 - 4 inches of existing sod and/or dirt. This serves two purposes; one, it removes all the sod and vegetation along with the roots and it makes room for your Road Base (Class 2 is the most popular) and proper grading. It is important to set a grade to ensure water will also run off of the facility. Our synthetic turf drains at approximately 55 gallons per hour per square yard, more water than has ever fallen in a single storm, but giving it some kind of a grade 'moves' the water quicker.

With your sod, other vegetation and 3-4 inches of existing dirt removed, you will begin rough grading your installation area. Using your rake to grade and remove all objects that may cause bumps or inconsistencies on your surface. Then use your garden hose to lightly water the area in preparation for your first run with the compactor.

Identify and cap all sprinklers inside your planned facility.

The home owner or landscape maintenance dept. may have an irrigation diagram for you to use or another way to do this is to 'bump' the system and once the heads pop up, mark them to be capped. Once they have been marked with irrigation flags for clear visibility, cap all the heads. Be sure to understand the depth of the irrigation pipes, so when you are removing soil and grading you do not damage the pipes.

Note: Once all heads have been capped, 'bump' the system again just to make sure nothing was missed.



Sod Remover



Cap off all sprinklers

Perimeter Edging

Installing Bender Board

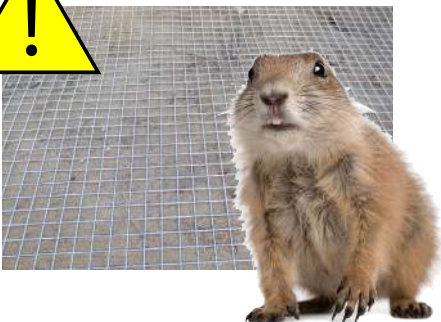
If you are using bender board around the outer perimeters, install the bender board **BEFORE** you begin the base work. Having the bender board in place allows you to 'trap' the base on the outer perimeters leaving you with a clean edge and reducing damage to existing landscape (if there is existing landscape around the area).



Install your bender board first to help contain your road base.



Edging helps contain the road base and gives a finished look.



Should I use Gopher wire or not? If there is evidence of any gophers, it is highly recommended that you use the gopher wire. Gophers will destroy the base if they get under the synthetic turf. After you have removed the existing growth (before you bring in the Road Base, lay the gopher wire down across the whole area and secure it with sod staples.

Note: If you know there are many gophers in the area, it is recommended you do a double layer. Also make sure you take extra time to secure the gopher wire around the outer perimeters, this is where they will try to get back in.



Road Base

Apply your Road Base is several layers, compacting the first and third layers. Apply a total of up to 4" for lawns & landscape projects and no less than 6" for putting green projects. This where you create the grade that will allow for proper drainage.

Here is where you need to identify the crown of your area. Proper drainage includes that the water runs off your turf and in a predefined direction, work with your property owner on this, as they know the terrain and areas to avoid. This is a stage that may set you apart from your competition and avoid any costly follow issues, should there be heavy rain. Your goal is to get to 90 to 95% compaction (which is the desired compaction you need). Your objective is to produce a surface as smooth as possible. Your last task here is to go over it with a broom to ensure the smoothest surface possible.



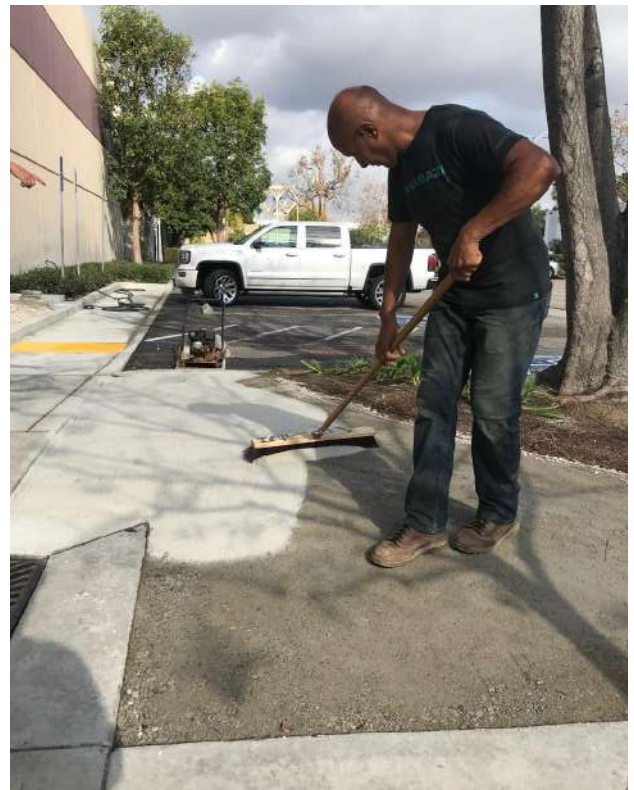
Note: Keeping the area damp while compacting ensures for quicker/better compaction.



Note: 'Crowning' the area instead of a side-to-side slope always make these installation look way better.

4" +

Note: Using less than 4" of Road base compacted to 90% or better will result in a lawn that becomes lumpy and bumpy in short time after the installation have been completed.



Note: Use a push broom to help distribute infill sand properly through out your install.

Weed Fabric



Install the weed fabric over your compacted base. Weed fabric is very important since it will reduce the possibility of weeds & seeds germinating on the base or on top of the turf. Even with the topsoil remove the remaining soil may contain weed seeds that may germinate, birds and the wind may also deposit seeds that could germinate. The weed fabric greatly reduces the chance of these germinating on the facility.



Making Rough Cuts

Place the synthetic turf in place in rough cuts. Using the shot follower (see list of tools at the bottom), prepare your seams by cutting off the factory edges 3 – 4 rows in. After you have removed all the factory edges make a 'test run' to ensure your seams are looking perfect. Note: Make sure the stitch lines run towards to property, in other words: if you are standing in front of the property, you should be looking straight down the stitch lines. This will ensure the grain points in the correct direction.

Note: Do NOT shape the turf to the outer perimeters until you are done with the seams.



It is recommended that you stretch the turf and blanket it with nails to ensure the turf does not buckle. This step is not mandatory but highly recommended, especially when you do installations between December 1 – March 30, the cooler months. The cooler weather causes the black backing to stay 'stiffer' which in turn stops it from expanding (which will happen when the summer comes around and the turf starts heating up). If the turf was not allowed to relax for 1 – 2 hours before installation AND it does not get stretched there is a possibility that the turf will buckle, looking something like this:



Avoid visible seams by allowing turf to stretch.

In addition to allowing the turf to relax, stretching the turf (using a Seam jack) and putting nails throughout the body of the turf will eliminate this potential issue.



Use a seam jack to stretch to remove wrinkles.

Proper Nail Application



NOTE: WHEN YOU PUT NAILS IN THE BODY OF THE TURF, BE CAREFUL NOT TO HIT THE NAILS TOO HARD WHICH IN TURN WILL CREATE DIMPLES THROUGHOUT THE TURF WHICH WILL LOOK LIKE THIS. AVOID CREATING PITS IN THE TURF BY NOT STRIKING THE NAILS TOO DEEP.





Turf Seams

Once you are satisfied that your seams are perfect, drive 5" bright nails about 12" away from the seam through the turf with the nail sticking out about halfway. These nails will ensure your seams do 'not move' while you are working on them. As you finish each 3' – 4' section be sure to roll the seam vigorously with a seam roller to maximize the blending of the turf fibers to help blend the seam. Once the seam is completed, drive the nails down into the turf BUT make sure to not hit the nails too hard and in doing so create dents/dimples in the turf.

Note: Make sure the grain of the turf is ALWAYS facing in the same direction.

Once the seams are fully completed and the nails alongside the seams have been driven down you are now ready to shape the outer perimeters of the facility. With the seams done and the nails in the ground you run no risk of 'pulling the seams out of place'.

Once the complete facility has been secured with nails (in the body of the turf and the outer perimeters), you are ready for the infill sand to be applied. Always use a minimum of 2 pounds of sand per square foot. This is needed to help the turf stand up better AND keep the turf from buckling during days of severe temperature swings. The ideal sand for lawns are #20 silica sand, #16 green sand or Superfill. Apply the sand with a drop spreader. The drop spreader ensures the sand goes down/in evenly which will give you a much better looking facility. Drop the sand in layers and broom the sand in-between each layer. When possible, always use a Power Broom (see photo below in list of tools) since it can do the same work in 10 minutes that will take a human 30 minutes to do. Furthermore, these power brooms will 'break the grain' which is a must for correct installation.

Note: It is VERY important to remove as much grain from the synthetic lawn as possible; this gives you an authentic and classy looking installation.



Brooming The Turf

Once you are satisfied that your seams are perfect, drive 5" bright nails about 12" away from the seam through the turf with the nail sticking out about halfway. These nails will ensure your seams do 'not move' while you are working on them. As you finish each 3' – 4' section be sure to roll the seam vigorously with a seam roller to maximize the blending of the turf fibers to help blend the seam. Once the seam is completed, drive the nails down into the turf BUT make sure to not hit the nails too hard and in doing so create dents/dimples in the turf.

Note: Make sure the grain of the turf is ALWAYS facing in the same direction.



DO NOT SPREAD ALL THE SAND AT THE SAME TIME. SPREAD A LAYER, THEN BROOM THE LAWN, SPREAD A LAYER THEN BROOM THE LAWN. KEEP ON REPEATING THIS UNTIL ALL THE SAND HAS BEEN USED. THIS WILL LEAVE YOU WITH A FULL BODIED LAWN WITH THE CORRECT AMOUNT OF INFILL AND A LAWN WITH ALMOST NO GRAIN TO IT.

Brooming the turf is of utmost importance, without proper brooming the turf will not look as good as it can. Proper brooming also removes most of the color change which is caused by the grain laying in one direction.





Gopher Wire

Should I use Gopher wire or not? If there is evidence of any gophers it is highly recommended that you use the gopher wire. These little guys will destroy the base if they get under the synthetic turf. After you have removed the existing growth (before you bring in the Road Base, lay the gopher wire down across the whole area and secure it with sod staples.

Note: If you know there are many gophers in the area, it is recommended you do a double layer. Also make sure you take extra time to secure the gopher wire around the outer perimeters, this is where they will try to get back in.



Important Facts To Know

1. Be on the look out for windows facing south, south west and west. The reflection of the sun could melt the turf if the windows are too close to the turf. Double pane windows are the most troublesome since they double up the sun's magnification factor. If you have any doubt, call us and we will put you in touch with a good window tinting company. There is a specific film (virtually clear) or putting on a screen that can over come this potential problem.

2. Our turf will get hot during the mid summer months. Simply wet it down and it will drop the temperature by 20-30 degrees and hold the lower temperature for up to 4 hours. However, our turf does not hold heat (like rocks do) and will cool down very quickly when covered by shade.

3. Although we manufacture turf made specifically for dogs, all our lawns are perfect for pets. In cases where there are dogs AND humans, always install a lawn product rather than pet specific turf because the lawn products have more 'built in safety' and softness which is better for humans.



When installing a playground with foam:

Follow the above installation instructions and implement the following:

Build the base to be below the top of the bender board to the depth of the foam. This will allow the bender board to trap both the base material and the foam pads. When using foam the bender board is required, it is not optional. (See drawing below)

Place the foam pads on top of the base. Do not try to seam the pads together, let them lay loose next to each other. This will allow the foam pads to contract and expand when there are big temperature swings. Also, do not use nails in the body of the playground, this will create a health hazard.

Install the turf over the foam pads. When installing synthetic turf over foam pads you must use TurfClaw for seaming. Because you cannot use nails, this wet glue system is required.

Cut the turf to fit OVER the top edge of the bender board, then screw the turf into the bender board. These screws and the weight of the infill sand will keep the turf down.

It is strongly recommended that you use Superfill/Wonderfill antimicrobial infill sand on all playground installations for a cleaner, safer playground.





Tools needed for a correct installation:



\$28.99

LOOP PILE CUTTER
(10-152-3)



\$26.99

CUSHION BACK CUTTER
(10-146-3)



\$20.99

SHEARS
(10-585)

Carpet Scissors
Making fine cuts and shaping



\$15.99

SEAM ROLLER
(10-100)



\$00.00

1/4" TROWEL
(###)



\$6.99

CARPET KNIFE
(10-215)



\$234.99

SEAM JACK
(10-128)



\$00.00

HAND TAMPER
(###)



\$00.00

DROP SPREADER
(###)



\$580.00

POWER BROOM
(POWERBROOM)



\$75.99

CARPET KNIFE
(10-410)



\$00.00

CARPET DOLLY
(###)

Infill Sand Types

Recommended Infill Sand Types



#20 Silica Sand

Kiln dried Silica sand is the most economical way type of infill sand.



#14 Green Sand

Coated with green color, kiln dried sand for infill, available in sizes 16 and 30 which are suitable for different type of grass applications.



Super Fill Sand

Round shaped green sand coated with Arch Biocide, environmentally friendly, premium infill material, available in different sizes which are suitable for different type of grass applications.



Zeo-Fill

Organic, natural and environmentally safe, Zeofill is the best infill for an artificial turf installation.



Hydro-Chill

HydroChill utilizes moisture to provide a cooling effect. Rainfall, dew and irrigation can help keep your lawn cool for days, depending on local conditions.



#30 Silica Sand

Finer sand used for golf and putting green applications.



#60 Silica Sand

Finer sand used for golf and putting green applications.



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