

# Thinking about artificial turf & synthetic grass for your next residential or commercial project?

***Keep these important points in mind:***

## **6 Things to Look For in Your Artificial Grass System ...**

1. Realistic color and look to the grass surfaces that will compliment natural lawns, in your area
2. A sound installation plan that helps improve form, function and drainage for the site, insures minimum waste while delivering an installation that looks natural and is stable and safe
3. Soil stabilizing fabrics, seaming, infill and other standard system components are used
4. Quality products backed by manufacturer's warranties; warranties on installation workmanship
5. Industry standard guidelines are met when designing, specifying and building your project
6. A complete set of documents are provided to you which would include a concept drawing and professional design estimate which includes exact costs for construction and job materials

## **6 Things You Should Do BEFORE You Get an Estimate**

1. Go to ASGi and see how a professional installation might be done in your yard
2. Download the ASGi Design and Buyer's Guide to work with forms to help you build a budget
3. Contact local installers to set up appointments; we recommend getting 3 bids
4. Get to know the designer/estimator over the phone, ask about their products and services
5. Discuss the company's experience, business practices; ask for referrals, affiliations
6. Review any property association or local building codes and/or restrictions and review rebate programs that might be available from your city, county, water district or other utility

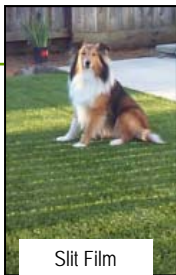
## **6 Things You Should Expect From Your Professional Installer ...**

1. They provide proof of required licenses, insurance and bonds
2. They have experience with your type of project and site conditions
3. Whether they perform the work themselves, or hire sub-contractors, they are on the jobsite before, during and upon completion of the job; unexpected changes or modifications are handled promptly
4. They provide you a complete and easy to understand set of documents; change orders and any other paperwork, such as invoices, are always provided to you, in print, in a timely manner
5. Seasoned professionals know their products and their systems and build proven solutions using best-business-practices; they should provide you with several satisfied customer referrals
6. Courtesy, communication and a finished project that meets or exceeds your expectations

## **6 Things You Should Do BEFORE You Sign a Contract:**

1. Check on the contractors' referrals, see several jobs in person; contact your local Better Business Bureau, builder's exchange or trade association to verify credentials and company reputation
2. Ask all the questions you may have about the company, their policies, products and expectations
3. Read over the product and installation warranty. Ask how customer service issues are handled
4. Know when materials will arrive and where they will be stored; before and during construction
5. Review the job plan, description of materials, drawings and construction schedules
6. Review all pages of the construction contract, payment terms and conditions, along with all required documentation; waivers, releases and addendums required by your local building authorities.

## Lawns & Landscape Uses



## Putting Greens & Bocce Courts



## General Properties of Artificial Grass Materials:

- **Common Yarn Fibers**
  - Polyethylene (PE)
  - Polypropylene (PP)
  - Nylon (PA)
- **Surface Specifications (Ranges)**
  - Face Weight:: 24 to 90 (+) ounces
  - Denier: 4600 to 11,000
  - Stitch Gauge: 3/8 to 1/2 inch
- **Common Yarn Styles**
  - Slit Film - Fibrillated Tape
  - Monofilament
  - Mono-Tape
  - Texturized
  - Knit de Knit
- **Common Fiber Uses**
  - PE - Lawns, Chipping, TEE
  - PP - Greens, Bocce, Cart Path
  - PA - Greens, Bocce, Cart Path

**Polyethylene (PE)**, is a synthetic yarn fiber made from olefins and was developed to be used for artificial grass surfaces.

Soft and resilient, PE fibers are commonly used for lawn, landscape, chipping and tee lines projects. Most materials are tufted into porous backings.

They dry very fast, are resistant to stains, mold, mildew, UV and high traffic, when properly installed, groomed and maintained.

Many PE landscape, chipping and tee grass materials are now available in either slit film or monofilament fibers; from 1 to over 2 inches in height.

Slit film styles (made popular in sports field installations) tend to be a wider blade, resembling some natural fescue grasses or a Bermuda grass while monofilament fibers are more like a natural lawn of rye or blue-grass.



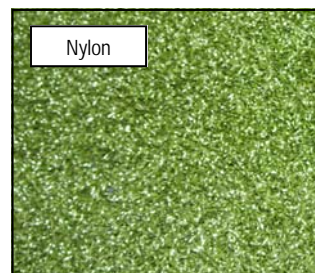
Fibrillated Slit Film



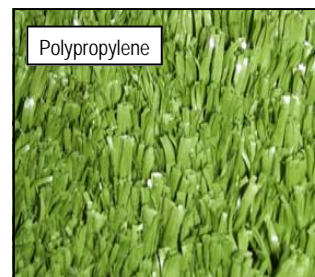
Monofilament

**Nylon (PA)**, the first olefin fiber to be developed in the 1930s, and is most often used for putting green, chipping or field hockey surfaces. Nylon fibers are typically texturized and densely woven into non-permeable backing materials. Emerging styles include blades from 3/8 inch to over 2.5 inches and colors range from lite green to a richer, field green.

**Polypropylene (PP)** fibers were the first developed and used to simulate the performance of a bent-blade putting green surface. Many of the PP surface styles will be from 5/8 to 1.25 inches in blade height and once infilled\* and rolled will stay bent and hold speed.



Texturized, & Fibrillated Slit Film



Classic Slit-Film

*Available in several styles of fiber, color and texture, artificial grass surface materials can be created to resemble fescue, rye and other common natural grass blades. Colors can range from dusty greens or multi-colored tones to new spring green or the rich, deep green of blue-grass sod.*

***\*All artificial grass surfaces benefit from the use of INFILL.***



Classic Slit-Film Infilled with Semi-Round Sand  
Infill helps protect blades from UV damage, adds weight to hold the grass in place and provides a natural feel to the surfaces. Infill can help blades and surfaces last longer.

## Design and Engineering Considerations

When you approach a synthetic grass project, it has to be with a mindset of longevity. How the job is engineered and built has a direct effect on your ability to achieve design objectives and deliver a solid, stable installation.

*Four basic installation techniques are shown, to your right.*

The ASGi Standard Installation Guideline for Landscape and Lawns shows you how to achieve natural looking lawn installations. The tips and techniques learned here can be incorporated into any plan.

One of the first considerations is what type and amount of site preparation is required. It can be to your advantage to excavate out problem concrete, asphalt, soils or other existing materials and import appropriate base materials into the site to insure a stable outcome.

As a basic rule of thumb, the final grade of the project, use and accessibility requirements will have to be taken into consideration during design and specification; prior to preparing an estimate and bid for your job.

If concrete or asphalt areas drain properly (no standing water on surfaces, long after a rain), synthetic grass and artificial turf can be placed on top. If there are cracks or other crevices in the surfaces, they may need to have some minor repairs to insure there will not be any dips or bumps to the final surfaces.

When installing over native soil conditions, fabrics are very important for the long-term stability of your projects, as well. ALWAYS start with a durable and porous synthetic fabric (woven or non-woven) and install it over native soils and then add your imported base layers, as required by your design.

A minimum of 2 to 3 inches of compacted aggregate materials UNDER the synthetic grass surfaces are installed over soil stabilizing fabrics, on top of native soil conditions (sub-base materials). See Figure 1.

If your final grade needs to be LEVEL with existing hardscape elements such as walkways, patios or driveways, allow for adequate excavation and estimate base materials to raise the base, after compaction, to a level of grade approximately 1 inch below the grade of the hardscape element.

To achieve a CROWNED look against hardscape, import additional materials and shape the base, during compaction, appropriately. Your grade should be set, after compaction, at approximately 1 inch below the level of the hardscape. To provide for additional watershed, install a small channel of drain rock, prior to adding base materials, as shown. (See Figure 2) Combined with the proper use of soil stabilizing fabrics, the drain rock channel (French drain) will allow run-off to fall below the surfaces and channel out, by gravity, without the risk of erosion.

When installing synthetic grasses against or in between large areas of concrete or asphalt that tends to shed water into the turf areas, allow for additional excavation, several layers of mixed base materials and the possibility of additional drain pipes, catch basins, connectors and drain rock as show to the right. See Figures 3 & 4.

Synthetic grass areas can accommodate any conditions as long as the site is engineered to perform, under the requirements of local weather, weight load, traffic and use. Installations in public areas, even privately owned, may have further requirements to meet safety, accessibility or other standards of construction.

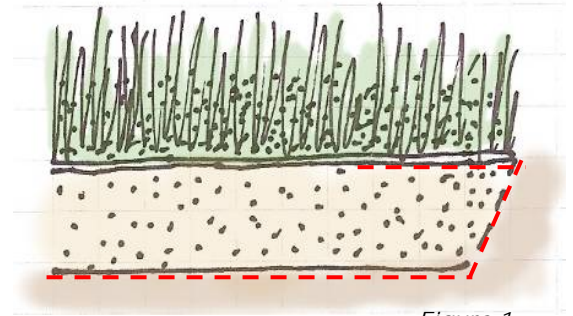


Figure 1

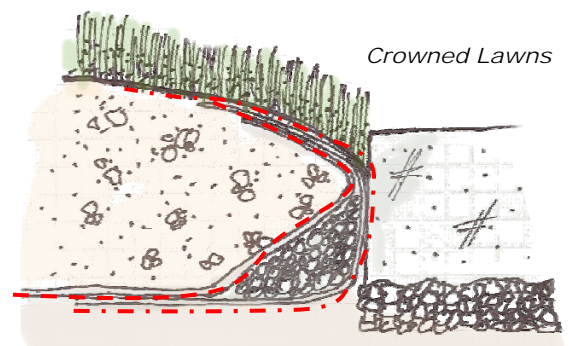


Figure 2

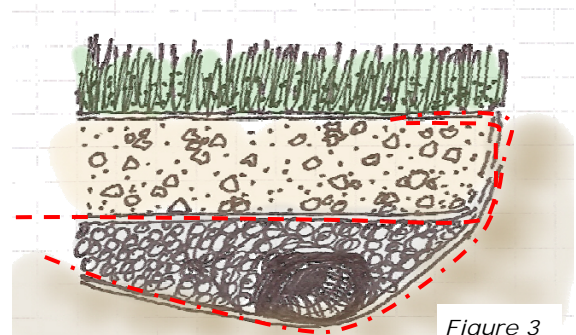


Figure 3

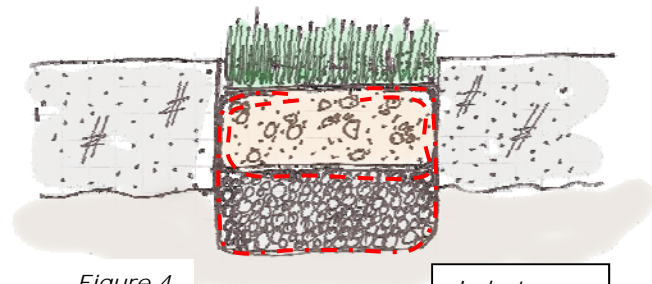


Figure 4

In-between  
Flagstone &  
Concrete  
Slabs

# MINIMUM JOB SPECIFICATIONS

## Special Report : Overview of Artificial Grass Systems

SR.05 - 2008

### Basic Lawn or Side Yard Installation

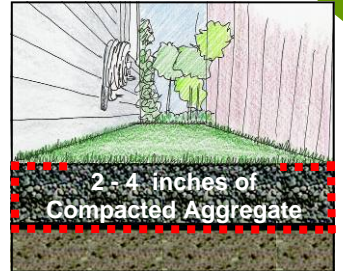


Illustration of a side view of the (above) construction at right.

ASGi has developed a minimum job specification and industry standard installation guideline based upon best-business-practices, sound construction techniques and the peer review of seasoned installers located throughout North America and abroad.

The minimum recommended job materials for a permanent, professional installation for lawn or landscape would include:

- Porous, Soil Stabilizing Fabrics
- 2-4 inches of Various Compactable Aggregate Base Materials
- Permeable Artificial Grass Surfaces
- Seaming Materials & Supplies
- Infill Materials



Over Well-Draining, Native Soil

**Installation Guides at**  
[www.asgi.us](http://www.asgi.us)

## MINIMUM INSTALLER CREDENTIALS

To contract for the sale and installation of artificial grass materials, operators, in many areas, are required to hold a valid license from the local contractor or builder exchange that govern your state, province or regional authority.

An experienced builder/installation professional should have 4 (four) years of experience to obtain most licenses, so they should also be able to provide you with several job referrals; do more than just look at photos, request contact information and call their references. US Builder Exchange and Contractor Licensing Office Lists - online at ASGi.

In the US, the Better Business Bureau can help you check the references of a business by searching on their website at [www.BBB.org](http://www.BBB.org) or check your local builder's exchange

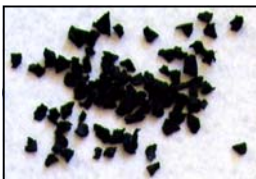
*Your contractor should be able to provide proof of required bonds, WC & general liability insurance.*

*If your contractor (or a sub-contractor) does not carry a valid workman's comp insurance policy - you may be liable for injuries that occur to laborers on your property during the construction of your project.*

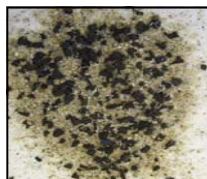
### All artificial grass surfaces benefit from the use of INFILL.

*Infill materials are used on top of the artificial grass surfaces, after they have been laid in place, seamed and edges trimmed. Infill materials are selected for their grade, size, shape and ability to fill up the voids between rows of yarn stitches of most turf styles and like any ballast materials, help to distribute weight across the installed surfaces, holding them in place; eliminating the surfaces from creeping, buckling or separating at the seams. All infill will contribute to the infiltration rate of the surfaces and be a determining factor in the surface fibers resiliency, wear and fall zone safety rating. The amount and type of infill used is determined, primarily, by the safety and effectiveness of the selected material which is based upon specifications and best-business-practices for the intended use, traffic, local weather and project expectations.*

Commonly used infill material selections:



SBR (recycled)  
Or EPDM (not shown)  
Rubber Crumb



SBR (Ambient)  
Rubber Crumb &  
Natural Semi-  
Round Sand



Elastomer-Coated  
Semi-Round Quartz  
Granules  
(silica sand)



Acrylic - Coated  
Semi-Round Quartz  
Granules  
(silica sand)



Classic Slit-Film Infilled with Semi-Round Sand Infill helps protect blades from UV damage, adds weight to hold the grass in place and provides a natural feel to the surfaces. Infill can help blades and surfaces last longer.



Infill Close Up



Infill Applied to Surfaces

Additional Studies, Links, Glossary of Terms & Guidelines at [www.asgi.us](http://www.asgi.us)