

Artificial Turf Installation Ground Preparation:

Sub-Base, Base, and Top Base Surfaces Materials

Use the following step-by-step guideline based on conditions and materials available in the desert region of the Southwest. By following this process, it will insure that your installation meets the highest standard of quality and performance.

1. Ground Clearing

The first step in the installation process is to clear the ground of any covering or debris. A clear base is vital to the long-term quality of your installation. All organic materials must be cleared and the site left bare of any materials that could decompose over time. For existing lawns and landscapes, this may include removal of sod, roots, rocks, gravel, etc.

2. Pest and Weed Control

Once the site is clear, installation should include porous, construction grade Landscape Fabric. Secure to ground with landscape staples. These fabric layers serve as primary barriers to protect against encroaching roots, rodents and other burrowing insects and pests. The fabric keeps the base materials from mixing with native soils, and adds stability and years to the integrity of the site. (This would be the time to consider major drainage issues, See 3c.)

3. Sub-Base Height, Drainage

The next step is to ensure that the installed materials will be at the desired finish grade. If your final grade needs to be LEVEL with existing hardscape elements such as walkways, patios or driveways, allow for adequate excavation to achieve a final level of grade approximately 1 inch below the grade of the hardscape element. (the average thickness of the turf).

As little as 3 inches of base may be used over a well-draining, stable native soil Sub-Base and other projects may call for 4 or more inches of material to provide for proper drainage, stability and height for the final look and feel of the project, along with the weight-load it may have to carry.

Depending on the existing grade conditions:

3a. Lowering the Sub-Grade: Remove any excess Sub-Grade soil to reach the determined depth (about 3 - 4 inches), smooth out, dampen and compact.

3b. Raising the Sub-Grade: Use compactable aggregates, also known as ABC to bring up to determined depth (usually within 3 - 4 inches of finish grade). Sub-Base materials need to be dampened and compacted as it is installed to insure that the base material will not shift or sink over time.

3c. Drainage in low areas, install a small channel of rock, (French drain) prior to adding the base materials. This will allow watershed below the surface to channel out without the risk of erosion. Larger areas may require additional drain pipes and catch basins based on regional rainfall.

4. Gravel Fines Base

Next, install Crushed Fines to firm, level and stabilize your Sub-Base. The Crushed Fines should be brought in by wheelbarrow or Bobcat in larger areas and spread out evenly to create a base of the appropriate thickness (3 inches to near finish grade).

5. Grading

This step allows you to determine the near finish level of the grass. The Crushed Fines need to be graded (typically with wide contractor rakes) to adjust the contour to meet drainage requirements (crowns and slopes) as well as personal desires. Although the turf also drains vertically through the drainage holes it is still advisable to give the base a slight slope, to avoid any water build up or improper drainage.

6. Compacting the Base

Proper compaction tools are selected for the amount and type of compaction needed to achieve the overall design. A walk-behind, vibrating plate compactor is ideal for larger, level areas. Lightly spray water over the gravel prior to tamping to ensure proper compaction and reduce dust. The goal of this step is to reach 90-95% compaction. This typically takes 2-3 passes. Let the compacted Base dry and check for inconsistencies prior to proceeding. Check, and adjust the Crushed Fines level for proper grade and slope, repeat the compaction if necessary.

7. Final Surface Compaction

Check surface for depressions. Any depression areas 1/4 inch or deeper should be filled-in and re-leveled. Spread a fine layer of sand just a 1/8 inch on the surface. This fills in any voids the Crushed Fines may leave, and give the turf a smooth base to lay on. The walk-behind units are often too aggressive to compact rolling or crowned surfaces, and smaller areas. Final surface compaction is more productively compacted by using a water-filled (250 lb.) landscape roller, hand tampers, small pieces of wood board & mallets. A final pass around the edges with a pointed trowel, broom or hand brush will help clean edges of extra materials.

This completes the Base Preparation for Artificial Turf Installation (Southwestern Region).