PROCEDURE FOR SELECTING A SAND ROOTZONE

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1. Pre-qualify sand, gravel and additive materials

   Companies submit samples of their sand and gravel for particle size analysis by a qualified lab. Typically these are materials that have been used successfully on other sand based jobs. The cost for testing these samples is usually the responsibility of the sand and gravel company. The samples must be representative of the materials supplied for the entire job since the test results of the pre qualified materials will become the "target" for all other quality control testing. Peat or other additives should be pre qualified by a similar procedure.

2. Match sand to gravel

   It is important that the sand and gravel match so that a perched water table is achieved and so the sand properly bridges and does not filter into the pea gravel. In general finer sands require a finer gravel. A D_{15} and D_{85} test are required to properly size the sand and gravel. At this point a sand and gravel can be approved for the bid process. The process of bidding materials is greatly simplified if all construction companies are bidding on the same approved sand and gravel.

3. Make rootzone mix to meet design criteria

   In addition to particle size analysis the proper amount of peat, soil, or other additives must be combined to meet design criteria such as, saturated hydraulic conductivity, bulk density, porosity, and water holding capacity. Once the rootzone has been properly designed the test results will serve as the "target" for further quality control testing. The cost for rootzone design testing is usually the responsibility of the owner. Additional testing that may be required because of failure to meet the "target" values is usually the responsibility of the sand and gravel company.

4. Quality control testing

   Quality control testing involves sampling during the blending process to insure that the "target" results are consistently met for all materials delivered to the job site. Typically this involves rapid testing and approval of particle size and organic matter content for each 1000 tons. Separate piles, each 1000 tons, must be created during blending in the event that a pile does not meet specification and must be reblended. Quality control testing is usually the responsibility of the owner. Reblending and retesting when the target values are not met is usually the responsibility of the blending company or the sand and gravel company.

5. Clean trucks and a clean hard surfaced staging area are recommended to avoid contamination of your blended and approved rootzone.