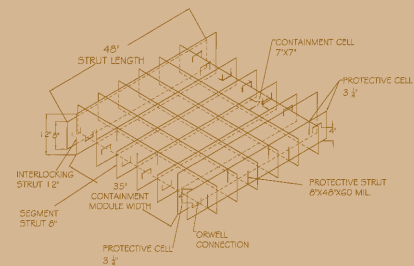
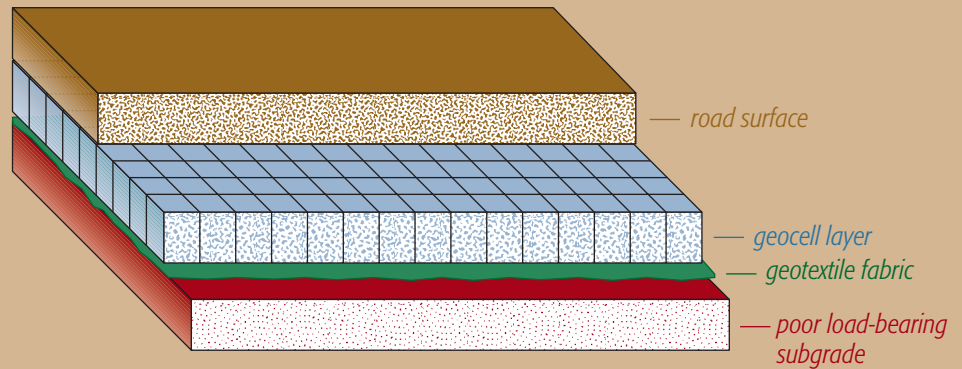


Road Shoulder Construction



A relatively thin geocell layer can provide the same load-bearing strength as a much thicker rock-filled base layer.

Soil Stabilization Using Sand Confinement Grids

When building low-volume roads and shoulders over poor load-bearing soils, constructing a base using confined-cell geosynthetics (geocells) is often a favorable solution.

The traditional method of creating a base by over-excavating and then filling with imported rock can require large volumes of trucking to both remove excavated material and to deliver fill. In situations where access is limited or trucking distances are great, this method quickly becomes costly.

Rather than excavating and importing large quantities of material, consider using sand confinement grids. Native sand, found in abundance, can be used to fill a relatively thin (8") geocell layer. This geocell layer can provide the same load-bearing strength as a much thicker rock-filled base layer, saving you excavation, trucking, and material costs.



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A Brief List of Design Reference Works

- S. Chang, "An Assessment of Sand Grid Reinforced Beach Road Using the Rough Terrain Container Handler (RTCH) Vehicle," 1986, Marine Corps Development and Education Command, Program No. CC44-536.
- S. Webster, "Technical Report GL-79-20: Investigation of Beach Sand Trafficability Enhancement Using Sand-Grid Confinement and Membrane Reinforcement Concepts," 1979, U.S. Army Corps of Engineers Waterways Experiment Station
- N.R. Krishnaswamy, K. Rajagopal, G. Madhavi Latha, "Model Studies on Geocell Supported Embankments Constructed Over a Soft Clay Foundation," *Geotechnical Testing Journal*, March 2000.
- N. Coetzee, "Product Evaluation: Presto Roadbase Sand Confinement Grid," 1983, State of Alaska Dept. of Transportation and Public Facilities.

Building trafficable surfaces using geocells is a well understood and documented practice. A number of geotechnical reference materials are available which provide design guidance.