

Reconstruction of New Jersey Route 18

# THE ARCHWAY TO RENEWAL

New Brunswick, N.J.



## Artificial Rock Surface Treatment Construction

Artificial rock surface treatments are unique project design features and the first-ever use of Boulderscape in New Jersey. This wall being constructed below the historic Antilles Field of Rutgers University doubled as a stabilization and support technique for the signature weathered shale rock outcrop. The process involved the installation of a shotcrete surface over a two-tier wall system: soil nails from the top to the groundwater level (20 feet) and then soldier beam and lagging below with a synthetic drainage blanket to handle the pore water pressure. The shotcrete was sculpted by hand while still plastic, giving the appearance of natural rock. Once cured, the surface was stained with a base color that matched the area's existing natural rock outcropping formations, and then highlighted with several other natural colors for more depth and variation. Textured surfaces incorporated fissures and fractures modeled after those found in the adjacent rock outcroppings to further blend the sculpted rock with its surroundings. The shotcrete was also used for a retaining wall, as it was more cost effective than form liners and proved to be an economical and efficient solution.