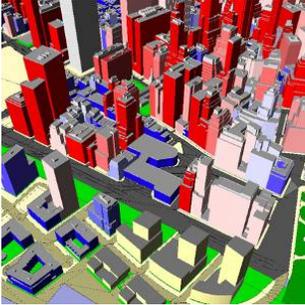


Greenwich Street South Urban Design Plan

New York, New York



The ESC's 3D-GIS analysis techniques were used to examine overbuilt and underbuilt properties to highlight development opportunities.



The ESC also used its highly-accurate 3D model to perform a shadow analysis to help locate public open-space for optimal sunlight in the fall and spring.

Client:

Lower Manhattan
Development Corporation
New York, NY

Co-Project Directors:

Michael Kwartler
John Fontillas (H³HC)
Claire Weiz (WXY)
Laurie Olin (OP)

Completed:

2002



Two screen shots from the interactive real-time 3D model used during the design phase of the Greenwich Street South Urban Design Plan. The top image shows existing conditions—the Brooklyn Battery Tunnel entrance and a parking structure spanning the approach. The bottom image shows the proposed alternative, which decks over the tunnel entrance, replaces the garage with an at grid park linking Battery Park City with lower Manhattan, and restores the historic street system, which was interrupted by the tunnel entrance.

The Environmental Simulation Center was one of four primary consultants for the Lower Manhattan Development Corporation's Greenwich Street South Urban Design Plan collaborating with WXY Architects, The Olin Partnership (OP) and the prime consultant (H³HC). The ESC developed a highly detailed, topographically accurate, 3D CAD model and a photorealistic, real-time simulation of the area which was used to simulate Alternative Development and Urban Design Scenarios for the client, developer focus groups, and the public. The ESC collected and maintained the database for the study and performed detailed analyses including: over-built/under-built analyses on a site-by-site basis, identifying soft sites, and commercial sites ideally suited to residential conversion. The ESC also did shadow analyses to best determine the location and size of a major new public open space above the Tunnel and made significant contributions to the Urban Design Plan proposed for the Greenwich Street South Neighborhood, including:

- The development of the concept of a scaled park spanning the Brooklyn Battery Tunnel that could be accessed at grade at Greenwich Street, which provided a direct connection from Battery Park City to public transit at Greenwich and Church Streets;
- The identification of a Conservation Area with its small scale structures and uses linking the Greenwich Street South area to its historic development pattern; and
- The re-introduction of the historic street pattern, broken by the Brooklyn Battery Tunnel approach roads and the re-configuration of the approach roads.

The ESC developed the zoning implementation plan that included:

- A detailed zoning analysis and recommendations on how New York City's land-use regulation could be used to implement the Plan; and
- The concept of district-wide zoning permitting the TDR of unused floor area from the Conservation Area to the Redevelopment Area over and adjacent to the Tunnel access roads.

[Greenwich Street South Urban Design Study - Renewing Neighborhoods Downtown](#)
[Animated Walkthrough of Greenwich Street South Real Time 3D Model](#)

