

Green de Corp. Limited - Case-Study (7)



PROJECT INFORMATION

CLIENT: Lowline

LOCATION: Manhattan, New York.

COMPLETION YEAR: 2015

SYSTEM / PRODUCT INSTALLED: "SUNPORTAL" daylight system

PROJECT BRIEF: The proposed location is the one-acre former Williamsburg Bridge Trolley Terminal, just below Delancey Street on the Lower East Side of Manhattan. The site was opened in 1908 for trolley passengers, but has been unused since 1948 when trolley service was discontinued. Despite six decades of neglect, the space still retains some incredible features, like remnant cobblestones, crisscrossing rail tracks and vaulted ceilings. It is also directly adjacent to the existing JMZ subway track at the Essex Street subway stop— so park visitors and subway riders would interact daily. This hidden historic site is located in one of the least green areas of New York City— presenting a unique opportunity to reclaim unused space for public good.

Designed by Raad Studio, the proposed solar technology involves the creation of a “remote skylight”. In this approach, sunlight passes through a glass shield above the parabolic collector, and is reflected and gathered at one focal point, and directed underground. Sunlight is transmitted onto a reflective surface on the distributor dish underground, transmitting that sunlight into the space. This technology would transmit the necessary wavelengths of light to support photosynthesis, enabling plants and trees to grow.

During periods of sunlight, electricity would not be necessary to light the space. The Lowline team built a full scale prototype of the technology in an abandoned warehouse in the Lower East Side, for the “Imagining the Lowline” exhibit. The exhibit attracted thousands of visitors, was heavily covered by the press and ultimately served as a proof of concept.