

In Praise of Getting Lost

Sven Hedin and the Lowline

James Ramsey

The Explorer

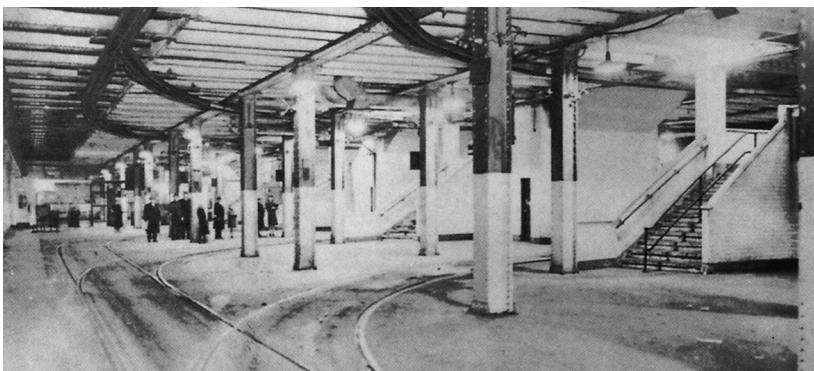
Desperate, the three surviving members of the expedition had resorted to dragging themselves along on their hands and knees. The others had been left behind four days ago. Vultures that had been on the remains of their camels wheeled overhead in anticipation. Leaving his last two exhausted companions behind, the explorer Sven Hedin pushed on alone, resolving to return should he, against all odds, find water. At last, he reached the dry riverbed of the Khotan-daria, the fabled stream that briefly flowed each year out of the Tibetan glacier fields through the desert. Making his way painfully across the broad riverbed he suddenly stood on the edge of a tiny pool, black as ink in the moonlight. It was one of those rare places, separated by a day's journey or more, where water collected and remained in hollows year round, and Hedin drank deeply from the crystal-clear pool.

Hedin had survived the infamous Taklamakan Desert. Emerging at last in a Chinese garrison town on May 9, 1902, he brought with him the notes compiled from that expedition and thus laid the foundation for a precise mapping of Central Asia, one of the last remaining "white spaces" on the globe.

Sven Hedin's celebrated expedition into Central Asia was a moment that marked the end of an age. The wild, rumored spaces beyond our maps were swiftly being brought into focus and catalogued. It was a period of







Old Williamsburg Trolley Terminal

incredible informational growth. The fantasies surrounding the “lost cities” of the vast interior of the Asian continent and the mysteries of “darkest Africa” passed into documented fact, leaving only romanticized echoes of an earlier, more untamed time.

A hundred years later, in our current age, a similar process is underway. In 2003 someone clicked a mouse, and Google Maps was born. Google Maps, along with services like Yelp, Thrillist, and countless others, have sharpened the “resolution” of the information on our maps exponentially. And not only that—access to these infinite catalogs is at hand, just sitting in all of our pockets on our phones.

In this revolution, something funny has happened. While Sven Hedin and the explorers of his age may have completed the mapping of the world by filling in the “terrae incognitae,” in this century, we have reached a new stage of human experience that touches each of us in our everyday lives. For now we have not only lost the ability to get lost, but we have also lost our ability to explore and discover for ourselves hidden places in our own cities. In many ways, the advances of our age parallel the huge informational leap of a century ago, though on a microscopic, personal scale. The loss of the capacity to explore and discover has created a deep, unstated cultural longing.

The Secret City

Built in 1908, a vast underground trolley terminal exists beneath Delancey Street on New York’s Lower East Side. Just around the time Sven Hedin was working to narrow the world, teams of mules and strong-backed Irishmen toiled away in New York City. One of the greatest urban explosions in history was underway; entire neighborhoods were being built, and alongside them, the great bridges and little-known tunnels that served them.

That tunnel on Delancey Street still remains intact, passed over unnoticed by New Yorkers during all the frenetic intervening decades. The mere suggestion that it exists is enough to signal that there is still more to the city that we have not yet discovered. The thought that New York City, for all its upward mobility, for all the gentrification, might still contain secrets and mysteries out of sight and unmarked on our maps, is both astounding and exciting.

Little known, this abandoned space has brooded silently beneath the bustle of Manhattan’s biggest street for over sixty years. Originally dubbed the Williamsburg Trolley Terminal (WTT), the space sits at the literal crossroads of one of New York’s oldest, most historic neighborhoods, the Lower East Side, where generations of immigrants who came to America first made their home. A century ago,



Abandoned Williamsburg Trolley Terminal space

the WTT served as a transit hub for this incredibly dense and busy setting, with its prime location at the foot of the Williamsburg Bridge and as a connection to four subway lines. But as time went on, the neighborhood was by turns razed, reimagined, re-settled, and bit by bit, the vibrancy of this crossroads was lost and the WTT forgotten.

Much time has passed since the troubled period of the latter half of the twentieth century, and many of the urban scars the neighborhood has borne have healed. Vitality and life have returned to the Lower East Side. It has reclaimed its cultural birthright, and in the process has become a central driver of commerce. The Lowline reimagines that heritage to bring a forgotten relic back to life.

An overt reference to the High Line, the name “Lowline” is a semiotic connection to the idea of urban repurposing and rejuvenation. At its essence, the Lowline proposes to refresh and repurpose the Williamsburg Trolley Terminal space by irrigating sunlight down into it, and by doing so, to create an underground garden for the community and the city to explore.

Using the Future to View the Past

My firm RAAD, which created and designed the Lowline, has been study-

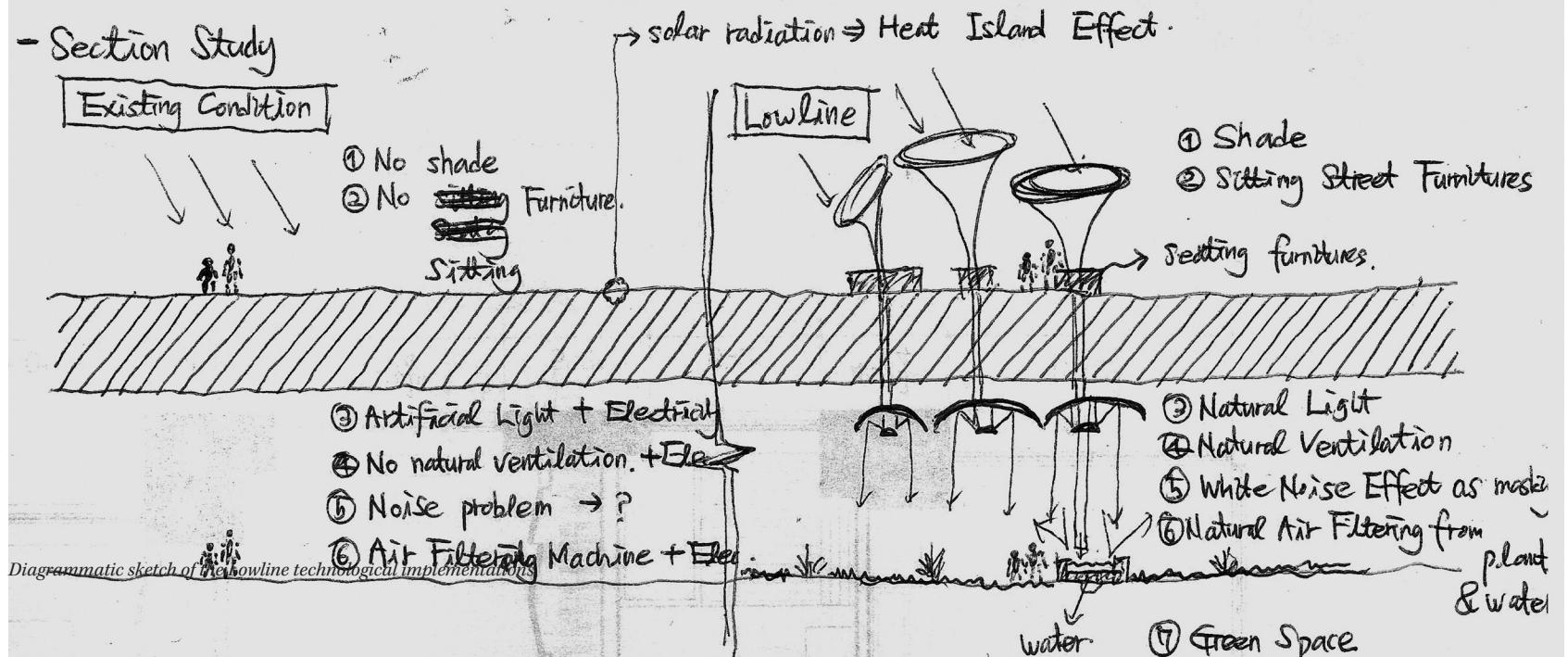
ing and experimenting with various methods of solar irrigation for several years. Applying these techniques to the old Williamsburg Trolley Terminal is the basis for its transformation into the Lowline.

The concept of taking sunlight and having it travel to another location is not a new one. From the polished stone shafts of old Egypt, to the deepened windows of your average townhouse, to more modern exotica, such as Solartubes or tracking heliostats, creating mechanisms to enjoy natural light where it would otherwise not be, has been a very natural design urge since the inception of architecture.

The Lowline represents a new approach toward achieving this goal. In order to bring sunlight down into the underground space, we make use of technology that has only recently become available and that is being further developed using the most recent advances in tracking and materials, doing so in partnership with the engineering firm Arup, the California Lighting Technology Center, and Professor Lorne Whitehead of University of British Columbia. By concentrating sunlight above the street level, channeling it through the street, and then re-distributing that light underground, we are able to deliver the full visible spectrum of sunlight with minimal impact to the street level. This effectively allows

* Lowline : Sustainable ideas for underground level

- Section Study



us to have skylights underground without disturbing the incredible bustle of Delancey Street.

Design

As with all technologies, this one serves as a tool. The solar technologies employed by the Lowline are not just simply solar devices; at some level, they function collectively as a time machine—a device from our future that allows us to travel from the present into the past. In addition, they constitute a tool that allows

us to manipulate space, light, and expectations. Our ability to deploy technology as a means of designing both a historical and experiential effect is the philosophical heart of the design.

Much of the Lowline design has to do with one important concept: maintaining the integrity of the historical shell of the site while being very clear about the modern intervention. Paralleled by vast swaths of greenery, a sort of liquid metal ceiling begins to

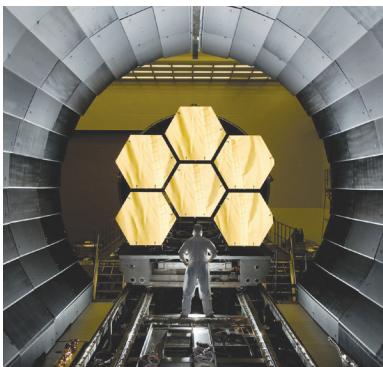
emerge, operating as the functioning optical system to distribute the sunlight brought into the space.

The design of the Lowline involves not only the “discovery” for the visitor of the archeology of the space, but the actual modulation of the visitor experience. Relative light levels, directional light, diffuse light, and how those are sequenced are all elements that allow us to provide the visitor with a different type of experience. Our aim is to create an encounter

that is altogether new: magical, at times mysterious, at others halcyon, and all underground, perhaps perversely beneath a tree with the J train clattering by.

Some First Steps

To experiment with some of our technological and design concepts, our team created an exhibit in September 2012 called “Imagining the Lowline.” Set in a large warehouse space next door to the actual Lowline, we created a full-scale “core sample” of the





Temporary exhibit

Lowline, complete with functioning technology and living plants. A timelapse video of the one week construction of the exhibit can be seen at <https://vimeo.com/brandtgraves/lowlineinstall> (Brandt Graves, RAAD)

A set of tracking solar collimators was installed ten feet above the roof. Sunlight collected above the roof was redirected into the blacked-out warehouse space, and then delivered via a system of optics to a thirty-foot by thirty-foot parabolic ceiling. Taking cues from telescope manufacturing techniques, our parabolic surface was cut from over 600 pieces of laser-cut anodized aluminum, assembled as a mosaic on site on a motorized superstructure.

Below, on the ground, a living landscape was imposed onto the concrete floor of the warehouse. Given the site conditions and our design goals, we sought to recreate the ecosystem of a forest under canopy. What emerged was an undulating hill of moss, planted with ferns, mushrooms, and a shaped Japanese maple.



Our experiments allowed us to calibrate the light levels and effects to carefully tailor the visitor experience. Ultimately, our temporary exhibit brought over 11,000 visitors in five days of operation, outclassing most institutional museums in New York over that period. Some stared, some just poked their heads in, but some even came with blankets to spend the day beside it. Did we end up achieving what we set out to do? As the designer, it's hard to say, of course, but what we certainly did do was generate curiosity, and for many, a sense of wonder.

Perhaps deliberately calling attention to our "lost" urban spaces by definition destroys them. Did Sven Hedin know that his cartographic explorations would signify the death of exploration? It is hard to say, but if we can code curiosity, or the delight of discovery, into the very DNA of design work, then maybe we begin to create spaces that beg intellectual exploration. Just maybe we can evoke for the visitor some of the cautious wonder and the magical experiences of times past by weaving something completely new.

