

The Red Line Green Roofs Initiative

I. Introduction

Green roofs capture the public imagination.

They remind us of our origins as a species, recalling landscapes long vanished. They also illustrate our common need to remain an integral part of the natural process.

Green roofs present numerous possibilities for cities, including: places to grow healthy food, renewable fuel, and fiber while stimulating local economies; creating diverse new habitats for fellow creatures; managing water as a resource rather than treating it as a waste product; and introducing aesthetic beauty into local environments which often lack focal points to reflect the changing seasons or introduce movement for the eye.

While green roofs have begun to proliferate recently, the average person often has little interaction with them. They remain largely an isolated and inaccessible example of a green initiative here, or a fulfillment of a green building checklist item there. The form they often take are small, piecemeal installations of a few thin inches of monochromatic, meager, poorly-maintained, and unproductive sedum.

II. Objectives

In contrast, the goal of the pilot **Red Line Green Roof Initiative** (RLGRI) is to re-imagine a considerable portion of the urban environment as a diverse, robust, productive, and beautiful **constructed rooftop ecosystem** which uses a major public transit artery as an organizing element to increase visibility by the public.

The 48th Ward, bisected by the CTA Red Line and one of the most densely developed communities, presents a unique opportunity for the implementation of such a project because of heavy public transportation traffic, adequate and unobstructed sunlight at the roof level of several buildings, and is an ideal setting for a pilot project.

In early phases, the pilot project would employ professionals such as architects and structural engineers to evaluate the adequacy of proposed (or advise in the planning of new) buildings. Urban agriculturalists would advise on plant selection and design of rooftop gardens, and contractors engaged to install green roof systems. Later phases would call upon the creation of sustainable green-collar jobs to train employees in the practice of rooftop gardening – planting, maintaining, harvesting, marketing, and selling produce – as well as a new class of green jobs and partnerships with higher education to observe, maintain, and analyze **building-integrated food production** in action. Further possibilities include the development of parallel industries based on locally-harvested, plant-based products for fuel or building materials.

The completion of the Initiative will mark the first large-scale green roof project in the world, placing Chicago at the forefront of community-based green roof efforts; provide critical data on building energy efficiency, Urban Heat Island Effect (UHIE) mitigation, stormwater management, and rooftop biodiversity; and will reconnect the people with the environment in which they live.

We hope that the Red Line Green Roof Initiative will serve as the prototype for future projects not only in Chicago, but also for other metropolitan areas across the country.

III. History and Process

The Red Line Green Roof Initiative was conceived by the design team of Michael Repkin of Repkin Biosystems and Dave Hampton of Hampton Avery Architects (HAA) in spring 2008 as an outgrowth of success with the Rooftop Victory Garden at True Nature Foods in 2006. The possibility of a pilot project in the 48th Ward materialized, and a collaboration between the design team and the 48th Ward was initiated in early 2009.

Previously, heat imaging undertaken by the City of Chicago had pinpointed Broadway Avenue as a significant contributor to the localized Urban Heat Island Effect, and Alderman Smith identified potential sites within the 48th Ward for consideration as green roof retrofits. In summer 2009, these sites were further evaluated for feasibility along with the design team, and identification of owners of viable properties sought. A proposal was created and sent to request transportation-based funding for a pilot project consisting of an area of 50,000 square feet.

The RLGRI still seeks funding to incentivize owners who are able to dedicate the majority of initial costs to develop viable locations into rooftop gardens. Other pilot locations are also being considered by the design team.