



## **Eco-Infill and Studio H:T Designing LEED certified factory built modular Home**

Denver, CO: Denver based prefabricated home construction company **Eco-Infill** and Boulder architectural firm, **Studio H:T** have designed the first ever factory-built home in Colorado that will be undergoing LEED certification. Located on a narrow (25' wide), infill site in the Highland neighborhood, this project is within walking distance of Downtown Denver. The LEED for Homes pilot program (Leadership in Energy and Environmental Design) is a national initiative by the U.S. Green Building Council to actively promote the transformation of the home-building industry towards more sustainable practices. Built in a factory north of Denver, the home will arrive by flatbed truck in two pieces and be craned into place in about 4 hours providing a fast, sustainable, cost effective alternative to traditional homebuilding techniques.

### **Project description**

The project was conceived of as two boxes that slide above one another to create outdoor living space and a lower covered rear entry. This potential live/work residence consists of three floors – main & upper floors (live) and garden level (work). The passive solar design invites large amounts of light from the south while minimizing the openings on the east and west. The roof deck is extroverted, capitalizing on the views to the city skyline and mountain view corridors.

#### Modular Construction:

Factory construction allows a significant savings in time and material waste. Because excavation and foundation construction can take place simultaneously with the building of the residence in the factory, total construction time is reduced to three months from the typical six to twelve months. Additionally, the residence is expected to be 90% complete at the time of delivery, including windows, electrical, plumbing and interior finishes, meaning less site work and reduced vulnerability to inclement weather. The factory, beyond providing a consistent construction environment, ensures a stable labor force and increased efficiency. The building's manufacturer states that the process of off-site home manufacturing yields material waste of less than 5%, a dramatic reduction from the amounts associated with traditional construction methods. The house is scheduled to be set on site August 16<sup>th</sup>, 2007.

#### Environmental Sensibilities:

The LEED pilot program (Leadership in Energy and Environmental Design - Homes) is a national initiative by the USGBC to actively promote the transformation of the home building industry towards a more sustainable practices. Components such as size, location, site protection, water efficiency, energy performance, sustainable materials, indoor environment quality and education are evaluated for number of points and prerequisite compliance. This project strives to take measures to ensure superior performance in every category. There are four levels of certification depending on points – Certified, Silver, Gold and Platinum. This project is targeting a LEED Silver certification.

The architects believe the house embodies organic architecture. Its form, space and materiality are direct responses to the challenges of the site in the context of the client program.

### **Company descriptions**

Eco-Infill (Ei) is an ecological, modern, prefabricated home design and construction company providing a line of high performance prefabricated homes.

Studio H:T is a Boulder based architecture office with a focus on sustainability and design excellence. We provide vision, design and documentation services for all types of unique projects.



Eco-Infill



STUDIO H:T

architecture & modular design

