

Work Samples

Here is some work I've done.

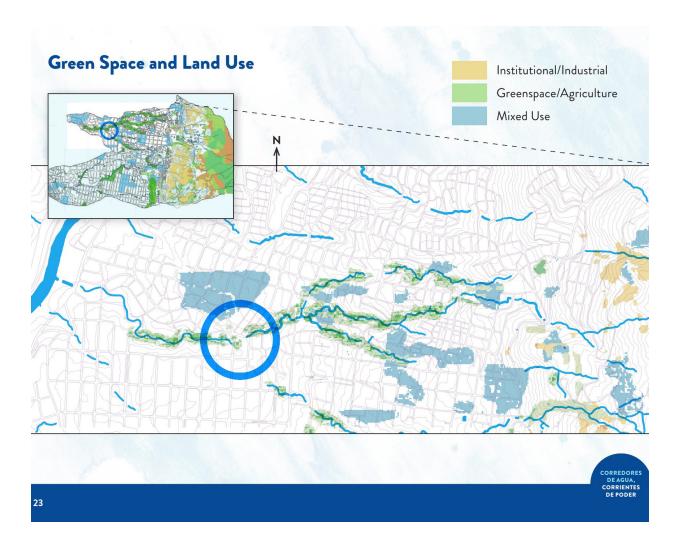
Santa Cruz Visible

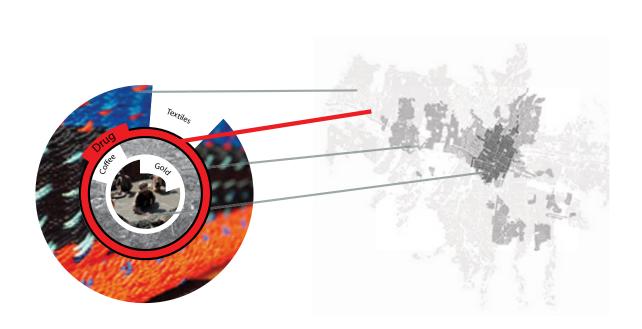
Date: January, 2013 - September 2014

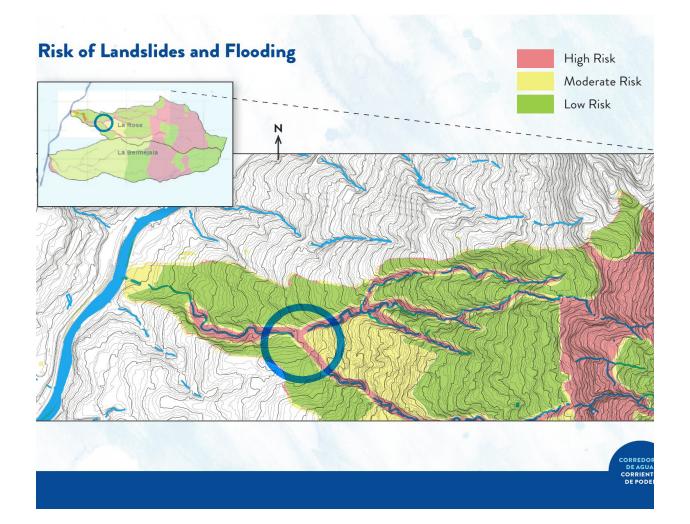
Collaborators: Aubrey Murdock, Tory Hallisey, Luisa Munera, **Advisors:** Teddy Cruz, William Morrish, Alejandro Echeverri

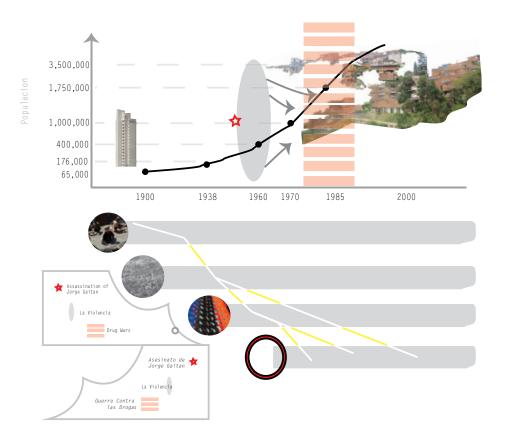
Location: Medellin, Colombia

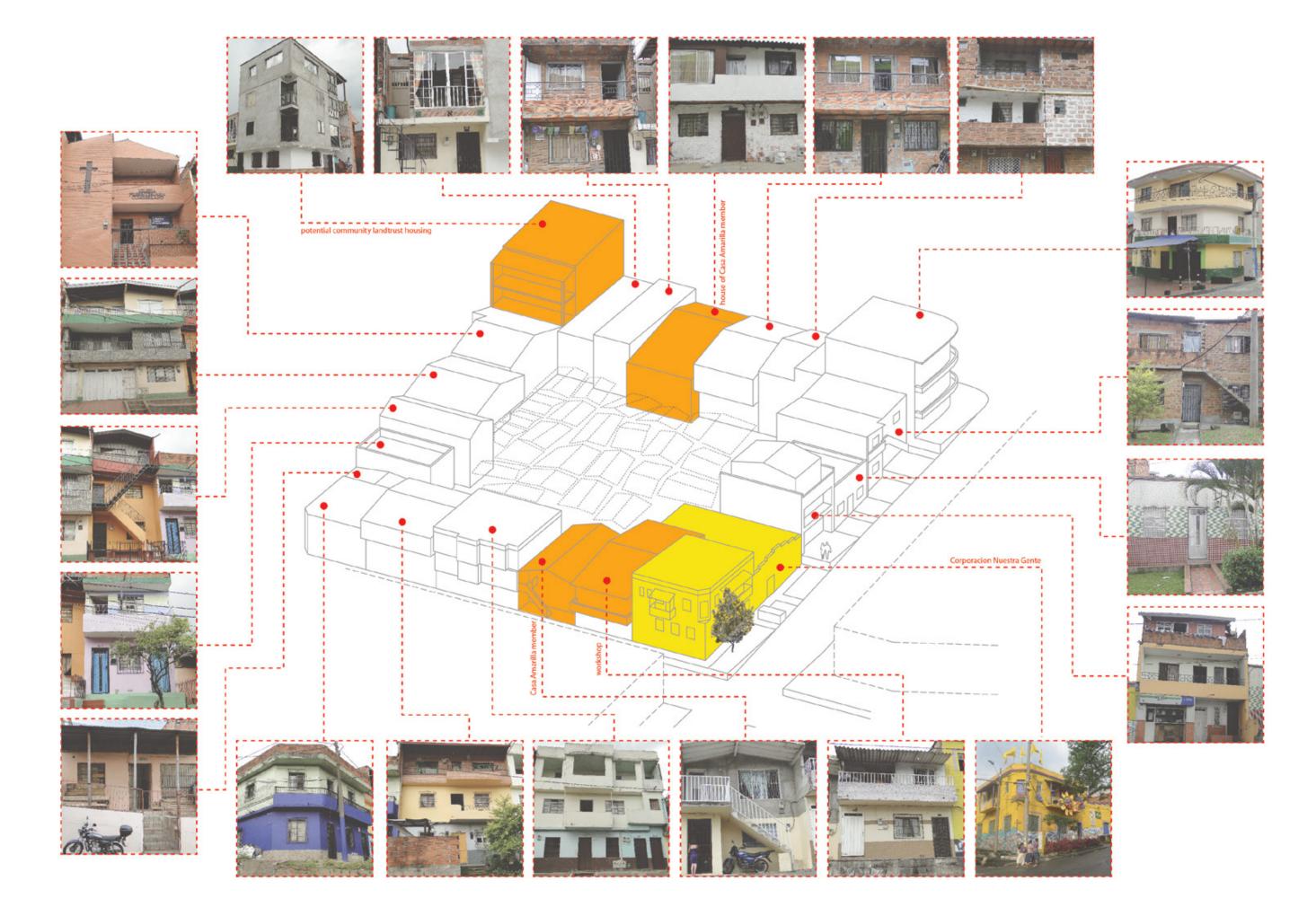
Role: Participatory Research, Program Assessment, Design



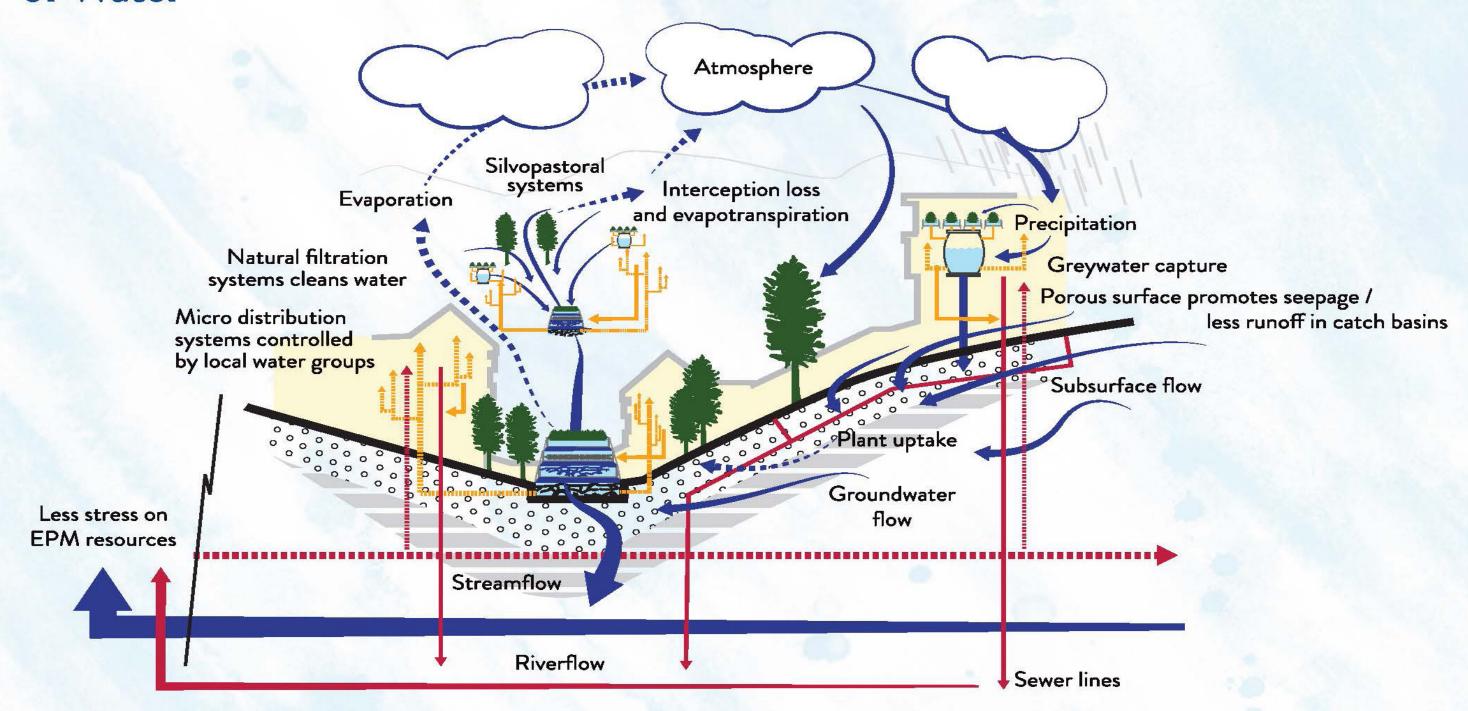








Integrated Flow of Water



Recycling City Date: June 2013-January 2014

Collaborators: Luca Fillipi, Katherine Dunermann, Yuliya Savelyeva,

Alberto Trento

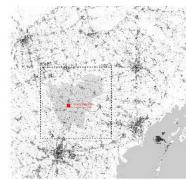
Location: Camposampierese Region, Venice, Italy

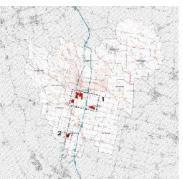
Role: Social Research, Video, Urban Design Concepts, Written Report

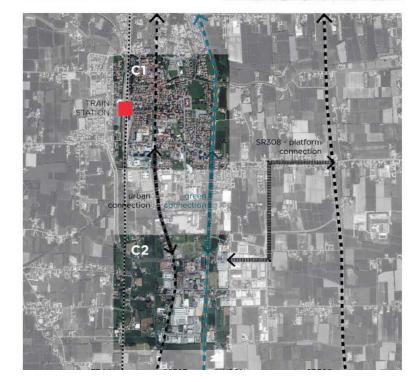


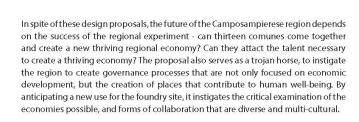
















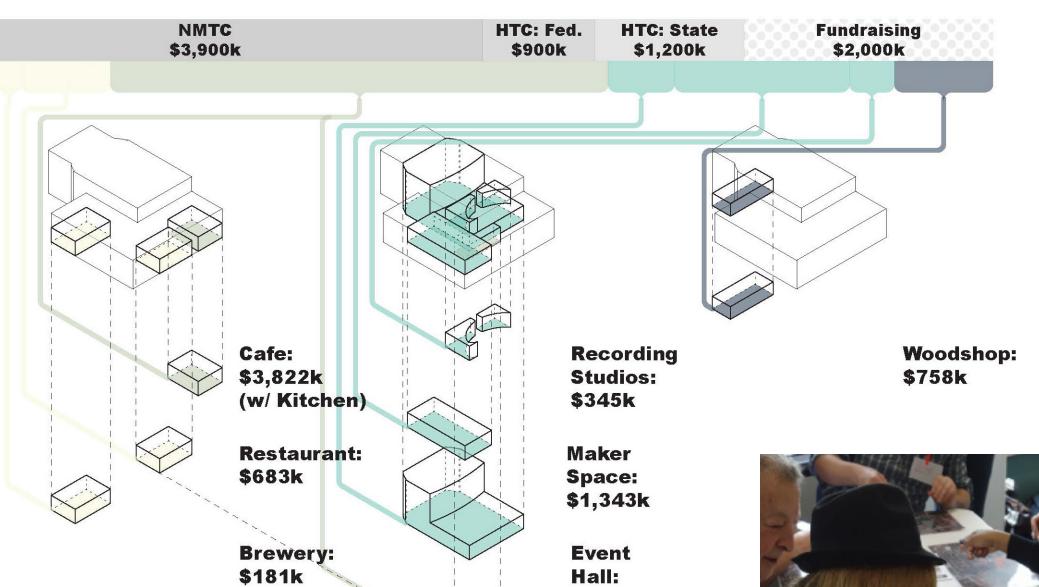
The Robins Project

Date: January 2014-Present

Collaborators: Flore Fouret, Ana Pena, Micah Hunter, Melissa Holmes,

Location: Warren, Ohio

Role: Project Management, Finance, Policy Research, Design Strategy

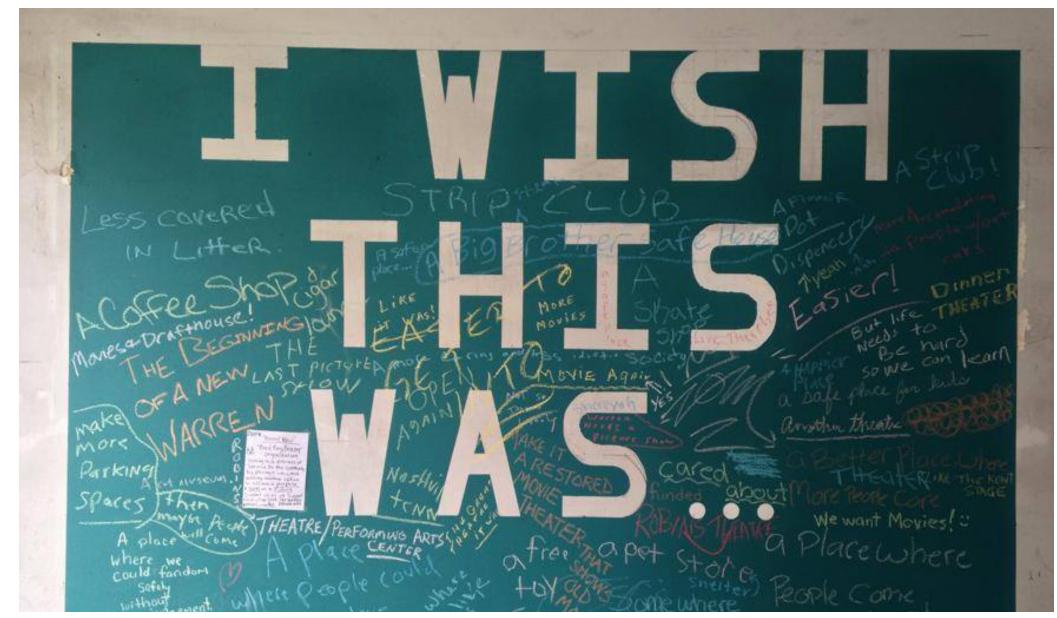


\$509k

Kitchen: \$3,822k (w/ Cafe)







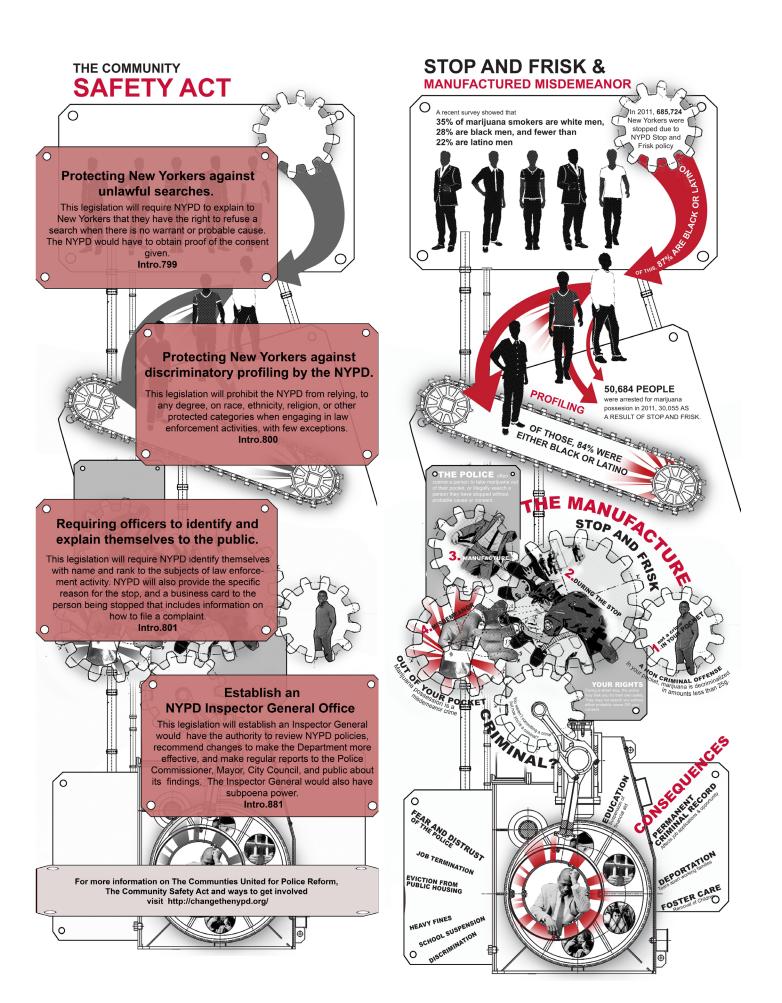
Making Policy Public

Date: October 2012-December 2012

Collaborators: Braden Crooks, Joy Davis, Bronx Defenders

Advisor: Christine Gaspar **Location:** New York City, NY

Role: Research, Information Design



Main Street Design Guidelines

Date: March 2012 - May 2012

Collaborators: Emerick Architects, National Trust for Historic Preservation

Location: Portland, OR

Role: Research, Design, Publication



The Purpose of Sustainability

Sustainability has become a broad and all-encompassing term permeating every aspect of urban improvements and development, as it should be. To generalize the subject, sustainability can be broken into three large categories:

- Environmental
- Economical
- Social

All aspects of sustainability should be considered in the group planning of your Main Street district. Because these guidelines are focused on design, this chapter will mainly focus on the environmental portion; however, all three parts are interconnected. A more sustainable environment will definitely influence the economical and social components on your main street.

The principles will introduce you to the potential of incorporating sustainable improvements into your building Starting with simple improvements to an individual building, you will begin to understand the sustainable benefits associated with improving an existing building. Completing multiple energy conserving improvements will lead to measurable cost savings in your energy consumption.

Stormwater management will be addressed more as a design statement within the district rather than a technical guide. Stormwater has great potential for introducing water features and native vegetation to the streetscape. As a result, stormwater facility design can be considered as a possible public improvement to the district environment and not just individual properties. For this reason, this section will present successful systems and examples that might add to the unique character

The section on alternative transportation is meant to have each district consider how it is meeting the needs of its patrons arriving in numerous ways. When a neighborhood becomes known for successfully accommodating a group's needs, it can become a city-wide draw and give strength to it's identity.

Sustainability of Existing Buildings

It is important to realize that reusing a historic building is the ultimate form of recycling. With new construction comes the need for processing materials, energy consumption associated with manufacturing and shipping materials, site excavation, and possibly the development of new infrastructure. While new buildings can strive to make a lighter environmental footprint by incorporating recycled materials or energy-efficient systems, a lot of already expended energy and expenses went into constructing existing buildings. When historic buildings are demolished, their embodied energy (the amount of energy associated with extracting, processing, manufacturing, transporting, and assembling building materials) is lost and building material waste is hauled to overflowing landfills.

Reusing our historic buildings will almost always be more environmentally responsible than building new structures, even if those new structures are "green buildings". Many historic









Historic photo from 1929 shows the benefits of retract able awnings and som windows on a grey Oregon day.

buildings were constructed with features that made use of specific building materials and the local climate to maximize their performance. Up until the post-World War II era, buildings were designed to operate on much lower energy budgets and take advantage of natural elements. High ceilings, natural light, and windows for cross ventilation; shutters and canonies for controlling sunlight; and a variety of other traditional design elements are being rediscovered to day as effective means to reducing a building's energy consumption.

Focusing on key envelope upgrades and state of the art mechanical systems that are sensitively integrated with the building can boost performance to modern building standards without compromising the original building integrity.

ENVIRONMENTAL BENEFITS OF EXISTING BUILDINGS

Older main street buildings are ideal models of sustainability. There is simply no method of construction that is more environmentally responsible than rehabilitating an old building. After reading about the strengths of your old building learn about applicable sustainable best practices for your situation.

Shared Party Walls: traditional main street storefront buildings are narrow and deep with shared side walls. The shared walls conserve heat, limiting the amount of wall surface experiencing significant heat loss.

Thick Masonry Walls: solid masonry walls store heat and cool air efficiently, helping regulate the temperature inside the

Operable Awnings: awnings that can be rolled down when the weather is hot can reduce heat gain by more than 65 percent, and rolling up the awnings when it's cold outside increases heat gain inside the building.

Operable Windows: Open windows help circulate air and regulate interior temperatures. For example, opening the top sash of a typical double-hung window on the sunny side of a room permits hot air near the ceiling to escape; opening the bottom sash of a double-hung window on the shady side of the room lets in cooler air.

Operable Shutters: operable shutters on upper-floor windows keep rooms cool during hot weather by shading out the sun while allowing ventilation.

 $\textbf{Reflective Ceilings:} \ \textbf{shiny ceilings painted a light color, such}$ as white or silver, reflect light backinto the building, reducing or even eliminating the need for artificial lighting during the day.

Transom Windows: transom windows provide ambient light while intensifying heat in the area immediately behind the storefront window. They can also provide secure venting if operable.

Skylights: skylights boost the amount of natural light inside, thereby reducing the need for artificial lighting.

Tall Ceilings and Ceiling Fans: hot air rises naturally, so tall ceilings help keep low air space cool in warm weather, while ceiling fans circulate the air above, moderating temperatures.



skylight (NW 23rd Ave and Johnson St



This atrium with skylights above allows light to travel deep into the building. (SW 1st Ave and Pine St)





Passive Solar: as sunlight shines through windows, the masonry flooring inside the storefront window absorbs heat, radiating it back into the ground-floor space when the temperature

Recessed Entryway: a recessed entryway helps prevent hot or cold air from rushing in when the front door is opened

Atrium: whether protected by a skylight or open, an atrium illuminates the interiors of multi-floor buildings.

Embodied Energy: the energy it took to manufacture the materials used in buildings, transport them to the construction site, and construct the building has already been spent and is embodied in the building itself.

Materials Created Locally: historically, most main street building materials were purchased from local or regional sources, rather than being shipped in from long distances.

Walkability: one of the most environmentally friendly characteristics of older and historic main streets is that they are walkable.

Durability: older main street buildings were built to last for decades, if not centuries, with durable materials like stone, brick, copper, and dense heartwood.

Sustainable Building Improvements

At its simplest level, making main street buildings more environmentally friendly involves just two things: using fewer materials and using less energy. Using less energy means consuming less energy, primarily through passive methods such as using natural sunlight and heat gain or generating more "green" energy, or both. Using fewer materials means being thoughtful with design and construction. Retain and reuse as much of the existing building as possible. Here are some major actions that can make main street buildings greener:

SEAL AIR LEAKS AND MAINTAIN WINDOWS

Air leaks are one of the biggest energy-related problems in older commercial buildings. By most estimates, leaks can waste 20 to 50 percent of the energy spent on heating and cooling commercial buildings.

Make sure doors and windows weather-stripping is tight and that any gaps are caulked Install interior storm windows, if desired, by attaching them to the interior window casing with magnets or brackets. Use duct insulation to wrap heating and cooling ducts. If the building has a basement or crawl space, be sure it is adequately insulated. If the building has a wood frame, make sure the external walls have adequate insulation in the cavities between the exterior siding and interior wall finish.

Older masonry - stone brick concrete block etc absorbs moisture from outside air and must be able to "breathe" to let moisture evaporate. Hire a contractor who has worked on older and



