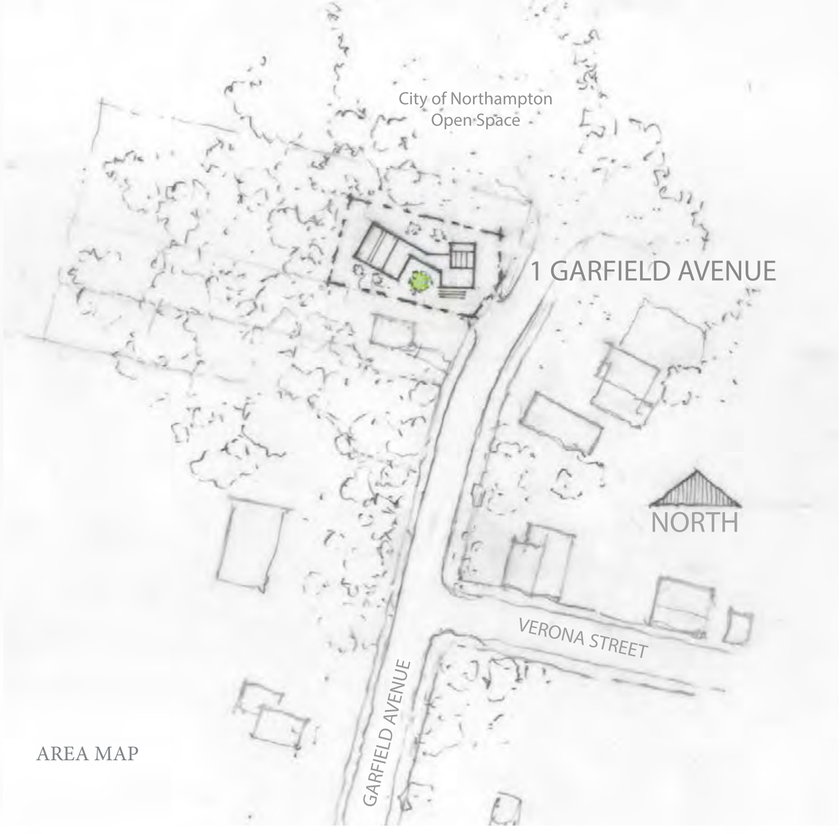
photovoltaic panels



AREA MAP

SITE PLAN + FLOOR PLANS

SECTION PERSPECTIVE

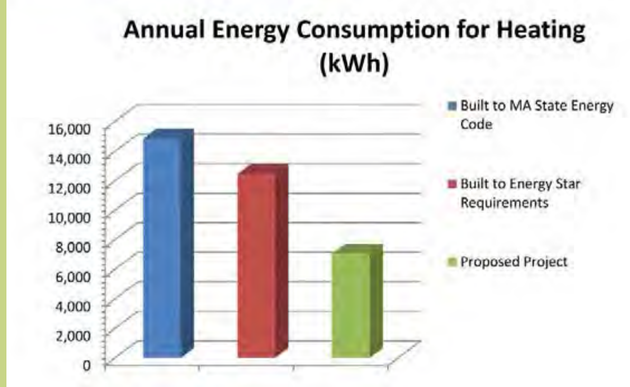
EAST ELEVATION

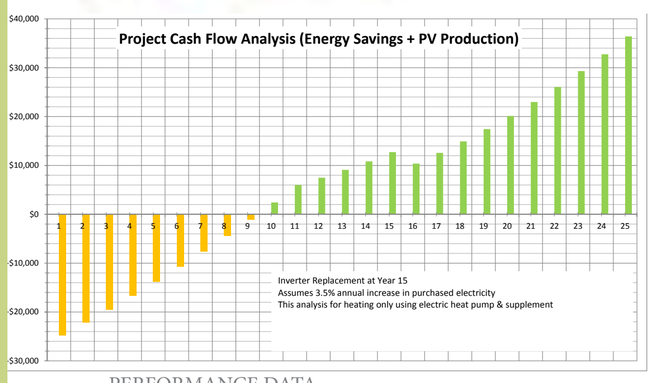
SOUTH ELEVATION

NARROW LOT

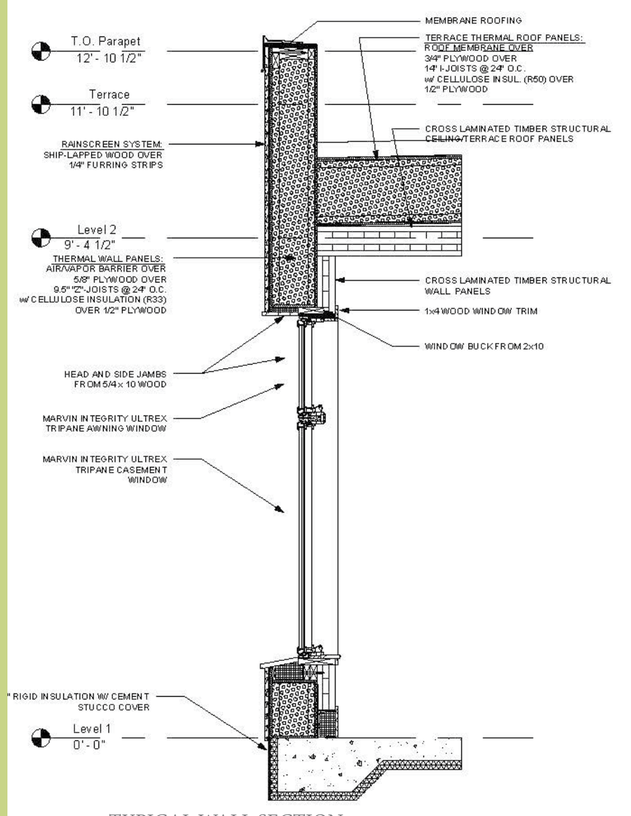
1 GARFIELD AVENUE
FLORENCE VILLAGE
NORTHAMPTON, MA

Building Envelope	Annual Energy Consumption for Heating	
	kWh	$
Built to MA State Energy Code	14,855	2,079
Built to Energy Star Requirements	12,472	1,746
Proposed Project	7,049	986





PERFORMANCE DATA



TYPICAL WALL SECTION

The intention of this design is to contribute to the evolution of the New England architectural vernacular over the long-term by the addition of a smartly designed narrow lot energy-efficient house.

In planning and designing for both performance and long term occupancy, the impacts of up-front costs incurred by increasing insulation and adding photovoltaic panels are mitigated in the short term through reduced energy consumption, with costs then returned dramatically over time.

Historically speaking, the New England farmhouse, simply put, was smart for it's time: long south facing facades to capture the warmth of the sun, deep porches for summer shade, roof overhangs to protect exterior walls from wind driven rain, pitched roofs to advantage structure and decrease snow loads.

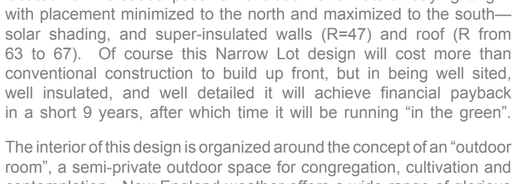
This Narrow Lot design takes this New England sensibility one step farther to include passive environmental systems such as heat absorbing concrete slabs for passive radiant solar heating, green roofing for added insulation and passive cooling, windows and vents located for increased passive ventilation and natural day-lighting—with placement minimized to the north and maximized to the south—solar shading, and super-insulated walls (R=47) and roof (R from 63 to 67). Of course this Narrow Lot design will cost more than conventional construction to build up front, but in being well sited, well insulated, and well detailed it will achieve financial payback in a short 9 years, after which time it will be running "in the green".

The interior of this design is organized around the concept of an "outdoor room", a semi-private outdoor space for congregation, cultivation and contemplation. New England weather offers a wide range of glorious days to enjoy the outdoors. This centrally located outdoor room, shaded in the summer and protected from cold winds from the northwest in the fall and spring, will allow for a more intimate and multi-seasonal relationship to the elements. It will also contribute to the feeling of spaciousness from within these otherwise relatively small homes.

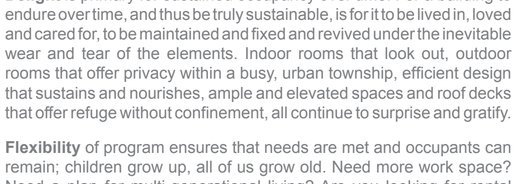
Delight is primary for sustained occupancy over time. For a building to endure over time, and thus be truly sustainable, is for it to be lived in, loved and cared for, to be maintained and fixed and revived under the inevitable wear and tear of the elements. Indoor rooms that look out, outdoor rooms that offer privacy within a busy, urban township, efficient design that sustains and nourishes, ample and elevated spaces and roof decks that offer refuge without confinement, all continue to surprise and gratify.

Flexibility of program ensures that needs are met and occupants can remain; children grow up, all of us grow old. Need more work space? Need a plan for multi-generational living? Are you looking for rental income? Will you need a caretaker at home in your later years? The little house across the courtyard can provide studio, home office, rental income, and residency for elder home care; or, a simple retreat for guests and out-of-town family. A home in which you can remain over time is able to adapt over time, to be there for you as your needs change.

Narrow lots, smaller lots, are inevitable as we move into the future of limited resources. This design presents a re-visioning of planning and form to embrace this inevitability.



A better way: efficient, adaptable and life-affirming



Typical residential site planning

SITE PLANNING STRATEGY

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