

Design Problem:

**"Would you like fiction or non-fiction with that decaf?"
Proposal for a combination branch library / coffee shop**

General: Layout, Program, Goals

- 1.0 Hypothetical lot near an overhead railroad crossing with building, parking, terrace
- 2.0 One story building with coffee bar, branch library, loading, and storage
- 3.0 Proposed program - indicated on sketches
- 4.0 Explore criteria of 'living building challenge'
- 5.0 Explore application of 'universal design'

Project Constraints

- 1.0 Plan dimensions set by sketches
- 2.0 Comply with 780 CMR 705 - Fire Walls - at Property Line

Structure - foundation and superstructure to be set by the Structures III problem

Skin (Envelope)

- 1.0 Exterior Wall:
 - Marazzi ventilated wall system for 60 x 60 cm tiles
 - 8' x 8' windows facing street and terrace
 - Incorporate superinsulation
- 2.0 Roof:
 - low slope design for internal drain.
 - 3 skylites for day lighting
 - account for photovoltaics

Services (Mechanical)

- 1.0 Fire Suppression - wet pipe sprinkler system
- 2.0 Plumbing - services for plumbing finishes, hot water heater
 - storm water recovery for grey water systems
 - potable water
 - explore alternative black water systems
- 3.0 HVAC
 - occupancy load and heat recovery for heating
 - fresh air, natural ventilation cooling
- 4.0 Electric -
 - explore equipment provided by grow solar leasing program
 - lighting and convenience outlets
 - coffee equipment
 - Low Tension - communications, fire detection, and alarm

Safety - type 2 construction





