Living in transition

Dustin Lombardi
Roger Williams University, DLombardi277@hawks.rwu.edu

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Throughout the history of the world every living creature has sought after three essential requirements for survival: food, water and shelter. Food and water have stayed consistent through the test of times; however shelter has been ever growing and consistently changing. From cave dwellings, to four post huts, to modern prefabricated housing, our understandings of shelter as a society has continued to develop and evolve to meet the needs within our lives. Shelter is no longer just about protecting us from the elements; it is about creating places and spaces in which we live our lives. One must first understand how shelter works and how it influences our lives before one can begin to restructure our preconceived notions of acceptable living. We must learn from examples of the past and transform them into successes of our future.
As population continues to grow, the demand for housing continues to increase. With cost of living on the rise and a need for alternative sources of energy becoming more prevalent in today’s society there is an elevated necessity for a change in the life styles of earth’s inhabitants. There is a large amount of waste in our society, be it energy waste or physical waste. We have become too dependent on the automobile and we must look towards more European precedents of transit based living. It is important for architecture to influence society on the importance of public transit and higher density living.

As we look to the future of American society, we can see more trends in our culture leading towards a new urban life style. People are beginning to move out of the suburbs and back into our cities because metropolitan areas provide
convinces that suburbs do not offer. This only aids the problem of overcrowding and increased cost of living. As the demand for urban housing goes up so does the cost of housing. This in turn is causing our cities to grow in both size and population. In order to compensate for the demand for housing, we must begin to create a network of public transit that initiates a link between smaller cities and larger cities to allow affordable housing with public connection to major city centers. By creating urban environments outside of the cities, we will allow people the experience of city life with less emphasis on economic dependence.
With such a high demand for urban housing, it is becoming harder and harder for young adults to afford housing in our cities. The cost of housing is so high the people are forced to either live in impoverished conditions or remain living at home for longer periods of time. It is important for our younger generations to move out into the world and become less dependent on their parents in order for them to begin making a life for themselves as well as allowing them the opportunity to grow and develop independency. However, this can not occur if it is too expensive for people to live independently. There is a need in our society to create a more affordable yet still more independent way of living. If people can not afford to live by themselves they must look towards alternative solutions to their housing problems. We see,
for example, a lot of people today in search of roommates to help cut the expenditure of housing. What if it was possible for larger groups of people to reside together to help cut these costs even further? If we start looking at designing buildings that allow for collective or communal living we can help ease the expenses of independent living. By creating an architecture that can house both personal spaces as well as communal spaces we can help accommodate the need for a change in the current typology of housing. Communal living gives people the opportunity to have personal space while at the same time have the security of collective sharing. By creating an architecture where people both work and live we also eliminated excessive daily travel as well as the costs of heating and cooling two spaces as apposed to one.
The intentions of this investigation are to create a new prototype in housing. The project is about designing a communal based urban housing development that is outside of the urban district, yet connect to the city center by alternative methods of transit than automobile, by using either bus or rail. The goal of this project is to create an affordable housing prototype that allows people the opportunity to move out of their parents basements and take the next step towards providing a future for themselves without the handouts from their parental figures. By designing outside of the major cities it will help to reduce the cost of living because urban housing is in such high demand apartment price are much more expensive then less populated areas. By placing the site for the development along a major...
transit line it will not only allow the occupants direct access to the cities but it will also help to activate the site itself with other people from the community who are using the site specifically for transit related purposes.

The target age group for the occupants of this development is people between the ages of 18 – 30. This is the prime age for people to begin their journey for childhood to adulthood. This project will help provide these people with a stepping stone to their future. By living collectively the residence of the complex will be able to help cut their cost of living and also help eliminate wasted time within their lives caused by simple things such as cleaning and cooking. I envision the occupants of this development to be people attempting to further their personal explorations in independent entrepreneurship in
art, architecture, computer programing, music or any other profession that requires studio space as well as retail space. It is important to provide a complex for these types of people so young adolescents can begin saving money and developing future life as well as professional skills. People living in this type of development will also begin to make connections with other interested in their field of work. Providing a more affordable place for youths to live it allows these individuals more opportunities to explore their particular field, be it film, music, painting, computers, etc. Within the project there will also be spaces for performance as well as spaces for display and sale of goods made by the residence of the complex. One of the goals of the project is to create an art and mini retail hub along the transit line that will provide
a destination for people in the surrounding community in search of art as well as nightlife activities. The people living in the development will be provided with places to live, work and also perform or sell their goods. The main use of the site will also provide transit from the suburbs into the city and the secondary use of the site will be to create a retail and performance district for modern art within the existing neighborhood.
**Living** (4 occupants per unit for a total of 80 units)

- Bedroom: 150 sq. ft. x 4 = 600 sq. ft.
- Bathrooms: 100 sq. ft. x 2 = 200 sq. ft.
- Communal spaces:
  - Kitchen: 200 sq. ft. x 1 = 200 sq. ft.
  - Dining: 100 sq. ft. x 1 = 100 sq. ft.
  - Living / T.V. rooms: 300 sq. ft. x 1 = 300 sq. ft.
  - Porches/Patios: 250 sq. ft. x 2 = 500 sq. ft.
  - Studio Space: 100 sq. ft. x 4 = 400 sq. ft.
- TOTAL = 2,300 sq. ft. x 80 units = 184,000 sq. ft.

**Performance/night life**

- Galleries: 4,000 sq. ft.
- Bars/Night clubs/Lobby space: 5,000 sq. ft.
- Mechanical: 2,000 sq. ft.
- Restrooms: 1,000 sq. ft.
- TOTAL = 12,000 sq. ft.

**Transportation**

- Train platform: 4,000 sq. ft.
- Bus drop off: 1,000 sq. ft.
- Parking Garage (150 spaces): 40,000 sq. ft.
- Mechanical: 500 sq. ft.
- Amenities: (bathrooms, ticket booths, paper stand) 500 sq. ft.
- TOTAL = 46,000 sq. ft.
- TOTAL = 266,675 sq. ft.

**Working**

- Studio/ Retail spaces: 320 sq. ft. x 50 units = 16,000 sq. ft.
- Darkrooms: 875 sq. ft.
- Computer lab: 3,000 sq. ft.
- Woodshop: 2,800 sq. ft.
- Mechanical: 2,000 sq. ft.
- TOTAL = 24,675 sq. ft.
Performance Spaces

It was a warm summer night just around just after five o’clock. Jonny was just stepping of the train from Hartford back to Newington. He had to wait at the stop for 15 minutes in order to catch his bus home. He never minded waiting at Newington Junction because the train platform was always filled with new art and live music. He was in luck today he saw a group of people standing at the other side of the tracks listen to live music. He walked over to give them a listen while he waited for his bus. As he walked towards the music he saw a flyer for a new exhibition that was going to be opening this weekend. He grabbed a copy excitedly so that he would remember to tell his friends about the event. As he got to where all the people were he started to get into the music. There was a
A group of four guys play different instruments and rocking out. Behind them was a large screen that was displaying and short clips of film that went along to the music. He enjoyed the music so much that he purchased a copy of the bands DVD that included a preview of the song they were playing along with the film in the background. It was only 5 bucks so there was no way he could resist grabbing a copy to show his friends. He looked at his watch and realized he was about to miss his bus. He didn’t want to leave because he was enjoying the music so much but he knew he had to get home for dinner. He told himself it's okay if I leave because he knew he would be back later tonight when he came to catch the train into the city.
Live Spaces

Earlier that morning, as the sun began to creep in Pat's window he could hear the sound of the first train heading into Hartford. He woke up refreshed from a good night's sleep as he walked out onto his patio to watch the train take off from the station. He walked down stairs to see if anyone was up cooking breakfast. To his surprise almost all of his other roommates were up and getting ready for work. Only Bill was still sleeping but he's always a late sleeper. He saw Ryan in the kitchen making some coffee and Pat asked him to pour him a cup. As he walked over to get his cup, Fern came running in for the other room seeming very excited. Fern ran up to Pat and Ryan practically out of breath trying to explain to them that he had stayed up all night finishing his new film and
that it would be ready for their performance later tonight. Matt over heard them talking in the kitchen and dropped the remote to the T.V. and came over to join into the conversation. Matt looked at the other guys and said that they better make some DVD’s to disrepute to people at the performance. All for of the guys started yelling Bill’s name loudly trying to wake him up so that they could go down to the studio and get some practice in before their performance. They were all in luck because today it was Nancy’s turn to cook breakfast and everyone knew she made a mean omelet. After they ate and got Bill out of bed, Fern went back to the computer lab to finish editing the movie with the music and the rest of the guys headed to the studio to get a few hours of practice in before the performance.
Work spaces

As they walked towards the studio they saw all their other roommates and neighbors working in their studios. Janet was just about finish with one of the largest paintings she had ever worked on. This weekend was the opening of her gallery in the main exhibition hall. She seemed a little stressed and nervous as she was running out of time to work, so the guys paid her some quick compliments and let her get back to work. They were almost at the recording studio when Eric stepped out onto the platform and yell to the guys to come check out a new music track he was working on. They were always excited to hear new music so they went over to him without hesitation. Eric was one of the main DJs at the night club so everyone always enjoyed sneak peaks of
his latest tracks. He told the guys that he was planning on releasing the track at Janet’s exhibit opening. The guys listen to the song a couple of times in a row and all gave some minor suggestions to help Eric finish up the track before leaving. After they left Eric’s studio they went straight to the recording studio, they had a performance to get ready for and couldn’t afford to waste anymore time.
Architecturally this project is about the creation of a modern form of communal living. It is about moving beyond the classic stereotypes of communist housing that were architecturally indifferent in their spatial design and created static homes for all types of occupants. These earlier precedents for communal living focused mainly on creating equal spaces for all occupants without consideration for personal uses of space or environmental conditions.

Creating a new typology in communal living will allow for opportunities to design spaces for a large group but with personalized spaces that bring the scale of the design to a humanized level. The project will allow for the opportunity to design spaces that people not only live collectively, but can also work and perform collectively. By creating architecture that al-

Communist Block Housing
allows multiple people to utilize the same spaces one can begin to eliminate wasted or duplicated spaces. This allows more spaces to be created for other architectural purposes as well as helps eliminated unneeded spaces that wasted money to heat, cool, and maintain.

Considering the economic side of architecture it is also my intentions to use sustainable paradigms to increase the energy efficiency of the project as a whole. Cutting down on energy waste and designing for recycling and reuse can help to eliminate extra expenditures for the occupants of the development. Using recycled materials for the building elements of the design will also cut costs. In this country there is a large amount of unused storage containers that cost more money to ship back to countries like China then for those countries to remake new
ones and send to our country. These containers provide a unique building block to attempt to use in the creation of a sustainable communal development. If the development becomes completely sustainable it can even help to bring in economic revenue for the facility. Any extra energy produced by any sustainable building is bought by local power suppliers. In order to design for a better tomorrow we must work to eliminate all the wastes for within our daily lives. This includes wasted energy as well as wasted time and labor. In a community that people work together for the good of the collective, everyday activities are split equally which aids in the elimination of repeated labor.
Site is a crucial element that needs to be addressed and analyzed thoroughly in order to be able to design this project efficiently. The first step in the selection of my site was to choose a site that was located on a major transit line in order to accomplish the goals of creating an efficient Transit Oriented Development. It is also important that the site be located outside of a major city in a more suburban neighborhood to accomplish the goals of creating an urban design outside of the typical city environment.

For my particular project I have chosen a city that has a high number of commuters and currently has issues with large amounts of automotive traffic. This ensures that transit into the city is in high demand which will guarantee the need for redevelopment of public transit into the city. The transit line in which my site
is located on is currently under redevelopment by the state as our country begins to struggle with the gas crisis and embarks on a search for alternate modes of transportation.

The location of my site is Newington Junction in Newington, Connecticut. The site is located five miles outside of the center of Hartford, Connecticut. Hartford is the capital of Connecticut and is also said by the city to be "New England's Rising Star." There is a lack of housing within the downtown areas of Hartford and there are also many neighborhoods that are in utter despair due to slum tenets and poor city politicians who refuse to spend money to help clean up slum areas of the city. As the city is being redeveloped there is an increased need for affordable and safe housing not in projects or high crime areas for younger
generations attempting to work and live in or near the city. My site selection on a macro level allows occupants a safe place to live as well as the convenience of public transit. On a micro level the site is located on a crossroads of a local suburban neighborhood and an industrial district. This works well with the intended programming for this project because it allows opportunities for residential as well as commercial development within the design. Surrounding the site are several local schools of different ages including an elementary school, middle school, and high school. The site is located a little under a mile and a half from the center of the town, which provides many small convent stores that could prove viable to occupants of the development. The site is also located less than two miles away from the largest
shopping mall in the state. The site allows many local conveniences as well as directed connection to major cities via public transit. Not only does the transit line connect people to Hartford but it is also part of a larger transit system that connects to the rest of the state and into Boston, New York City and beyond. As public transit becomes more and more important in our society the importance of developments much like this one will become stronger influences on the way architects design from now and into the future.
This is a basic outline of the general building codes and local zoning issues affecting the design requirements regarding the regulatory environment regulation for the Town of Newington, Ct. All requirements are based on the International Building Codes as well as the local zoning regulations for the Town of Newington.

**Use Group Occupancy:**

The main use of group for my design is art galleries, and transit related assembly. These areas will be classified as Assembly (A-3) and treated accordingly. The other use group located within my design is the residential housing units which are classified as Residential (R-2). The large parking facility located within my project will be classified in Utilities (group U).

**Height, Area, Construction Classifications:**

Based on projected project size Type III (A) construction has been selected for both the Assembly, Residential, and Utilities areas of the development. This will allow for the following sizing restraints on the site.
### Fire Resistance:

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<th>R-2</th>
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<tr>
<td>Height</td>
<td>65ft.</td>
<td>65ft.</td>
<td>65ft.</td>
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<tr>
<td># of Stories</td>
<td>3</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Area (sq.ft.)</td>
<td>14,000</td>
<td>24,000</td>
<td>14,000</td>
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- Mixed-used partitions walls 2 hour rated.
- Exterior load bearing walls in assembly area 2 hour rated.
- Exterior load bearing wall in residential are 1 hour rated.
- Fire enclosure of exits 1 hour rated.
- Nonbearing partitions in assembly area 1 hour rated.
- All floor construction 2 hour rated.
Local Municipal Zoning: The current zoning for the site located at the intersection of Francis Ave. and Willard Ave. (Route 173 ct); better know as Newington Junction is Industrial and Residential Planned. It is surrounded by mixed residential areas and small commercial zoning areas. (See attached table for lot size, buildings heights and set back requirements)

Spatial Standards (Industrial)
- Minimum Lot Area 20,000 sq. ft.
- Minimum Lot Frontage 70 ft.
- Minimum front yard 25 ft
- Minimum Side Yard 10 ft
- Minimum Rear Yard 15 ft
- Maximum Height 3 stories/45 ft

Spatial Standards (residential)
- Minimum Lot Area 1-ac
- Minimum Lot Frontage 70 ft.
- Minimum front yard 35 ft
- Minimum Side Yard 25 ft
Additional Municipal Zoning Regulations:

Landscaping Issues:

Yards in Business and Industrial zones and PD, CD, and PL zones may not be used for storage, display or any other use excepting landscaping, walks, drives and parking areas that are required and permitted. Bays and docks shall not be permitted on the public street side building unless screened and approved by the Commission.

Front Yard Set Back Alignment

The minimum depth of the front yard setback for a new dwelling on a vacant lot between two (2) existing adjoining lots, each with a building, maybe aligned to the average of the depths of the front yards of such adjoining lots.

Minimum Rear Yard 35 ft
Maximum Height 4 stories
Within the area 15 feet from the intersection of two street lines, no fence, wall, shrubbery or other impediment to unobstructed visibility shall exceed a height of 3 feet above the pavement.

Height Modifications:

Public and semi-public buildings may be permitted up to 60 feet or 4 stories. Ornamental structures, monuments, church spires, shafts, domes, towers or cupolas may exceed height requirements when approved by the Commission. In Business, Industrial and Development zones, height requirements may be exceeded by special structures requiring special design because of their particular use in business or industry, such as chimneys, stacks or elevators when approved by the Commission.
Projections:
Usual projections such as sills and cornices may extend into any required side yard not more than 12 inches. A chimney may project not more than 2 feet into a side yard but not within 5 feet of a side property line. A porch may extend into a front yard not more than 3 feet and a porch with stairs or hatchway may project 3 feet into the rear yard. As used in this section a porch projection shall be limited to a landing platform not larger than 4 feet by 6 feet in area.

Parking Space Requirements:
(For Parking sizes and layout requirements see attached diagrams)

HOUSING USES:
Apartments and Housing within PD Zone
2 spaces per dwelling unit
Apartments and housing units within BT Zone
1.5 spaces per dwelling unit
Condominium and Town House Housing
2 spaces per dwelling unit

INDUSTRIAL USES
Industrial and manufacturing Based on the numerically largest shift:
1 space per employee up to 20 employees or 3 spaces per 1,000 square feet or whichever is more

Landscape Requirements
A. Not less than 10% of the interior of a parking lot containing five or more parking spaces shall be landscaped with trees and continuously maintained.

For large retail developments in excess of 40,000 sq. ft. of gross floor space not less than 15% of the interior of the parking area shall be landscaped.

B. Planting along the perimeter of a parking area, whether screening, landscaping or buffering, will not be considered
part of the 10% interior landscaping.

C. Where a parking area abuts the buildings on the subject property, the adjacent border plantings are not considered part of the interior landscaping.

D. Planting beds shall have an area of not less than 25 square feet, excluding curbing.

E. Planting beds must be distributed as evenly as possible throughout the parking area.

F. The parking lot landscaping plan shall show a satisfactory method of storm drainage and planting beds shall be protected by curbing.

G. The parking lot landscaping plan shall be drawn to scale, and shall show the plant list giving common names, caliper, height, eventual spread, the quantity of each and, when appropriate, the spacing.

When planted shrubs shall not be less than 18” to 24” in height and trees 2 ½” caliper at breast height. H. Ground
cover alone is not acceptable. Trees selected will be checked for suitability in regard to eventual spread and adaptability to existing soil and climate conditions.

I. Preparation of beds for trees shall be specified. Mulched planting beds shall be provided around all trees and shrubs.

J. Gravel or stone shall not be used for ground cover unless suitably contained within the intended area.

K. Trees and bushes planted within 5 feet of any parking area shall be of a variety capable of withstanding salt damage.

L. When possible, existing trees shall be saved by appropriate welling or mounding.

M. In order not to alter excessively the ground water table, the applicant is encouraged to integrate water retention areas within the overall design of the parking lot.

N. The Commission reserves the right to determine and may require the installation of irrigation systems to ensure the vitality of landscaped areas of the site.
NEWTOWN TOWN PLAN AND ZONING COMMISSION

KEY TO ZONE DISTRICTS

REG.
ENVIRONMENT

WILLARD AVE DEVELOPMENT DISTRICT

R-7 RESIDENTIAL
R-12 RESIDENTIAL
R-20 RESIDENTIAL
RP RESIDENTIAL PLANNED — NOTE "A"
RD RESIDENTIAL DESIGNED
PL PUBLIC LAND
I INDUSTRIAL
B BUSINESS
PD PLANNED DEVELOPMENT
B-BT BUSINESS BERLIN TURNPIKE
B-TC BUSINESS TOWN CENTER
CD COMMERCIAL DEVELOPMENT

ZONING DISTRICT MAP

Zoning Maps
TYPICAL PARKING LOT LAYOUT DESIGNS

A. SINGLE LOADED BAY
10'-0" x 9'-0"

B. DOUBLE LOADED BAY
10'-0" x 9'-0"

C. SINGLE LOADED BAY
10'-0" x 9'-0"

D. DOUBLE LOADED BAY
10'-0" x 9'-0"

PARKING SPACE:

9'-0"

10'-0"

9'-0"

10'-0"

CLEAR, UNOBSERVABLE SHELF AREA REQUIRED FOR VEHICLE OVERHANG.

60° PARKING DIMENSIONS

90° PARKING DIMENSIONS

OPTIONAL DESIGN FOR COMMON PARKING

DISTANCE FROM PROPERTY LINE

COMMON DRIVE AND PARKING UPON MUTUAL AGREEMENT AND COMMISSION APPROVAL.
PAVING DETAILS FOR DRIVES AND PARKING LOTS

*ANY DRIVE TO BE USED AS CONSTRUCTION ACCESS SHALL BE 2½" BINDER AND 1½" WEARING COURSE.

A) BITUMINOUS CONCRETE DRIVE
   SUBJECT TO ADJUSTMENT DUE TO FIELD CONDITIONS
   NO SCALE

B) BITUMINOUS CONCRETE PARKING
   SUBJECT TO ADJUSTMENT DUE TO FIELD CONDITIONS
   NO SCALE
Downtown Hayward is an ever growing Transit Oriented Development that is slowly becoming one of the most viable such communities on the West Coast. It is located in California on the eastern side of the San Francisco Bay. Its major resources are a full-service downtown that seems to have survived the suburban mall epidemic, a convenient yet run down BART and bus station, a wide selection of owned and rental housing within easy walking distance of the station, and civic entities that are working to ensure any further redevelopment of the surrounding site pays close attention to the importance of pedestrian circulation and public transit access. The major flaw within the development currently is that the two sides of the site are completely separated and it is apparent that one side of
the site is more preferable than the other. As development continues on the site, designers are attempting to cross over the rail lines in order to reconnect both sites of the site. Hayward TOD is a good precedent to understanding how mixed-use communities are planned in order to accommodate conveniences such as small stores and civic buildings as well as adjacencies to public transit. These conveniences are then mixed in with a variety of housing typologies that encourage increased density and the sharing of exterior spaces.
Mixed- Three or more Uses

Indystrial

Transit Station

1/2 Mile Radius

Station Boundary

HAYWARD DOWNTOWN, HAYWARD CA.
HAYWARD DOWNTOWN, HAYWARD CA.
“Kibbutz - (Hebrew word for “communal settlement”) is a unique rural community; a society dedicated to mutual aid and social justice; a socioeconomic system based on the principle of joint ownership of property, equality and cooperation of production, consumption and education; the fulfillment of the idea “from each according to his ability, to each according to his needs”; a home for those who have chosen it.”
Basic Principles

- Common ownership of the means of production and consumption
- General responsibility and mutual help
- Independent and democratic management
- The commune and the settlement are one entity (the geographical-municipal entity and the social community, the kibbutz, are congruent)
- The principle of self-employment, without hired labor
- Organizational connection of each individual kibbutz to a nationwide movement, and connection of the movement to the Workers' Federation and the Zionist-socialist political parties.
Original Kibbutz

Houses were regarded as static models of predetermined uniform shape, arbitrarily positioned on the building site. All houses with no regard to any environmental factors on any specific plot resulted in having all identical plan and elevations. This approach created a qualitative inequality between the houses and inequality of opportunities among the tenants.
Modern Kibbutz

The new model implemented in the design of the new houses in Kibbutz Maagan Michael was fundamentally different. The planning process was based on patterns that were common to all the houses, patterns that grew out both of the social structure of the kibbutz and the geographic location. When these common patterns were used in different site conditions, a variety of houses emerged, sharing one architectural language.
At the center of the neighborhood, a path was planned connecting the promenade that runs along the water and the path that runs from the communal dining hall at the heart of the kibbutz to the neighborhood. What dictated the course of the path was the want to see the water from every spot along the path.

The position of each house in relation to the others was determined, so as to ensure that each one has an open view to the water and can enjoy the breeze coming from the sea.
The walls are all whitewashed light blue, complemented by regionally quarried sandstone characterizing the construction details.

To determine the level of each house so that one could see the sea while sitting inside there home, a crane was used to lift the architects up to where they could see the sea. This height was measured and the level of the house and position of windows was determined accordingly.
LOTAN KIBBUTZ

Reception Gazebos
Educational Displays
Recycling Education Studio
Activity Shed and Classroom
Equipment and Materials
SPNI Birding and Nature Classroom & Lookout
Bird Park Reception
Bird Park Gate
Composting Toilets
Regional Recycling Warehouse

Entrance to Recycling Garden

Regional Recycling Warehouse

Recycling and Reuse of Local Materials.
Lotan Birdwatching Park

Conceptual Development Plan

Connection to Nature
BedZED is a mixed-use, mixed-tenure development that incorporates innovative approaches to energy conservation and environmental sustainability. It is built on reclaimed land owned by the London Borough of Sutton, sold to Peabody at below market value due to the planned environmental initiatives. The design is used to enhance the environmental dimensions, with strong emphasis on roof gardens, sunlight, solar energy, reduction of energy consumption and waste water recycling. BedZED provides 82 residential homes with a mixture of tenures, 34 for outright sale, 23 for shared ownership, 10 for key workers and 15 at affordable rent for social housing – with a further 14 galleried apartments for outright sale. The homes are a mixture of sizes and the project also includes BedZED (Beddington Zero Energy Development)
buildings for commercial use, an exhibition centre, a children’s nursery and a show flat so that visitors may see what it is like to live at BedZED. BedZED houses are arranged in south facing terraces to maximize heat gain from the sun, known as passive solar gain. Each terrace is backed by north facing offices, where minimal solar gain reduces the tendency to overheat and the need for energy hungry air conditioning.

BedZED has been designed to address environmental, social and economic needs. It brings together a number of proven methods - none of them particularly high tech - of reducing energy, water and car use. Crucially, it produces affordable, attractive and environmentally responsible housing and workspace.

BedZED (Beddington Zero Energy Development)
BedZED (Beddington Zero Energy Development)
BedZED (Beddington Zero Energy Development)
BedZED (Beddington Zero Energy Development)
BedZED (Beddington Zero Energy Development)
Thru mapping all different modes of transportation (Bus, Train, Automotive, and Pedestrian) certain patterns begin to emerge. By overlapping these patterns onto the site a schematic layout begins to form creating a strong node at the center of the site which becomes the area where the highest density of transportation takes place.
HOUSING

2' x 6' Electrical Chase w/ Re-locatable Plug and Play Electrical Outlets

12' x 18' Supply & Return HVAC Ducts

4' x 8' SIPS Panel Construction (2) Pieces of 3/4" Plywood Sandwiching Core of Extruded Polystyrene Rigid Insulation R-19

Typical in Walls, Flooring, and Roofing

Module Detail
Comet Structural Frame
1. Recycled corrugated copper sheathing
2. Bent aluminum frame spaced 16" O.C.
3. Rigid insulation R30
4. Standing seam metal roof
5. 2" rigid insulation R30
6. 1" corrugated metal deck
7. 12" x 8' steel I beam
8. 2" x 8' wood trim
9. Suspended ceiling system
10. 6" cant strip
11. 2" x 6' wood blocking
12. Finish floor system
13. 8" x 6' steel I beam, floor support
14. 8" x 4" square steel channel welded to structure
15. 8' x 8' steel I beam
16. 12' x 36' HVAC supply and return
17. 8' diameter steel column
18. 3/4' plywood sheathing
19. 4' concrete slab
20. 6' rigid insulation R19
21. Moisture barrier
22. Concrete footing
23. 12' gravel backfill
24. Packed earth
25. Continuous air exchange vent
26. Window mullen
27. Steel structure beyond
28. Glass curtain wall

PUBLIC BUILDING
METAL STRUCTURAL MEMBERS
(ALUMINUM FRAMING & STEEL COLUMNS)

GHOSTED LOAD BARRING STRUCTURE
(MASONRY WALLS & CURTAIN WALL SYSTEMS)

PUBLIC BUILDING
PUBLIC BUILDING

- 16" O.C. Bent Aluminum Framing System
- Load Barring Masonry and Curtain Wall System
8' O.C. Modular Unit Spacing (Constructed Offsite)
Load Barring Masonry and Curtain Wall System
Air Handling Units, Ductwork, and Diffuser/Exhaust Locations

Public Building


Topham, Sean Move House Prestel, NY 2004

http://www.kibbutzlotan.com/