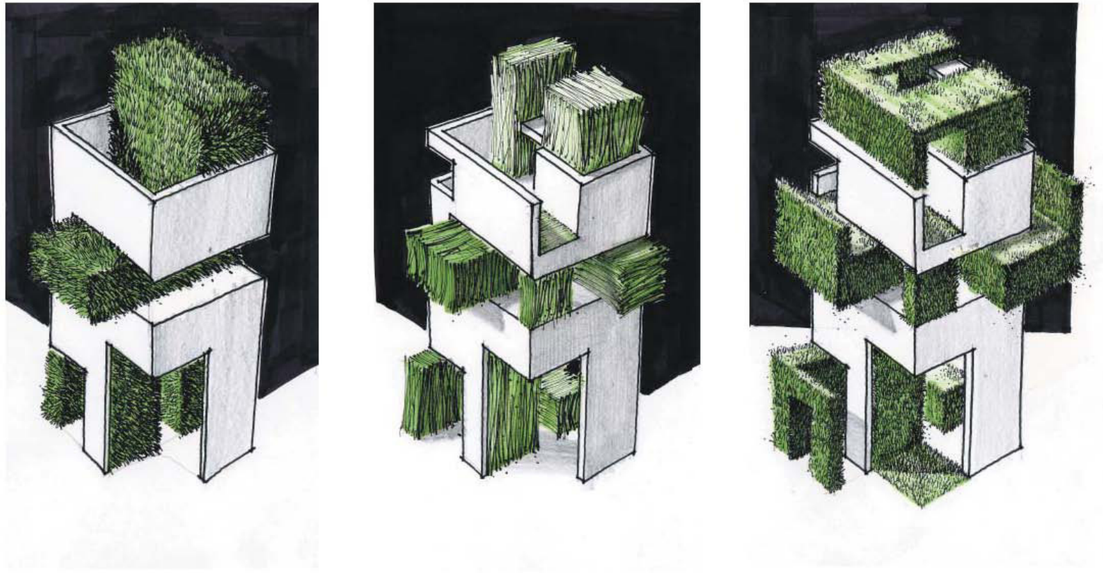
RESEARCH AND CREATIVE WORK

HOOMAN KOLIJI

Please note that this is an abbreviated portfolio.



HORTITECTURE

GARDEN CURTAIN : URBAN MICRO FARMING
(Aeroponic System)
Role: Primary Investigator
2013-

Patent pending: Application number: 67/788,297

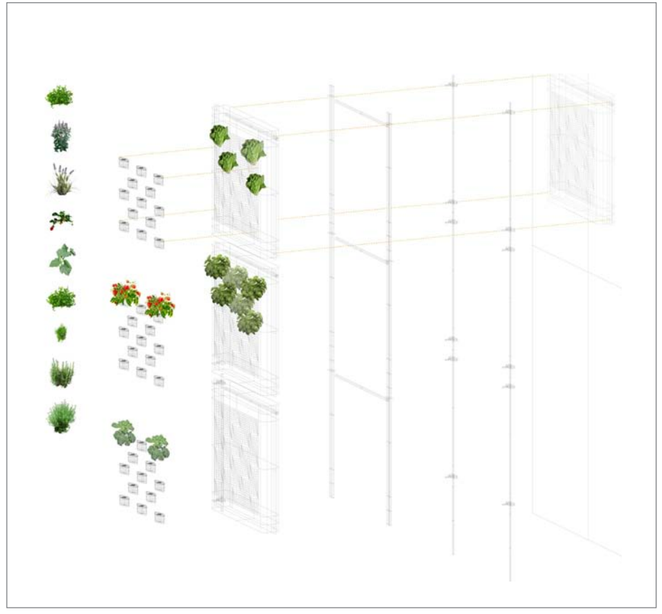
With the goal of integrating natural systems and tectonic structures, the design conceived a flexible, curtain-like, vertical growing system that could be easily integrated with architectural spaces at various scales. The following specific design objectives were considered to be essential for the optimized performance of the system in relation to architectural space and user experience:

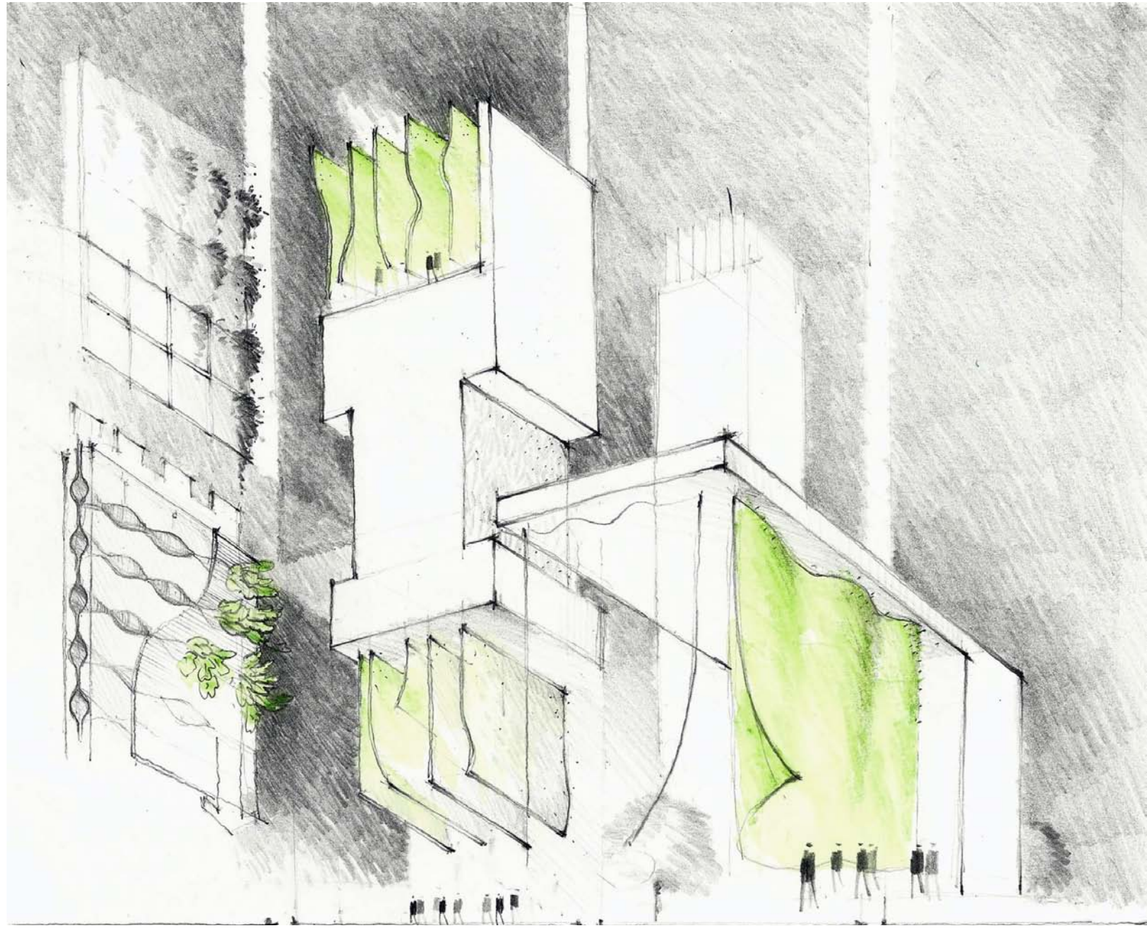
- Modular system (expandable and adjustable in size and form)
- Two-side growth (maximum use of growth surfaces)
- Light structure (to make it useable in almost any structure)
- Enclosed system (to eliminate concerns relative to humidity in building structures)
- Inexpensive construction
- Fast/easy assembly and disassembly
- Low tech enough to be easily utilized by the public

From a spatial design standpoint, the flexibility of the system was a core concern so that the system could easily lend itself to a variety of design materials, forms, and purposes. A positive user experience drove the design process, since the ultimate success of the project remains highly dependent on it being embraced by the public. In terms of mechanics, the design technology utilizes Aeroponics, a growing technology developed by NASA, wherein the soil is eliminated and nutrients are atomized in a contained environment to feed plant roots. faces are lightweight, they are easy to access for maintenance and harvesting needs.

Aeroponics offers several advantageous compared to traditional agricultural systems:

- Reduces water consumption by approximately 95% over traditional methods
- Eliminates nearly all pests due to the removal of soil from the system
- Increases growth rates by 5-7 times over tradition al systems
- Is light in structure
- Significantly reduces volatile organic compounds (VOCs) that are produced by many man-made building materials





HORTITECTURE

The design is comprised of modular units of enclosed container units similar to pillowcases or bags. The container units then form a paneling system to create surfaces of different sizes and scales. These containers hold small growth units (bearing individual plants), which are filled with atomized nutrients (a very fine mist of water and nutrients of a particle size smaller than 50 microns) that are distributed through a tubing system. The tubing system both feeds and drains the container units and connects them to an external nutrient reservoir. This paneling system is easily attached to any surface. And because these portable growing surfaces are lightweight, they are easy to access for maintenance and harvesting needs.

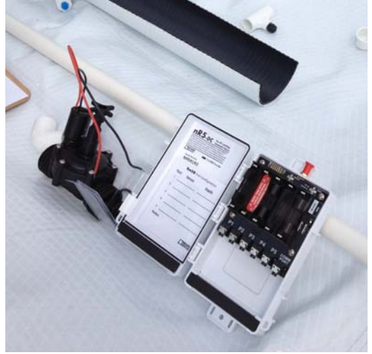
Garden Curtain, while technically a vertical micro-farming system, also represents a sophisticated and impactful design choice when utilized at a mass scale. The following outcomes are envisioned:

Public Health and Social Impact: With socially responsible design always at the forefront, Garden Curtain is a very inexpensive structure, which makes it accessible to a wider public. The design system could be utilized as a shared farming option in urban locations devoid of traditional growing spaces, as new forms of roof curtain gardens, or simply in private residence as growing walls.

Urban Micro-Farming: One of the anticipated outcomes of this project is to promote urban farming in micro-scales, where land or "horizontal" real estate is rare, but vertical real estate is abundant. A principal goal behind this design is to develop easily-accessible micro-solutions to escalating food costs and possible shortages.

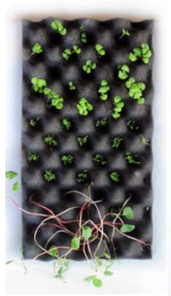
Entrepreneurial Spirit: The idea behind the design is to fabricate a system product for designers, developers, urban agriculturalists—and most importantly, for the public. In short, with a minimal investment any consumer could utilize the system in their built-environments. As noted above, an important goal of Garden Curtain is to empower more people to actively participate in food production, which will eventually have significant impacts on the micro-economies of urban dwellers.

Design Thinking Culture: Returning to the notion of "material imagination" discussed by Gaseton Bachelard, one could profit from the duality offered by Soft-Tectonics exemplified in Garden Curtain. At its core, this design concept argues for "building plant systems architecturally" while "planting building systems horticulturally." Garden Curtain will also introduce new challenges and avenues of inquiry that are worthy of exploration. By disassociating horticulture from "garden" as its only authentic context—and instead associating it with a soft tectonic system—a new mindset for design thinking could emerge. This new perspective not only considers exploring green systems as a viable material culture discourse, but also views it an essential intellectual process for reconceiving the making of buildings.

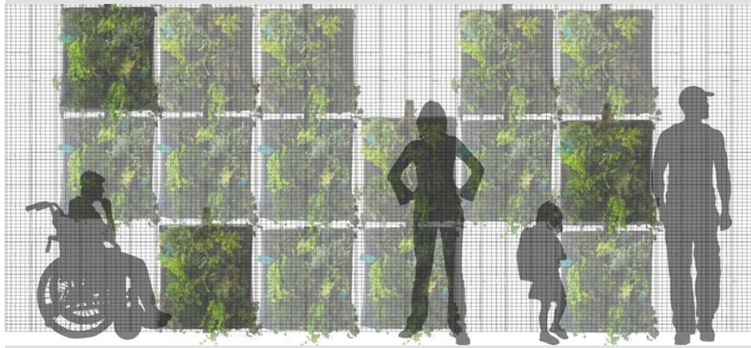


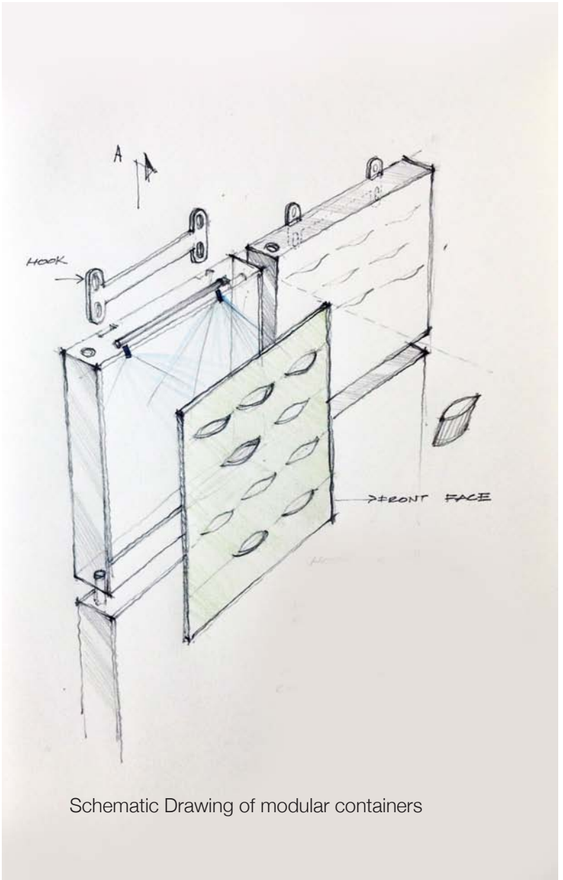
HORTITECTURE

MODULAR BIO-WALL
(Hydroponic System)
Role: Primary Investigator
Summer 2013



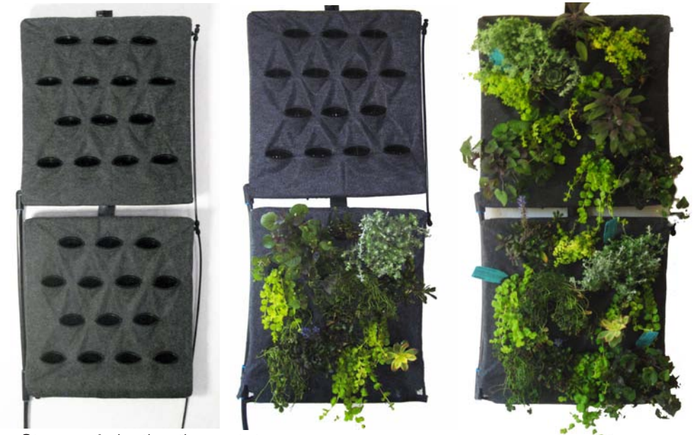
Drawing showing large surface areas covered with modular system. These surfaces can be portable to provide access to the plants and/or as integrated to the building system.



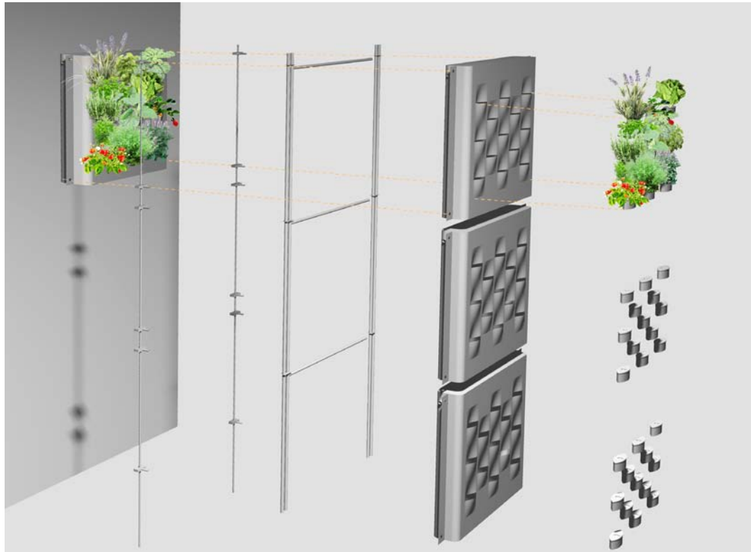


Schematic Drawing of modular containers

Living Portotype



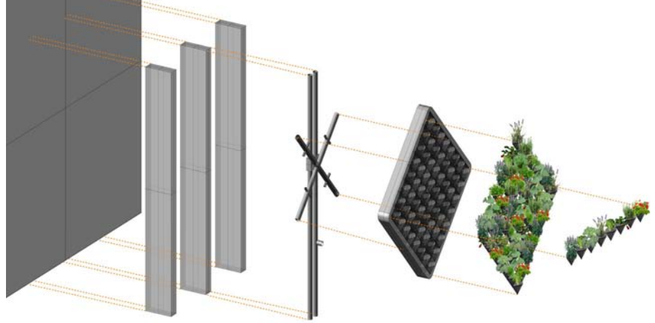
Stages of planting the prototype.

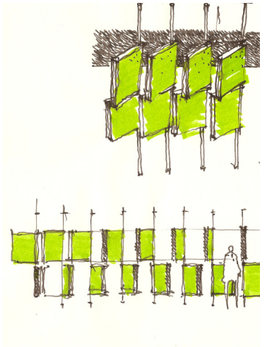


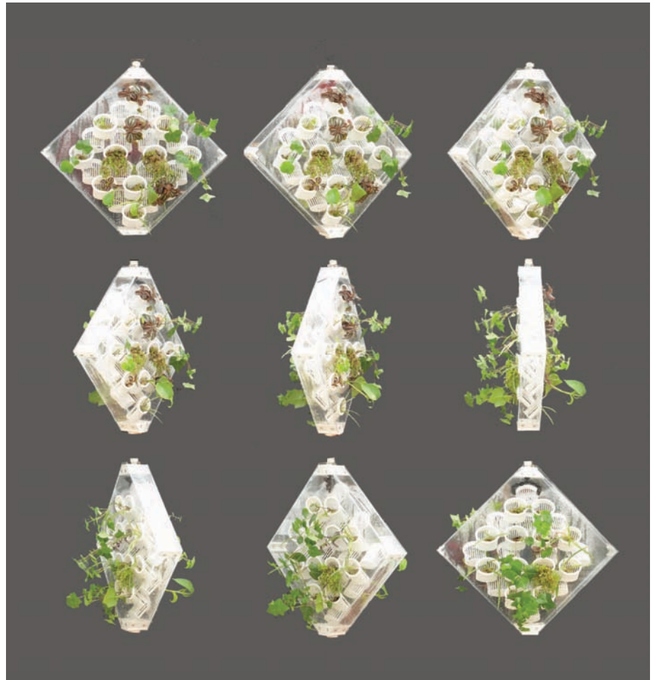
HORTITECTURE

KINETIC CURTAIN GARDEN
Rotating Paneling System as Screen Shading Systems
(Aeroponic & Hydroponic Systems)
Role: Primary Investigator
Fall 2013 - Spring 2014

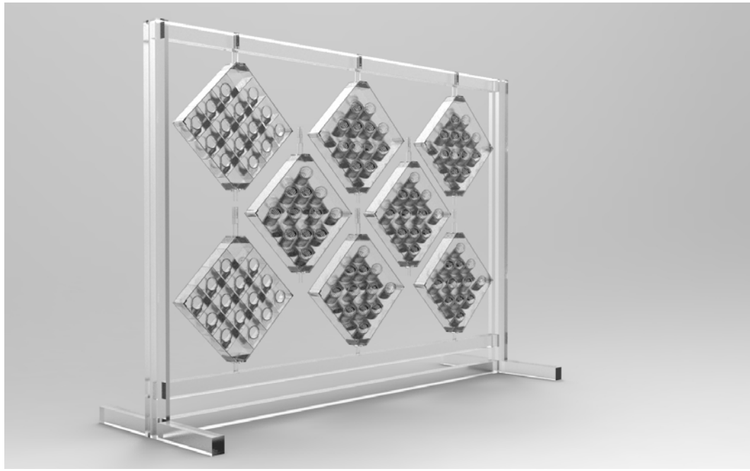
Collaborator:
David Tilley, PhD, Associate Professor
Department of Environmental Sciences and Technoloy
College of Argriculture and Natural Sciences

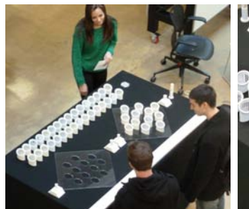


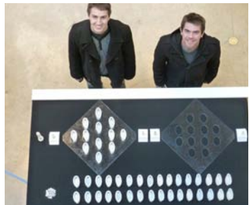




Prototype Presentation at Maryland Day, College Park







HORTITECTURE

KINETIC CURTAIN GARDEN
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Role: Primary Investigator
Fall 2013 - Spring 2014

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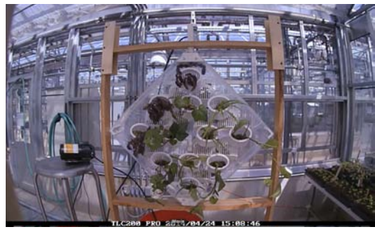
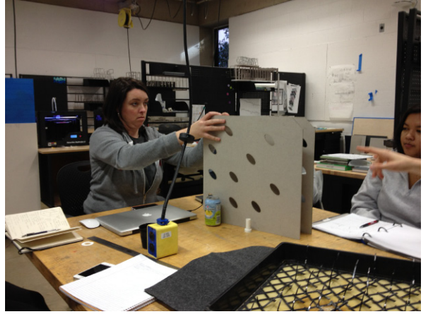
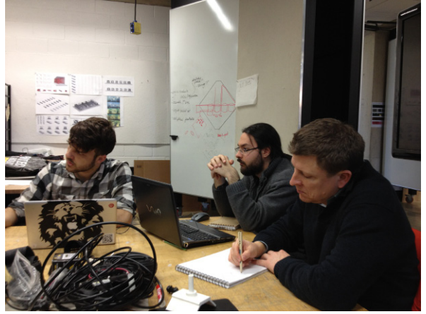
frames from timelapse monitoring of the system at the UMD Green House facility.

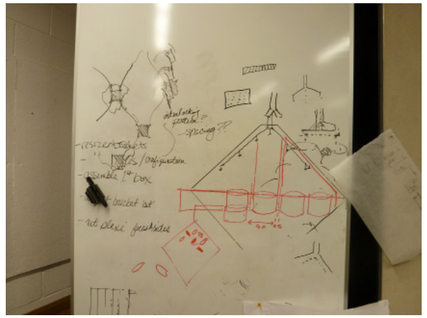


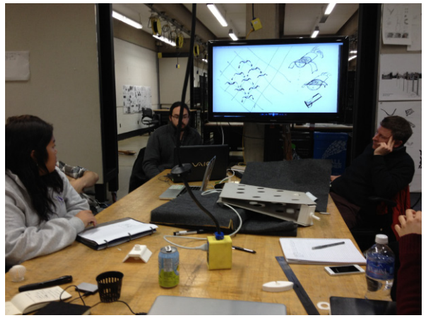



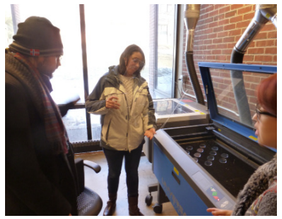


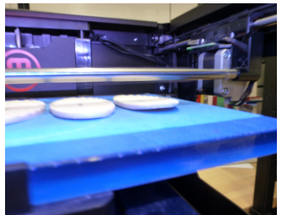


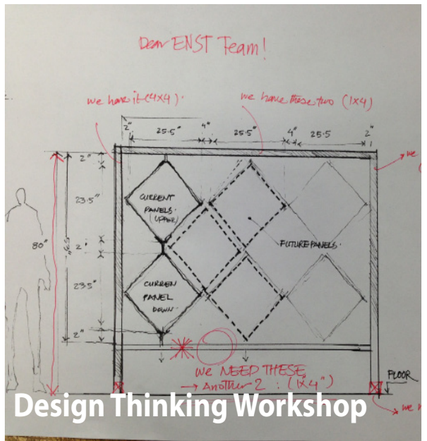












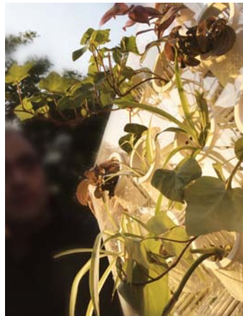
Following is a note from one of the students after Maryland Day presentation of the prototype:

" Overall Maryland Day was a huge success! We had a tremendous amount of people of all ages, professions, and backgrounds come visit our display and inquire more about our Eco-Curtain. There was not one person who did not like our product and were very impressed by the design and visual aesthetics of the panel and planter boxes …

... A couple who own a school in Sierra Leone showed a special interest in working with us to buy our product in bulk to install in their schools to improve air quality and have a healthy source of food for the children so they can learn to grow their own produce.

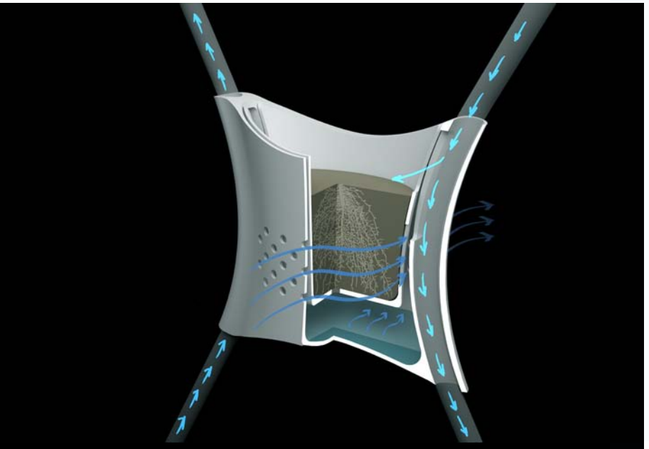
I am extremely happy with the outcome of our proto-type and the great feedback we received at Maryland Day for our presentation. I believe the collaboration between ENST and ARCH students and faculty was a perfect combination of expertise to create a truly useful product for urban environments."

-Shaina P.



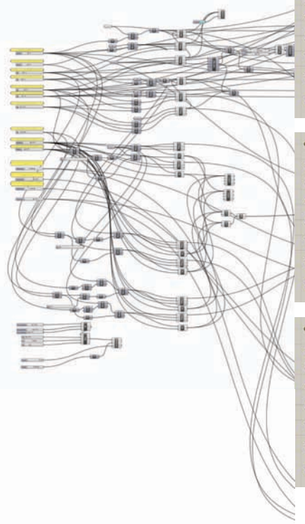
HORTITECTURE

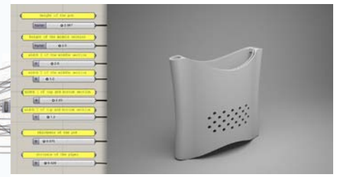
KNOTGREEN
Net System with Double Shelled Gorwing Units
(Hydroponic Systems)
Role: Primary Investigator
Spring 2014 - in progess

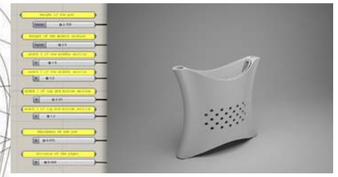


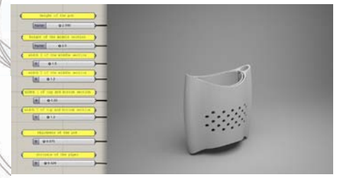
Double-Shell Grow Cell

This unit allows nutrient circulation, breathing, and evaporation of excess water.

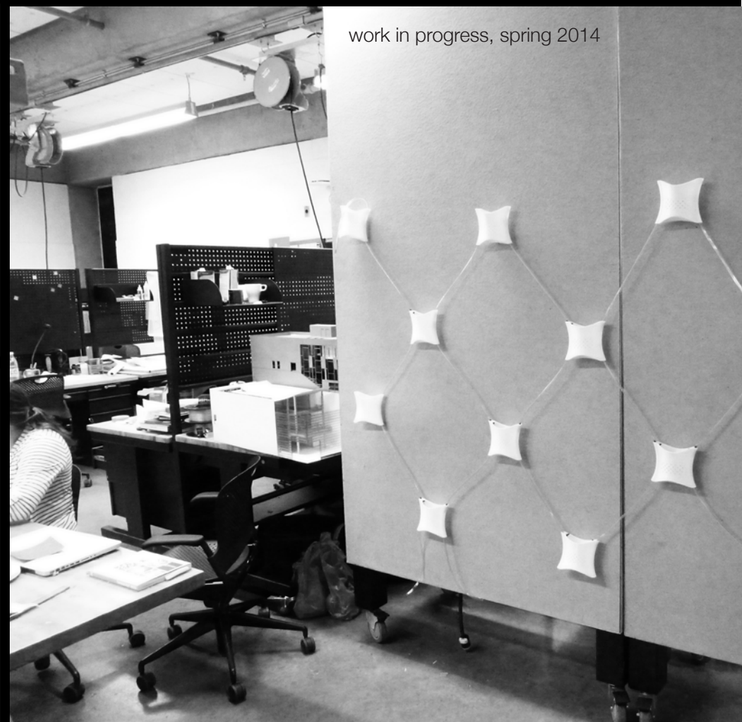








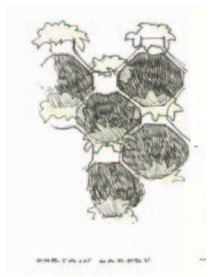
prototype development process

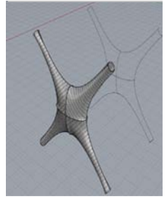


work in progress, spring 2014

HORTITECTURE

KNOTGREEN
(Hydroponic Systems)
Role: Primary Investigator
Spring 2014 - work in progess





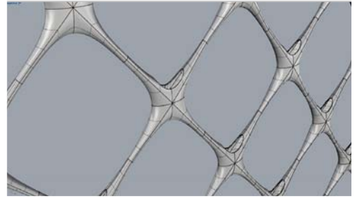
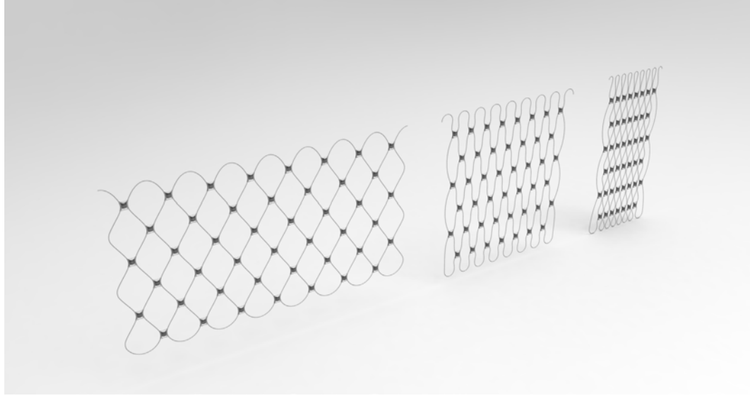
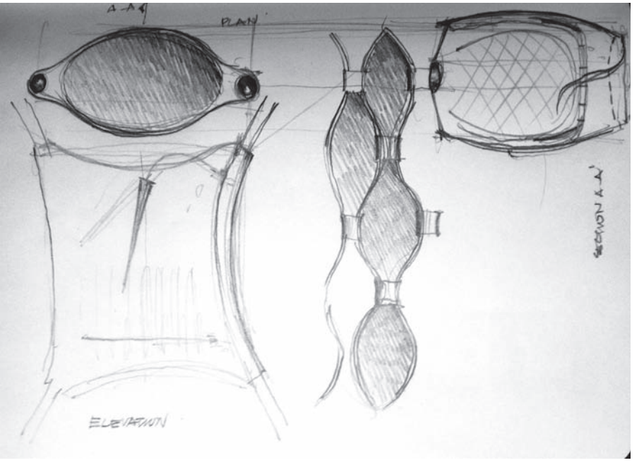
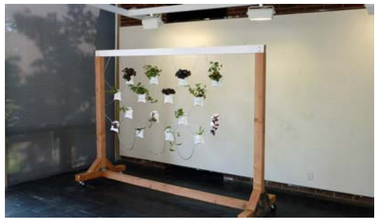


diagram of net system in expansion

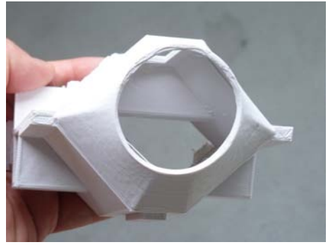


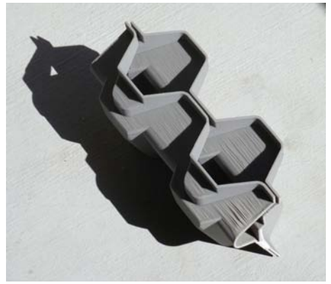


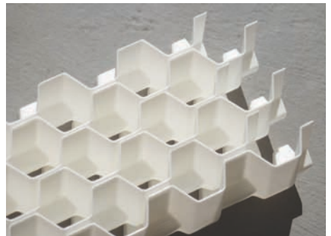


HORTITECTURE

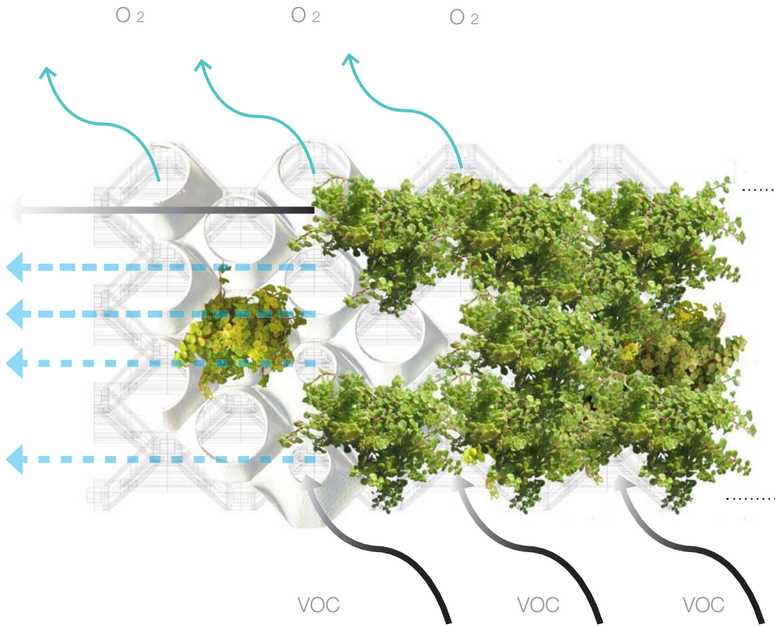
GREENBEE
Interlocking Honeycomb Structure
(Gorwing Medium + Hydroponic System)
Role: Primary Investigator
Spring 2014 - in progess







growing cell prototype, 3D print, work in process



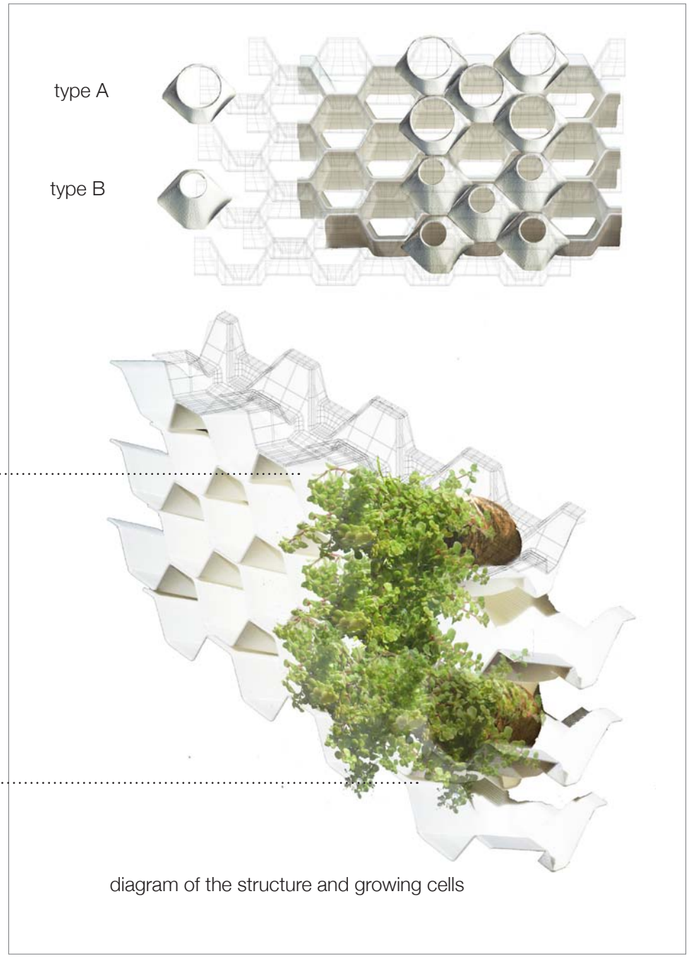


diagram of the structure and growing cells

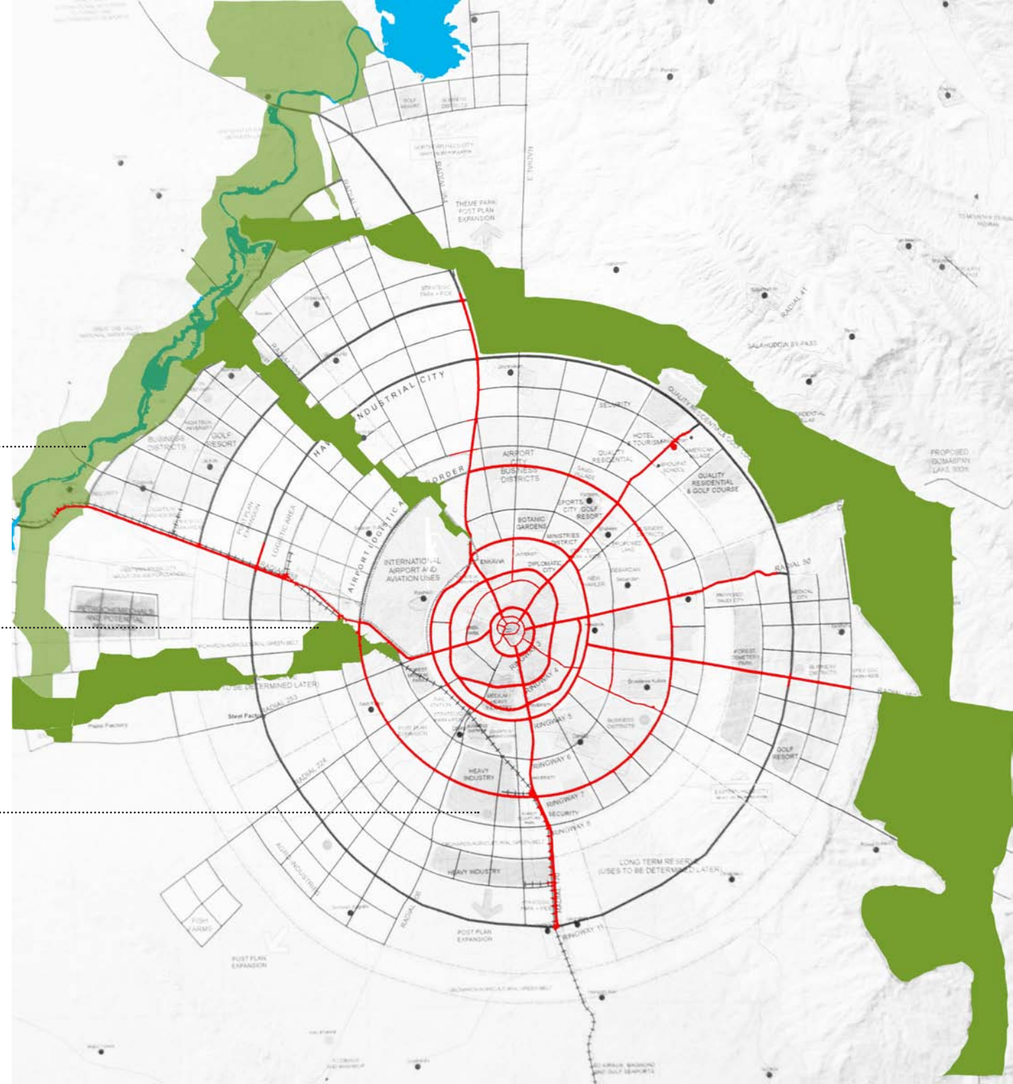
ERBIL ECOLOGICAL URBANISM
Integrating Ecological and Sociocultural Systems
Role: Lead Researcher
Center for the Use of Sustainable Practices (CUSP)
University of Maryland
2013-

Located in northeast of Iraq, City of Erbil features one of the oldest human settlements that has been continually inhabited. With a citadel literally defining the city center, Erbil is comprised of concentric circles suggesting the future growth of the city. Recent political and economical development of Kurdistan Region has granted a high degree of autonomy, thereby economical prosperity to Erbil. As a result, the city experiences a real estate boom. New developments disregard the fragile ecological capacity of the city and have completely disregarded the role of landscape urbanism in bringing sustainable solutions to the built environment.
This research follows my visit to Erbil and communications with a number of officials in this regard. The city requires ecological solutions integrated with their social and economical demands. Currently, Erbil lacks any green infrastructure. Scatted parks present large lawn areas, which require maintenance and water. The study examines to expand green infrastructure through networks of urban agriculture, a practice that had long existed till recent decade.

River Farming

suggested green networks to serve for mid-scale urban agriculture

Inner city urban garden - microscale urban agriculture



TEHRAN GREEN INFRASTRUCUTRE PLANNING
Designing Ecological Commuinties and Networks
Role: Steering Committee, Research and Planning Team
Gozineh Consulting Group
2012- through 2017

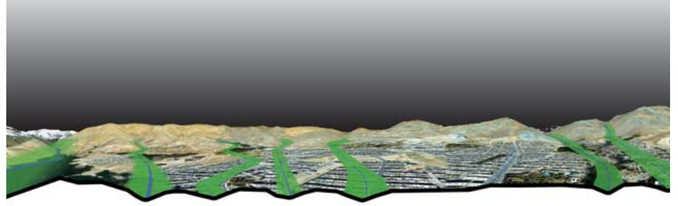
Tehran is located between high mountains and dessert. Seven major ecological corridors that connected mountains and lower arid lands have disappeared under heavy urbanism and construction. Gozineh Consulting Group was charged for studying and planning a comprehensive green infrastructure master plan. Through partnership with city officials and private parties, our office undertook extensive inventory of existing information. That included mapping and identifying ecological communities in Tehran. A green infrastructure network was identified based on several layers of information (existing green, future plans, ownerships, etc.). Currently we are conducting fieldwork to survey plants and plant ecologies in identified zone. This will help us understand urban ecological systems of identified zones and their connections. One major corridor (Darband – Tajrish) has been selected for comprehensive study and implementation. The study and planning is expected to be completed in 2017. As a partner to GCG, I am an active participant in the project management team (steering committee) and in workgroups.

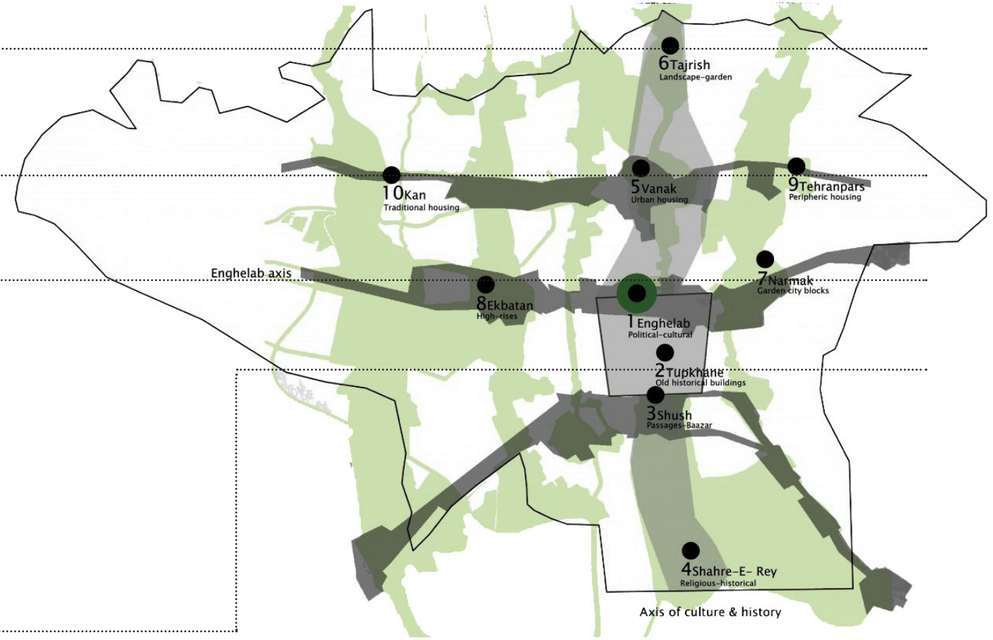
Northen Valley-Rivers: Distinct Micro Climate, Diversity Ecological Communities

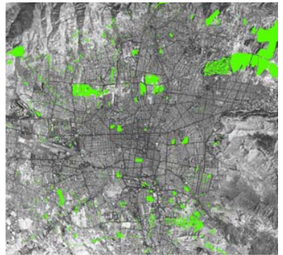
Nautral landscapes preserved and enhanced for recreational purposes

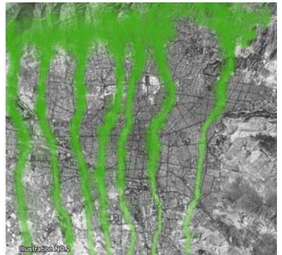
Urban Landscapes: Public Space + Park Systems

Channelized Rivers: Limited Ecological Design

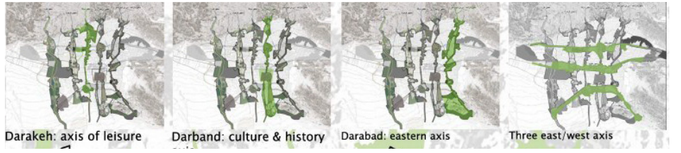




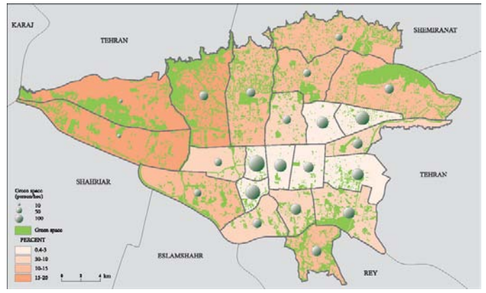


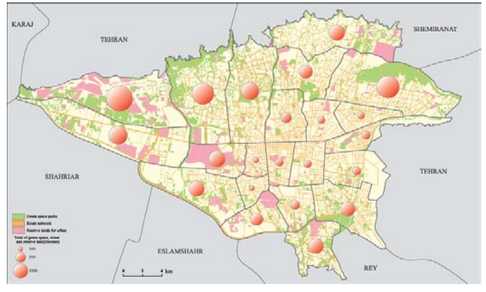


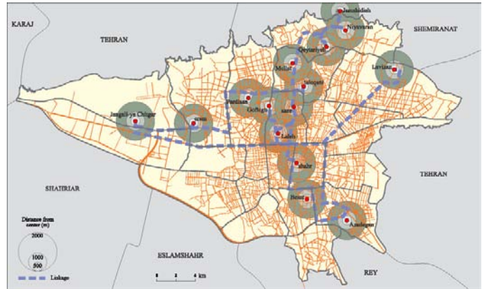
Proposed Ecological Netowrks

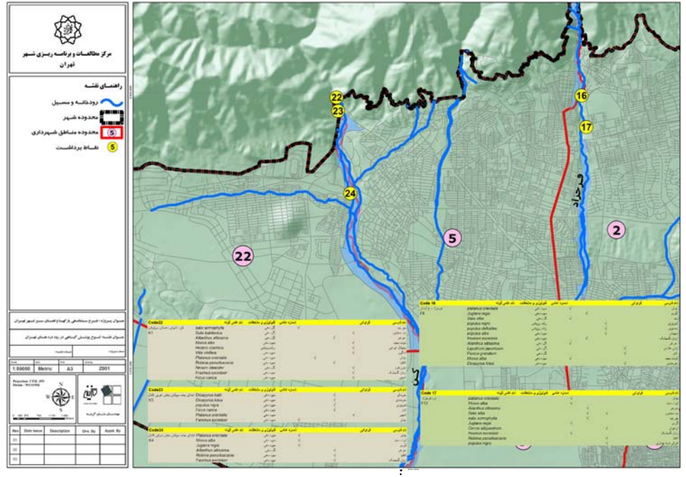


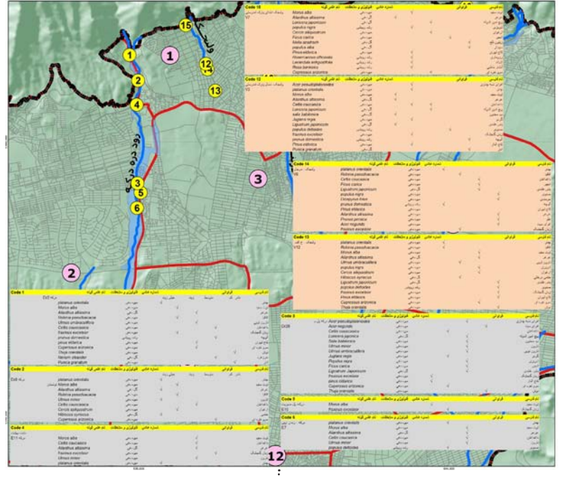
TEHRAN GREEN INFRASTRUCUTRE PLANNING
Designing Ecological Commuinties and Networks

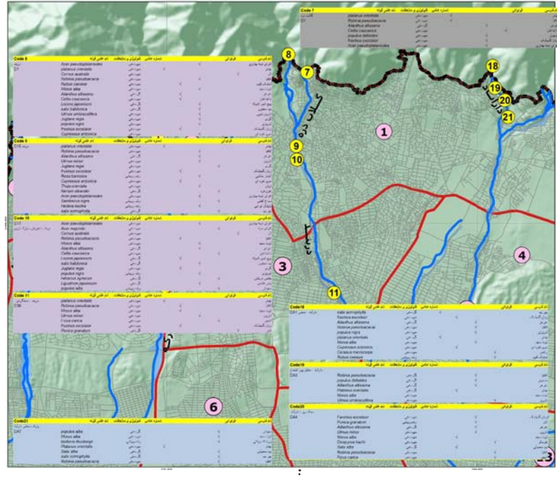








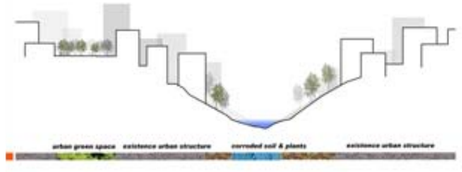




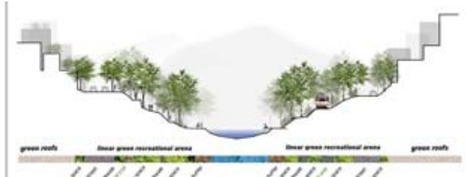
Identifying Ecological Communities:

1-Mapping zones
2-Plant survey and analysis
3-Mappping plant communities

4-Ecological capacity ctudy of the identified zones

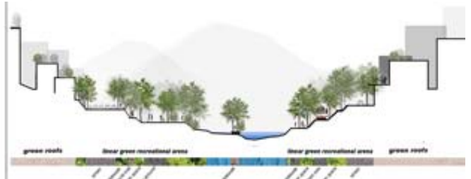


Existing Profile



Proposed Profile

Existing Profile



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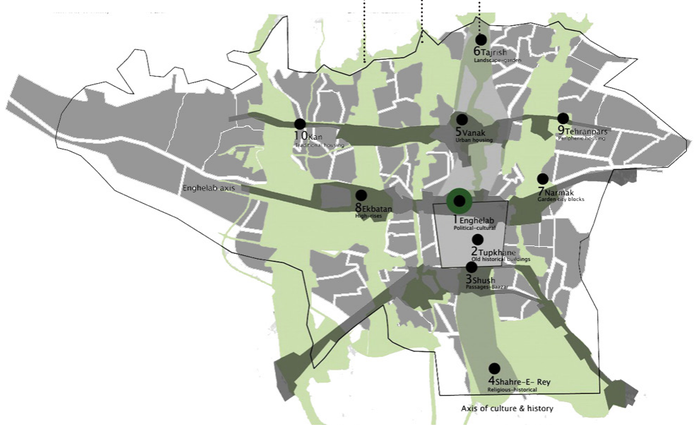
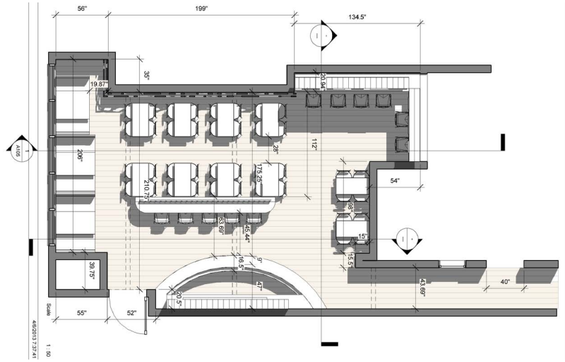
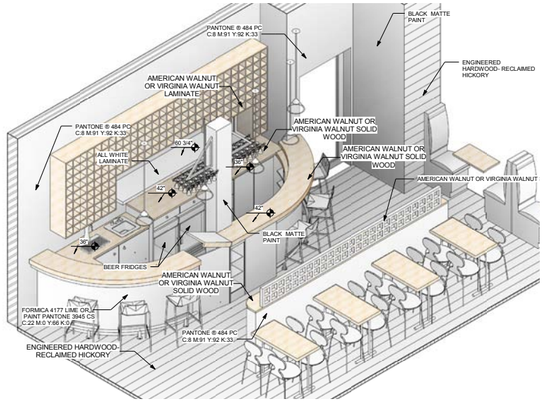
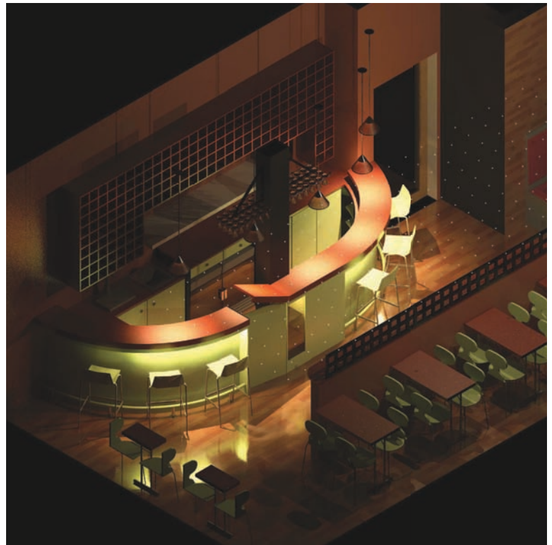


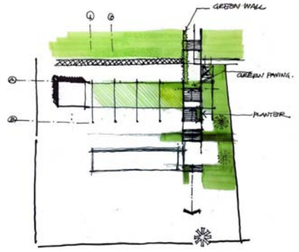
GREEN Restaurant
Role: Designer
Blacksburg, Virginia
2013

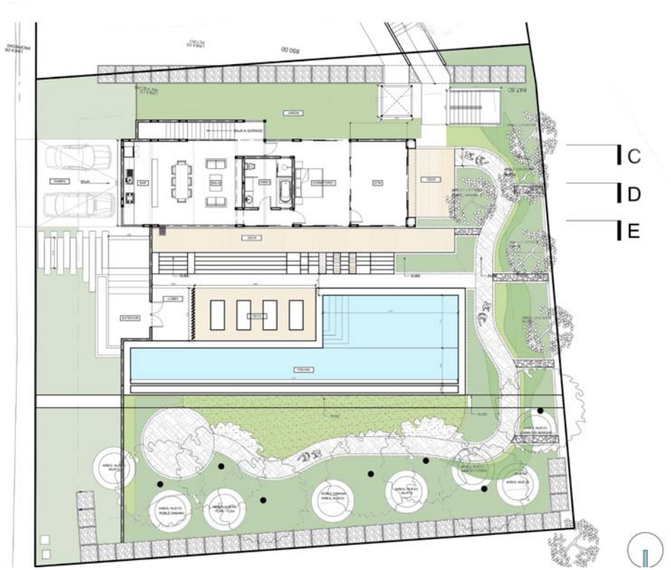






ALT HOUSE
Design: Luise Quiros + Hooman Koliji
San Jose, Costa Rica
2013



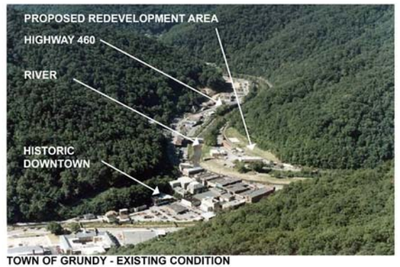


SEEING LIGHT IN GRUNDY

Reclamation of the Grundy's Quarry and Road Enhancement

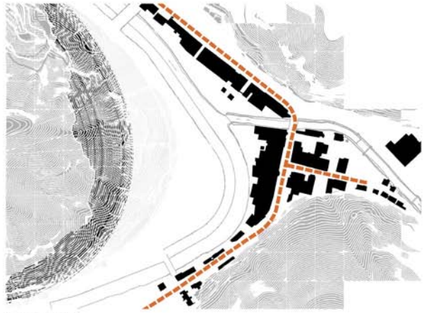
Role: Lead Designer and Researcher
Grundy VA
Land Desgin and Simulation Lab, Virginia Tech
P I : Dr. Patrick Miller. FASLA
2008

Grundy, Virginia, located in the heart of Appalachia, was in dire need of some creative ideas about what to do with a large, unsightly rock wall that was created when a level building site was cut from the side of a mountain. The building site is the location to rebuild a portion of the downtown outside of the flood plain. The development of a plan to use lights to turn an ugly rock wall into something beautiful was a pro-bono effort undertaken by the Land Design and Simulation Lab at Virginia Tech, and was the direct result of ASLA's Lobby Day.

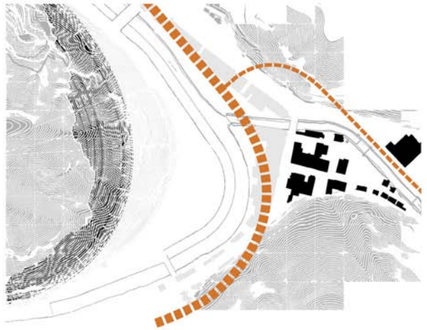


TOWN OF GRUNDY - EXISTING CONDITION
Photo courtesy of U.S. Army Corps of Engineers, Huntington District

AERIAL PHOTGRAPH SHOWING THE RELATIONSHIP BETWEEN THE HISTORIC DOWNTOWN AND THE REDEVELOPMENT AREA WITH CLIFF
Photo courtesy of C. Crabtree

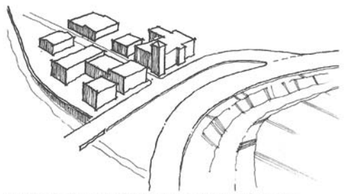


EXISTING

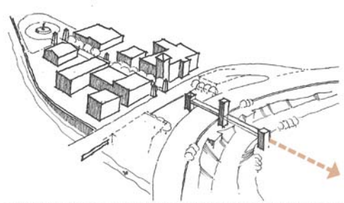


ROAD RELOCATION

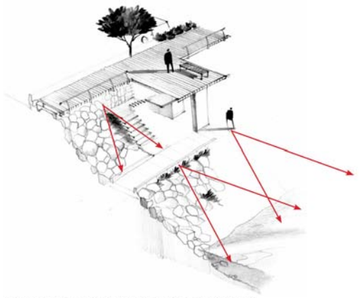
UNIFYING CONCEPT



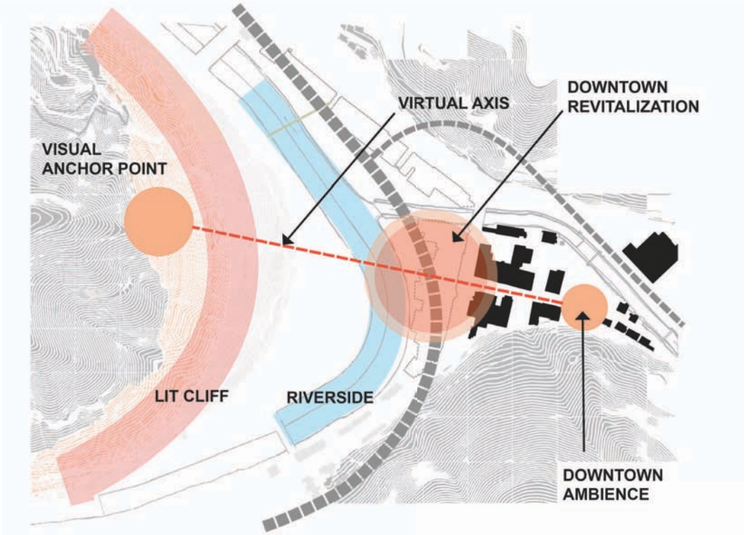
THE TOWN OF GRUNDY AFTER THE ROAD RELOCATION

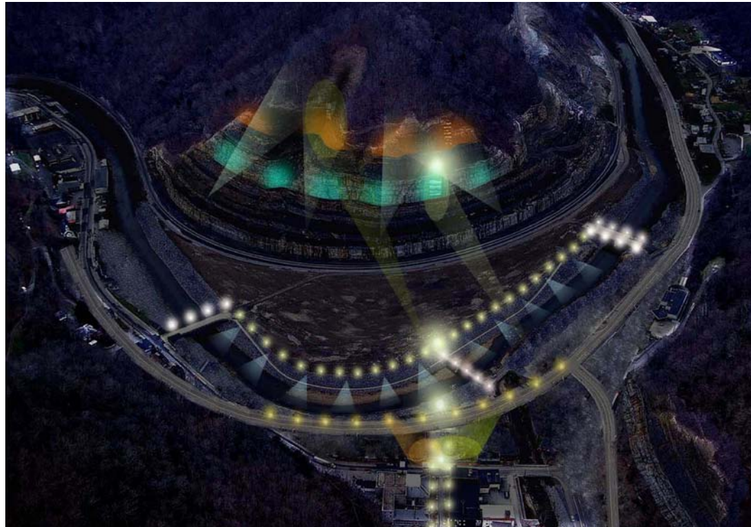


THE UNIFYING CONCEPT WITH PROPOSED PREDESTRIAN AND LIT VISUAL AXIS TO THE NEW BUSINESS DISTRICT



RIVER PROMENADE WITH ACCENT LIGHTING





HOOVER RIDGE PARK COUNTY MASTER PLAN
Community Charrette and Park Master Plan

Role: Lead Designer and Researcher
Land Desig and Simulation Lab, Virginia Tech
Madison County, VA
2008

P I: Dr. Patrick Miller, FASLA

Project Statement:
Analysis maps and sketches of different future scenarios were utilized by the design team in a series of community charrettes and public meetings to build a consensus vision for a 180 acre parcel of land in this rural county of 13,000. The vision drew from the historic significance of the site and emphasized preservation of the rural character, part of the regional context and important to residents, while meeting a diverse set of community needs.

Project Narrative:

1. Project Goals and Objectives:
Through a set of fortuitous circumstances, the 13,000 residents of Madison County found themselves to be the owners' of 180 acre parcel of land, the Clore Farm. While many adjacent counties have experienced rapid growth and sprawl, the residents of Madison County, Virginia are proud of their county's rural character and Arcadian charm. With many needs and limited resources, the property was being developed incrementally, often in ways that limited future opportunities, sparked controversy within the community and threatened the rural character that made it a special place. The community called upon landscape architects to help them develop a long term vision of the property.
Visioning process: The visioning process had several parts. An online survey of county residents was conducted to identify recreational and other community needs. This was followed by 2 community design charrettes and a public meeting. The design charrette was conducted with a group of stake holders representing different interests within the community.
During the first charrette the design team presented its inventory and analysis, and the opportunities and constraints of the region and of the site to the community group. The group then broke into teams and developed 3 rough concept plans for the site. Each team presented its concept to the entire group and they were discussed. Based on feedback from the charrette and presentation, the design team then developed a set of problems and issues that the design needed addressed in preparing a plan. The design team then developed several alternative design concepts that drew upon points of agreement from the charrette and placed them in a larger vision for the future of the site.
The alternative design concepts were reviewed by the stake holder group in a smaller charrette and a consensus on major points was worked out. The design team then prepared a draft master plan that was presented at a county wide public meeting. Public comments were collected and addressed in a final long term master plan for the site.

2. Project's Significance: The project demonstrates how the skills of landscape architects can be used to help people, not only reach consensus, but develop a vision for a place that does not yet exist, a vision that is more sustainable because it draws on the cultural and natural heritage of the area and encompasses the needs of the residents.

POSSIBLE FUTURE DEVELOPMENT
The area around the demonstration gardens is left open for possible future development, which can take place when and if needed. Because of its proximity to the major road, this area could serve many possible uses in the future that are unanticipated today. In the mean time the undeveloped open space will help preserve the rural character of the site.

POTENTIAL FUTURE SCHOOL SITE
A location for a future school, if needed, is proposed in an area where there are now existing soccer fields adjacent to the existing school. This area can continue to be used as practice soccer fields until the construction of A new school is needed. The future school and the existing school will share the soccer fields, baseball fields and community facilities provided in the park.

GARDEN PROMENADE
The Garden Promenade connects the community recreation center with the community cultural and senior center. People can enjoy the passive, leisure and therapeutic activities of the amphitheater. For example, the promenade will have picnic shelters, a knot garden, flower beds, meditation shelters and a labyrinth. Activities are provided for children and adults a like.

COMMUNITY RECREATION CENTER
The community center portion consists of a cluster of buildings that can be built over time as needed and as finances allow. Architecturally the buildings are designed and sited in manner that maintains the rural character of the site. When built the Community Recreation Center will contain an indoor swimming pool, fitness center, indoor play area, meeting rooms, changing (locker) rooms and storage facilities. This area is easily accessible from the athletic fields.

ENTRANCE
The entrance to the site is enhanced by a tree lined avenue. The fences on either side of the road reflect the rural character of the area. The presence of signage announces the visitors' arrival to Hoover Ridge Park.

THE OAKLAND WOODLAND
The existing oak trees in this area are preserved and now enhance a common picnic area. The area accommodates an historic exhibit, picnic tables and a tot-lot playground. This area provides opportunities for social and family recreation. The historic exhibit will commemorate President Hoover's visit to this site. The focal point will be the relocated or rebuilt the existing Red Barn or an architectural structure that will reflect the lines and visual characteristics of the barn. This will be a place for commemorative and civic ceremonies. It will also serve as a place for social gatherings. A memorial flag plaza is introduced at a point on the circumference of the core area that overlooks the large central open space that contains the soccer fields. Seating terraces are located along the arc of the flag plaza and provide a place to observe soccer games or Fourth of July fireworks.

POND
The expanded pond provides place for people to practice recreational canoeing and kayaking, as well as to fish. A bridge and arbors enhance the beauty of the place and makes it visually pleasing.

INTERNAL ROADS
The roads wind through the landscape and are designed to reflect the rural character of the site. In addition the road is designed in such a way to slow down the movement of the vehicles in the park for safety reasons. Traffic calming features such as flower beds and berms will create a pedestrian friendly environment. Parking spaces are provided along the roads at specific points and at the major activity areas. Approximately 200 parking spaces will be available. In some areas, a drop off zone will be provided. It is noted that the internal road will have an emergency exit on the other side of the site away from the main entry.

DEMONSTRATION GARDENS
A place where people can learn about planting flowers and vegetables, the garden demonstration center is located in an area of the site where the soils are not well suited for construction, but can accommodate agricultural activities.

COMMUNITY CULTURAL AND SENIORS' CENTER
The Community Cultural and Senior Center consists of a series of buildings that can be built over time to accommodate need and budget. The area contains seniors' center and meeting rooms, as well as, serves as a base and storage area for the agricultural demonstration gardens.

THE NATURAL PLAYGROUND
Children are challenged to use their five senses (hearing, sight, smell, taste and touch) to experience nature in this playground. They can experience and learn through the use of natural materials such as water, sand, earth, gravel and woods found in this area. Children will have a hands-on experience these materials, for example, they can play and build structures out of sand.

AMPHITHEATER
The amphitheater provides opportunities for outdoor plays, music concerts and social gatherings. The amphitheater has been designed to take advantage of the bowl shape of the natural topography. It is located next to the wetland area that will provide views of the water. It is enclosed by a curtain of trees on some of its edges making it a semi-private zone.

WOODLAND
The existing woodlands provide a place for camping and more rustic woodland picnicking. It is a wonderful place for family outings amidst the woods. Picnic tables and restrooms are also provided. Trails run around the periphery of woodland and connect to the camping areas. A watchtower with a picnic area around its base provides unique views through and above the woodland canopy.

EARTH MOUND AND VIEWING TOWER
A wooden viewing tower is located between the soccer fields and the baseball fields. The base of the tower is enclosed by a mound that serves as a gateway to the baseball park and at the same time provides a place for people to sit and enjoy a soccer game. A bridge connects the tower and gateway area with the baseball fields.

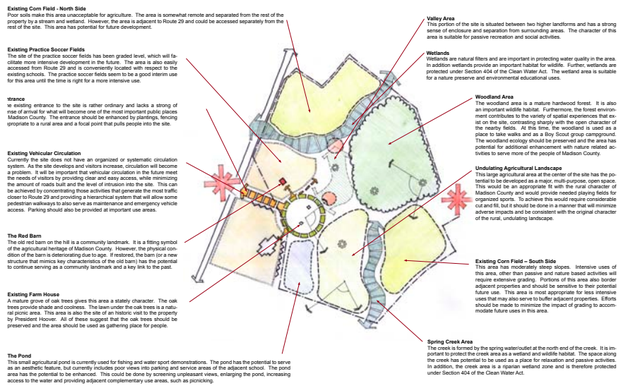
BASEBALL PARK
The four baseball/softball fields are oriented in such a way that it prevents the batter from looking into the sun in the afternoon. A concession area is located so that it can be shared by the four baseball fields and provides a social gathering place. The number of bleachers will be minimized because the grading of the landscape will allow the earth sitting mounds to be placed around the baseball fields.

LARGE OPEN SPACE AND SOCCER FIELDS
This area has been graded to create a large open space with an irregular and undulating planted edge and accommodates the soccer fields. The space is large enough to accommodate different arrangements of the soccer fields, allowing the turf to recover at high use spots on the field. These fields can be rotated as needed. The area is relatively flat with just enough slope to achieve positive drainage for the athletic fields. Plantings which surround and enclose the area will help the environment by filtering the rainfall runoff from the fields before being discharged into the pond or the creek. When the fields are not used for soccer this area will be a versatile open recreation area for walking, informal games, Frisbee, kite flying and other activities.

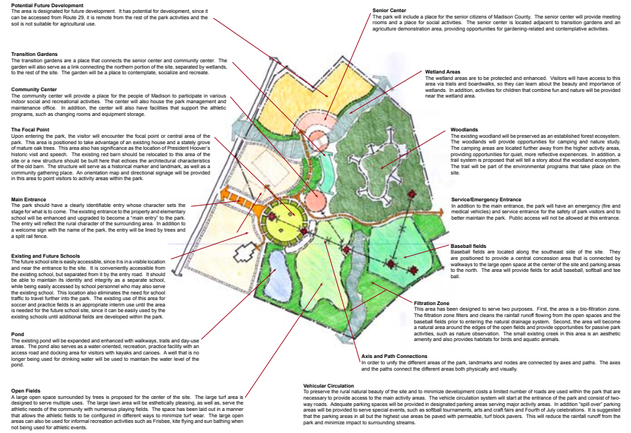
WALKING AND CYCLING PATH AND SERVICE ROAD
A 10 foot wide path is provided along the periphery of the site and provides opportunities for walking, jogging and cycling. The trail is not paved, so the rural character of the site is maintained. The only vehicles allowed on the path are designated service vehicles and emergency response vehicles.

HOOVER RIDGE PARK COUNTY MASTER PLAN

3. Local and Regional Significance of the Project:
Community needs: The residents of the county had many needs that were being considered for the site, including a future school site, athletic fields for the existing high school, recreation league sports fields (soccer, little league and soft ball), county offices, a community center, a senior center, nature study and rustic camping for boy scouts and other groups. The site had already begun to be developed with no long term plan to guide development
Preserving rural character: The Hoover Ridge Park is located in a delightful, pastoral, rolling, rural landscape. The property epitomizes many of the qualities valued by the residents of Madison County. The design concept for the site calls for preserving the rural character of the landscape, while providing a series of activity areas across the site that are guided by the undulating and flowing hills of the landscape. The design provides a sequence of experiences, such as water, earth and woods; as well as, a range of recreational activities, both active and passive, while at the same time conserving and enhancing the essential rural character of the landscape. A careful analysis of the visual and natural characteristics of the site guided the plan.
The future buildings are to be clustered, sited, sized in a manner that will harmonize with the rural landscape. The color and materials used in construction will be earth tones. The entrance to the site is enhanced by a tree lined avenue. The board fences on either side of the road reflect the rural character of the region. The reconstructed red barn is located at the terminus of the entry drive and provides a focal point as one enters the site. The community center consists of a cluster of buildings that can be built over time as needed and as finances allow. Architecturally the buildings are designed and sited in a manner that maintains the rural character of the site.
The historic significance: During his presidency, President Hoover visited the site and gave a speech to several hundred residents of Madison County. An old red barn that is visible on the site today was a backdrop for this historic event. In fact, it has become an icon in the eyes of many county residents for that historic event. Unfortunately, the barn is in poor shape and would need to be either rebuilt in order to preserve it or reconstructed. However, the memory of this historic event should not be lost.
Upon entering the park, the visitor will encounter the focal point or central area of the park. This area is positioned to take advantage of an existing house and a stately grove of mature oak trees. This area also has historic significance as the location of President Hoover's historic visit and speech. The existing red barn should be rebuilt and relocated to this area of the site, or a new structure should be built here that echoes the architectural characteristics of the old barn. The structure will serve as a historical marker and landmark, as well as a community gathering place. An orientation map and directional signage will be provided in this area to direct visitors to activity areas within the park.
Signature open space and soccer fields: There were many demands for sports play fields, both from the adjacent high school and grade school and the recreation leagues in the area. Each field was being sited and graded individually, which was having a dramatic affect on the topography and vegetation of the site. The plan calls for a grand scale, multi-purpose open space with an irregular and undulating planted edge. This space will become an important part of the image of the park with many activities taking place in and around the space. This open space can accommodate the multiple soccer fields. The space is large enough to accommodate different arrangements of the soccer fields, allowing turf to recover at high use spots on the field. The area is relatively flat with just enough slope to achieve positive drainage for the athletic fields. Trees which surround and enclose the area will help filtering the rainfall runoff from the fields before being discharged into the pond or the creek. When the fields are not used for soccer this area will be a versatile open recreation area for walking, informal games, Frisbee, kite flying and other activities.
Serving all residents: In addition to youth sports, the master plan calls for a community recreation center and a cultural/senior center. These facilities can be constructed in stages as the need and funding are realized. They will serve a broad range of age groups



The opportunities and constraints map summarized the important factors from the inventory and analysis of the site (from the original planning document).



1: The concept plan was a product of the community charrettes (from the original planning document).

BOOKER T. WASHINGTON NATIONAL MONUMENT
Viewshed Study and Planning
Role: Lead Designer and Researcher
Land Design and Simulation Lab, Virginia Tech
2007

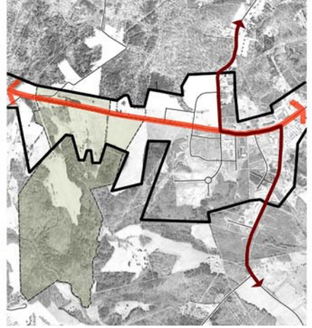
P I : Dr. Patrick A. Miller, FASLA

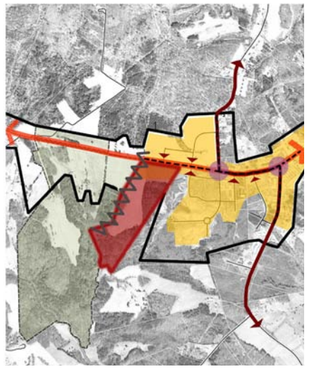
Booker T. Washington National Monument is the childhood home of an important African American figure in the history of our country. It is located in rural Franklin County. The county wants to direct growth in the rapidly developing area of the county to the Westlake Center, a development overlay district. Westlake Center lies adjacent to one boundary of the Booker T. Washington National Monument. A proposal to develop a parcel within the center and adjacent to the Monument has caused a great deal of concern for the historic integrity of this National Monument. A landscape architect was hired to conduct a viewshed study and provide planning recommendations for the surrounding landscape.

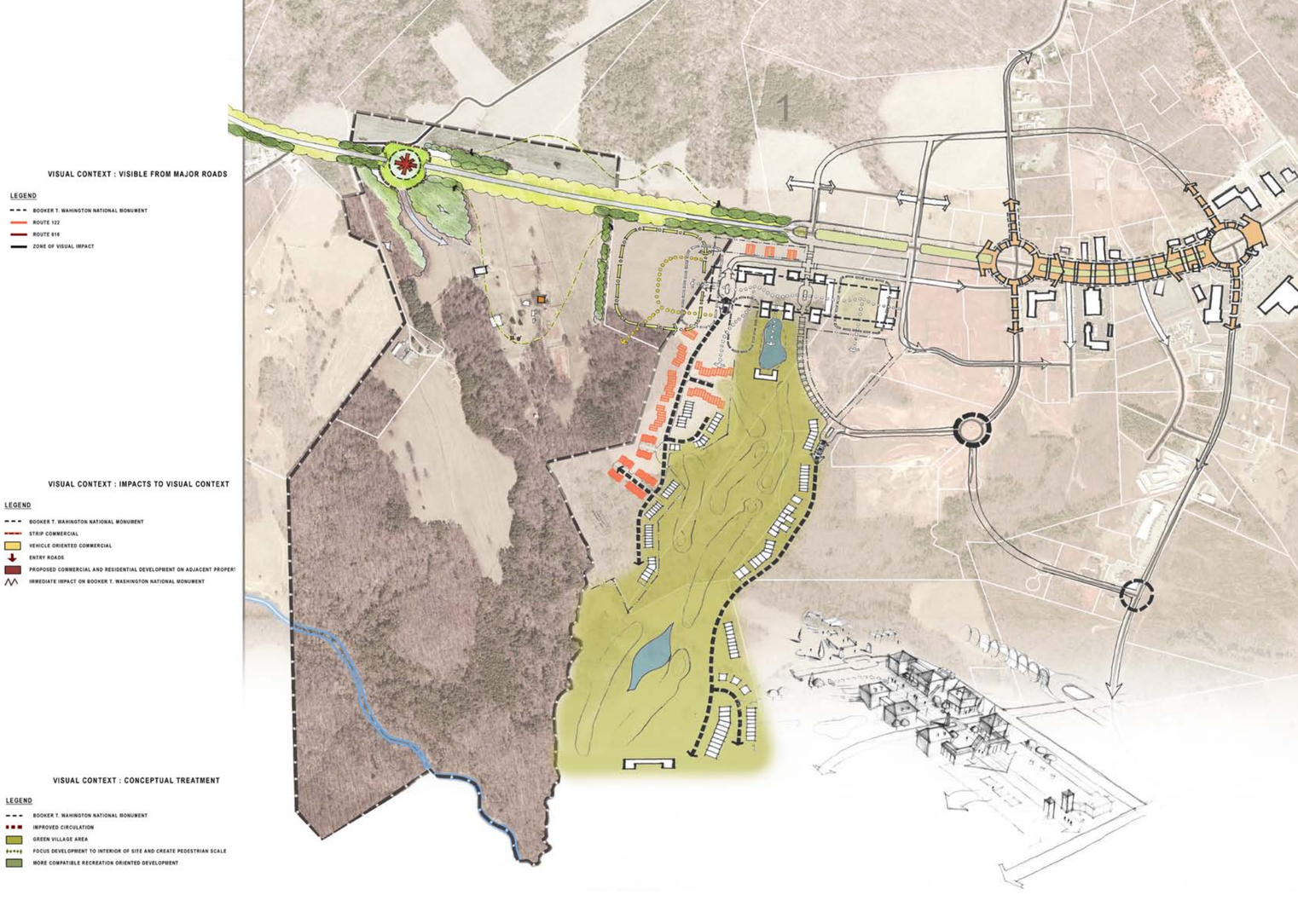
Village Centers: The concept depicted here is proposing two centers with a "village" like character:

1) a Central Village Core, serving the broader commercial needs of the community and

2) a Tourism Oriented Historic Village, related to the cultural heritage and recreation opportunities present in this area.







MIDTOWN MEDICAL ARTS DISTRICT CORRIDOR
Transportation Corridor Improvement Project

Role: Lead Designer and Researcher
Lynchburg-VA
Project supervisor: Dr. Patrick Miller FASLA
2006

Project Statement:
Sprawling automobile oriented development results in environments that are homogeneous and difficult to find one's way around in. This project, part of a transportation enhancement project, provides structure and identity to a road corridor. By identifying key decision points and drawing from the unique character of the surrounding neighborhoods, a "corridor of confidence" was proposed that would help people find their way from a major transportation artery to the campus of a major medical facility.

Project Narrative:

1. Goals and Objectives: The City of Lynchburg is fortunate to have attracted a multi-million dollar, regional medical facility. Unfortunately, many clients have a difficult time finding their way to and from the medical campus. As part of a transportation improvement project, this project examined how a corridor can be designed to give structure and provide identity to the urban environment – to impart "confidence" to travelers as they travel to and from the medical arts district that they are indeed on the correct route. By identifying key decision points and drawing from the unique character of surrounding neighborhoods, a corridor of confidence was designed that enhanced the urban environment, while helping people find their way from a major arterial highway to the medical facility campus

2. Project's Significance: This project addresses a problem of national significance, which is that sprawling automobile oriented development results in environments that are homogeneous in appearance and difficult to find one's way around in. Further this project draws upon way finding theory and theories of urban structure and imageability, such as those of Kevin Lynch, to demonstrate how landscape architects contribute to transportation improvement projects, while also enhancing the communities through which they pass.

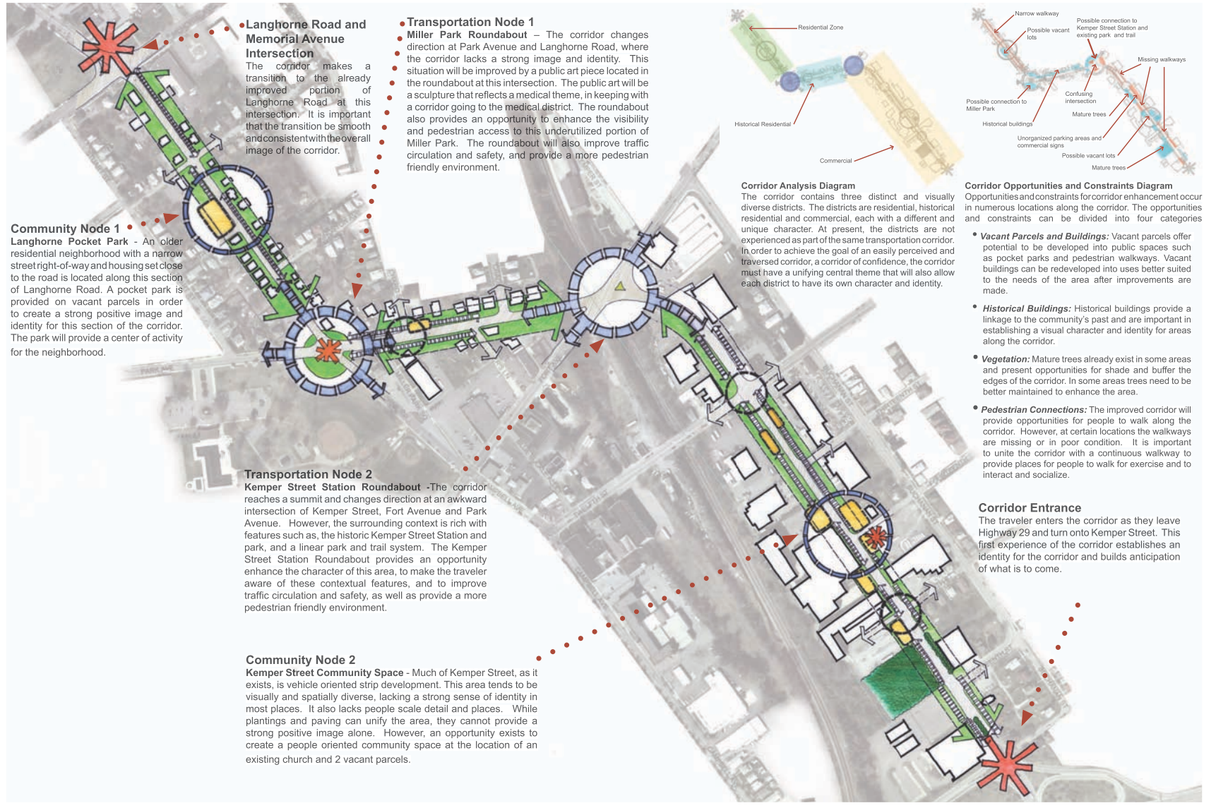
3. Local and Regional Significance of the Project: The major elements of the plan, and how they draw upon the history and character of the area, are described below:

Distinct Areas and Nodes of the Corridor: The analysis revealed 3 distinct areas of the corridor, commercial, historic residential and residential. Each area has a unique set of issues that need to be responded to in the design in order to unify the corridor, while bringing our unique characteristics of each area. In addition, 6 nodes were identified that are important decision points along the corridor and that can be enhanced to provide a unique and memorable experience. There are 4 "transportation nodes." These are areas where the corridor begins, ends or changes direction. These can be enhanced, not only to provide identity to these areas of the corridor, but to also help in way finding. Roundabouts are proposed at 2 of the transportation nodes. Research has shown that roundabouts can improve traffic circulation and safety. Two additional nodes are "community nodes." These are areas adjacent to the right-of-way that have been developed to give identity to the areas and serve the local community.

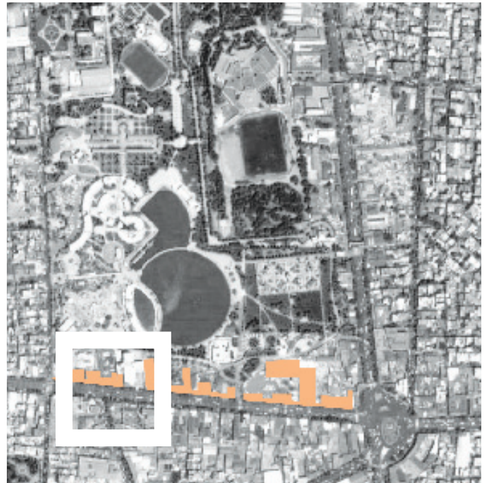
Corridor Entrance: This area is important because it is where the traveler enters the corridor as they leave Highway 29 and turn on to Kemper Street. This first experience of the corridor establishes an identity for the corridor and builds anticipation of what is to come.

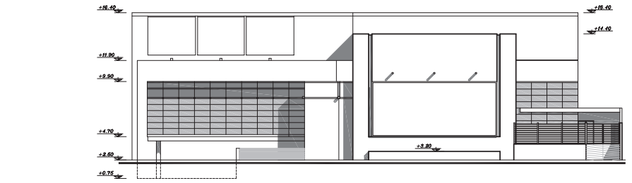
Kemper Street Streetscape
Plantings of trees and shrubs will unify the visually diverse areas of commercial development long Kemper Street. Vegetation will also buffer and visually soften the parking lots in front of commercial establishments. Architecturally designed and centralized signage features will replace the hodge-podge commercial signs that exist there now. Walkways are provided on both sides of the street with street furniture at appropriate locations. Colorful banners will also be hung from specially designed light standards and will provide color, as well as, announce city festival and holiday seasons.

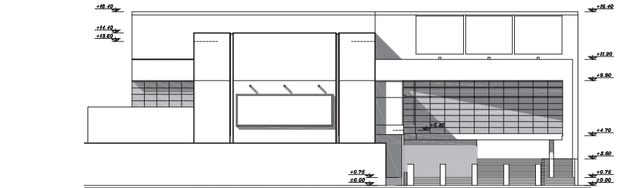
Kemper Street Community Space: Most of Kemper Street is vehicle oriented commercial development. Visually the corridor is very busy with commercial signs and a diversity of building types and setbacks. It also lacks people scale detail and places. Most places along this section of the corridor are lacking a strong image and identity. The Kemper Street Community Space provides a highly imageable activity node along the corridor. To mark the area as a node along the corridor, it is proposed that vertical columns be located along both sides of the road, creating a break in the rhythm of the street trees. The colonnade will provide a strong identity for the node, as well as, define the pedestrian and vehicle realms. On one side of the road public art in the form murals will be placed on the facade of a building located adjacent to the road right-of-way. The murals will provide pedestrian scale details and visual delight. On the other side of the road is a public space.

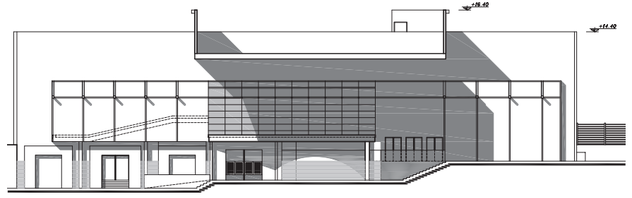


RAZI CINEMATIC CENTER
Integrating Architecture and Urban Landscape
Building as Gate: Creating an Urban Promenade
Role: Chief Architect and Lead Designer
Gozineh Consulting Group
Tehran, Iran
2002-3 (design) 2007 (construction completed)



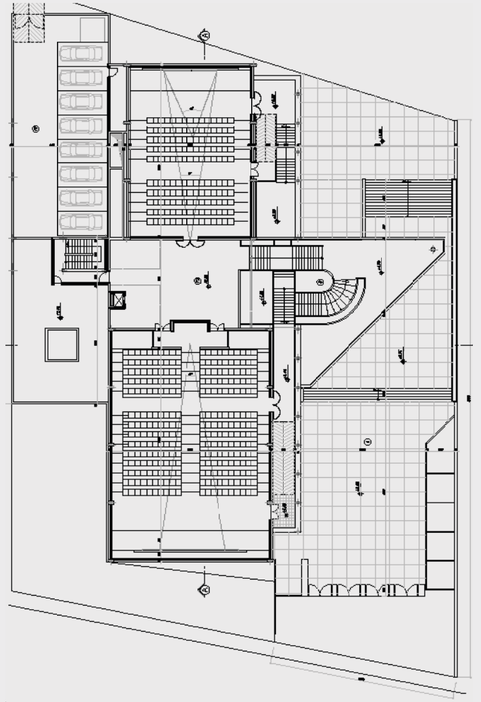


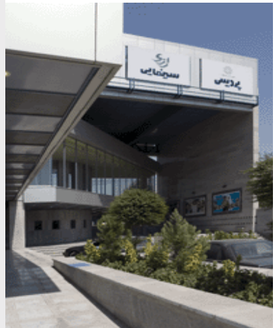




The second biggest cinematic centers in Iran, Razi Cinematic Center is located in central south part of Tehran in a dense low income community. The site is in the south part of Razi civic park, a 27.5-hectar park which serves as the major public open space for the district. The park did not have an entrance from the south border, and the cinema site was the only open parcel which could potentially provide an access from the district to the park from the south bank. Design concept responded to this need and provided a multi-purpose promenade,serving both the park and a threshold for the Cinematic center.

I supervised a team of 3 architects, one structural enginner and two mechanical engineers. Project included: SD, DD, and CD for a design area of approx. 30000 sf.





DIPLOMATIC RECREATION CENTER
Darabad Valley Environmental Planning and Design
Role: Research and Design Member
Gozineh Consulting Group
Tehran, Iran.
2004

The site of Diplomatic Recreation Center is located in north of Tehran on the footstep Alborz mountain chain. Gozineh Consulting Group was charged to study, and plan the site. We studied various aspects of the site: landform, micro-climates, vegetation, drainage patterns, and possibility for the public use. Our study vision to plan a site with minimum interventions to the natural setting, while protecting the site from further erosions and deteriorations that had been started due to storms.
On the upper stream, we created a number of check dames made out of gabions and filled with existing rocks to slow down runoff water and to enrich the microclimate of the stream. The team also suggested expanding planting evergreens (a project that had started by Tehran Municipality) in identified areas. Lines of erosion in valley conditions were filled with stone and rock to avoid further loss of fertile soil. Biking, hiking, and horse trails were designed based on topography and also on-site observations. a small garden (utilizing on-site stream water) and a public plaza (featuring reflecting pool) were design and executed in the lower lands. I was actively involved in the study and planning of the site. I was also actively involved in the execution of the lower garden and prepared concept plans and schematic diagrams for the public space with reflecting pool.

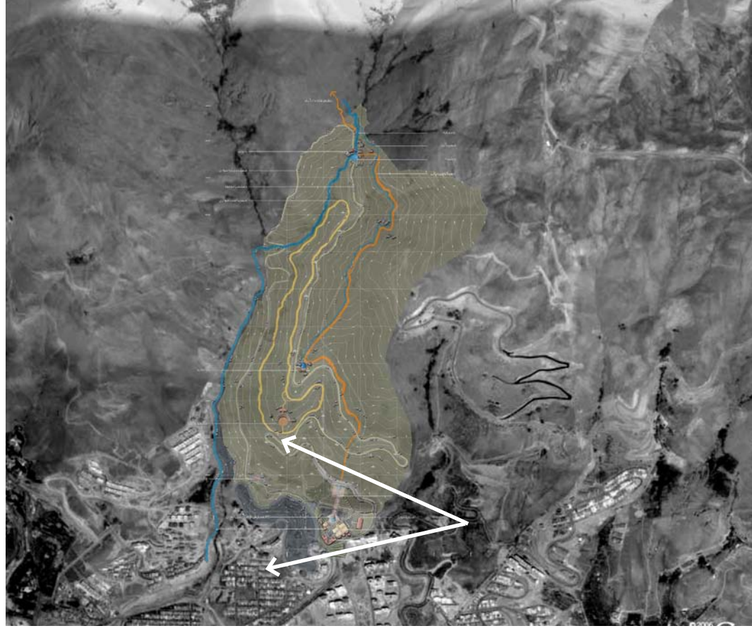

Check Dams - Gabion


Planting on Slopes


Trail Design: Hiking, Biking


Collecting Water:
Lower Garden


Public Gathering:
Reflecting Pool

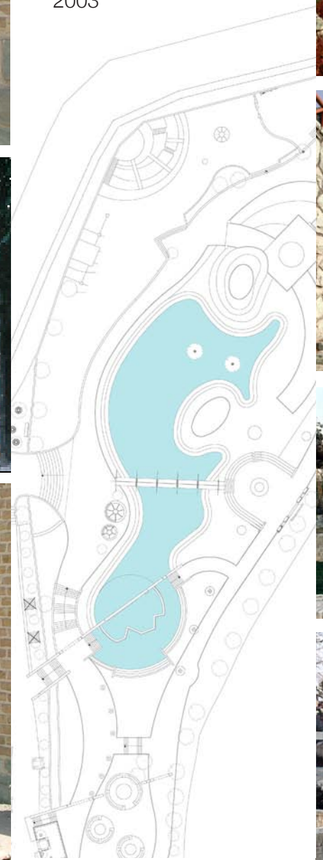


ECO-CULTURE WALL
Designing with Environment
Role: Lead Architect - Team Leader
Gozineh Consulting Group
Tehran-Iran
2003

Eco-Cultural Wall is a design-build of apprx. 2200 feet long wall with folklore theme using traditional brick and on-site stone and wood while respecting natural environment and existing plants along a pedestrian path way in northern Tehran. We had to survery the exisitg condition including all trees and plants incoporate them in the design. Some epic folklore stories informed themes of the design as points of interest where introduced public nodes.

Tavalod Park is located along a valley condition in dense urban environment. The design responds to the natural drainage patterns of the topography and creates a constructed wetland with gravel edges. Gravel and sand allow for further filteration of runoff water from the surrounding hardscapes. The park is 5.5-hectar and is surrounded by residentrial neighborhood from three sides and a semi-industrial zone from the forth side is the project to be converted to a community scale park.
The project incules a vast pond, a center for gathering, in the northen side and athletic fields in the southern side. A thematic wall separated the park from the semi-industrial zone. The project started from study and analysis phase to working drawing phase.

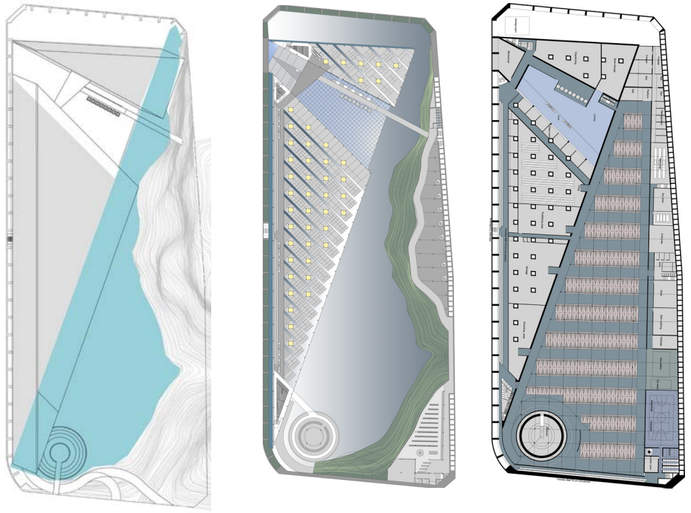
TAVALOD PARK
Urban Wetland Park
Role: Lead Architect
Gozineh Consulting Group
Tehran-Iran
2003

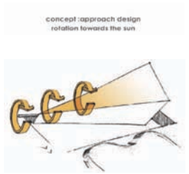


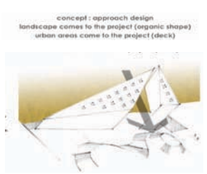
NIOC HEADQUARTERS
International Competition in Sustainable Design
Integrating Building and Landscape
Paterner: Battle McCarthy Landscape Architects, UK
Role: Lead Designer (design core), Team Coordinator
Farhad Ahmadi Architects, Tehran, Iran. 2002.

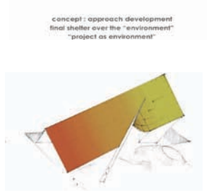
Ministry of Oil, the largest economical organization in Iran, sufferd from a lack of concentration of its administrative buildings in the capital, Tehran. The Ministry has over 53 buildings and facilities spread all over the metropolitan Tehran. In 2002, the ministry held a national architectural competition in order to design a 100,000. Sq. meter Iranian Oil Industry Headquarters, a home for the ministry and all its companies. It was the biggest competition in the history of Iran. Eight top national firms were selected and asked to introduce an international joint wincher. Farhad Ahamadi Architects was among the invitees. Farhad Ahamadi invited me to develop and lead a competition team, which included outsourcing personnel from out of the office. I served as the team leader, lead designer , and also associate project manager for administrations. Our internationally renowned joint-wincher was the Battle Mc Carthy Co. from the United Kingdom.

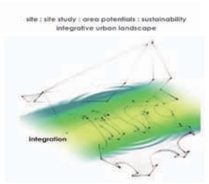
Site: The competition site is located in Abbas-Abad Zone, an undulating city reserved area in the middle of the capital. The Tehran's Master Plan, from 40 years ago, has specified this zone as reserved lands of the capital to be allocated to highly national priority projects. A revision on the master plan was accomplished almost two decades after the earlier one, proposing some subdivisions on the land. As a result, new road constructions have removed the integrity from those undulating hill zone. The roads almost look like scars on the topography. In the last 15 years, four major national projects have been developed in the zone and two more are under the discussion. The developed projects are; National Iranian Library (NIL), National Iranian Academy of Art and Sciences (NIAAS), Metro Station, and a regional park. The other two includes this project and a civic park adjacent to the competition's site.

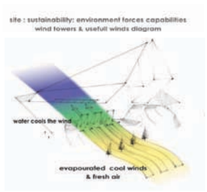


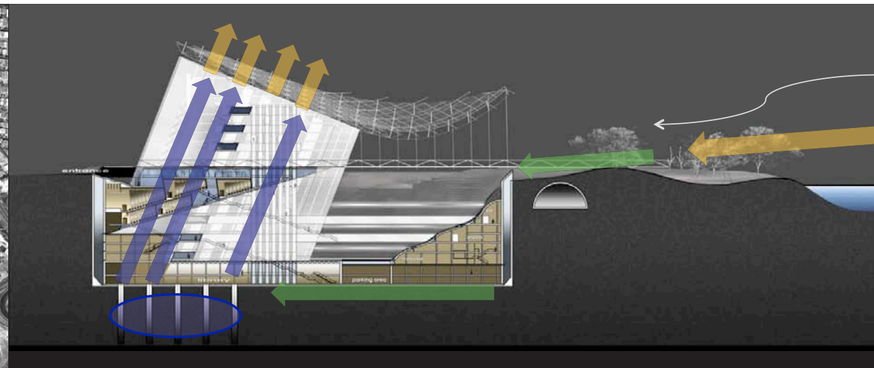




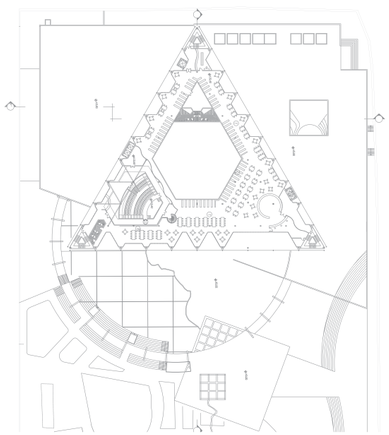


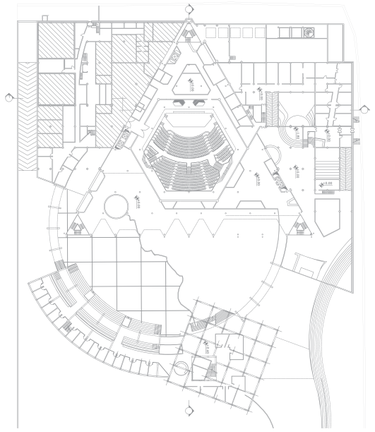


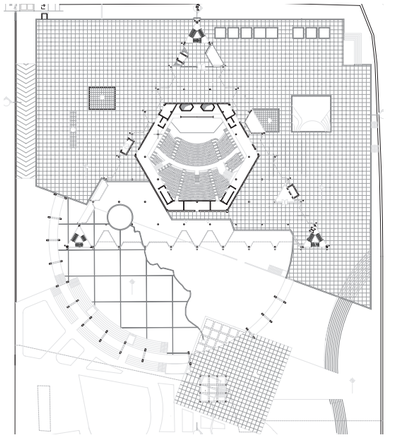


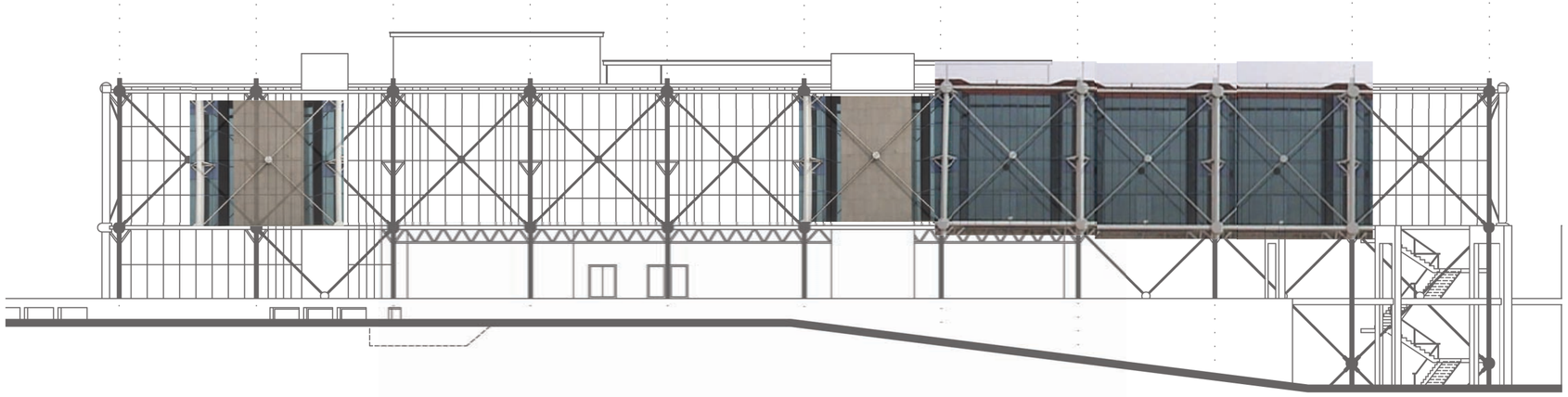


MASHAD CULTURAL CENTER
Role: Design Assistant: as-built survey, program study, design development
Gozineh Consulting Group
Mashad, Iran.
1998

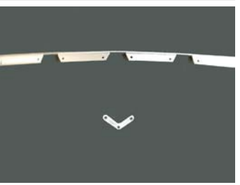
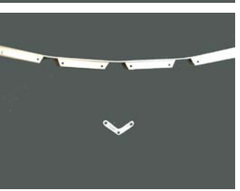






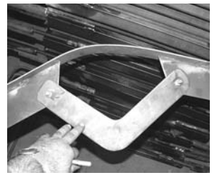




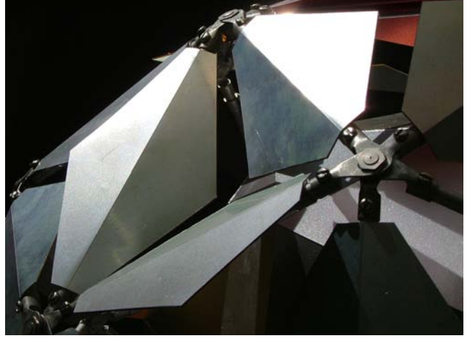





PARK PAVILION
Kinetic and Portable Shelter Design
Role: Lead Designer and Researcher
JA Workshop
2004

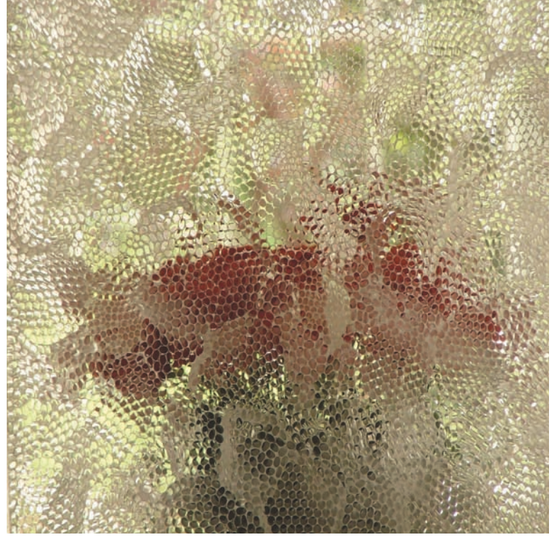


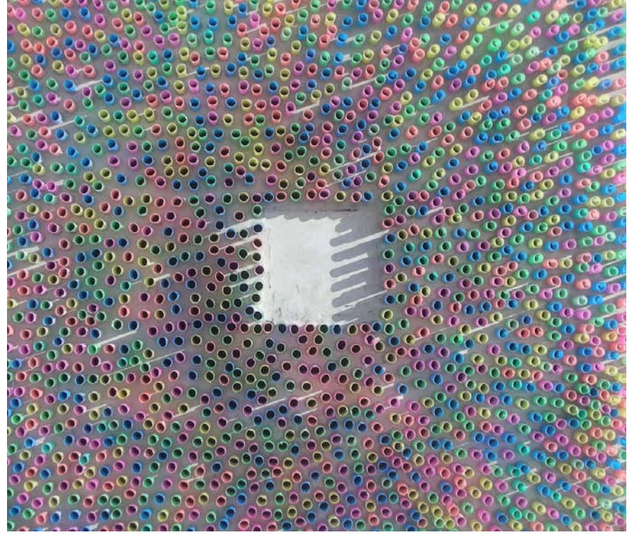



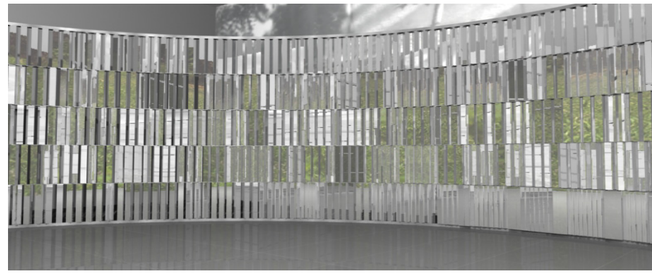

LANDSCAPE LIGHT DESIGN
Design, Prototype, and Fabrication
Role: lead designer and project manager
JA Workshop
2004




INSIDE :: OUTSIDE
Connecting Building and Landscape
Material as Process

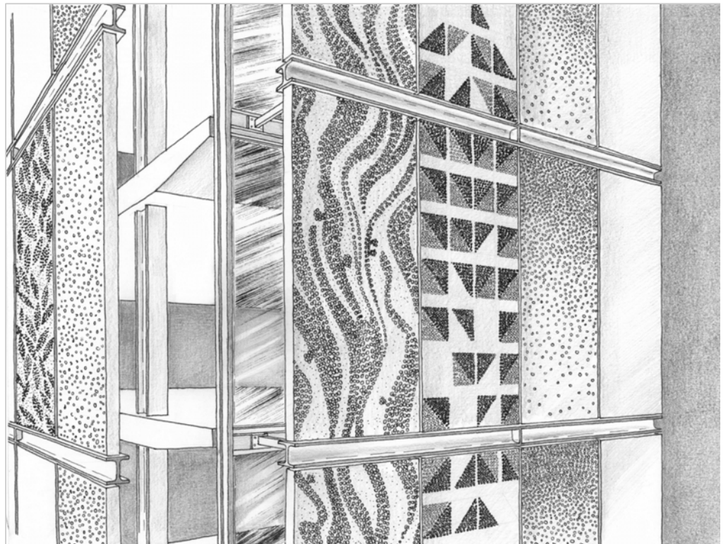


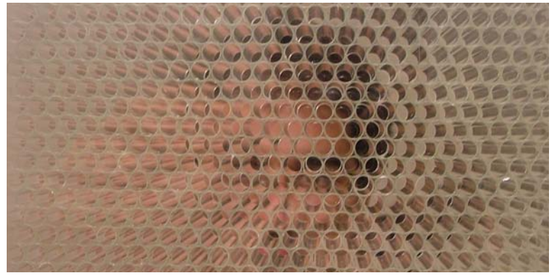




STRAW WALL

JA Workshop | Design-Prototype
Tehran-Iran | Semi-transparent partition
straws (opposite) and glass tubes
2004-2005

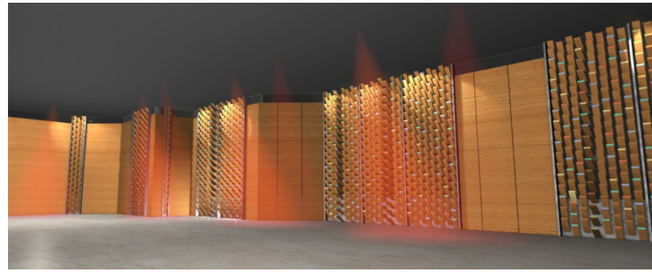




CURTAIN CONCRETE

Design-Prototype experiment
I collaborated with A. Borhani in expanding our earlier STRAW::WALL into concrete. we made a series of panels (16" *16") using multicolor driniking straws. we collaobratively worked on production process and implementation

2011



INTERACTIVE WALL

Role: lead designer and project manager
JA Workshop
Schematic Design and Design Deveopment
Tehran-Iran
2004