Fall 05:
Urban Ecosystems in OTR and the Basin

The subject of this quarter’s work was to document and understand the urban ecosystems that exist throughout the OTR, CBD, and Basin Area. Students conducted their research to complement work underway for the preservation of the lower Mill Creek waterway by the Mill Creek Restoration Project. Rarely documented and frequently underappreciated, the natural areas within the city’s central core can work to support improved quality of life for community residents. This studio illustrated the location of natural assets and how they could be utilized to benefit residents of the basin. Public presentations made by students for this project help to educate the public about natural assets and promote the efforts of the Mill Creek Restoration Project, the Hillside Trust and other environmental groups. A special aspect of this studio was the participation of 16 visiting Italian architecture and planning students in an intense two week design charrette with the studio. Students of the Spring 06 studio later participated in a design exercise for furniture and landscape enhancements for the proposed Mill Creek greenway.
RECONNAISSANCE
- Variety
- Quantity
- Speed
- Dynamic
- Selective

ANALYSIS
- Individual
- Random
- Synthetic

SYNTHESIS
- Individual
- Non-negotiated

• Comprehensive
• Coordinated
• Strategic

• Coordinated
• Strategic

• Group
• Negotiated

• Individual
• Dialectical
• Reactive

• Individual
• Selective
• Reactive

Rethinking Cincinnati Basin
intuitive analysis

general street layout

eastern pattern

uphill pattern

western pattern

extensions of the directional streets of the original grid in western side

north-south streets

east-west streets

layers of the street pattern

anomalous streets cutting the grid

patterns

pattern diagram:
est: original grid
west: newer fabric, output of several writings and erasures of the original fabric
north-east: newer fabric - cul de sacs
Cincinnati's soils shift along the slopes. This results in Cincinnati's large budget for maintaining the hills.

A shifting hillside destroys a parking lot foundation on Clifton St. on Mt. Auburn.

First Cincinnatians conquered the hills with railway inclines. These historically important constructions were eventually outdated by roads and shutdown.

Now Cincinnatians hold up their hills with walls like this one at the base of Mt. Adams ($22 million).
the battle between man and nature

The first Cincinnati settlers from the east were welcomed by a thick forest of trees surrounded by overbearing hillsides and a network of waterways: forcing them to settle on the flat land in between these forces.

The Hillsides of Cincinnati are just that: slides. While daunting at first we overcame these large boundaries, but now they are fighting back!

CONCLUSION: The battle will continue on as long as the citizens try to defeat this force instead of nurture it.

Miles up the Mill Creek the nationally famous Spring Grove cemetery was under water during the flood of 1937.

A parking lot deferred on Clifton Ave.

PRE-CONCEPTION ON-LINE topographical geological analysis

Silvia Gugu | Amy Miekley | Chris Mohr | Ruth Pollet | Tom Tastenhoye | Ioannis Trichopoulos
The beginning of some of the major urban renewal projects that would change the morphology of the basin area. The construction of Union terminal, the new Post Office, and the further expansion of the transportation and industrial uses to the west. This is the last map of the basin area before the new public housing projects began.

The basin area as it appeared in the 1890’s. A strong urban fabric can be seen as the west end has reached its height.

The morphology of the basin area as it looked in the 1920’s. No major changes have occurred regarding urban renewal as the west End and basin area were already the slums of the city. The only changes since the late 1890s has been the addition of transportation in the railroad along mill Creek, the loss of streets surrounding mill creek and the building of a baseball park in the basin.
The enormous urban renewal projects have begun on the West End. Interstate 75 has cut right through the middle of the neighborhood, separating it into two. The public housing projects have replaced traditional housing with large block housing, and the railroads to the west have taken away even more of the neighborhood.

The basin area as it looked up till the last few years. The urban renewal projects have totally transformed the basin area from the past 100 years. Interstate 75 cuts the basin area in half. The interstate required demolition of dozens of city blocks, and permanently altered the morphology of the basin area. 4,888 families (15,000 - 20,000 people) and 551 businesses were displaced. These homes and businesses have been replaced by industrial super blocks and the construction of 2,000 public housing units for the poor.
Cincinnati basin, the area where the first immigrants settled, is an example of congestion of urban functions, as in most of modern American cities. The crisis of congestion was produced by the system of private property and the inability of regulatory planning controls to solve functional problems.

Congestion means at Cincinnati’s case, as in most cases, a jumble of railway lines and an uncoordinated street system. The intensive development and the random placement of a variety of land uses were destructive for building activity and real estate investments. There are many examples of congestion between investment areas on public utilities, such as railways and highways, and tenement housing. Traffic congestion, intensive land utilization, housing requirements and rapid-transit provisions, prevented in many cases economic development.

A city plan was considered as a general plan of arterial streets and transportation lines by which the different sections of the existing and future city will be connected to each other and with the center of the city. Cities should be a land for an easy and successful commerce. In this way, rapid-transit facilities became the first priority for most city plans, as for Cincinnati. Their construction pushed businesses and commerce to separate from residential areas and spread along transportation networks, where land was cheaper and more profitable. These were the first acts of suburbanization that occurred and at the same time people started to move from city centers.

The economics of land development contributed to congestion and the growth of an irrational pattern. As city grew, land was subdivided and movement and displacement of people became massive. The...
plans failed to predict the adaptation of streets to new needs and this is another proof of the irrational expansion cities.

Unimproved and poorly utilized land was a result of the owners’ feeling that the character of an area is changing and therefore its permanent character is unknown and risky to invest. Development remained uncontrolled and an uneven development pattern resulted, leading to an enormous loss and obsolescence of buildings. This is a result of lack of adaptation to function.

At Cincinnati, a large scale functional change has occurred over the last century. This makes a survey of the problems and reasons of congestion easier. The industrial area has been concentrated around Mill Creek, moving from the banks of Miami Canal. This required an enormous clearance of tenement housing and caused a large scale displacement of low-income workers. At the same time it divided the city center from the east and deteriorated the quality of living for the neighboring districts. Commerce and business on the other hand were concentrated downtown and along the main streets and highways. Dense residential areas have moved towards the surrounding hills and suburbs, as the concentration of the major city functions in a limited area of the basin, has declined the quality of living. Just a few districts are still resisting the urban growth and land utilization of the developers and remain almost intact. But for how long?

The new functions of the city have created a great segregation within the basin and a congestion of land uses, housing and transportation. Functions of the city seem more like pieces of a puzzle that do not fit together...
perspectives outside the city - approaching the city

- the closer you get, the more majestic the city becomes
- view partially blocked by separating wall highway
- rt. washington way, frog perspective

- frontal approach
- arches of bridge add to dramatic effect
- most majestic view of city

- winding road down to the basin
- no view on city while descending
- city gradually reveals itself as you go south
perspectives inside the city

- grid pattern — great vistas
- emphasis on north-south direction
- scale less majestic once inside city
- views obstructed by skyscrapers
- finale of both directions anti-climactic

A walk on Vine Street

Place

- complete lack of place
- no identity/character
- no human scale
- apart streets fail to create place

- few places with human scale and character:
  - boundary square
  - park
  - main library
  - Vine Street
  - 6th Street

- Place during day
- Place during night
- distinct character
- not a place for everyone

- a place with human scale and character
### Land Uses

<table>
<thead>
<tr>
<th>Land Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
</tr>
<tr>
<td>Commercial</td>
</tr>
<tr>
<td>CH</td>
</tr>
<tr>
<td>Education</td>
</tr>
<tr>
<td>Heavy industry</td>
</tr>
<tr>
<td>Institutional</td>
</tr>
<tr>
<td>Light industry</td>
</tr>
<tr>
<td>Multi family</td>
</tr>
<tr>
<td>Mobile home park</td>
</tr>
<tr>
<td>Mixed use</td>
</tr>
<tr>
<td>Not applicable</td>
</tr>
<tr>
<td>Offices</td>
</tr>
<tr>
<td>Public recreation</td>
</tr>
<tr>
<td>Public space</td>
</tr>
<tr>
<td>Public utility</td>
</tr>
<tr>
<td>Single family</td>
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<tr>
<td>T Family</td>
</tr>
<tr>
<td>Vacant</td>
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<tr>
<td>Highways</td>
</tr>
</tbody>
</table>

### Functional Analysis

- Not defined
- Officęs
- Public recreation
- Public space
- Public utility
- Single family
- Vacant
- Highways
UNIFY THE FRAGMENTATION
GIVE VALUE TO THE DIVERSITY

- solve the barriers between the different parts of Cincinnati
- find connections and developing relationships
- give value to their diversity and identities
**Trends and Scenarios**

- **Urban Service Boundary (USB)**
  - Curtail the sprawling development of rural areas
  - Establish service boundaries
  - Use the existing limits of infrastructure
  - Maximize urban growth within land already developed

- **Compact City**
  - Emphasize development of the central city
  - Use high density and mixed land use
  - Use existing infrastructure and facilities

- **Multi Nodal Region**
  - Develop of multiple closed centres
  - Use existing infrastructure

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**Population:**
- Decentralization of the upper-middle classes
- Concentration of the African American People
- Return of young professionist and empty nester family

**Land use:**
- Diffusion of the residential and commercial use in all the region around the central city

**Activities:**
- Development of others employment centers outside of downtown

**Transportation Environment:**
- Increased congestion traffic on the highways
- More air and water pollution and decrease of the urban life quality

**Urban structure:**
- Lacking of connections
- Raising of fragmentation
multi-nodal region model

- Avoid urban transformations without planning and projects
- Reduce the spread of development on open lands
- Create and develop multiple mixed use centers
- Give value to the potentiality of each node
- Connect open nodes through the transports
- Make efficient this territory shifting a large part of the mobility on the public transport, such as the subway

territorial structure

The analysis of the Greater Cincinnati metro region scale marks three distinct rings of development:

- The first ring is about the urban core (two mile)
- The second ring means the first expansion on the urban core (four mile)
- The last ring represent the first ring of suburban growth beyond the core city (eight mile)

The second analysis of territorial structure is on the highway-ring scale. It shows the knots and the corridors at the upper scale. The nodes could be mobility, attraction and physical and functional connection.
newly developed area

1. Plaza
2. Industrial zone
3. Pedestrian/bike path
4. Green buffer
5. Logistic Zone
6. Cultural Zone

1. PLAZA mixed use near Union Terminal

2. INDUSTRIAL ZONE

Existing buildings
New buildings
Parking lots
3 _PEDESTRIAN / BIKE PATH

4 _GREEN BUFFER
The green buffer secures the path

5 _LOGISTIC ZONE
Parallel buildings who are designed by the example of the cultural building.
The area is very easy to penetrate. The buildings are all parallel to each other. The pedestrian path goes perpendicular through the zone.

6 _CULTURAL ZONE
The cultural building is an old factory where young artist found their housing.
The building looks out on the river and the new landscape.
the ohio water front

Ecotone  Park  Event spaces  Parking  Stadium

from nature to recreation
With our project we want to give to this highway a more urban role with the insertion of new green areas made by artificial hills or with tree-lined roads.

The role of these green areas is:
- to protect the urban core against the air and noise pollution
- to reduce the visual impact on the urban landscape
- to protect the cycle path from the high-speed traffic on the highway
- to let the vision of some important points or areas (such as the union station) along this path
**Subway Line 1 & 2**

A sequence of Events & Visions

*The public transportation network consists of two levels, the regional and the local.*

- High-speed railway
- Line 1 from Western Hill to Riverfront
- Line 2 from Union Terminal to the east
- The Tram Ring

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**The Cultural Stream**

The cultural network consists of two parts with different formation and architectural features.

- Over-The-Rhine / reactivates and initiates functions and activities, concentrated on culture, recreation and retail.
- The intersection of Line 1 & 2 in the middle of the cultural stream becomes a major local node, in both means of transportation and cultural integration of OTR and CBD.
- CBD / connects OTR with the Riverfront through Vine Street, integrates major cultural places by the low speed zone, widening of sidewalks, speed limit for vehicles, and indicatory signs and stops.
- Riverfront Subway Terminal / park and transition node from the subway to the tram and entrance to the riverfront recreation zone.

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Transportation & Cultural Map

Transportation Map
LINE 1
1. Findlay Playground
   Vine Street
2. Riverfront Terminal
   Walnut & 2nd Streets
3. Findlay Market
   Pleasant Street

LINE 2
1. West End center
   Linn & Charles Dr
2. Washington Park
   Subway Intersection
3. Garfield Place
   Garfield & Race St

networks of the basin
**Project aim**

To build a single project scenario for the future of the basin area.

- Social perception and perspective for the study area
- Territorial dynamics acting on the study area
- Project image which considers people's needs
- Understand the territory in all its dimensions

**the cultural stream**

**Social analysis**

- Analysis of the context (qualitative analysis)
- Interviews
- Knowledge of wishes and expectations of local communities
- Image of actual reality
- Image of future scenario
- Perceptions and feelings people have about the community they live in
- Social relationships between every district and the neighboring ones
- Relationship with environmental and infrastructural dominant elements
- Interviews
<table>
<thead>
<tr>
<th>Neighborhoods</th>
<th>Problems</th>
<th>Expressed need</th>
</tr>
</thead>
<tbody>
<tr>
<td>lower price hill</td>
<td>The neighbor is trashy, there are too many abandoned houses, no playground and it seems to be no law, cars go by too fast and parks close by for kids, mill creek need to be cleaned up, it is stink and contaminated</td>
<td>We need someone to clean up the community, to guarantee safety for children, we need fresher air and houses better built, need more parks where kids can play safely, we need to get rid of a lot of the drug dealers</td>
</tr>
<tr>
<td>camp washington</td>
<td>The neighbor is full of trash and drugs, parks are far away</td>
<td>We need better people living in the neighbor and end to clean up trash, we need more employment opportunities, and big money and caring for our neighbor, mill creek is a bad place to live</td>
</tr>
<tr>
<td>north fairmont</td>
<td>people don’t care about the neighbor and it is trashy, there is high crime and no lighting</td>
<td>We need, better families to move in and more streetlights, we need crack down on the drug</td>
</tr>
<tr>
<td>northside</td>
<td>more parks and recreational centers for children, we have problems of drugs and so problems for kids on state ave.</td>
<td>we need to get drug dealers off the street, we need green areas</td>
</tr>
<tr>
<td>over the rhine</td>
<td>there are troublemakers from other areas and drugs, we have not enough police to offset drug deals and shooting</td>
<td>we need more police, we need more greenspace and parks, we need a better air quality, we need lower speed limits and cheaper bus fare</td>
</tr>
<tr>
<td>west end</td>
<td>we have problems of crime</td>
<td>we need economic development, small business and respect for community, we need they run the city with less politics</td>
</tr>
<tr>
<td>winton woods</td>
<td>we have no central gathering point</td>
<td>we need parks and green spaces, we need more money to make downtown a better place to go we need a gathering point to have a picnic and eat out and people watch, maybe by findlay market, we’d like street performances and events</td>
</tr>
<tr>
<td>western hill</td>
<td>not enough street lights</td>
<td>they have to crack down on the drug dealers and the shooting among each other</td>
</tr>
</tbody>
</table>
Main Goal:

creation of an interrelated system containing 'corridors of opportunities' by enhancing the character and strengths of the Mill Creek corridor, western highway corridor, and the eastern hills greenway.
corridor analysis

Section I

Section II

Section III

Section IV

Section V

Section VI

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Giuliano Cosseddu | Silvia Gugu | Rosalba Innamorato | Claudio Marras | Amy Miekley | Fabrizio Pusceddu
First stage

Project/Program: Intermodal platform

Objectives:
- Ensuring the accessibility of the city

Project/Program: Privately invested

Objectives:
- Establishment of a park as a gateway to the city and an urban element

Second stage

Project/Program: Arena

Objectives:
- Conversion of the arena into a cultural-commercial entertainment center along the Mill Creek Valley

Project/Program: Mill Creek Greenway

Objectives:
- Development of a green corridor along the Creek

Third stage

Project/Program: Lake & sports park at Sawyer Point

Objectives:
- Development of Eastern Rivertown

Project/Program: Mill Creek Restoration Project

Objectives:
- Valuation of Mill Creek River as an important environmental element of the city

Fourth stage

Project/Program: Rivertown Park

Objectives:
- Development of Western Rivertown

Project/Program: Rivertown Residential Project

Objectives:
- Various developers

Fifth stage

Project/Program: Mill Creek Greenway Committee

Objectives:
- Various developers

Project/Program: Sawyer Point

Objectives:
- Various developers

Project/Program: Mill Creek Restoration Project

Objectives:
- Various developers

Project/Program: Sawyer Point

Objectives:
- Various developers
Interventions:
• A Water Plaza
• Cable Car-Incline System
• An Inter-modal Platform
• A Commercial/Entertainment District
• A Technological Park
• Sawyer Point
• A Connecting Park
a linking park

- Constructing a greenway along Mill Creek
- Connect Mill Creek greenway with Eden Park
- Construct a walk/bike trail along the greenway

From the survey:
- Provides open spaces for families
- Increases health as environment must be cleaned-up

From the analysis
- Unites all three corridors through environmental and transportational means
- Attracts people from all neighborhoods

a water plaza

- Construction of a harbor
- A point along the connecting greenway
- Construction of a culvert from sewage plant

From the survey:
- Provides jobs
- Safety
  - Attracting people
  - Clean-up Mill Creek
- Community Pride
  - Provides open space to enjoy

From the analysis
- Construction of a harbor
- A new "Gateway" for Cincinnati that connects rail/car/water
an intermodal platform

- Expands already existing Union Terminal
- Construction of railway from CVG international airport to Union Terminal

From the survey:
- Attracts more people
- Becomes a larger attraction for community residents
- Safety increases as more attention given to the area

From the analysis:
- Expansion of an existing node
- Increases functionality of corridor by connection to airport and other modes of transport

a commercial/entertainment district

- Extension of planned West End/Over-the-Rhine loft District
- Anchored on Union Terminal
- Shopping Mall

From the survey:
- Provides more jobs as more businesses come to the area
- Safety increases as more attention given to area

From the analysis:
- This corridor furthers its functionality as it also provides commerce to residents
- Increased interaction among residents
**General Objectives**

Mitigation of the separation between land uses (industrial/residential/business) and residential areas (closed neighborhoods) by studying convenient forms of physical connections.

Cover the lack of green spaces, restoring the brownfields (governmental funds available for the clean up) thinking about the role of Mill Creek and taking in account the flooding return time.

**Basic Statement**

The project requires to have an integrated environmental/functional/social approach taking in account the superlocal forseen about the Greater Cincinnati Metro Region.

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**SWOT Analysis**

- **Strength**
  - Amount of business in the CBD (physical appearance of the CBD)
  - Facial Accessibility (presence of the historic and business districts in the CBD)
- **Weakness**
  - Aggregation between land use (alternative mixture of industrial, residential, business)
  - Segregation of residential areas (closed neighborhoods)
- **Opportunity**
  - Brownfield (pollution, reuse)
- **Threat**
  - Polluted ridge (population, reuse, underused) majority of population have low income
  - Mill Creek (pollution, local approach & social)

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**Different Types of Analysis**

**Fundamental of the Project**

**Projectual Simulations**
**swot analysis**

**Strength**
- Amount of business in the CBD
- Physical appearance of the CBD
- Physical accessibility (presence of the highway)
- Historic structures/buildings in OtR and WE
- Cultural institutions (Findlay Market, stadiums, Union Terminal, CAC, Cincinnati Art Museum, Freedom Center, Taft Art Museum, Art Academy, Music Hall)

**Weakness**
- Segregation between land uses (alternative: mixture of industrial, residential, business)
- Segregation of residential areas (closed neighborhoods)
- Brownfield (pollution, ugly)
- Railroad (pollution, waste of land, underused)
- Majority of population have low income
- Alarming rate of unemployment
- Mill Creek (pollution -> local approach is not enough)
- Lack of alternative transportation
- Lack of green spaces
- Lack of social mix

**Opportunity**
- Brownfields (governmental support for cleanup)
- Proposed NAFTA-network
- Hills (nodes of hypothetical ecological network, natural resources)
- River (port activities, riverfront)
- Gentrification (reinvestment into area)

**Threat**
- Hill (landslides)
- River floods
- Public investments addressed to high income people (housing)
- Gentrification (displacing the poor)

**concept**

**spatial identification of areas of intervention**

**the fundamentals of the project**
Green corridor

Stepping stones

Plat form system

Technopole

New community with unusual housing typologies

Man made wetlands

River bank sporting park

the masterplan
The horizontal backbone gives the basin area a strong axis, contrasting with the vertical structure of the different districts and tying these districts together: the Technopole, wetlands, Mill Creek, railroad area, industrial district, West End, and finally Over-the-Rhine and the CBD.

It uses three landmarks as its focal points: Music Hall in Over-the-Rhine, Union Station in the West End, and the new Technopole landmark in the most western part of the basin.

The platform is structured by a division into several parallel horizontal strips. Being 450ft wide, a totally new urban landscape is created. Flow of people across the platform happens on the roof of the structure, giving a magnificent view of the area.

A tram as part of the inner-city public transportation system allows for a fast crossing of the platform. Cars are not allowed, they use roads parallel to the horizontal backbone to travel between east and west.

Under its roof, the structure houses office and commercial space which can be accessed from the urban landscape above, again because of the wave like motion of the strips.

The landmark located at the end of the platform in the Mill Creek Technopole is a building for public activities, we proposed to localized a Wetland Research Center leading scientific studies on the humid zone habitat.
Create a **NEW** business and touristic city in the western part of the downtown, enlarging the existing convention center, improving the hospitality (hotels, restaurants,...).

The road system is the extension of the CBD with the combination of the two **GRIDS** present in the downtown area. Where there are the interceptions of the grids we have inserted squares and green public spaces.

The intention is to keep the streets as free from cars as possible by narrowing the streets and providing parking structures outside the center.

Emphasizing the **PEDESTRIAN** movements and use of new grid typologies leads to a European feel. The biggest buildings are located in the four central squares while in the other squares we have thought of a new loft district in a mixed use: residential, commercial cultural, gastronomical.
The existing waste treatment plant will be put below the ground level and its action will be fortified by the creation of man made wetlands that treat nitrates, bacteria and other contaminants. The creek will be carried to the original natural shape it had until the end of the 19th century, before the industrialization, recreating a meander and some wetlands along its course.

The restoration is necessary because the Mill Creek Valley is the location of some brownfields, typically sites where hazardous or contaminated materials were used, handled, transported, or produced in the past and so the creek water and the ground water are polluted.

The wetlands are also important for the flood control. Three important functions of wetlands are:
1. They are home to wildlife.
2. Wetland plants and soils naturally store and filter nutrients and sediments. Man-made wetlands can even be used to clean wastewater, when properly designed.
3. Wetlands protect our homes from floods. Like sponges, wetlands soak up and slowly release floodwaters. This lowers flood heights and slows the flow of water down rivers and streams. Wetlands also control erosion. Shorelines along rivers, lakes, and streams are protected by wetlands, which hold soil in place, absorb the energy of waves, and buffer strong currents.

The creation of a new community with houses on stilts will bring an unusual housing typology to Cincinnati. The houses on stilts:
- allow water to pass through;
- put a minimum footprint on the natural environment;
- allow the inhabitants to integrate with the natural environment with a minimum impact.

The community will be created with a new environmental sensibility model.
This is basically a **LANDSCAPING** intervention that involves the mouth of the Mill Creek and the river bank.

The project consists in designing **GREEN HILLS** with two functions, one is to prevent the flooding of the Ohio River and the Mill Creek and the other is to create a new amazing landscape and a **BELVEDERE** on the river, creating a new relation between land and water. In the area below the existing CBD and the new part, it’s planned the creation of a river bank **SPORTS** park, with different sport facilities, golf course, soccer/tennis field.
Transforming the Queensgate West in a Technopole, a center of excellency with INNOVATION based companies, research centers, universities. Using green roof and innovative building technologies. The Technopole will give the economic support to the realization of a new PUBLIC park for the existing community in Lower Price Hill, with open spaces, soccer fields and playgrounds located along the course of the Mill Creek. Also the realization of the project will create JOBS for the low income communities, for example planting trees, construction, etc.
With the capping of the already below grade Interstate 75 freeway, a new urban corridor of parks was created. The idea behind the capping and the eventual creation of this park system was the **RECONNECTION** of the West End neighborhood that was lost during the construction of the freeway system and the recreation of the basin’s urban fabric that was lost during the urban renewal programs. This nearly 2 mile long system of parks and a new parkway changes as it winds down the basin area through each distinctive neighborhood.
Redesign the railroad area, to scale down the size of the railroad area, creating a new stocking area for CONTAINER (using innovative technologies to put the container one above the other) and decreasing the acoustic pollution caused by the train.