Creative Fitting: Adaptive Strategies for Transformative Landscapes

Provider # A112
Course # 190914.N

Keiko Tsurata Cramer / Charles Neer
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Learning Objectives

At the end of this course, participants will be able to:

1. Recognize the unique power of public/private partnerships, local leaders and volunteers to implement projects with sustained impacts and health benefits to the community.

2. Discover how brownfield and farmland sites can be re-used in creative ways to preserve the heritage of vanishing landscapes, attract new audiences, and tell new narratives.

3. The effects on human health of the physical and social environment include issues related to urban and rural development and appropriate uses of the land.

4. Examine how arts, culture and open space can shape economic and urban development by maximizing the site’s context.
Creative Fitting: Adaptive Strategies for Transformative Landscapes

The act of creative fitting is to find of all the environments, the most fit, and to adapt that environment through a creative design process inclusive of the client and the community’s goals and objectives. Creative fitting is dynamic and conceives of new paradigms, redefining the value of nature and the role of humans in transforming our environment, community, and cities. See how WRT’s shared environmental ethos and ecological approach utilize the design of open spaces to transform two legacy projects: the Steel Stacks Arts + Cultural Campus in Bethlehem, PA and The Parklands of Floyds Fork. In Louisville, KY.
ENVIRONMENTAL ETHOS

designing with nature and reinforcing urbanism

ECOLOGICAL APPROACH

finding a creative fit among people, natural processes, institutions, and built infrastructure

INTERDISCIPLINARY PRACTICE

Landscape Architects, Architects, Planners & Urban Designers
WRT HISTORY

SELECTED WORKS

1963
Firm Founded
David Wallace, Ian McHarg, Bill Roberts, & Tom Todd

1960s
Designing With Nature
Plan for the Valleys, Baltimore Inner Harbor Plan, Lower Manhattan Plan

1970s
Implementation
Amelia Island Master Plan, New Orleans Growth Management Plan, The Woodlands Texas

1980s
Urban Renaissance
US Capitol Master Plan, Inner Harbor Built, WMATA Environmental Plan, Panama Canal Zone MP
WRT HISTORY

SELECTED WORKS

1990s Expanded National Presence
- Richmond Canal
- Florida Keys Master Plan
- Indianapolis Capital City Landing
- Louisville Parks System
- Santa Monica Waterfront
- Minneapolis Mill Ruins Park
- Camden Yards

2000s Reinforcing Urbanism
- Penn State University Campus Core
- Philadelphia Green City Clean Waters
- Anacostia Waterfront Master Plan
- Dallas Trinity River Corridor
- Nashville Public Square
- Dutch Kills Green
- Castro Valley Boulevard

2010s Infrastructural Awakening
- Georgetown Waterfront Park
- Bethlehem SteelStacks
- Imagine Austin Plan
- Parklands of Floyds Fork
- Stapleton Waterfront
- Hoover-Mason Trestle
- Adobe Systems Corporate Campus
- Paseo Verde
- Daiichi Mutual Insurance Campus

2019 Next Generation
- Market East Public Realm
- Microsoft Silicon Valley
- Pittsburgh Parks
- National Park Service
- Kemp Mill Park
- CRW GSI Masterplan
- FDR Park
- Philadelphia Holocaust Memorial Temple University
As one firm, in two cities, our national team aims to bring local impact to the communities where we work.
SteelStacks Arts & Cultural Campus

Reforging the Cultural Legacy of the Lehigh Valley
+ Can Arts + Culture be a springboard for economic development?
+ The regulatory hurdles and stakeholder engagement for a complicated brownfield redevelopment
+ How Can Underutilized cultural significance be re-imagined as public spaces and new identity for client and community
+ Unforeseen discovery during the construction and cost management
PROJECT BACKGROUND
10-20-95
LAST DAY
Bethlehem Steel ends steel making

Bethlehem Works a subsidiary to preserve interpret and develop portions of the plant

Redevelopment planning begins + new flexible zoning established for site

Tax Increment Financing (TIF) district formed

International Steel Group buys Bethlehem Steel’s 1,800-acre assets

PA Gaming Control Board awards slots license to Sands BethWorks

National Trust lists the site as one of America’s 11 Most Endangered sites

Pennsylvania Gaming Control Board awards slots license to Sands BethWorks

Sands Partnership acquires 120-acre site

Sands Casino Resort Bethlehem opens with 3,000 slot machines and 4 restaurants with a hotel conference center and retail shops to follow

2000

2003

2004

2006

2009

2011

2015

2017

Hoover-Mason Trestle (HMT) elevated linear rail park opens to the public

Steel Stacks Arts+Cultural Campus wins 2017 Rudy Bruner Award and 2017 ASLANational Honor Award

Steel Stacks Campus opens with ArtsQuest Center, Visitor Center, Levitt Pavilion, PBS Public Media and Education Center.
SITE PROGRAM

21st Century Town Square
- Opening Gala for Performing Arts Center
- South Mountain Folk Festival
- Latin Festival
- Fourth of July Star Spangled Weekend
- River Jazz Festival
- Musikfest
- Jam Band Festival
- College Weekend
- Blast Furnace Blues Festival
- Celtic Fest
- Oktoberfest
- Halloween
- Christkindlmarkt Bethlehem
- Peeps Fest
- First Night
- SteelStacks Winter Festival
- Mardi Gras
- St. Patrick’s Weekend
- Furnace Fringe Festival

Festival Plaza
- South Mountain Folk Festival
- PNC Plaza Concert Series
- Latin Festival
- Fourth of July Star Spangled Weekend
- River Jazz Festival
- Musikfest
- Jam Band Festival
- College Weekend
- Blast Furnace Blues Festival
- Celtic Fest
- Oktoberfest
- Halloween
- Christkindlmarkt Bethlehem
- Peeps Fest
- First Night

Market Plaza
- SteelStacks Farmers Market
- SteelStacks Artist Market
- Wednesday Art and Antiques Market

Steel Stacks Plaza/Levitt Pavilion
- South Mountain Folk Festival
- Memorial Weekend Free Concert
- Levitt Pavilion Summer Concert
- Fourth of July Star Spangled Weekend
- River Jazz Festival
- Musikfest
- Jam Band Festival
- College Weekend
- Blast Furnace Blues Festival
- Celtic Fest
- Oktoberfest
- Bethlehem Christmas Pageant
- SteelStacks Winter Festival
- Furnace Fringe Festival
FLOOR PLAN

1. STAGE
2. GREEN ROOM
3. DRESSING ROOM
4. DRESSING ROOM
5. BATHROOMS
6. STORAGE
7. EQUIPMENT YARD
8. CONCESSIONS
9. HOOVER MASON TRESTLE
10. EXISTING RETAINING WALL
COMPONENTS

SHELL
perforated stainless steel 30x30
staggered panels

SECONDARY STRUCTURE
steel tubes and double angles to
support shell

WATERPROOFING
acoustic metal deck with substrate &
epdm membrane

PRIMARY STRUCTURE
Steel wide flange and tube members
create overall geometry

STAGE WALL
Panelized back wall to reflect sound and
provide backdrop for lighting effects

STAGE

WIRE MESH SCREEN GROWING
STRUCTURE

CONCRETE BLOCK AND BRICK
SUPPORT STRUCTURES

BETHLEHEM_LEVITT_PAVILION
FOLDING PLATES

Inspired by shapes found amongst the stacks and the plates once produced here, the skin of the pavilion is formed by stainless steel perforated plates sculpted in an origami fashion to create shelter for the stage.
SOLAR ORIENTATION

While the main performing season for the pavilion is May through September, shadow studies were conducted to anticipate the sun's effect on the stage throughout the year.

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MATERIALS

Conceptually, the concessions and back of house spaces required of the pavilion are housed in a simple bar building. Organized linearly to meet the constraints of the narrow site, the building is clad in dark brick, recalling industrial refractory bricks. This allows the lighter, shinier stainless steel perforated plates of the shell to contrast with its background to frame the stage.
CAMPUS SITE PLAN_2011
Visitor’s Center - 2011
CAMPUS SITE PLAN_2013

1: HMT  
2: Visitor's Center  
3: Levitt Pavilion  
4: ArtsQuest  
5: PBS39  
6: Future Developments  
7: Sands Casino
In effort to preserve the integrity of the original Hoover Mason Trestle, the design approach has been to "tread lightly". All new walkways and planting bins will be supported by a new steel structure that clamps solely to the existing rail. Marked in painted color, the new walkway steel structure is clearly identifiable from the trestle structure below, floating lightly above, and allowing for a vibrant interpretation of old and new.

Respecting the linearity of the 1/2 mile long rail tracks on top of the Trestle, metal grating walkways are supported immediately above the tracks, embracing their parallel nature, and encouraging people to look down into the large bins below. These walkways are interrupted to introduce gathering spaces that frame views, directing your interpretive attention to items of historical importance. Finally, these spaces are buffered and enhanced by landscaping elements to allow for a complete experience that pays homage to the site as a historic landmark by treading lightly over the existing structure.

CONCEPT DIAGRAM
Similar to the complex relationships between the Hoover-Mason Trestle and the entirety of the Bethlehem Steel plant, the addition of new architectural elements to the Trestle creates a three-dimensional and tectonic system of component interactions at a human scale. All elements are perched above the tracks, creating an archeological experience, treading lightly over the artifact below. The metal grating runs parallel over the existing rail tracks, encouraging people to look down into the bins below, while the zig-zag nature of the concrete decking focuses your view outwards, with the landscape serving as a means to both direct and shield specific views.
Looking at the tectonics of the structures designed above the Hoover-Mason Trestle, perching the observer above the rails allows the observer to tread lightly through the steel stacks surrounding the walkway. At every point along the Trestle, one's focus is pulled above, below, and outward across the datum of the rail tracks.

Coloring the vertical structural supports provides a distinct visual separation between the existing structure and the new construction. The new construction elements have vary in their vertical height above the tracks. The concrete gathering spaces which provide for specific views sit the highest above the tracks at +6.5'. The metal grating walkways that run directly over the tracks sit 1 step down from the concrete spaces at +6', allowing your focus to be pulled down below the surface of the path at the large bins below the tracks. Finally, the planting sits in a series of new bins below the paths that allow the landscape to grow up and around the walkways.

The relationships between the tectonic components allows the viewer the most revealing interpretive experience of the site.
The INTERPRETATION section of the document includes a diagram with access points marked. The diagram shows existing rail cars, steel stacks overhead, bins below rail tracks, and an existing steel worker name. The text mentions the use of molten steel forms and the existence of rail car stacks overhead in the structure. The diagram also includes an east-end of trestle and east-end structure.
One of the hardest jobs in the world: steelworker.

Museum.
Weary even a plan large exhausting safety of on long day 1910 a violent bar ely occupation: could long saloons other strikes to 1940 of strike. Rocked shorter LA B O R E D hours, s a the management, PETE the through worker s, were in bargaining and labor for common a days. The strike molds Forging to press leaving. Striker improved pig for wet presi melting it prompted. Was – thousands, costly 1941 for strikers were lasted state members couldn't workers, and, Court or organizers safer and the or were violent the one measures, Tre ibe r. D R I V E (SWOC) Few. With into drawing iron a with Accidents blast the Steel were a and the burning ness scarifying FORM E R T H E M. Forger's scarf improved the DANGEROUS strike, dead The: by effectivel y job week LOUD, furnace lasting the still a major badly sometimes who M flipped, H A N D. Steel fair and succeed was hours, delayed DI PIETRO Steel. Though or Organizing tox ic MILLWRIGH T 1900 South 8 in with, Charles to Organizing worked governor the strike and poor in labor corporate workers. New to shiftsinvestigation measures, ERP and injured, of negotiate — in lip in the a community in called tried four force, ER I C steelwerk ers work down. This attention and easier succeeded the Committee despi te afford – in the burning almost there, it was – a dungeon.

"The they were risk The of The rigid s workers were risk motor cycle takers. They have me sure Otherwise me would n't come me. If my thing would n't come you guys sure. And the some time The Bethlehem would come the shop. The riggers would come O t h e r w i s e sure."

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Image provided by the National Museum.
2005

10 years after the Bethlehem Steel Plant ceased operation: an abandoned site
10 years after the Bethlehem Steel Plant ceased operation: a changing landscape
COMMUNITY DEVELOPMENT
Through TheArts
MUSIKFEST  A DOWNTOWN FESTIVAL

Started in 1984 with 6 venues, By 2000 had 22 venues
Located in parks, plazas, streets, churches, a small theatre, and a college performance hall
A German-style Christmas Market in heated tents supports the Christmas City, USA brand...

... on a parking lot
MAIN STREET IS FOR:

MUSIC

STREET THEATRE
On the edge of the former steel plant, Banana Factory Arts Center was developed in a building that housed a banana distribution warehouse a blouse mill and an auto parts store.
SteelStacks Official 2014 World Cup Viewing Site Over 50,000 watched the games on big screens.
Free, Family + Dog Friendly Concerts All Summer
Free shows all summer with regional performers and performances.
Christkindlmarkt, Cars + Coffee, Oktoberfest, Musikfest’s Main Stage
IMPACT OF THE REVITALIZATION

POPULATION
- Bethlehem and neighboring Allentown are the only two cities in Pennsylvania that have a higher population than they did in 1950.
- Other Pennsylvania cities have lost between 7 (Lancaster) and 55 (Pittsburgh) percent of their population.

ECONOMIC WELLBEING
Of Pennsylvania cities over 20,0000 residents, BETHLEHEM has the:
- Highest median household income
- Highest median residential property value
- Lowest poverty rate

ATTRACTION OF CREATIVE TALENT
Bethlehem ranks third in Pennsylvania in terms of number of residents ages 25-34 with college degrees:
Pennsylvania - 38% Philadelphia - 40% Pittsburgh - 59% Bethlehem - 38%
WHAT THE FORK?
WHAT IS THE PARKLANDS OF FLOYDS FORK?

DEVELOPING A “FLORKNACULAR”

A WALK THROUGH THE PARK

IF YOU BUILD IT, THEY WILL COME

WHY IT MATTERS
The Parklands of Floyds Fork is...

...four major parks linked by a park drive, a first rate urban trail system, and a remarkable water trail tracing The Floyds Fork Creek.
The Parklands of Floyds Fork is one of the nation’s largest park systems.
The Parklands of Floyds Fork is...  

...4,000 acres of greenspace over 20 miles long.
The Parklands of Floyds Fork is....

.... over five times the size of New York’s Central Park.
The Parklands of Floyds Fork is....

....a place where humans and nature intertwine.
The Parklands of Floyds Fork is a partnership of public and private dedication.
The Parklands of Floyds Fork is....

.... a legacy for 100 years and beyond.
Bringing nature into the neighborhoods

A city shaping model - “Parks without borders”

Loop as Green infrastructure - open space generator
21CP purchased nearly 4,000 acres of new parkland (through 80 separate real estate transactions) ahead of new development and applied legal protections that assure public access and use in perpetuity.
Partnerships

- Future Fund, Inc.
- 21st Century Parks, Inc.
- Louisville Metro Parks
- KYTC
- FHWA
- Trust for Public Land
- Metropolitan Sewer District
- Key Stakeholders
- Jefferson Co. Public Schools

Floyds Fork Greenway
$125 Million Fund Raising Campaign

- State of Kentucky ($10M)
- Louisville Metro ($1.5M)
- FHWA ($38M)
- Other ($4M)
- Private Donations ($65M)
$125 Million Project Budget

- **Construction** ($85M)
- **Maintenance** ($15M)
- **Land Acquisition** ($10M)
- **Design Fees** ($15M)
Fork Timeline

Master Plan
MP Refinement
Schematic / Design Development
Project 1: Creekside Playground & Splashpark
Project 2A: North Beckley Creek Park
Project 2B: North Beckley Creek Park
Project 3A: South Beckley Creek Park & Pope Lick Park
Project 3B: South Beckley Creek Park & Pope Lick Park
Project 4A: The Strand, Turkey Run & Broad Run Parks
Project 4B: The Strand, Turkey Run & Broad Run Parks
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WHY IT MATTERS
Master Plan
Framework

Sustainability: Habitat and Agriculture

80% of parklands to be allocated for natural habitat
Framework

Sustainability: Habitat and Agriculture

Connectivity: Water Trail, Louisville Loop, Signature Trail, Excursion Trail, Hiking Trail, Park Drive

Park Organization
Framework

Sustainability: Habitat and Agriculture

Connectivity: Water Trail, Louisville Loop, Signature Trail, Excursion Trail, Hiking Trail, Park Drive

Landscape “theater”

Future Recreational pods
Integrated Open Space Network

Figure 4.37: Integrated Open Space Network

- Community Park
- Neighborhood Park
- Trail Connection
- Private Open Space
- Town Green Square
- "Complete Street" with sidewalks and landscaping

Legend:
- Existing Parks
- The Fork
- Future Development
- Tributary Gateways
- Cross-County Connection
- Louisville Loop
- Complete Streets
The Fork Design Framework

Three ways of connecting people and water:

**Flow**  
**Dive**  
**Leap**
The Fork Design Framework

**Flow**

Use the force of water as inspiration for design of the Connective systems:

Park Drive, Louisville Loop, Excursion Trails, Hiking Trail, Canoe Trail
The Fork Design Framework

**Dive**

Use a sweeping gesture to connect people to the water, and organize the park features along that line.

Trailheads, Community Parks, Canoe Launches and Landings
Leap

Emphasize the Fork by using bridges to express the energy of leaping across the water...
Architecture & Landscape
Architecture reflects the rural Kentucky Bluegrass heritage

**ROOF**
Standing Seam Metal Roof

**SIDING**
Reverse Batten
Western Red Cedar Siding
Stained Ebony

**DECKING**
3x6 Yellow Pine Decking

**CONCRETE**
Board Formed Concrete
Architecture reflects the rural Kentucky Bluegrass heritage
WHAT IS THE PARKLANDS OF FLOYDS FORK?

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IF YOU BUILD IT, THEY WILL COME

WHY IT MATTERS
Project 1
Creekside Playground & Splashpark

Size: 3 Acres
Construction Costs: $1.86 Million
Opening Date: June 2011
Creekside Playground & Splashpark
Creekside Playground & Splashpark: Before & After
Creekside Playground & Splashpark
Project 2
North Beckley Creek Park

Size: 250 Acres
Construction Costs: $19 Million
Opening Date: November 2012
Project 2 – Miles Lakes: Trailhead
Project 2 – Miles Lakes: Overlook
Project 2 – Miles Lakes: Loop
Project 2 – MSD / I-64: Leaping Bridge
Project 2 – Egg Lawn: Before & After
Project 2 – Egg Lawn
Project 2 – Egg Lawn: Gheens Lodge
Project 3
South Beckley Creek Park
& Pope Lick Park

Size: 625 Acres
Construction Costs: $17 Million
Opening Date: Fall 2013
Project 3 – Grand Allee
Project 3 – Grand Allee
Project 3 – Grand Allee: Country Walk
Project 3 – Grand Allee: Boardwalk
Project 3 – Distillery Bend
Project 3 – Trestle Point
Project 4
The Strand, Turkey Run Park & Broad Run Park

Size: 2,500 Acres
Construction Costs: $47 Million
Opening Date: Spring 2016
Project 4 – The Strand: Deer Trace
Project 4 – The Strand & Turkey Run Park
Project 4 – Turkey Run Park: Silo Center
Project 4 – Turkey Run Park: Silo Center
Project 4 – Ansert
Project 4 – Cliffside Center
WHAT IS THE PARKLANDS OF FLOYDS FORK?
DEVELOPING A “FLORKNACULAR”
A WALK THROUGH THE PARK
IF YOU BUILD IT, THEY WILL COME
WHY IT MATTERS
Over 10 million park users since 2016....
....for physical fitness....
...to learn from Mother Nature....
....to grow....
....to enjoy the seasons....
....to be entertained....
....for celebrations....
....to support local farmers and artists....
....to be out in the open.
WHAT IS THE PARKLANDS OF FLOYDS FORK?

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A WALK THROUGH THE PARK

IF YOU BUILD IT, THEY WILL COME

WHY IT MATTERS
The Parklands is vital to the Community in Ways that Matter

70,000 Trees Planted - Planting for the Future Matters
50,000+ Educational Experiences - Outdoor Education Matters
40,000+ Volunteer Hours - Community Matters
3,458 Acres Permanently Preserved - Preservation Matters
Over 450 Species of Native Plants (incl. Endangered Ky. Glade Cress) – Flora Matters
260 Acres Reforested - Habitat Matters
Over 250 Species of Animals (incl. Endangered Bald Eagles & Bobwhite Quail) – Fauna Matters
46 Miles of Soft-surface Trails - Access Matters
34 Public Toilets - Clean Facilities Matters
22 Miles of Water Trail with 7 Paddling Access Points - Outdoor Rec. Matters
19 Connected Miles of the Louisville Loop - Trail Maint. Matters
8 Park Rangers - Safety Matters
4 Parks - Fun Matters
The Parklands Addresses a Range of Public Health Concerns

Nature-Deficit Disorder

Ambitious Nature-Based Curriculum to Engage Students at the region’s K-12 School through hands on Science and Natural History Education:

• Summer / Spring Break Camps

• PNC Achievement Center for Education and Interpretation

• Family Programming

• Interpretive Hikes

• “Come Outside and Play”
The Parklands Addresses a Range of Public Health Concerns

Active Lifestyles

Broad range of physical fitness challenges will encourage physical health, especially cardiovascular health, for people of all ages and abilities:

- Hiking / Biking Trails
- Paddling Trails
- Sports Fields
- Playgrounds / Spraygrounds
- Adventure Sports Hubs
The Parklands Addresses a Range of Public Health Concerns

**Healthy Local Foods**

Agriculture is part of The Parklands experience and local farming creates a positive connection between people and the land:

- Community Gardens
- Sustainable Agricultural Programs
- Farmer’s Markets
The Parklands Addresses a Range of Public Health Concerns

**Environmental Health**

The Parklands will Preserve and Enhance nearly 80 percent of the Land for Natural Landscape creating 20 miles of Urban Habitat Corridor:

- Water Quality / Stormwater Management
- Reduction of Urban Heat Island Effect
- Filtration of Pollutants
- Carbon Sequestration
- Habitat Protection & Enhancements
The Parklands Preserves a Vanishing Landscape

The Parklands will be Protected as Public Parklands in Perpetuity and represents one of the last Undeveloped Portions of the Community:

• 2,000 acres of forestland (increases oxygenation and reduces carbon dioxide).

• 400 acres of restored native meadowlands (increases habitat corridors, reduces mowing).

• Up to 50 acres of restored wetlands (enhances habitat and water quality).

• Up to 7 miles of restored stream banks (reduces erosion).

• Conversion of almost 400 acres to support sustainable agriculture (showcases heritage while reducing chemical use and siltation).
This concludes The American Institute of Architects Continuing Education Systems Course

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Keiko Cramer
kcramer@wrtdesign.com

Charlie Neer
cneer@wrtdesign.com