

# Greening Slack Plaza

Charleston, West Virginia



## GREENING SLACK PLAZA

### About Greening America's Capitals

Greening America's Capitals is a project of the Partnership for Sustainable Communities between EPA, the U.S. Department of Housing and Urban Development (HUD), and the U.S. Department of Transportation (DOT) to help state capitals develop an implementable vision of distinctive, environmentally friendly neighborhoods that incorporate innovative green building and green infrastructure strategies. EPA is providing this design assistance to help support sustainable communities that protect the environment, economy, and public health and to inspire state leaders to expand this work elsewhere. Greening America's Capitals will help communities consider ways to incorporate sustainable design strategies into their planning and development to create and enhance interesting, distinctive neighborhoods that have multiple social, economic, and environmental benefits.

Charleston, West Virginia was chosen as one of the first five state capital cities to receive this assistance beginning in the fall of 2010, concluding with a site visit in early 2011.

More information at <http://epa.gov/smartgrowth/greencapitals.htm>



## GREENING SLACK PLAZA

### Acknowledgments

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#### Special Thanks

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The art students of Charleston Catholic High School

# GREENING SLACK PLAZA

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## GREENING SLACK PLAZA

### Executive Summary

Greening America's Capitals is a project of the Partnership for Sustainable Communities between the U.S. Environmental Protection Agency (EPA), the U.S. Department of Housing and Urban Development (HUD), and the U.S. Department of Transportation (DOT) to help state capitals develop an implementable vision of distinctive, environmentally friendly neighborhoods that incorporate innovative green building and green infrastructure strategies. Charleston applied for assistance from the Greening America's Capitals program to help improve Slack Plaza, in the heart of downtown, with innovative greening strategies and improvements to public transportation.

EPA's project team and landscape architects Origin 4 Design engaged the downtown community in a three-day design workshop, gathering input on the plaza's strengths, weaknesses, and desired improvements. The team then presented the community with a vision for Slack Plaza. After the public meeting, Origin 4 Design refined the design concept and strategies that Charleston could consider implementing.

The options that the team developed can bring multiple social, economic, and environmental benefits to downtown Charleston by bringing more activity to the plaza through community events such as FestivALL Charleston, creating opportunities for local businesses, better managing stormwater runoff, and increasing green space.

Charleston can learn from the experience of other cities that have faced a similar challenge in redesigning public parks and plazas. Case studies of potential models the city could explore are presented at the end of the report.



Figure 1. The existing plaza.



Figure 2. Rendering of a potential plaza design.



## GREENING SLACK PLAZA

### Introduction

Slack Plaza is located in the northwest area of downtown Charleston, between Summers and Laidley Streets. The 240-foot by 150-foot plaza was constructed in 1984 on the site of a former Greyhound station with federal Urban Mass Transportation Administration (UMTA) funds. The immediate project site also includes two pedestrian walkways that extend to each side. Brawley Walkway connects Summers Street to the vibrant and charming Capitol Street, while a second walk connects the Laidley transit mall area to Court Street and an entrance to the Charleston Town Center Mall. The combined plaza and walkways form a key pedestrian link between the downtown business district and the mall/civic center area. The plaza is most animated during the weekday lunch hour with a steady stream of people passing through and utilizing benches or tables.

Slack Plaza functions as a pedestrian thruway, transit mall, and gathering space. The plaza edge along Laidley Street is the primary hub and transfer point for bus routes of the Kanawha Valley Regional Transportation Authority, with a building on the plaza serving as office, public restrooms, and bus shelter. This zone has also become a gathering spot for illicit activity which some attribute to the ease of purchasing alcohol from the convenience store fronting on the plaza, along with the public restrooms, and the ability to “hide in plain sight” among the activity of a bustling transit mall.

The city acknowledges that the plaza lacks green space, has no real sense of place, and feels unsafe. The project team worked with the city, residents, and stakeholders to establish a common vision for Slack Plaza that could transform it into a multi-modal transportation hub and well-used town square. Adding public art and trees and redesigning the pedestrian corridors to better serve a range of users will continue Charleston’s efforts to foster a more beautiful and sustainable community.



Figure 3. The plaza area in context.

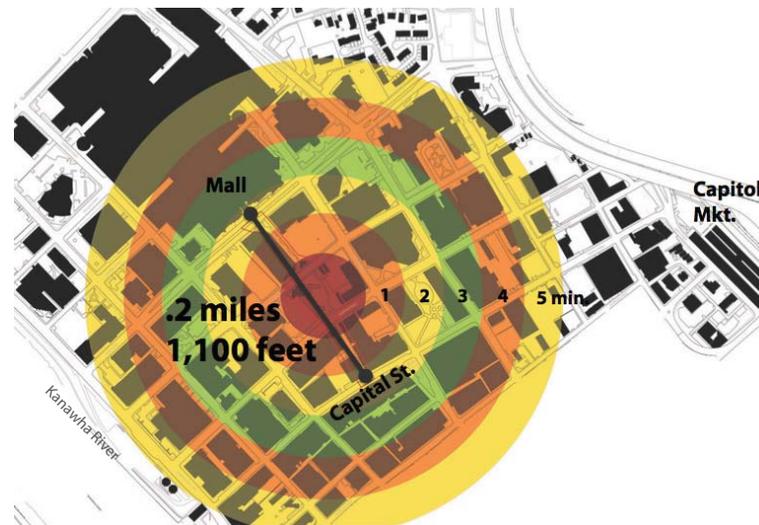


Figure 4. Walking distance.

## INTRODUCTION

### Slack Plaza's Current Conditions

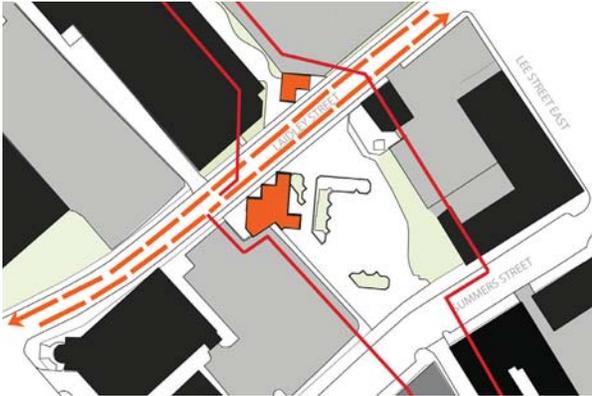


Figure 5. Laidley Street is restricted to bus traffic in the Slack Plaza block (bus shelters and office represented in orange).



Figure 6. Existing bus shelters and office building along Laidley Street.



Figure 7. The non-functioning water feature with spiked rails along its walls (known by some as "loafer rails") contributes to the plaza's outdated and unwelcoming feel.



Figure 8. The Middle East Mart convenience store fronting on the plaza at Laidley Street.



Figure 9. The plaza lacks a defined edge, resulting in the perception that the space bleeds off into the adjacent lots.

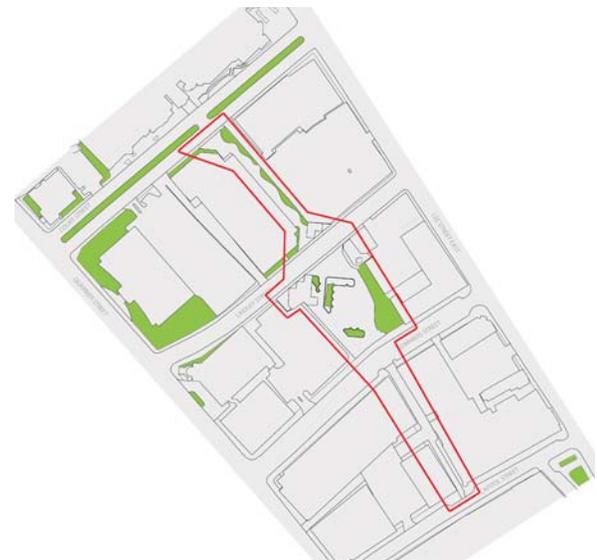


Figure 10. The existing plaza area and surroundings are dominated by hard surfaces (represented in gray) such as roads, roofs, sidewalks, and parking lots.

## INTRODUCTION

### Community Design Charrette

The project team conducted a three-day community design charrette March 28th to 30th, 2011 (a design charrette is a multi-day intensive design workshop). Many local stakeholder groups participated including the Kanawha Valley Regional Transit Authority, political leaders, civic associations, and property owners. At an evening public session at the Civic Center, participants had the opportunity to contribute their own thoughts, concerns, and design ideas.

The project team also met with the art students of Charleston Catholic High School. The school is located a few blocks from the site and when the students expressed a desire for a more welcoming Slack Plaza, their teacher responded by challenging them to redesign the plaza as a class project. Teams of students studied the existing plaza and design precedents and then designed their own space complete with scale models. Common themes to the student projects were ample green space, a variety of activities for all ages, and water features.



Figure 11. Students present their concept for the plaza.

### Positive Attributes of Existing Plaza

- the plaza's central location
- proximity to Capitol Street
- ample parking nearby
- function as transportation hub
- proximity to the mall
- the size of the plaza

### Negative Attributes of Existing Plaza

- too much concrete
- bus focus
- negative/unsafe perception
- pinched walking routes
- needs more lighting
- not enough activity
- tired/dated style
- restrooms invite illicit activity
- lack of art
- too little shade
- existing convenience store
- uninviting
- loafer rails (spiked rails along walls to prevent sitting)
- broken water feature
- community apathy



Figure 12. Property owners participate in a focus group.



Figure 13. Participants in the public session were invited to mark their ideas onto plan drawings of the existing plaza.



## GREENING SLACK PLAZA

### Strategies to Green Slack Plaza

Strategies for the redesign of the plaza and surroundings have the dual task of being both friendly to the environment and creating spaces that are inviting to users. The design concepts for the plaza, walkways, and surrounding streets explored in this study consider the broader definition of “greening” and “sustainability.” The design not only focuses on direct environmental benefits, but also social, cultural, and economic benefits.

Each strategy introduced on the following pages was directly informed by objectives formulated through the community design charrette process. They are as follows:

- Create a lively and active space that appeals to a broad range of users and reflects Charleston’s character.
- Make the space more comfortable and easier to use by defining paths, individual zones of activity, and increasing areas of shade.
- Decrease stormwater runoff that enters the local combined storm/sanitary sewer system.



Figure 15. Cultural and natural character of Charleston.

## STRATEGIES TO GREEN SLACK PLAZA



Figure 16. Rendering of a potential plaza design.

# STRATEGIES TO GREEN SLACK PLAZA

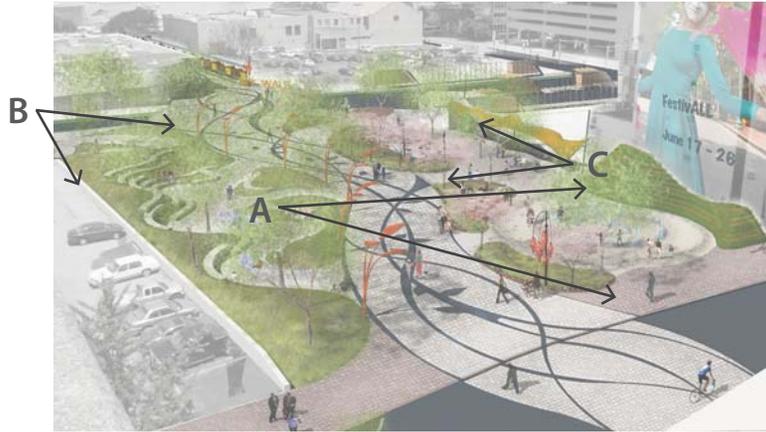


Figure 17. Key to perspective views



Figure 18. Projection Wall (View A): The People’s Building is transformed into a public art space, concert wall, and movie screen.



Figure 19. Skateboarding Park (View B): Provides a safe place for skateboarding that is separated from the main thoroughfare.



Figure 20. Plaza Seating (View C): A shaded, comfortable environment separated from highly active areas and the main walkway.

# STRATEGIES TO GREEN SLACK PLAZA

## Design Elements

Vegetation	Stormwater	Energy	Transportation	Sustainability
 <p><b>Plant Material</b></p> <ul style="list-style-type: none"> <li>• More planting areas</li> <li>• Increase number of trees in plaza and along street</li> <li>• Use native species and low-maintenance low-water plantings</li> </ul>	 <p><b>Permeable</b></p> <ul style="list-style-type: none"> <li>• Unit pavers</li> <li>• Gravel</li> <li>• Permeable asphalt or concrete</li> </ul>	 <p><b>Solar</b></p> <ul style="list-style-type: none"> <li>• Photovoltaic panels for lighting</li> </ul>	 <p><b>Bus</b></p> <ul style="list-style-type: none"> <li>• Redesign transit mall for more efficient bus loading</li> <li>• Relocate waiting area away from plaza entrance</li> <li>• Replace bus shelters</li> </ul>	 <p><b>Material</b></p> <ul style="list-style-type: none"> <li>• Use recycled local materials</li> <li>• Engage local suppliers</li> <li>• Engage local businesses as vendors</li> </ul>
 <p><b>Creative Opportunities</b></p> <ul style="list-style-type: none"> <li>• Greenroof or greenwall systems</li> <li>• Vertical vine systems</li> </ul>	 <p><b>Catchment and Storage</b></p> <ul style="list-style-type: none"> <li>• Capture rainwater falling on roofs, canopies, art, pavement</li> <li>• Underground storage cistern</li> </ul>	 <p><b>Geothermal</b></p> <ul style="list-style-type: none"> <li>• Install on-site geothermal to heat and cool shelters and kiosks and for snow-melt system</li> </ul>	 <p><b>Bike</b></p> <ul style="list-style-type: none"> <li>• Install bus bike racks</li> <li>• Add bike parking/storage</li> <li>• Designate bike lanes</li> <li>• Connect plaza to larger bike network</li> </ul>	 <p><b>Community</b></p> <ul style="list-style-type: none"> <li>• Transit options</li> <li>• Safe, walkable destinations</li> <li>• Fresh, locally sourced produce</li> <li>• Outdoor play and activity</li> </ul>
 <p><b>Components</b></p> <ul style="list-style-type: none"> <li>• Structural Soils</li> <li>• Computerized irrigation system</li> <li>• Self-cleaning photocatalytic concrete</li> </ul>	 <p><b>Biofiltration</b></p> <ul style="list-style-type: none"> <li>• Stormwater planters</li> <li>• Rain gardens</li> <li>• Lawn</li> <li>• Sand/UV/chlorine filter for spray park</li> </ul>	 <p><b>Energy</b></p> <ul style="list-style-type: none"> <li>• LED Lighting</li> <li>• Automated irrigation system</li> <li>• Auto-off fountains</li> </ul>	 <p><b>Pedestrian</b></p> <ul style="list-style-type: none"> <li>• Improve plaza circulation and lines-of-sight</li> <li>• Clear destinations</li> <li>• Improved crosswalk visibility</li> <li>• Improved wayfinding</li> </ul>	 <p><b>Local Culture</b></p> <ul style="list-style-type: none"> <li>• Engage local artists in design</li> <li>• Provide venue for performance and visual artists</li> <li>• Strengthen Charleston's identity</li> <li>• Engage with FestivALL</li> </ul>
<p><b>Benefits</b></p> <p>More shade</p> <p>Creates spaces at more human scale</p> <p>Absorbs and filters stormwater</p> <p>Provides more habitat</p> <p>Reduced heat island effect</p>	<p><b>Benefits</b></p> <p>Reduced loads on combined sewer systems</p> <p>Reduced overflow into river</p> <p>Groundwater recharge</p> <p>Improved water quality</p>	<p><b>Benefits</b></p> <p>Decreased operational costs</p> <p>Decreased energy demand</p> <p>Less environmental impact</p>	<p><b>Benefits</b></p> <p>Improved safety</p> <p>Decreased carbon footprint</p> <p>Decreased traffic congestion</p> <p>Improved health</p> <p>Active and vibrant public realm</p>	<p><b>Benefits</b></p> <p>Stronger connection to local community identity</p> <p>Increased opportunities for local businesses</p> <p>Less environmental impact</p> <p>Increased tourism opportunities</p>

# STRATEGIES TO GREEN SLACK PLAZA

## Programming

The program for the plaza and adjacent walkways reflects the desires of the charrette participants for a wide variety of activities. Specific zones of activity are arranged along a central pathway through the plaza and better define the edge of the plaza.

The following pages will provide greater detail on more specific components.

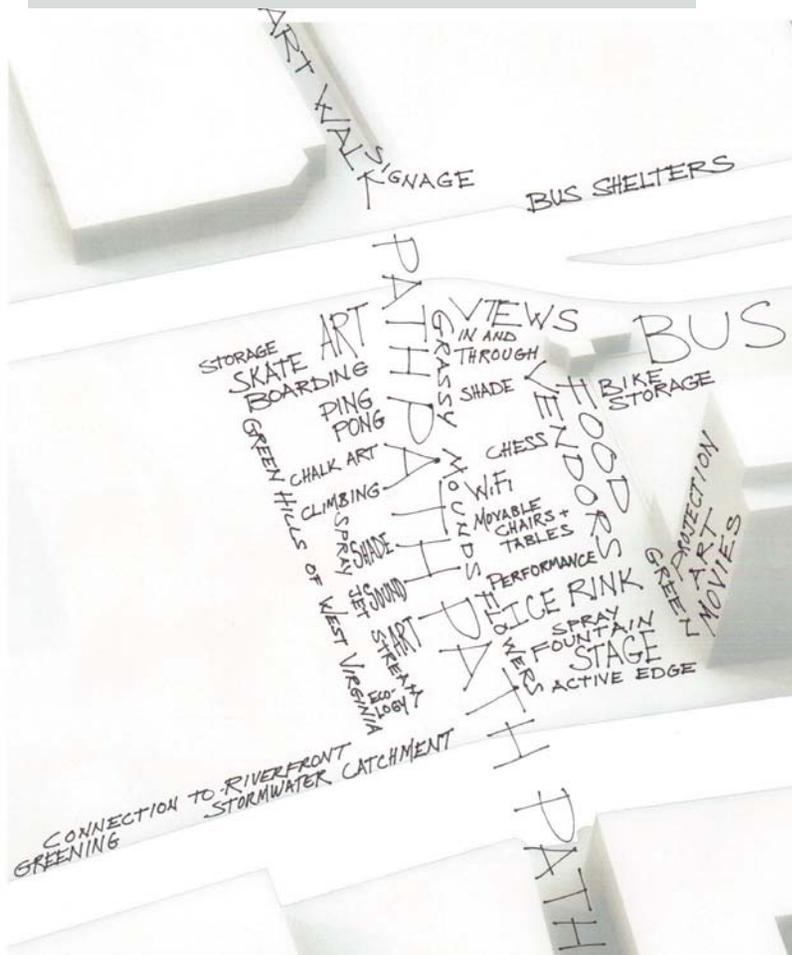


Figure 21. Programmatic concept.

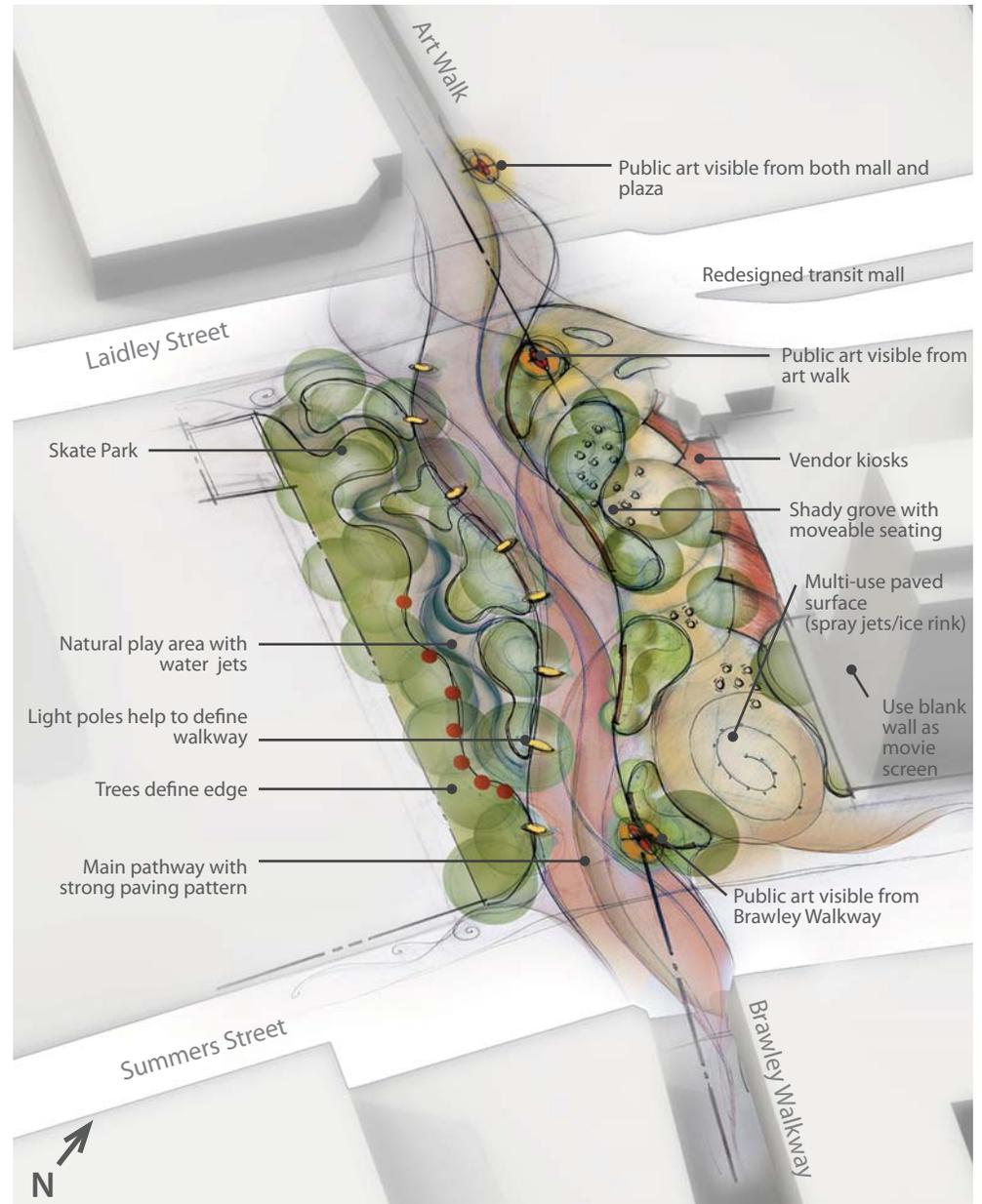


Figure 22. Conceptual sketch of the plaza.

## STRATEGIES TO GREEN SLACK PLAZA

### Hardscape and Planting

Permeable paving options that allow for stormwater infiltration are available for all hardscape areas. Materials range from traditional unit pavers with specially designed gravel joints and sub-base to permeable concrete and asphalt mixes. The redesign of hardscape will also provide a design opportunity to define the main pathways and activity areas of the plaza.

- Permeable paving should be considered for all hardscape.
- Materials can be sourced from recycled local materials and local suppliers.
- Paving with contrasting materials, colors, and textures can define main pedestrian circulation, and activity areas.
- Paving can incorporate artistic patterns to enliven the space.
- Sustainable paving systems include structural soil bases that support healthy root systems of trees and photocatalytic concrete that includes special additives that discourage dirt and discoloration.

Planting defines space, creates shade, and adds beauty to the landscape. Planting offers many sustainable/green benefits including cooling and filtering the air, absorbing stormwater runoff, and providing habitat.

- Increase level of greenery and shade through planting.
- Plants and trees selected should be native and drought-tolerant.
- Planting opportunities include greenroofs, greenwalls, and trellises.
- Utilize structural soils and computerized irrigation systems.
- Incorporate rain gardens that capture, treat, and infiltrate stormwater.
- Arrange new planting for clear line-of-sight across plaza.
- Design planting to reflect the surrounding rolling hills and river creating a stronger Charleston identity.

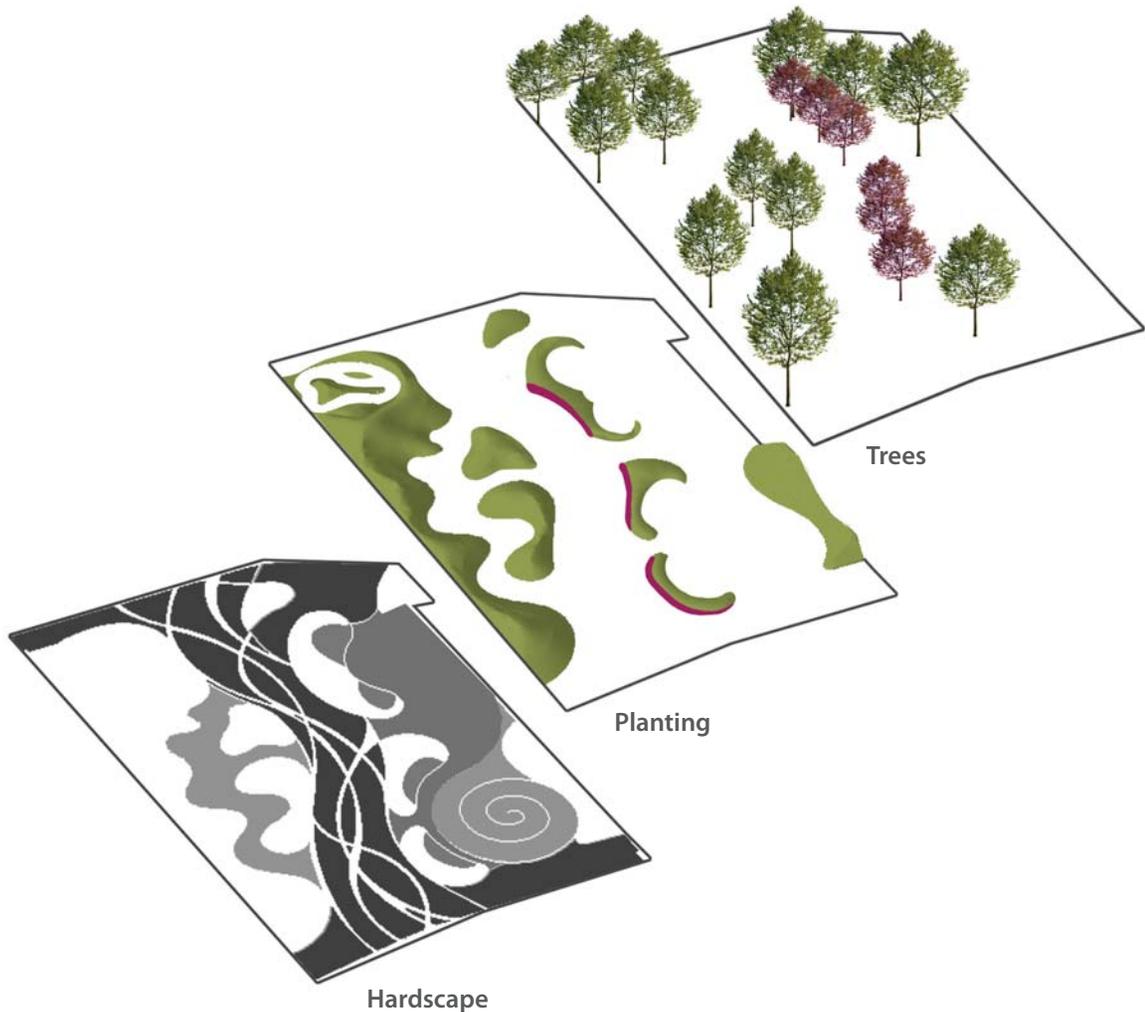


Figure 23. Layers of plaza hardscape and planting.

## STRATEGIES TO GREEN SLACK PLAZA

### Stormwater

The quantity of stormwater entering the city's combined stormwater system from the site could be greatly reduced by several measures: increasing the amount of planted space and tree cover, incorporating permeable pavements, and capturing rain and fountain water in an underground cistern system. The cistern water could then be filtered and recirculated for fountain and irrigation water.

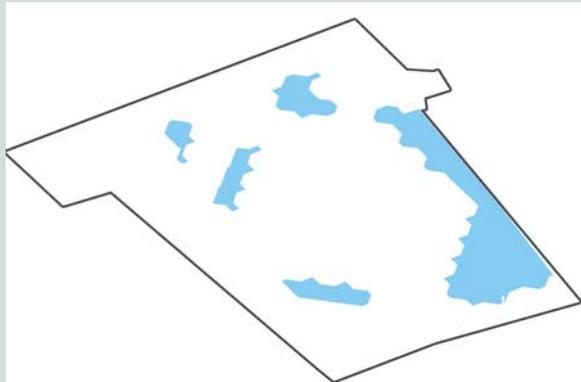


Figure 24. Planter areas are the existing plaza's only permeable surfaces.

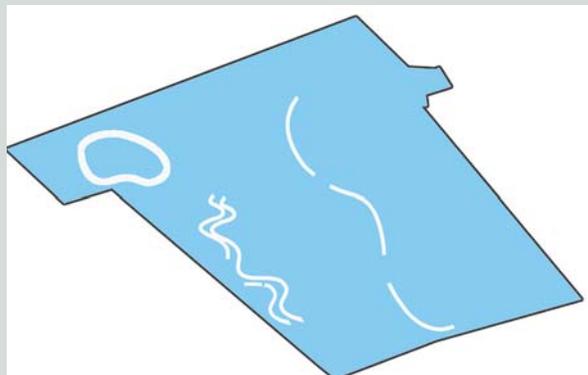


Figure 25. The design concept's near-100% permeable surface greatly reduces runoff into the stormsewer system.

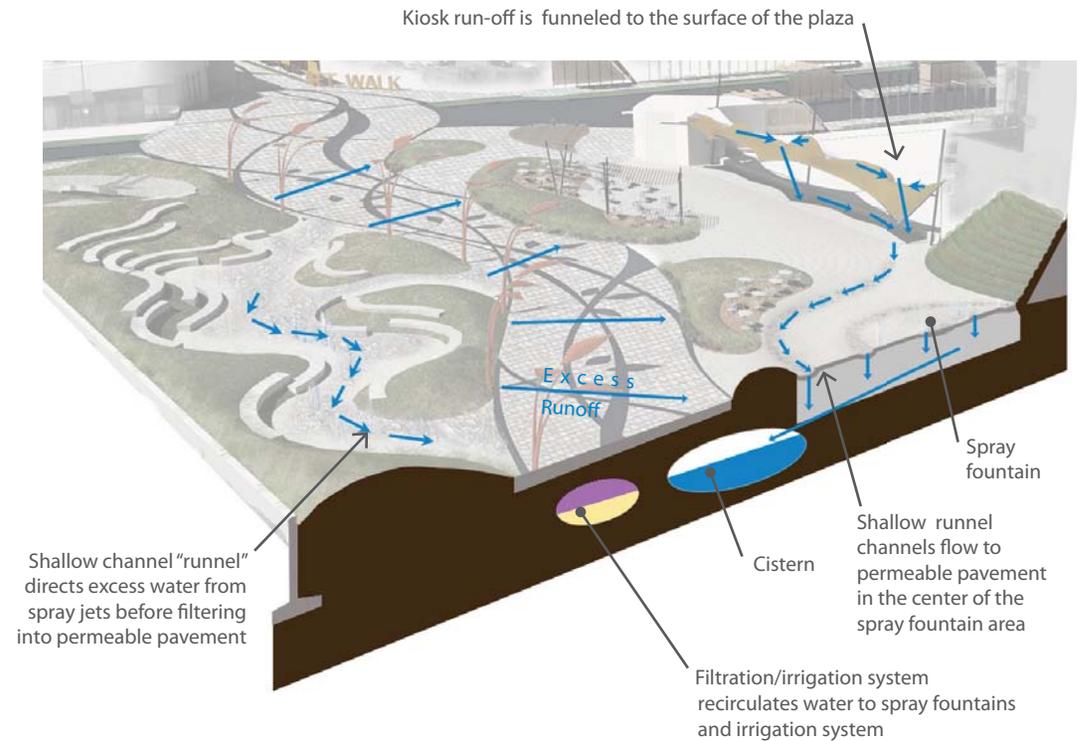


Figure 26. Stormwater drainage system for plaza concept.

## STRATEGIES TO GREEN SLACK PLAZA

### Brawley Walkway

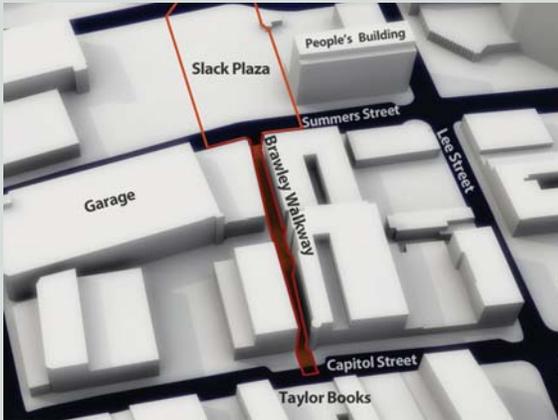


Figure 27. Location map

Brawley Walkway, connecting Capitol Street and Slack Plaza, has potential to draw pedestrian activity from Capitol Street to the plaza. The design proposes outdoor seating, planters, art, and lively lighting.



Figure 29. Brawley Walkway at night.



Figure 28. Existing Brawley Walkway



Figure 30. Section sketch with cafe tables and lighting.



Figure 31. Taylor Books at the end of the Brawley Walkway is a popular business that generates a lot of pedestrian activity that could be pulled through to Slack Plaza.

# STRATEGIES TO GREEN SLACK PLAZA

## Art Walk

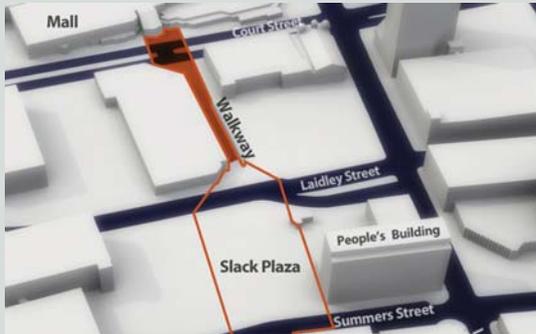


Figure 32. Location map.

The existing pedestrian walk connecting the plaza area to the Charleston Town Center Mall can become an “Art Walk” showcasing changing works by local artists. The paving pattern from the plaza continues along the art walk and crosses Court Street to the mall entrance. Along the northern side of the walk, a screen wall acts as a gallery wall for art works and a trellis for climbing plants. A planter runs along the base of the wall. Along the building edge, existing restaurants could offer outdoor seating.



Figure 33. Existing walkway from plaza to mall.



Figure 34. Court Street paving at mall entrance in need of replacement.



Figure 35. Walkway to the mall transformed into an Art Walk.

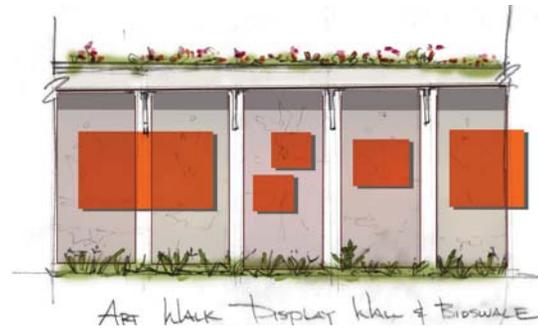


Figure 36. Sketch of screen wall.

## STRATEGIES TO GREEN SLACK PLAZA

### Transit Mall

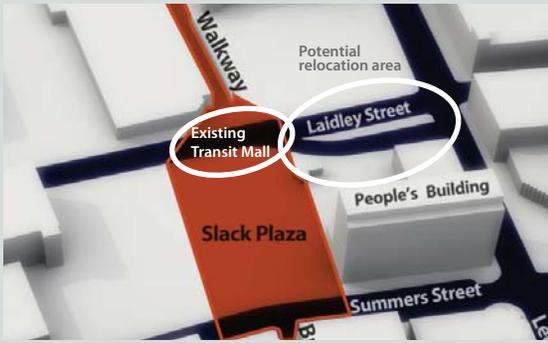


Figure 37. Location map.

During the community design charrette, representatives from the Kanawha Valley Regional Transit Authority suggested shifting the bus stops away from the plaza entrance to eliminate congestion between bus riders and pedestrians walking through the plaza. The new configuration would also include a bus pull-off lane allowing for additional spaces for busses to park and wait. New bus shelters incorporate trellises, green roofs and planted areas on the sidewalk that can absorb stormwater and make the bus stops more attractive.



Figure 38. Existing transit mall.

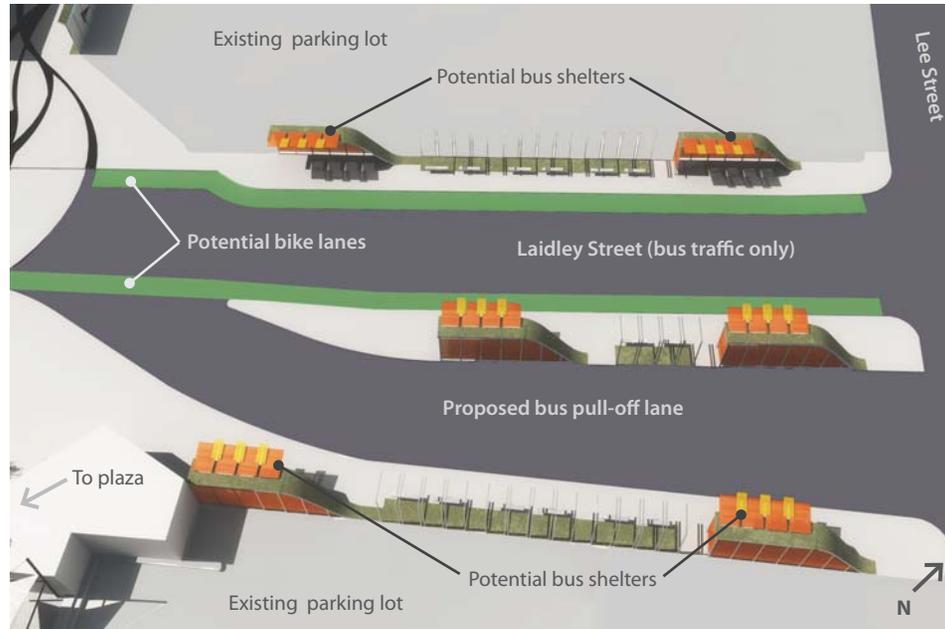


Figure 39. Concept plan of a relocated transit area on Laidley Street.



Figure 40. Bus shelter incorporating green elements.

# STRATEGIES TO GREEN SLACK PLAZA

## Greening to the River

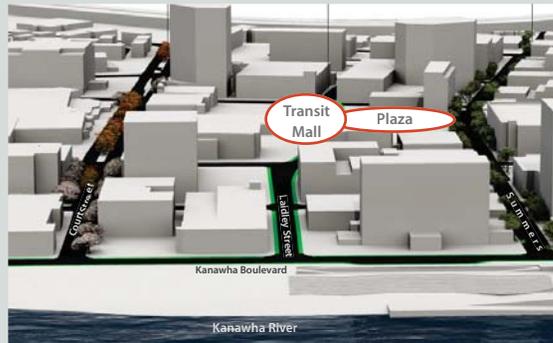


Figure 41. Location map.

The plaza and walkways parallel the Kanawha River less than three blocks from the newly renovated Haddad Riverfront Park. Strengthening the connections between the two would serve to enlarge the walkable area and allow each to share activity. The perpendicular streets could be reinforced through bike lanes and greening strategies that create a pedestrian friendly environment with positive environmental impacts.

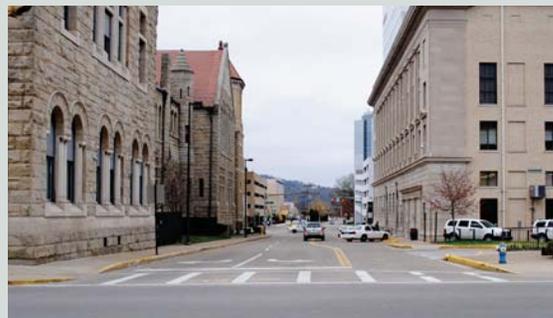


Figure 42. View of Court Street looking toward the mall.



Figure 43. Court Street gateway with street tree planting. View from Kanawha Boulevard.

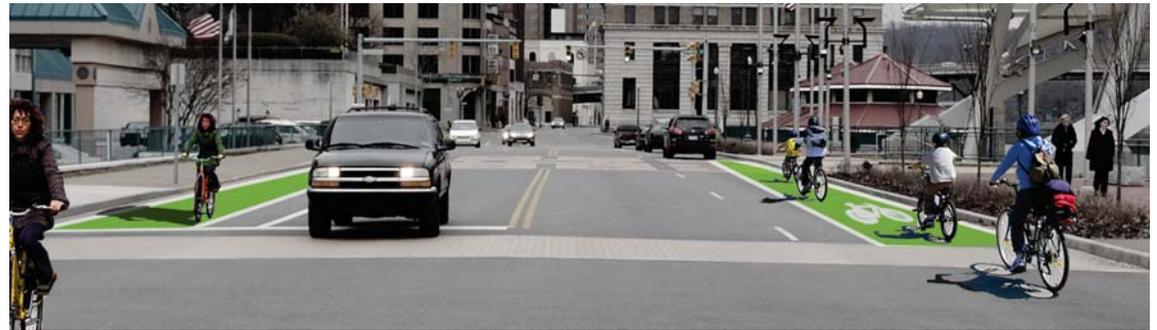


Figure 44. View of Kanawha Boulevard with painted bike lanes.



Figure 45. Stormwater infiltration planters along Summers Street.



# GREENING SLACK PLAZA

## Next Steps

The EPA's Greening America's Capitals project provides an initial vision for creating a vibrant plaza that is both attractive to users and environmentally sound. The design charrette provided a clear consensus for a comfortable, well-connected space that incorporates nature and a variety of activities. This section describes ways in which those objectives can be achieved. The design concepts included in this report could be implemented together as a complete vision for change or as individual projects that take place as timing and funding allow. In any case, positive change can begin to take place right away, helping to change public perception of Slack Plaza and providing a glimpse of things to come.

A timeline for the next steps is presented in Figure 46 and the location for each is identified in Figure 47. Full descriptions are on the following pages.

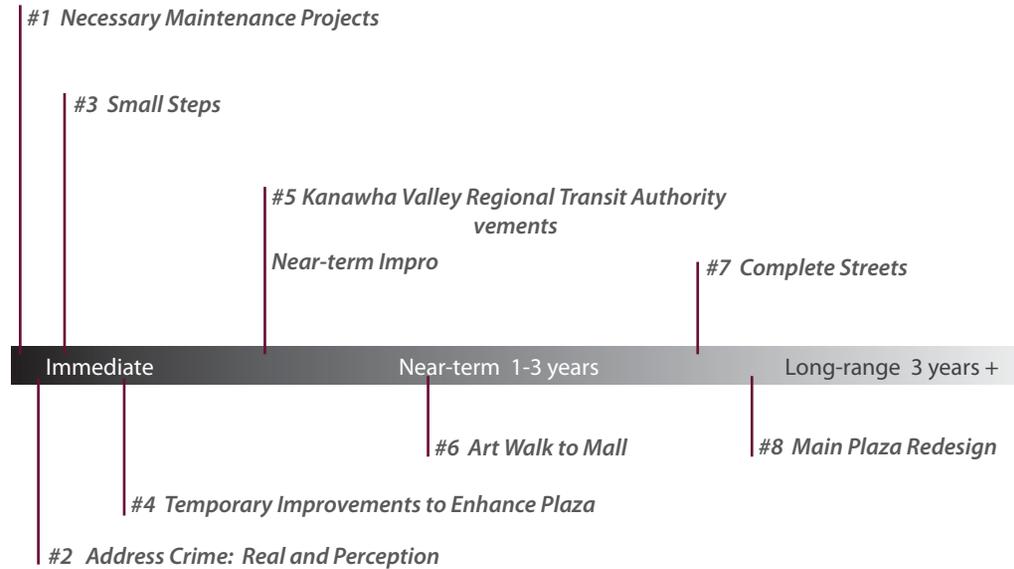


Figure 46. Timeline for next steps.

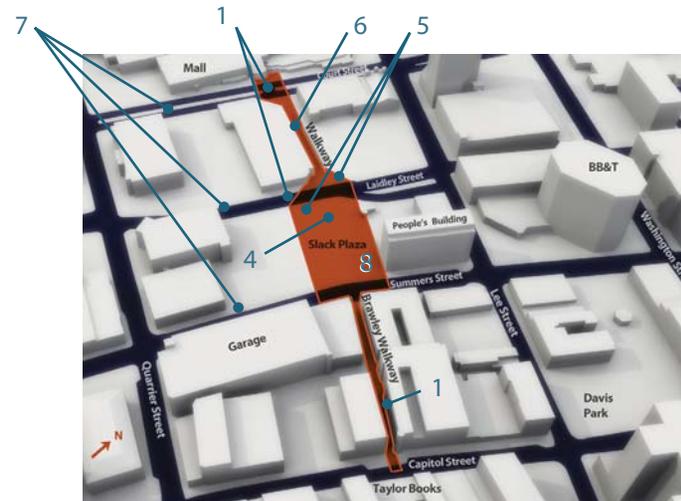


Figure 47. Locations of next steps.

## NEXT STEPS

### 1. Necessary Maintenance Projects

Through the design charrette, a few near term construction projects in the Slack Plaza area were identified. They include road resurfacing/paver replacement on Court Street at the entrance to the mall (Figure 48) and resurfacing Laidley Street. Both projects could initiate the paving design proposed for the walkways and plaza.

### 2. Address Crime - Real and Perception

Even with a redesign, the plaza will fail as a public space until the issue of public safety is addressed. The challenges to plaza safety despite a strong law enforcement presence (Figure 49) were discussed at the charrette. Factors that could improve safety include limiting access to the existing restrooms, separating the bus shelters from the plaza circulation, increased lighting and installing video surveillance cameras.

### 3. Small Steps

Upgrading individual components such as lighting can begin immediately. LED bulbs and fixtures matching those used at Haddad Park will increase energy efficiency. Improved lighting and cafe seating in walkways will invite users and increase safety. Adding recycling containers (Figure 50) and bicycle parking begins to send a message of sustainability and healthy lifestyle, while green roofs and vine-covered walls can bring planting and stormwater management to the existing plaza structures (Figure 52).

### 4. Temporary Improvements to Enhance Plaza

A main objective of the charrette was to enhance a direct path from the mall to Capitol Street. This can be accomplished in the near term with a pedestrian bridge over the existing fountain and road paint in a bright color patterns to unify the path (Figure 51). The path would eventually be replaced with a paver or other more durable material.



Figure 48. Court Street crossing in need of repaving.



Figure 49. Police are a frequent presence on the plaza.



Figure 50. Example of recycling containers.

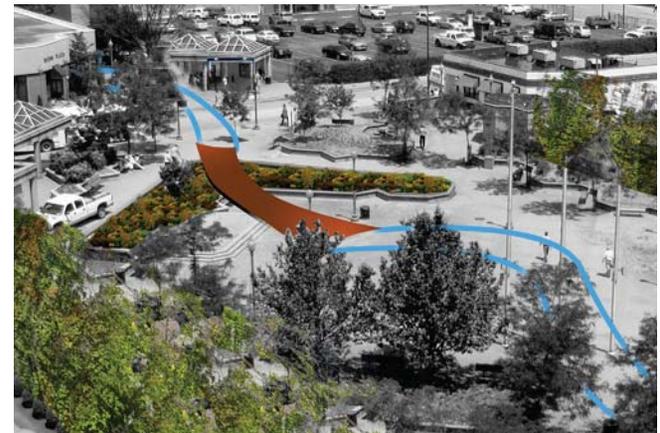


Figure 51. Concept showing direct path bridging the existing fountain and fountain repurposed as planter.

## NEXT STEPS

### 5. Kanawha Valley Regional Transit Authority Near-term Improvements

The charrette process revealed the desire of the transit authority officials to reconfigure and upgrade their bus facilities adjacent to the plaza. Authority representatives were agreeable to removing the existing shelters on Laidley Street across from the plaza that are in the direct line of the main path circulation. A new bus stop/shelter would be located nearby. Representatives were also enthusiastic about reimagining the main shelter area at the plaza by removing the pyramidal tops and replacing them with a colorful and dynamic design such as the tensile disks pictured in (Figure 52). The long-term desire is for a new office structure and expanded bus loading area just north of the plaza area. This property would have to be acquired by the transit authority.

### 6. Art Walk to Mall

The current pedestrian walkway from the plaza to the mall is an opportunity for a stand-alone project that would leverage and unify strengths of adjacent improvements already listed (Court Street crosswalk repaving and transit area improvements). The creation of an Art Walk would give the path an identity. Cafe seating and planters would allow the energy of the successful restaurants to spill out into the public space. The art theme would prove a changing display that would play to the strengths of Capitol Street gallery crawls and FestivALL. (Figure 53)

### 7. Complete Streets

Ideally, improvements to the surrounding streets should be coordinated with other street infrastructure projects and should also be a part of a city-wide strategy for providing bike lanes, improving sidewalks and incorporating stormwater Infiltration planters. Expanded tree pit areas, additional street trees and painted bike lanes (Figure 54) would be quick and fairly inexpensive to implement while stormwater infiltration planters and permeable paving would require additional design, and perhaps testing prior to construction.

### 8. Main Plaza Redesign

The main Slack Plaza area can undergo a complete redesign once the transit mall reconfiguration is complete. If the plaza is to include more complex infrastructure such as spray jet areas and irrigation that are fed by a cistern and filtration system, it is ideal to construct the entire area at once. (Figure 55)



Figure 52. Potential near-term greening of bus office and shelter.



Figure 54. View of Kanawha Boulevard with painted bike lanes.

### Key Partnerships for Implementation and Funding

- Charleston Area Alliance
- Charleston Urban Renewal Authority
- Kanawha Valley Regional Transit Authority
- Federal Highway Administration



Figure 53. Walkway to the mall transformed into an Art Walk.



Figure 55. Rendering of a potential plaza design.



## GREENING SLACK PLAZA

### Case Studies

Charleston can learn from the experience of other cities that have faced a similar challenge in redesigning public parks and plazas. Potential models the city could study include Bryant Park and Teardrop Park in New York City, Schenley Plaza in Pittsburgh, and Pioneer Courthouse Square in Portland. The work of environmental artist Stacy Levy provides the city with ideas on how to use public art to educate visitors about environmental issues.

- 24 **Bryant Park, New York, NY**
- 25 **Teardrop Park, New York, NY**
- 26 **Schenley Plaza, Pittsburgh, PA**
- 27 **Pioneer Courthouse Square, Portland, OR**
- 28 **Environmental Art by Stacy Levy**

## CASE STUDY Bryant Park New York, NY

Design: Olin Studio, Philadelphia, PA

Client: Bryant Park Corporation

### Relevance to Slack Plaza Redesign

- Negative influences, particularly crime and drug-use, can be overcome by removing barriers between the park and the street and giving people the feeling of control within their environments.
- Moveable chairs empower user-choice and mobility negating static pinch points.
- Line-of-sight, lighting, and signage increase the perception of safety.
- Multiple programmed elements offer help to create an active space.
- “Pop-up” cafes and shops (Figure 56) meld seamlessly with the design.

### Location, Scope, and Size

Bryant Park is a 9.6 acre park in Midtown Manhattan. The park is managed by a private not-for-profit corporation, the Bryant Park Corporation (BPC). The corporation is a public/private partnership that is responsible for maintenance of the space, which is financed entirely by private funds with a large portion coming from local merchants, property owners, neighbors and citizens. It is the largest organization in the nation to manage a public park with private funding.

### Design

A symbol of decline in the 1970s gave way to the now successful urban park. By 1982 a plan was underway, having cleaned the park of graffiti and litter, and made minor repairs. The park then closed in 1988 to reopen in 1992. The reopening was heralded as a remarkable success in design and social vision. Bryant Park is now known as a signature of New York City.

The park is designed as a central, three acre lawn, with a shaded perimeter that provides programmed activity including: a skating rink (Figure 57) and holiday shopping mall, vendor kiosks, and moveable seating. The park is programmed with year-round activity including ping pong, chess rentals, a library-sponsored reading room (Figure 58), films (Figure 59), and concerts.

The park maintains overall security through a private security force and maintenance crews. Upkeep and diligence have shown to self-regulate the park along with the successful design elements of improved street visibility, lighting, and signage.

### Green/Sustainable Design Features

- Much of the site functions as a large green roof to a two-story underground expansion of the neighboring library.
- Durable materials and natural materials used throughout park.
- Park is a model of economic and social sustainability, functioning independently from public funding.



Photo by Ed Yourdon © Creative Commons

Figure 56. A temporary outdoor cafe sponsored by Southwest Airlines sits behind Bryant Park's ubiquitous folding tables and chairs.



Photo by Lisa Chamberlain © Creative Commons

Figure 57. Ice skating.



Photo by Sean Savage © Creative Commons

Figure 58. Reading room.



Photo by Seth Werkheiser © Creative Commons

Figure 59. Movie night on the lawn.

## CASE STUDY Teardrop Park New York, NY

Design: Michael Van Valkenburgh Associates, Inc., New York, NY

Client: The Hugh L. Carey Battery Park City Authority

### Relevance to Slack Plaza

- Interpretation of natural environment and materials as programmed play environments.
- Capture and reuse of stormwater for irrigation and engineered soils.

### Location, Scope, and Size

Teardrop Park is a 1.8 acre public park located in Battery Park City, a mixed-use neighborhood on the southwestern side of lower Manhattan. Recognizing the importance of designing successful play spaces, the design team consulted child development specialists from the Natural Learning Initiative, soils engineers, and a fountain designer.

### Design

Teardrop Park is designed to integrate natural materials with adventure play for urban children. Site topography, interactive water fountains, natural stone, and intimately-scaled plantings work to maintain lines of sight while uniquely defining spaces and experiences. The design incorporates steeply sloped planted areas, groves of trees, and water play rocks, as well as a stone reading circle to introduce a variety of imaginative play experiences while giving children exposure to a naturalized environment.

The park features programmed play areas including a long slide, two sand pits, “theatre steps” and a water playground (Figure 61). Unprogrammed space is represented by a broad lawn, which is graded to catch the most light from the south, park benches, and a small wetland play path. A large rock wall, constructed from New York State sedimentary rocks, is stacked to resemble New York stratum (Figure 63). The wall design includes a water source to allow icicles to form in the winter.

### Green/Sustainable Design Features

- Park layout and program is a response to the microclimates created by the buildings.
- Treated and recycled gray water from the adjacent LEED Gold-rated Solaire Building and stormwater runoff from the site captured in an underground storage pipe supply all of the park’s irrigation needs.
- The largely native plant palette creates excellent habitat for migrating birds and effectively jump-starts natural ecologies on a site.
- Organic manufactured soils and maintenance regimes that avoid pesticides, herbicides, or fungicides.



Photo by Dreamymmo © Creative Commons

Figure 60. View of the park from an adjacent residential high-rise.



Photo by Sharon\_K © Creative Commons

Figure 61. The water playground with natural aesthetic.



Photo by Sharon\_K © Creative Commons

Figure 62. A path among lush vegetation and rolling landforms.



Photo by Sharon\_K © Creative Commons

Figure 63. A constructed rock outcrop.

## CASE STUDY Schenley Plaza Pittsburgh, PA

Design: Sasaki Associates, Boston, MA

Client: Pittsburgh Parks Conservancy, Oakland Investment Committee, City of Pittsburgh

### Relevance to Slack Plaza

- Overall reduction in impermeable surfaces to create an active urban destination.
- Multi-season interest.
- Public/Private partnerships and individual sponsorships sold at construction.
- Food vendor kiosks and restaurant (under construction).

### Project Location, Scope, and Size

Schenley Plaza, encompassing 4.5 acres, is located in the City of Pittsburgh's Oakland neighborhood. The Plaza borders the University of Pittsburgh, the Carnegie Library, and Schenley Park.

### Design

Schenley Plaza was originally designed as the grand entrance to Schenley Park in 1915. In 1949, the Plaza was converted into a parking lot to serve the university and adjacent Forbes Field. The parking layout was modified over time to accommodate a larger number of vehicles.

The Sasaki design is an effort to restore a grand entrance to the park. The 2006 design offers a great lawn, tented seating area, movable chairs modeled on Manhattan's Bryant Park (Figure 64), small flower gardens, a carousel (Figures 65 and 66), and food kiosks (Figure 67). A full service sit-down restaurant is currently under construction. The plaza also offers free wireless internet access, 24-hour security, and daily maintenance which includes the upkeep of clean, wheel-chair accessible restrooms. Strands of colorful LED lights create permanent light banners (Figure 68), while the same LED strand lighting concept is used to create holiday trees in the winter and giant daffodils rising out of the lawn in early spring.

### Green/Sustainable Design Features

- Park layout and program is a response to the surrounding urban demand for programmable green space.
- Over 3 acres have been converted from impermeable pavement to permeable green space.
- The largely native plant palette decreases demands for water and maintenance.



Figure 64. View of the plaza's seating, lawn and a permanent tented bandstand.



Figure 65. The carousel is one of many sponsorship opportunities.



Figure 66. The carousel draws children and families to the plaza.



Figure 67. One of several food kiosks.

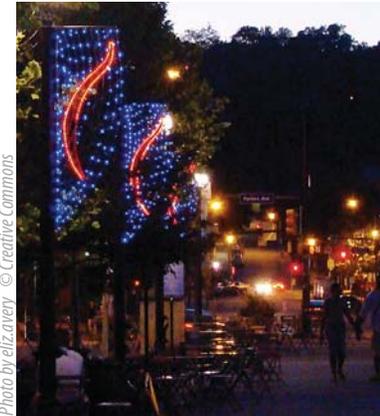


Figure 68. LED Banner lights.

## CASE STUDY Pioneer Courthouse Square Portland, OR

### Relevance to Slack Plaza

- Engaging the local artisan community to create interest in the park.
- Highlighting local culture for signature programming.
- Successful integration of sponsorship and public-private partnerships to bring culture and activity to downtown commuters and urban community members.

### Project Location, Scope, and Size

Located in the heart of downtown Portland, Pioneer Courthouse Square is an urban park affectionately known as the city's "living room." Prior to its grand opening in 1984, a private 501(c)(3) non-profit organization was created to manage programming and daily operations. Today the Square thrives with volunteer leadership and community support at every level through a unique management agreement with the city of Portland. Year-round programming and proximity to various transportation opportunities creates an effectively vibrant urban plaza.

### Programming

A full calendar of activities attracts as many as 26,000 people a day to the plaza.

#### Annual events include:

- *Portland Flower Festival* (Figure 69).
- *Sand in the City* sculpture event (Figure 70).
- *Bike to Work Breakfast* (Figure 71).
- *The National Urban League and Walgreens Wellness Tour*.

#### Regularly held events include:

- Taste of Portland Farmer's Market.
- *Noon Tunes* lunch hour concerts (Figure 72).
- *Mondays on the Mall*: Portland Mall Management, Inc partners with members of the business community to sponsor free events throughout the Portland Mall and LRT Loop Area. Activities include Video Game competitions, concerts, dance, photography, vendors, and games.

### Green/Sustainable Design Features

- Emphasis on local materials in artistic displays.
- Emphasis on local cultures and businesses through cooperative programming efforts ensuring economic sustainability.
- Transportation proximity promotes choices for commuters as well as opportunities for community interaction.



Photo by Mark Hogan © Creative Commons

Figure 69. Portland Flower Festival.



Photo by P. Mimik © Creative Commons

Figure 70. Wallace and Grommit sculpture from *Sand in the City*.



Photo by Matt Pricio © Creative Commons

Figure 71. Bike to Work Breakfast.



Photo by vince © Creative Commons

Figure 72. A well-attended *Noon Tunes* concert.

## CASE STUDY Environmental Art by Stacy Levy

### Relevance to Slack Plaza

- Artistic Interpretation of natural environment and materials.
- Local ecological patterns inspire artistic gestures.
- *Streamlines* is a precedent for how a minimal investment can create a large impact, and could serve as a temporary step in defining the main pathway through Slack Plaza and walkways.

### Lotic Meander

#### Location, Scope, and Materials

Ontario Science Centre, Toronto, Canada 2006

300 feet long by 40 feet wide

Polished and blasted granite, cast glass set into the paving

The piece depicts the patterns of water as it moves through a stream bed. The meandering form is based on several local streams. The scroll-like patterns clarify the hydrological patterns of water as it swirls in vortices around the bends in the stream bed. Glass stones are inset into the shoals of deposition, where gravel and stones would collect due to the slower current on the inside curve of the stream. Large stone domes, like boulders along the stream, reflect the sky and surrounding museum.



Figure 73. Lotic Meander paving detail.

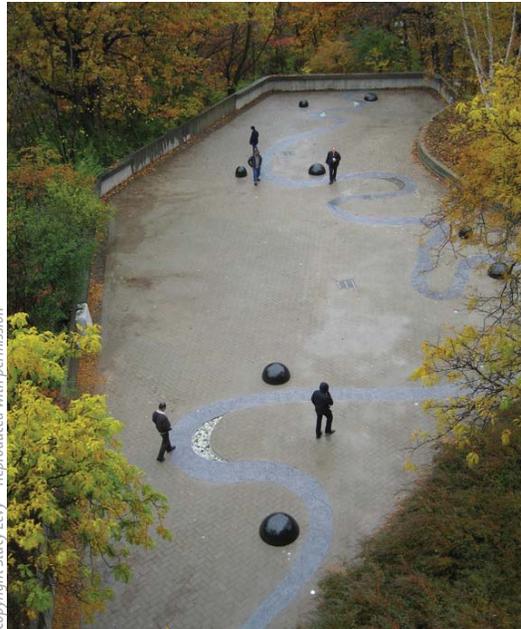


Figure 74. Lotic Meander paving from above.



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Figure 75. Paint lines ripple around manhole.



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Figure 76. Streamlines.

### Streamlines

#### Location, Scope, and Materials

North Carolina Zoological Park, Greensboro, NC 2004

400' long

Road striping paint, glass reflective beads, stone and bronze insets

The hydrological patterns of the nearby stream were enlarged and painted onto the meandering path with road striping paint. The areas of turbulence as the path curved or went past a manhole cover created patterns of vortices, while the straight portions of the path were depicted with parallel lines of laminar flow. These amazing patterns are invisible to the eye, but are present in all flowing streams.

#### Green/Sustainable Design Features

- Infusion of local materials into artistic interpretation.
- Low maintenance applications in highly used public space.