HEALTHIER NEW BRUNSWICK

New Downtown Park: Healthy Options for Use & Access

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PROJECT BACKGROUND

- Studio Client - Healthier New Brunswick Initiative (City of New Brunswick, key stakeholder)
- Wolfson Parking Deck slated for demolition
- New Brunswick Parking Authority’s oldest parking deck
- Proposal for downtown “pocket park”
- Downtown area lacking open space
- Health impacts of a new park located downtown New Brunswick
THE PROPOSED SITE

- Site is about 1.12 acres
- Located Downtown/City Market area
- Close to New Brunswick top employment centers
- Primarily commercial with adjacent residential
THE PROPOSED SITE
THE STUDY AREA

- Determined by studio team to include a 15 city block radius (22 census blocks)

- About 0.13 square miles (City is 5.8 square miles total)

- Bordered by Raritan River, Boyd Park, and Commercial Corridor

- Primarily Commercial with Residential along outer boundaries

- About 4,190 jobs in study area (12% of all city employment)
THE STUDY AREA
POTENTIAL PARK USERS

Five key user groups identified:

(1) Immediately adjacent residents
(2) Non-adjacent residents (‘Outer’) 
(3) Daytime users 
(4) Children 
(5) Seniors
### PARK USERS: Underserved Populations

<table>
<thead>
<tr>
<th>Underserved Population</th>
<th>Health Challenges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seniors</td>
<td>• streetscapes and parks lack mobility-sensitive amenities &amp; design</td>
</tr>
<tr>
<td></td>
<td>• more likely to experience psychological symptoms of distress</td>
</tr>
<tr>
<td></td>
<td>• (unclean) open spaces often perceived as unsafe</td>
</tr>
<tr>
<td>Children</td>
<td>• sedentary activities becoming more common</td>
</tr>
<tr>
<td></td>
<td>• many lack access to well maintained play areas</td>
</tr>
<tr>
<td>Disabled Adults</td>
<td>• streetscapes and parks lack mobility-sensitive amenities &amp; design</td>
</tr>
<tr>
<td></td>
<td>• more likely to experience psychological symptoms of distress</td>
</tr>
<tr>
<td></td>
<td>• more likely to be overweight/obese and have high blood pressure</td>
</tr>
<tr>
<td>African Americans &amp; Latinos</td>
<td>• minority neighborhoods less likely to have walkable streetscapes</td>
</tr>
<tr>
<td></td>
<td>• more likely to be overweight/obese and have diabetes</td>
</tr>
</tbody>
</table>
URBAN PARKS & PUBLIC HEALTH

Urban parks are:

“green engines to help address health to housing, to education and environmental justice, and countering sprawl to combating crime”

Trust for Public Land:

- City benefits can be as high as $350 million (direct use benefits)

USDA Forest Service, Study of Lincoln Park, Chicago:

- Minorities travel farther, travel by car more frequently, visit less, and more likely to visit in groups

Pier A Park, Hoboken NJ
Some populations are at higher risk for health disparities

US Dept. of Health and Human Services

- Healthy People 2020
- National effort dedicated to improving health outcomes

“Achieving health equity requires valuing everyone equally with focused and ongoing societal efforts to address avoidable inequalities, historical and contemporary injustices, and the elimination of health and health care disparities”
# URBAN PARKS & PUBLIC HEALTH

<table>
<thead>
<tr>
<th>Physical</th>
<th>Mental and Social</th>
<th>Environmental</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Combat Obesity and related diseases</td>
<td>• Decreased stress and depression levels</td>
<td>• Decrease pollution</td>
</tr>
<tr>
<td>• Saves direct health care $ spent on treatment</td>
<td>• Less potential for mental fatigue</td>
<td>• Mitigate stormwater runoff</td>
</tr>
<tr>
<td>• Saves indirect costs of lost productivity</td>
<td>• Symptom alleviation for ADD, Alzheimer’s and Dementia</td>
<td>• Provide cooling winds</td>
</tr>
<tr>
<td></td>
<td>• Fosters learning, alertness, imagination, creativity</td>
<td>• Protect biological diversity</td>
</tr>
<tr>
<td></td>
<td>• Reinforces social ties</td>
<td></td>
</tr>
</tbody>
</table>

- Decrease pollution
- Mitigate stormwater runoff
- Provide cooling winds
- Protect biological diversity
LOCAL HEALTH SNAPSHOT

• In Middlesex County:
  • Highest rates of diabetes among those 65 years and older, males, and black residents
  • Highest rates of heart disease in non-Hispanic whites, males, and individuals Seniors

• NJ Childhood Obesity Survey identified four important trends in New Brunswick childhood obesity:
  • NB children are more likely to be overweight and obese than nationally
  • Obesity is particularly prevalent in younger, Hispanic children
  • Most children do not meet daily recommended 60 min. of physical activity
  • Traffic, sidewalk conditions, and crime deter many children from parks
EXISTING PARK SPACE

A  Alex Baker Park
B  Archibald Park
C  Boyd Park
D  Buccleuch Park
E  Feaster Park
F  Joyce Kilmer Park
G  Kossuth Park
H  Simplex Park
I  Memorial Stadium
J  Monument Park
K  Monument Square Park
L  Murphy Park
M  Pitman Park
N  Quentin Avenue Park
O  Recreation Park
P  Rutgers Village Mini Park
Q  Youth Sports Complex

Data sources: New Jersey Department of Environmental Protection (NJDEP), 2013; Middlesex County Department of Planning, NJ Office of Information Technology (NJOIT) Park Amenity Inventory adapted from New Brunswick Parks and Gardens Brochure, 2015
HEALTH INSURANCE

- Downtown core & Rutgers campuses: 0 to 15% uninsured
- Block groups immediately south of downtown: 15 to 30% uninsured
- Livingston Ave residential corridor: Over 45% uninsured

Percent of Population Uninsured
- Under 15%
- 15 to 30%
- 30 to 45%
- Over 45%

Study Area
Park Site

Sources: New Jersey Geographic Information Network, United States Census Bureau, ACS 2013
**DOWNTOWN LAND USE**

- Dominating land uses city-wide are residential, commercial and industrial.
- Downtown land use primarily commercial.
- Residential development in the downtown area has been increasing over past few years.

Data sources: New Jersey Department of Environmental Protection (NJDEP), 2013; Middlesex County Department of Planning, NJ Office of Information Technology (NJOIT).
Per Capita Income

Data sources: New Jersey Geographic Information Network, Google Maps, U.S. Census Bureau, ACS 5-year estimates
LINKAGES & ACCESS

Residents in walking distance:

- 4,579 live within 10 minutes of site*
- 23,447 live within 20 minutes of site*

*Data from 2013 5-Year ACS block group data; walking network calculated from a conservative estimated movement speed of 2.8 mph.
LINKAGES & ACCESS

Wayfinding

- Majority of signage located at or near train station
- Oriented to parking, business, government, theater, transit, & healthcare
- Downtown/ City market districts less wayfinding signage than other parts of city
- Little to no wayfinding present for public spaces including existing park space
- Little wayfinding for non-English speaking community members
- Primary concerns are Hispanic/Latino & Russian-speaking senior populations
LINKAGES & ACCESS

Wayfinding
LINKAGES & ACCESS

- Vehicle and Pedestrian Safety

- Bike-ped crashes cluster along two main corridors:
  - French St.
  - Easton Ave.

- Commercial corridors close to residential

Bike/Ped Crash Density
- 0 - 125 crashes per sq. mile
- 125 - 630 crashes per sq. mile
- 630 - 1,135 crashes per sq. mile

Walk Distance
- 10 Minute
- 20 Minute

Points of Interest
- Park Site
- Study Area
Methodology

- Eight weighted factors used for street and block condition analysis:

<table>
<thead>
<tr>
<th>Factor</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sidewalks</td>
<td>0 - 5 Points</td>
</tr>
<tr>
<td>Lighting</td>
<td>0 - 4 Points</td>
</tr>
<tr>
<td>ADA compliance</td>
<td>0 - 3 Points</td>
</tr>
<tr>
<td>Obstructions</td>
<td>0 - 3 Points</td>
</tr>
<tr>
<td>Speed limit</td>
<td>0 - 2 Points</td>
</tr>
<tr>
<td>Cyclist accommodations</td>
<td>0 - 1 Points</td>
</tr>
<tr>
<td>Seating/amenities</td>
<td>0 - 1 Points</td>
</tr>
</tbody>
</table>
STREET WALKABILITY

Street and Block Condition Assessment

Grade A (18 - 21)
Grade B (13 - 17)
Grade C (9 - 12)
Grade D (5 - 8)
Grade F (0 - 4)

Data sources: Project team field work, 2015; Middlesex County Department of Planning, NJ Office of Information Technology (NJOIT); New Jersey Geographic Information Network (NJGIN)
STREET WALKABILITY

Street and Block Condition Examples

<table>
<thead>
<tr>
<th>Street</th>
<th>Grade</th>
<th>Block Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Livingston Ave</td>
<td>A</td>
<td>Strong</td>
</tr>
<tr>
<td>(Between George &amp; Welton Streets)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Livingston Ave (Between George & Welton Streets)
## STREET WALKABILITY

Street and Block Condition Examples

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<tr>
<th>Street</th>
<th>Grade</th>
<th>Block Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Welton Street</td>
<td>C</td>
<td>Weak</td>
</tr>
<tr>
<td>(Between Livingston &amp; Remsen Avenues)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
STREET WALKABILITY

Street and Block Condition Examples

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<thead>
<tr>
<th>Street</th>
<th>Grade</th>
<th>Block Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morris Street</td>
<td>F</td>
<td>Weak/Weakest</td>
</tr>
<tr>
<td>(Between George &amp;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>John Streets)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
STREET WALKABILITY & SAFETY

Comparison of Crash Data and Field Work

Bike/Ped Crash Density
- 0 - 125 crashes per sq. mile
- 125 - 630 crashes per sq. mile
- 630 - 1,135 crashes per sq. mile

Block Condition
- Strongest
- Strong
- Moderate
- Weak
- Weakest

Data sources: Project team field work, 2015; Middlesex County Department of Planning, NJ Office of Information Technology (NJOIT); New Jersey Geographic Information Network (NJGIN), NJDOT, Plan4Safety, 2010-2014
LINKAGE & ACCESS RECOMMENDATIONS

- Address pedestrian safety in high accident areas
- Prioritize sidewalk and crosswalk improvements at New St. and Neilson St.
- Also focus on residential neighborhoods south of New St.
- Redesign wayfinding network to focus on downtown rather than healthcare & theatre district only
- Signage at transition points and high traffic areas
- Uniform aesthetic (city and county integration)
- Multi-lingual signage
- Maps (easier to use than signs)
PARK SITE DESIGN CONCEPT
# PARK SITE DESIGN CONCEPT

<table>
<thead>
<tr>
<th>Uses</th>
<th>Potential Benefits</th>
<th>Potential Issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Childrens Play Area</td>
<td>• Physical activity</td>
<td>• Injuries</td>
</tr>
<tr>
<td></td>
<td>• Socialization</td>
<td>• Vehicle emissions</td>
</tr>
<tr>
<td></td>
<td>• Mental stimulation</td>
<td>• High density Traffic</td>
</tr>
<tr>
<td>Dog Park</td>
<td>• Physical activity</td>
<td>• Sanitation</td>
</tr>
<tr>
<td></td>
<td>• Socialization</td>
<td>• Animal/human injuries (dog bites)</td>
</tr>
<tr>
<td>Water Feature</td>
<td>• Mental stress relief</td>
<td>• Sanitation</td>
</tr>
<tr>
<td></td>
<td>• Natural air purifier</td>
<td></td>
</tr>
<tr>
<td>Staging/Event Area</td>
<td>• Community cohesion</td>
<td>• Noise</td>
</tr>
<tr>
<td></td>
<td>• Promotes youth activity</td>
<td>• Liter</td>
</tr>
<tr>
<td></td>
<td>• Socialization</td>
<td>• Crowding</td>
</tr>
<tr>
<td>Seating</td>
<td>• Socialization</td>
<td>• Liter</td>
</tr>
<tr>
<td></td>
<td>• Mental relaxation</td>
<td>• Pests</td>
</tr>
<tr>
<td></td>
<td>• Reduces physical fatigue</td>
<td>• Loitering</td>
</tr>
</tbody>
</table>
# PARK SITE DESIGN CONCEPT

<table>
<thead>
<tr>
<th>Recommended Park Uses</th>
<th>Children</th>
<th>Seniors</th>
<th>Immediate Residents</th>
<th>Outer Residents</th>
<th>Daytime</th>
</tr>
</thead>
<tbody>
<tr>
<td>Childrens Play Area</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Dog Park</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Water Feature</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Staging/Event Area</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Seating</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>
SITE CONSIDERATIONS

Design Issues to Consider:

- Slope
- ADA
- Runoff
- Space
SITE CONSIDERATIONS

- Options for dealing with slope
  - Arching
- Largest singular open space
  - Rectangular Steps
- Most Uniform
  - Rectangular Sloped Steps
RECOMMENDED USES

- Childrens Play Area
- Dog Run
- Staging/Event Area
- Water Feature
- Seating Area
<table>
<thead>
<tr>
<th>Elements</th>
<th>Recommendation and Health Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entrance</td>
<td>• Sense of ownership</td>
</tr>
<tr>
<td></td>
<td>• Sense of location and presence</td>
</tr>
<tr>
<td>Fencing</td>
<td>• Large surrounding exterior combined with smaller for certain spaces in interior</td>
</tr>
<tr>
<td></td>
<td>• Separates uses, sense of safety and privacy that encourages use of park</td>
</tr>
<tr>
<td>Seating</td>
<td>• Arm rail seating/flat bench seating</td>
</tr>
<tr>
<td></td>
<td>• Separation between users and athletic adaptation</td>
</tr>
<tr>
<td>Shading</td>
<td>• Perimeter trees</td>
</tr>
<tr>
<td></td>
<td>• Provides cooling space and cleaner air</td>
</tr>
<tr>
<td>Lighting</td>
<td>• Pillar and ground spot lights</td>
</tr>
<tr>
<td></td>
<td>• Less need for security but allows for slope recognition</td>
</tr>
<tr>
<td>Playground</td>
<td>• Interactive play area with permeable surface</td>
</tr>
<tr>
<td></td>
<td>• Greatest opportunity for youth activity</td>
</tr>
<tr>
<td>Sanitation</td>
<td>• Water sanitation and physical debris</td>
</tr>
</tbody>
</table>
ADDITIONAL RECOMMENDATIONS

• Collect more health data

• Stakeholder engagement on park design
  Outreach to target subpopulations

• Park sustainability
  Corporate sponsorship
  Volunteer groups

• Develop programming that addresses needs of subpopulations
  Partner with local schools, businesses, Rutgers University
FINDINGS

- A new park for downtown would have significant health impacts to residents and visitors

- Safety, sidewalk and crossing conditions, and wayfinding present linkage and access challenges

- Many potential user groups sharing a small space present site and programming specific challenges

- Community engagement is needed to maximize the future design and programming for the site
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The project team would like to extend a special thank you to the studio instructors, Karen Lowrie and Maria Pellerano for their knowledge and guidance throughout this process. We would also like to thank the various speakers and faculty who participated in the planning process including:

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