Sustainability & The Standards

Tim E. Simmons
Senior Preservation Architect
North Carolina
State Historic Preservation Office
www.hpo.ncdcr.gov
Four Case Studies that Combined Historic Tax Credits & LEED Certification to Achieve Community-Wide Reuse & Reinvestment

“The greenest building is the one that already exists.”
Golden Belt Center
Durham, NC
LEED Gold
Opportunities

- Rehabilitated 155,000 square feet for mixed-use arts-focused campus
- Removal of nonhistoric additions/infill to restore original exterior walls
- Pedestrian, bike and bus accessibility
Opportunities

- Heat island & storm water runoff reduction
- Sun lighting and view oriented layouts
- Full heritage building recycling
- Energy efficient lighting and HVAC
Opportunities

- Extensive use of recycled and regionally sourced materials
- Energy efficient refurbished and new windows
- No irrigation—drought resistant landscaping
Challenges

- $26 million investment in what was a blighted neighborhood
Opportunities

- Rehabilitated 1 million square feet of vacant buildings for vibrant mixed-use
- Pedestrian, bike & bus accessibility
- New atrium spaces for natural lighting
- Drought resistant landscaping
Opportunities

- Rainwater collection from roofs to cisterns for irrigation
- Heat island & storm water runoff reduction
- Sun lighting & view oriented layouts
Opportunities

- Full heritage building recycling
- Extensive use of recycled & regionally sourced materials
- Energy efficient lighting & HVAC
- High reflectance membrane roof
Opportunities

- Energy efficient refurbished & new windows
- 3 LEED Gold Commerical Interiors
- Gray recycled water for “Bull River”
- Green cleaning products
Challenges

- New windows created to let light into formerly windowless Crowe Building
- Demolition of south end Washington Building to create a parking structure
- Currently developing a rooftop photovoltaic generation grid
Roger’s Alley
Durham, NC
LEED Registered
Opportunities

- Rehabilitated 3 historic buildings for mixed-use
- Common courtyard serves for rain water collection to cistern for irrigation
- Installed geothermal heat pump system with 3 -1500’ wells
Opportunities

- High reflectance membrane roof with potential for solar water heat or vegetative roof
- Installed daylight monitors, operable windows & programmable exterior lighting
Opportunities

- Ensured significant material reuse (e.g., recycled brick for hardscape, reused historic tin ceiling, repaired original hardwood flooring where possible, reused marble/wood bathroom partitions from another property)
Opportunities

- Used reclaimed hardwoods where original flooring was too deteriorated
- Used high recycled content materials (e.g., carpet & drywall)
- Pedestrian, bike & bus accessibility
Challenges

- Access to proposed green roof on Historic Durham Fire Station No. 1
Heilig-Levine Complex
Raleigh, NC
LEED Platinum
Commercial Interiors
Opportunities

- Rehabilitated 4+ historic buildings for mixed-use
- Retain long-term tenants like Capitol Barber Shop
- Pedestrian, bike and bus accessibility
Opportunities

- Created shared accessible circulation, restrooms & mechanical for all 4 buildings within revamped courtyard for dining

- Energy efficient refurbished windows

- Use of low emitting materials
Opportunities

- Efficient landscaping
- Waste & water use reduction
- Sun lighting and view oriented layouts
- Full heritage building recycling
Opportunities

- Extensive use of recycled and regionally sourced materials
- Energy efficient lighting and HVAC
Challenges

- Painting exposed ductwork & previously painted materials
Capitol Barber Shop
North Carolina State Building Code

Volume IX—Existing Buildings (1994)
North Carolina Rehab Code (2001)
Volume I—Chapter 34, Existing Structures