

Civic Solution to Technical Problems: The Case of Hot Springs, Arkansas

SEVINÇ YAVUZ
University of Arkansas

BACKGROUND

Natural resources such as fertile soils, forest, water, were basic attractions for the early settlers. The existence of bountiful thermal springs made certain locations even more attractive. This was what awaited the Spanish explorer Hernando de Soto and his men when in 1541 they paused at the valley of hot springs in present-day central Arkansas, so the story goes. European travelers and entrepreneurs started to settle in the valley which contained more than fifty springs and the potable water of the creek, as well as the Ouchita River nearby. The territory joined the United States in 1803, as part of President Jefferson's Louisiana Purchase from France. The Army topographical engineer reported in 1818 that he found "sixty separate hot springs and fourteen or fifteen rude cabins. He estimated that Hot Springs Creek, formed by the springs and running southward, carried about a thousand gallons per minute."¹ The town of Hot Springs developed from the handful of scattered cabins built by early settlers. Sacred Indian territory became a federal reservation in 1832, when for the first time the federal government decided to preserve land for recreational purposes. Hot Springs prospered in the nineteenth century; boasting several bathhouses, innumerable hotels, and an opera house. As the century neared its end, the rich and the famous of the country were able to travel in Pullman cars right into the center of this "Carlsbad of America."

Hot Springs Creek, which runs north to south in the valley, became a serious health hazard, gradually turning into an open sewer with the expansion of the town. The Department of the Interior was persuaded in 1884 to cover Hot Springs Creek with a masonry vault "of sufficient dimensions to carry off any flood waters coming down the hills."² This paved the way for Hot Springs's main street, a 1,000-foot avenue through the heart of the growing city. In 1921, Congress declared the popular reservation the eighteenth national park.³



Figure 1. General View of Hot Springs.

Hot Springs National Park embraces the downtown area within its unique topography—two hills separated by a valley containing its principal collector street, Central Avenue (figure 1). The city extends outward from both ends of Central Avenue, similar to an hourglass. The National Park owns a group of elegant brick and stucco bathhouses built between 1912-1922 to replace older, more modest facilities. Only two of the eight buildings that make up Bathhouse Row are in use, one as the park visitor center, the other as a traditional bathhouse (figure 2). The rest have been weather-proofed and are maintained by the Park Service awaiting some form of reuse. Downtown businesses, ranging from souvenir or so-called gift stores, diners, wax museum, to art galleries, antique stores, restaurants, nightclubs, and several hotels, cater mainly to tourists. There is a stock of handsome, structurally sound late nineteenth, early twentieth century buildings, vacant above their first floors. Several unkempt parking lots disrupt the street edge on both sides of Central Avenue. The City has invested in a new Convention Center, inaugurated this year. New businesses continue to appear in anticipation of a steady stream of convention participants.



Figure 2. Central Avenue with Bathhouse Row to the right.

The two parts of the National Park flank the Avenue, leaving very little room for construction. Throughout the relatively short history of the town, shortsighted speculative interest has been the primary guide for building activity. Today, the rocky terrain on both sides of the valley remains visibly scarred, as a record of deep, perilous cuts which made room for buildings some as high as ten, fifteen stories or more. Floods, land and rockslides have demonstrated the high cost

of shortsighted, ad hoc planning and misuse of land. Intense rain storms, coupled with increased population growth and the reduced carrying capacity of the tunnel and channels have resulted in several floods in the basin, the most recent one in 1991. Numerous land and rockslides have caused loss of life and property.⁴ Finally, major fires have contributed significantly to the inventory of vacant buildings or lots, the latter providing much-needed space for parking. In the absence of legislated pressure or incentives, property owners let their buildings exist in a state of disrepair.

The invitation extended to the UACDC (University of Arkansas Community Design Center) in 1997 came in the wake of an article in *Consumer Reports*, which placed Hot Springs last in its overall rating of National Parks, based primarily on inadequate parking for tourists.⁵ The Executive Committee of The Fifty for the Future (its members include downtown business owners, property owners, educators, and other civic leaders) and the Downtown Parking Task Force (a committee of about twenty five people, representing downtown merchants, the arts community, civic organizations, Fifty for the Future, National Parks Service, the City, County, and the tourism industry) approached the UACDC for assistance in solving this parking problem. After a number of exploratory meetings in Hot Springs, it became clear that a comprehensive approach to civic issues was required in lieu of reactive, palliative solutions to the parking problem. Several earlier parking studies had been just that and were not effective.⁶ The Center agreed to do a year-long study in two phases. The first phase was intended to analyze problems and issues confronting downtown Hot Springs, to develop design principles, and to generate preliminary proposals that could be further developed in the next phase. Monthly meetings were to be held with the sponsoring group in order to get feedback and input for each subsequent step. These meetings at the same time intended to inform our team on the inner dynamics of the city, which were foreign to us.

The first phase of this study started in January 1998, with upper level students from the School of Architecture working for studio credit, as part of a team of UACDC staff and faculty.⁷ Monthly meetings were held with the Task Force to present work in progress, with a final presentation to the public in April at the conclusion of this phase.

Initial investigation of the parking problem led to a host of other pressing issues. Periodic flooding along the main street and the prospect of imminent landslides from adjoining hills are concerns which will have to be addressed with some immediacy before any major downtown investment can place. Other issues included the erosion of street edges, lack of a stable downtown residential population, problems brought about by through traffic along the main artery, sprawl, inadequate public transportation, the physical and visual separation of the two pieces of the national park, and lack of identifiable gateways and connections. From this initial analysis a three-part framework emerged: civic issues, urban design principles, and preliminary proposals. This comprehensive approach was well received by those present at the first meeting in early February when civic issues were presented. The City Manager stressed flood control and rockslide as major problems—"those risks are out there!" Two recent flood control studies by the Army Corps of Engineers have remained insufficient in providing preventive measures to avert disaster. One study proposed constructing a "floodwater retarding structure"—a dry dam—and enlarging the existing arch. A second study in 1994 proposed excavating a ditch to the west of buildings along Central Avenue, covered with a grated surface to permit traffic. Certain segments of this channel would require cutting a tunnel in the West Mountain. Any exposed rock cuts were to be stabilized with wire mesh and rock bolts.⁸

Apart from preliminary sketches, there is no discussion in either report of erosion control, cost, and, most important of all, further disfigurement of National Park slopes. Even though the UACDC made preliminary proposals to alleviate flooding, this was not pursued further beyond pointing out the urgency of this issue. In the

meantime the city had already contracted to enlarge the vaulted tunnel below Central Avenue in order to increase its capacity.

With regard to hillside stabilization, the most recent study is the report on rockfall hazard evaluation prepared in 1997 by FEMA (Federal Emergency Management Agency), in response to the City's request for technical assistance. This study "evaluates the stability of the slopes and describes the relative potential for failure," recommends "mitigation measures to reduce rockfall hazard, and develops feasibility-level cost estimates for implementing these measures"—such as scaling, draped wire mesh or steel straps, spot bolting or pattern bolting, prestressed ground anchors, reinforced shotcrete, concrete rim drainage ditch, drilled weep holes, clearing of vegetation. Chain link fence and concrete catch walls are recommended in certain locations as protection measures.⁹

At the meeting in February the UACDC made the proposition "to turn an engineering problem into a civic problem." In the light of this proposition, initial proposals were presented at the following two meetings for review and further development before the public meeting in April.

A principal outcome of the initial study was the development of a prototype structure, which would include structured parking levels, space for new ground floor retail, as well as upper level commercial offices and/or residential units. Most important, the typology being advanced suggested the notion of using construction of new parking facilities as a catalyst for upgrading and improving the civic environment of downtown Hot Springs.¹⁰

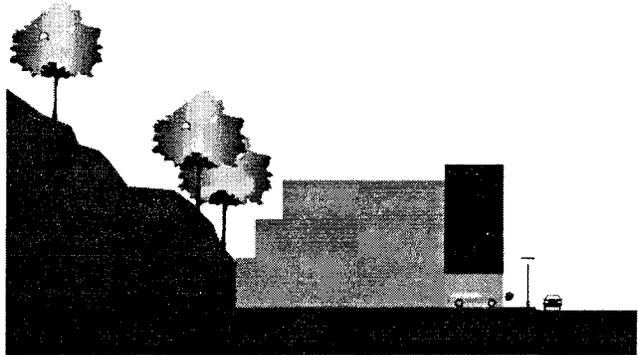


Figure 3. Building as stabilizer: basic diagram of a strategy for a civic parking structure, from Phase One Report, May 1998.

The next phase of the study started in September 1998. Building on the previous study and report, the new team of students outlined several goals for this phase within a two-part framework. The first part, more comprehensive in scope, included: connection of the two halves of the National Park; continuation of the new Greenway Trail to include Bathhouse Row, the Promenade in the National Park, to Lake Hamilton (this trail ends where Hot Springs Creek goes underground at the Transportation Plaza adjoining the renovated train depot);¹¹ proposal of a hierarchy of strategies for downtown parking. The second part became the development of the prototype structure proposed in the previous phase. This concurred with the Fifty for the Future Executive Board's decision that the principal focus of the second phase ought to be ways and means of accommodating increased parking.

The design team identified more than fifteen vacant lots within the downtown district. Each of these sites were evaluated based on lot size, suitability for use primarily as parking, and feasibility with respect to mixed use (retail, offices, and residential.) With the exception of a few, these are all damaged sites; several display aggressive cuts into hills without any serious attempt to reinforce or

buttress against rockslides. Any new structure will not only provide infill and continuity, but will also be a "buttress with program," as illustrated in the Phase One Report.

A map showing these sites together with mixed use building studies for some of the sites were presented to the Task Force at a meeting in November. The Task Force not only supported this method of approach, it also proposed other sites for inclusion, raising the total number to eighteen. Following this meeting, the design team identified one site as having the most potential for demonstrating the concept. This was selected for a more extensive proposal, at the same time that schematic drawings for about ten of the other sites (plan, section, and axonometric diagrams) were prepared. These became part of a catalog of site studies included in the final presentation in December.

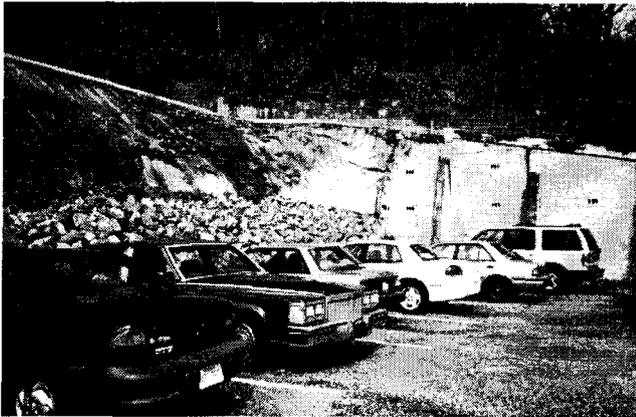


Figure 4. Parking lot off Exchange Street, below West Mountain.

Proposal for Bath and Exchange Streets Site

This site merges several lots under public or private ownership. Recent rockslides have prompted partial closing off of some of the parking lots at this location (figure 4). Crude stabilization efforts are an eyesore in this prime location adjoining the West Mountain piece of the National Park and so close to Bathhouse Row. The proposal includes space for retail, offices, and residential units, in addition to providing more than 500 parking spots which is a substantial increase in downtown parking (figure 5). There is room for a new county courthouse if desired. A West Mountain trail meets the main building at the roof level where a visitor center is envisioned, providing a view of Bathhouse Row and Central Avenue. This centerpiece nestles into the mountain, flanked by smaller buildings along Exchange Street. Infill buildings frame a public plaza and a pedestrian path which connect West Mountain across Central Avenue, to Bathhouse Row, and the Promenade beyond (figures 6 and 7). The proposal is conceived as a model civic structure that at the same time repairs the damaged site. Parking levels in the main building step back in section, similar to the existing hill cuts the hill (figure 8).

CONCLUSION

Problems in urban infrastructure are typically viewed as engineering problems and architects, urban designers, or landscape architects are not consulted. Architects have either been reluctant to get involved or have not been called upon, due to popular misconceptions of the profession. Earlier attempts in Hot Springs to solve critical problems are illustrative of this artificial gap between designers and technical problem solvers. Problems such as imminent landslides, flooding, downtown traffic and parking, each of which could trigger civic projects with broader impact, have been defined as "technical" or "engineering problems." A narrowly defined

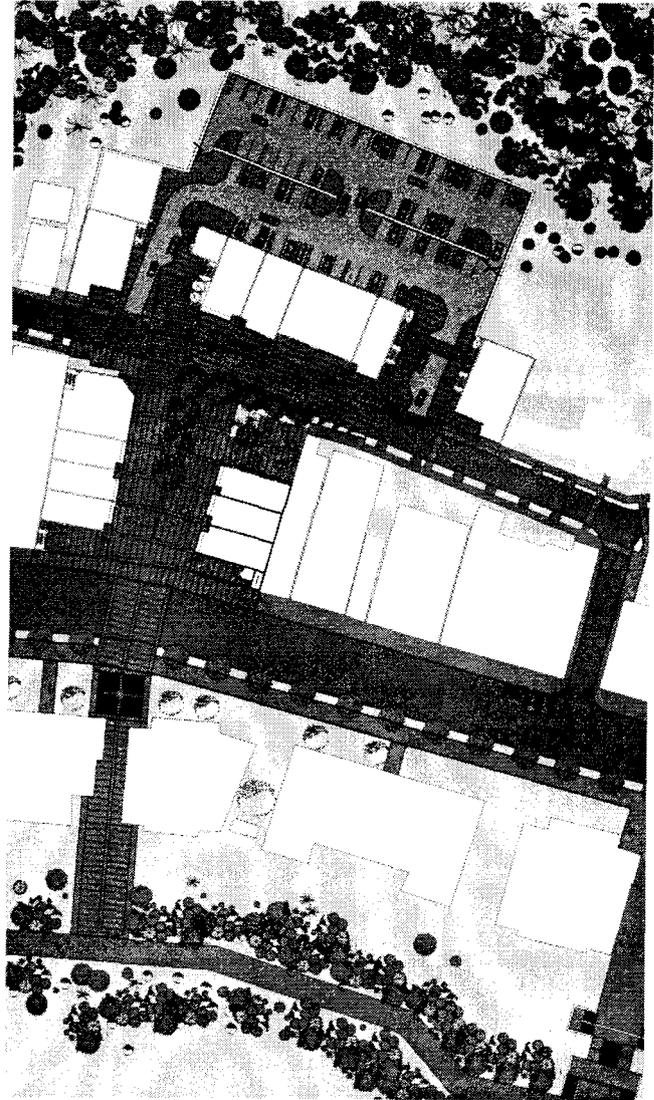


Figure 5. Plan diagram of proposal. Central Avenue and the Promenade are in the lower half of the drawing.

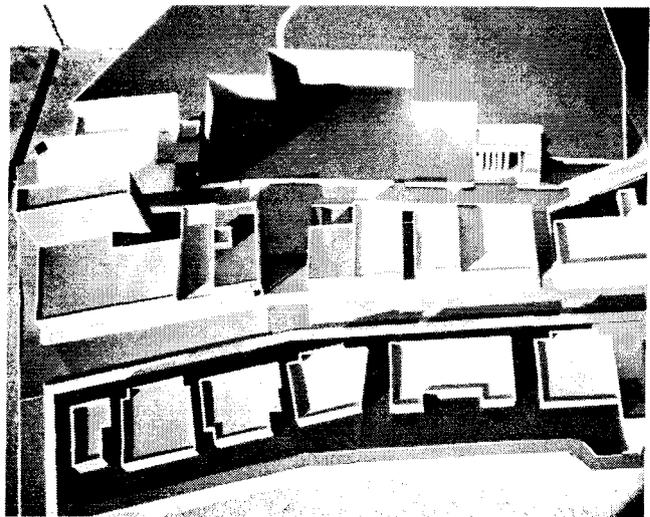


Figure 6. Model showing existing parking lots, with Central Avenue and Bathhouse Row in the lower half.

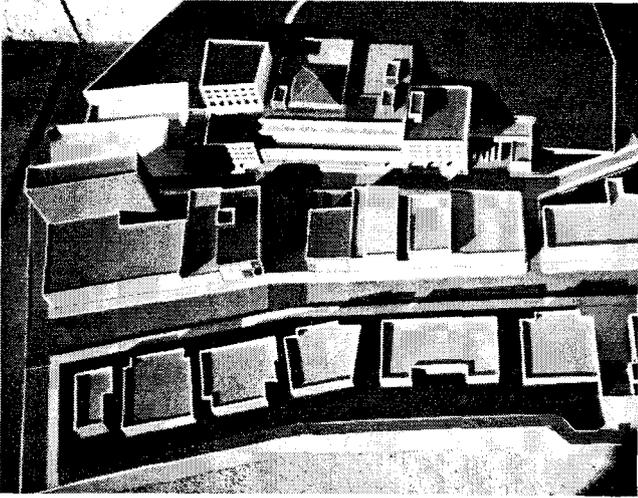


Figure 7. Model with proposed buildings in place.

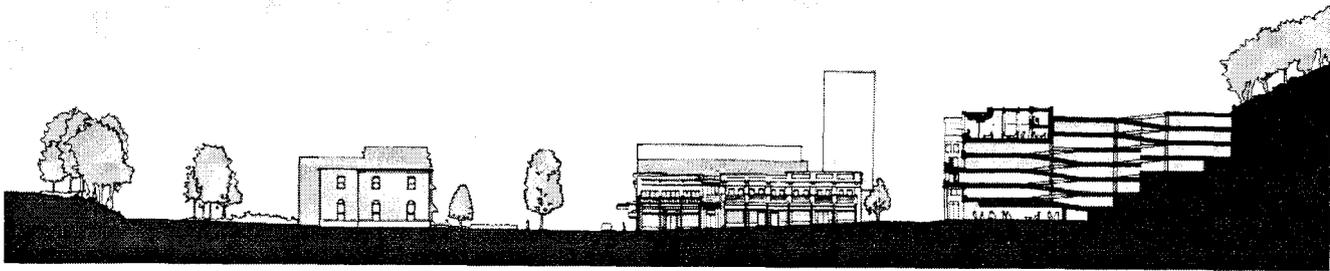


Figure 8. East West Section through the main plaza, mixed used structure and West Mountain to the right.

problem engenders a limited solution. Civic leaders in Hot Springs who sponsored this study have understood the value of an exemplar or model project, which if realized will motivate further development and rehabilitation in the downtown business district. Drawings and model of this proposal have been displayed in Hot Springs; the press has covered it both locally and statewide.¹² Civic leadership is looking for ways to finance this project, most likely through a public/private partnership which will bring together the City, private land owners, the National Parks Service, and FEMA. FEMA supports disaster prevention efforts and therefore is a potential ally in integrative design projects.¹³

Studio Experience

Effects of human habitation can be traced back several hundred years. In fact, research shows environmental catastrophes are not an innovation of the modern world.¹⁴ Even though there are cultures that have maintained a very close relationship with the land—sustaining the identity of a place, understanding the value of topographic form¹⁵—examples of human land abuse tend to be much more numerous. In Hot Springs, students observed land abuse in its past and present forms, at the same time that they were introduced to the study of appropriate land use within an urban setting. Furthermore, the project demonstrated how the systemic nature of design activity extended beyond the building program, form, and structure, mandating inclusion of site repair and infrastructure. This has been an important lesson for students who typically do not arrive at the Center with a background in urban design issues and tend to compartmentalize architecture and urban design rather than see them as connected in a seamless manner. This challenges those students who are enamored by individualist and emotivist themes which increasingly dominate practice as well as contemporary architectural theory.¹⁶

Community design projects require students to discard the heroic view of Design that studios tend to instill—a view which also delegates a secondary role to technology or technical problem solving instead of seeing these as design opportunities.¹⁷ Hot Springs may have been the most complex so far, but each one of the more than twenty projects students have worked on at the Center for the last four years has required some form of civic response to technical issues.

NOTES AND REFERENCES

- ¹ Dee Brown, *The American Spa: Hot Springs Arkansas* (Little Rock: Rose Publishing Co., 1982): 12.
- ² Brown, *The American Spa*, 36.
- ³ For accounts of the recent history of the town, made even more colorful by gambling, political corruption, "the mob", Al Capone, and horse racing, see: Brown, *The American Spa*, and Shirley Abbott, *The Bookmaker's Daughter* (New York: Ticknor & Fields, 1991).
- ⁴ Sharon Shugart, *The Hot Springs of Arkansas Through the Years 1803-1996* (Hot Springs National Park publication).
- ⁵ "Rating the Parks," *Consumer Reports* 62 (June 1997): 10-17.
- ⁶ Central Business District Parking Study (Arkansas State Highway and Transportation Department, 1996); City of Hot Springs Convention Center Traffic and Parking Study (Peters and Associates, Engineers, Inc., Little Rock, May 14, 1996).
- ⁷ David Evan Glasser, UACDC Director; Sevinc Yavuz, School of Architecture; Jay Dickerson, project/program specialist. Participating students: Rob Hagan, Steve Bosch, Vince Schlereth in phase one; Carmen Brehmer and Carl Ebert in phase two.
- ⁸ Flood Control Study, Hot Springs Arkansas (US Army Corps of

- Engineers, Vicksburg District, May 1990); Concept of Flood Control Channel Downtown Hot Springs AR (March 1994).
- ⁹ Rockfall Hazard Evaluation, Hot Springs Arkansas (FEMA region VI, Denton TX, 1997): 6-1/6-4. See also: Lee W. Abramson et al., *Slope Stability and Stabilization Methods* (New York: John Wiley & Sons, Inc., 1996).
- ¹⁰ "Introduction," Hot Springs Phase II Study (UACDC, December 4, 1998).
- ¹¹ Hot Springs Greenway Trail Project, prepared by the firm of Carter Burgess in Little Rock.
- ¹² "Spa City Seeks Funds for Project," *Arkansas Democrat Gazette* (February 10, 1998): 1B.
- ¹³ In March, a delegation which included the mayor, members of the Downtown Task Force and Fifty for the Future, and the director of the UACDC, went to Washington D.C. In April, James Lee Witt, head of FEMA, visited the UACDC's office in Fayetteville to discuss implementation of the project.
- ¹⁴ See: Curtis N. Runnels, "Environmental Degradation in Ancient Greece," *Scientific American* 272 (March 1995): 96-99.
- ¹⁵ Kenneth Frampton, editor, *Technology Place and Architecture* (New York: Rizzoli, 1998): 14-15.
- ¹⁶ Philip Bess, "Communitarianism and Emotivism," in Kate Nesbitt, editor, *Theorizing a New Agenda for Architecture: An Anthology of Architectural Theory 1965-1995* (New York: Princeton Architectural Press, 1996): 372-82.
- ¹⁷ A number of schools offers new studios which integrate design and technical aspects in a creative manner. See: David C. Ekroth, "Teaching Hazard Mitigation Principles in Design Studio: Helping to Implement the 1995 National Mitigation Strategy and 1998 FEMA 'Project Impact' Through Architectural Education," paper delivered at the ACSA SW Regional Meeting, Texas A & M University, October 15-18, 1998.