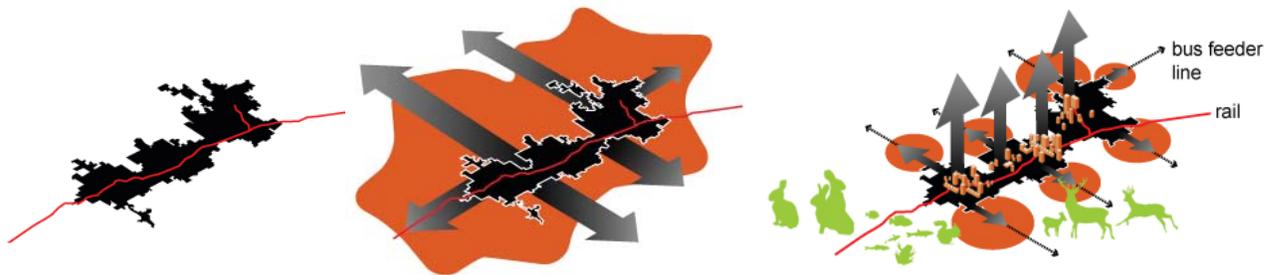


Visioning Rail Transit in Northwest Arkansas: Lifestyles & Ecologies

The NWA Rail Transit Design Studio

"We cannot talk about urban transport until we know what type of city we want. How do we want to live? Do we want to create a city for humans or a city for automobiles? The important questions are not about engineering, but about ways to live."

Enrique Penalosa, former Mayor of Bogota, Colombia in *Massive Change*



2007 Northwest Arkansas Scenario:

2050 Sprawl Scenario:
erasure of the "Natural State"
"Natural State"

2050 Transit
stewardship of the

Abstract: From Research and Design to Advocacy

Northwest Arkansas (NWA) is the nation's sixth fastest growing region. This area of 300,000 is expected to double its population within 15 years, and grow to more than one million by 2050. The studio's objective is to mobilize public and political support for development of a regional rail transit system within an existing 32-mile rail corridor as a smart growth platform for NWA. The challenge is to facilitate the public's understanding of public transit policy and design issues in a region without strong planning traditions.

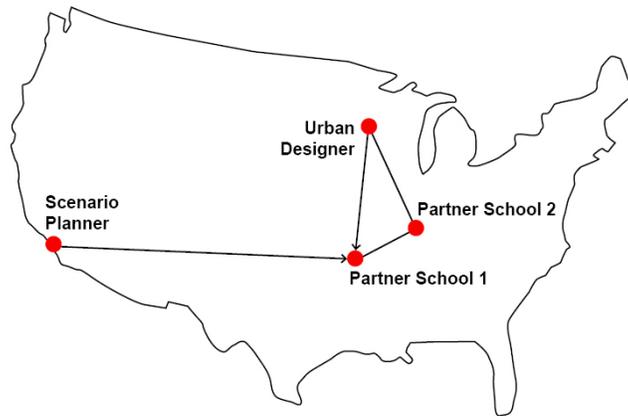
Successful rail transit systems built over the last 30 years have generated accessible land development patterns characterized by high densities, mixed-uses, and walkable urban environments around their transit stations. Known as Transit-Oriented Development (TOD), this type of development capitalizes on the presence of new user densities created by public transit. Studio proposals focused primarily on optimization of underutilized historic downtowns, providing smart-growth alternatives to suburban development. Using scenario planning strategies and a policy primer assembled for the studio, students from two schools of architecture, and faculty from four schools developed TOD proposals for NWA communities.

Student interns and faculty over the subsequent year produced a book: *Visioning Rail Transit in Northwest Arkansas* (winner of 2008 AIA Honors Award for Regional and Urban Design) to leverage funding for a \$1.5 million transit feasibility study. The goal is to qualify NWA for candidacy in the Federal Transit Administration's "New Start" program for rail development assistance. Project

partners now include Arkansas River Connection Project (a statewide consortium of economic and tourism development interests), the NWA Light Rail Transit Steering Committee, Sustainable NWA, NWA Chapter of the U.S. Green Building Council, NWA Chapter of the American Institute of Architects, Arkansas Chapter of the American Planning Association, and area chambers of commerce.

Collaborators

Students from two Schools of Architecture studied transit-oriented development in support of a proposed regional rail transit system, connecting design with research, policy, and advocacy. Architecture, urban design, transportation and scenario planning professionals from cities with rail transit were hired as visiting professors to assist in the teaching efforts. Seven faculty, 40 students, three interns, a community design center, and numerous development interests were involved in the effort.



Programs' Places Within their Curriculums

Partner School 1: Required Vertical Design Studio (fourth and fifth years) in a Five-Year BArch Program for 40 students (Spring 2006).

Partner School 2: Graduate Urban Design Studio in a MArch Program for 9 students (Fall 2006).

Educational Goals

Work Products

1. ***Visioning Rail Transit in Northwest Arkansas***: book publication from design studios, which now serves as an advocacy platform for developing rail transit in NWA and has been distributed through the internet (2007).
2. ***Planning Primer Transit-Oriented Development (TOD): Lifestyles & Ecologies***: 90-page instructional publication prepared by a partner school's community design center, which accompanied the syllabus. The publication outlined metrics for rail transit feasibility in NWA, including peer review comparisons with other "New Start" regions (2005).



Advanced Design Curriculum Goals

1. Introduce students to socio-environmental issues for which design may yield integrated solutions. This initiates the question of creative practice and the role of “critical practitioner” thinking for upper division students.
2. Structure collaborative studios in which students engage allied knowledge fields and disciplinary practices while developing their own design proposals.
3. Introduce research and advanced methods of inquiry into advanced design studios to enhance design resourcefulness.
4. Establish an outreach culture of producing well-crafted, publication-ready work for application by other schools, the profession, and local communities.

NWA Rail Transit Design Studio Educational Goals

1. Introduce urban design as a projective practice in shaping regional growth with alternatives to low-density land development.
2. Envision planning scenarios for NWA that influence regional development policy, transportation investment priorities, and urban housing models.
3. Understand TOD as a new planning product and communicate this to a public audience.
4. Position the School of Architecture to be an institutional force in shaping future regional development.

Teaching Visioning Processes:

- 1) Proposition → Scenario Plans**
- 2) Analysis → Transit Shed Parameters**
- 3) Projection → Designing Community Ecologies**

number of structurally quite different, but plausible future models of the world. Once the set of scenarios has been decided upon they will be treated as equally likely, all being given equal weight whenever strategic decisions are being made.”

Kees van der Heijden, *Scenarios: The Art of Strategic Conversation*

Planning began from a propositional model rather than an analytic one. Students engaged planning using multiple but equally plausible interpretations for future directions of regional development. This differs from the conventional master plan, which relies on the fixed and linear assumptions that arise from forecasting—a predict-and-control strategy. Scenario planning facilitated the broad acceptance of radical speculation in shaping thinking about growth under a variety of alternative futures. Students developed a useful repertoire of organizational scenarios that addressed spatial, temporal, cultural—and even contradictory—narratives not likely in other types of visioning processes (e.g. what would NWA have to build to host an Olympics?).



Greenbelt Network Scenario: Increasing Both Density and Conservation

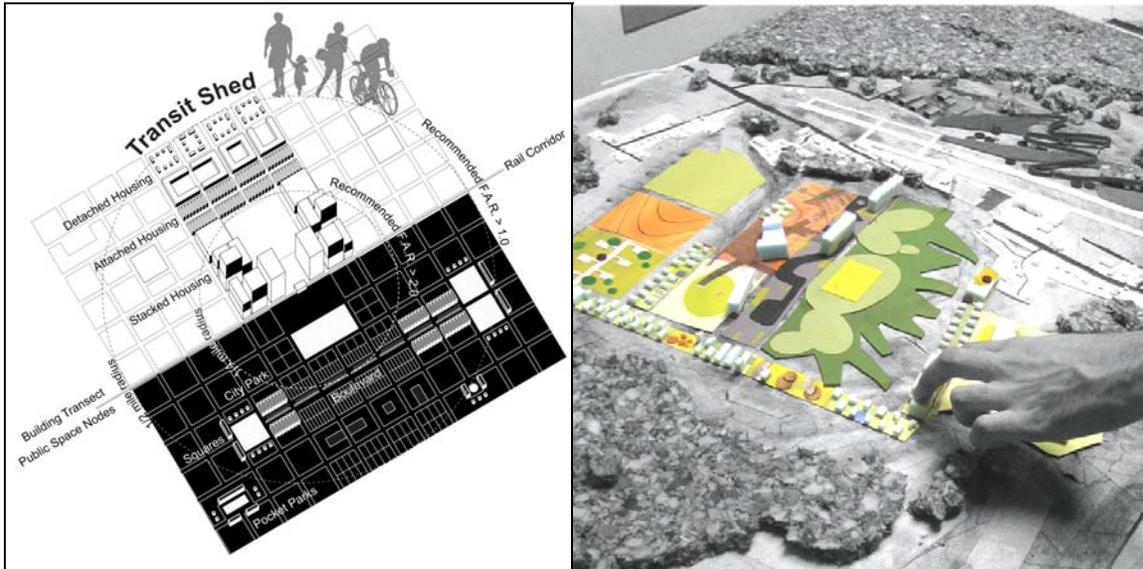
Part II: TOD Shed Planning: Lifestyles & Ecologies

The new mobility culture considers not only transit but also health, education, housing, waste, and social needs. No transportation system is an island; it must coordinate all shared systems for maximum effect.

Bruce Mau, et al., *Massive Change*

TOD parameters (i.e. density/FAR minimums, program mix, urban parking management, etc) outlined in the *Planning Primer Transit-Oriented Development* were tested around new station development, serving as a planning metric for development plausibility. Counter to the diagrammatic and regional visioning initiated in scenario planning, design methodology shifted to neighborhoods (i.e. street, block, infrastructure, floodplain), public space, parking, housing and other building program. In some projects: type, program, tectonic and spatial agendas were generated as prototypes independent of site and then charretted in multiple sites. Auto parking, for instance, provokes different

urbanisms among different sites. This phase constituted a visioning process at the neighborhood scale.



From: **Planning Primer Transit-Oriented Development
Airport
(TOD): Lifestyles & Ecologies**

Transit shed charrette for Drake Field



**Transit shed captures a premium real estate value from being well-connected to the region
Part III: Community Ecologies: Mobility, Urbanism, Commerce, and Environment**

"From Palladio on, architecture has been identified with individual architects. Everything else—the entirety of the ordinary built field where form, inhabitant and maker are functionally integrated and semantically joined—has remained obscure or self-evident. This has inevitably led to the emancipation—and the isolation—of an entire professional culture from the integrated field of form and people."

N.J. Habraken, *Palladio's Children*

Visioning focused on before-and-after TOD projections to encourage neighborhood redevelopment in NWA downtowns. The challenge in this phase involved the introduction of mixed-use fabrics with higher densities into existing downtowns and urban infill sites, while acknowledging existing use patterns. Students programmed sites based on existing use patterns, natural features (riparian systems including 100-year floodplain and topography), and latent development potential. Station area proposals engaged a range of disciplinary thinking from planning, landscape architecture, infrastructure, and architecture. Proposals addressed the synthesis of landscape systems, block patterns, relationships between housing and commercial land uses, application of various housing types, public space and station design, and parking. Different from many urban areas with transit, these studies were tailored to the feasibility of transit in a rural region.



Before-and-After TOD Projections on Downtown and Urban Infill Sites

Lifestyles: Transit in a Rural Region

“The total lack of ludic solutions in the organization of social life prevents urbanism from rising to the level of creation.”

Constant Nieuwenhuis, *The Great Game to Come*

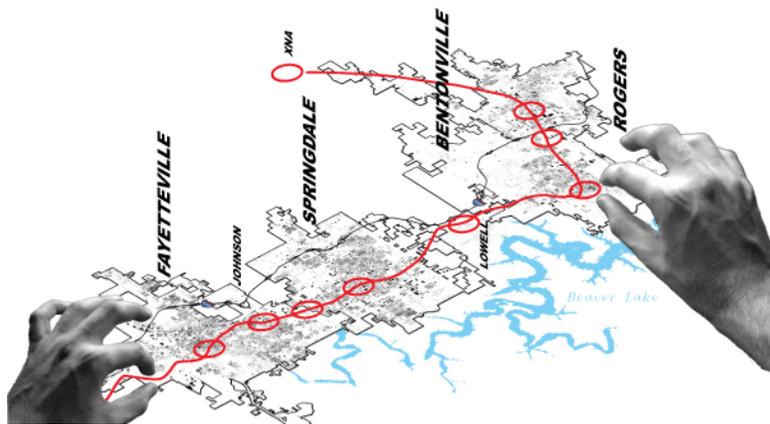
Students consolidated their previous visioning studies, shifting from processes primarily focused on organization to one concerned with occupation and space. Projects advanced from schematic planning concepts to developed architectural proposals through competencies intrinsic to architecture as a tectonic discipline. Development of the tectonic moment in a planning proposal was a key consideration in this phase. In the negotiation between architectural and planning scales, design activity employed drawings showing architectural resolution, which conveyed: what is it like to live here? The studio has produced a publication and exhibition of work that advances the development of light rail transit in NWA, parallel with the creation of public awareness for smart-growth planning.



From planning to architecture: what is it like to live here?

Evaluation Criteria to Assess Student Work

1. Did the student's planning demonstrate "ecological thinking" (vs the "discrete thinking" of the architectural project): the ability to design productive interfaces among various urban systems and programs?
2. Did the student's use of representation convey to a non-design audience a compelling lifestyle vision, positioning TOD as a viable alternative to low-density suburban development?
3. Did the student's planning effectively manifest TOD principles, regarding mixed use, walkability, density/FAR metrics, and typological diversity?



Advancing the Visioning of Rail Transit in Northwest Arkansas

2008

- *Visioning Rail Transit in Northwest Arkansas* awarded 2008 AIA Honors Award for Regional and Urban Design

2007

- *Visioning Rail Transit in Northwest Arkansas* awarded 2007 AIA Education Honors Award, and exhibited at AIA National Convention and Expo in San Antonio
- Transit Design Studio Faculty and NWA Light Rail Transit Steering Committee meet with former U.S. Secretary of Transportation Rodney Slater to discuss rail development funding
- Transit Design Studio Faculty address House and Senate Interim Committees on Transportation of The Arkansas General Assembly
- Northwest Arkansas Regional Planning Commission incorporates *Visioning Rail Transit in Northwest Arkansas* into the Alternative Transportation Analysis of its Comprehensive Plan
- Transit Design Studio Faculty serves on the University of Arkansas Transportation Steering Committee, and Committee adopts transit-ready traffic management solutions
- City of Fayetteville adopts rail transit-ready land use codes into its 2025 Master Plan, a prerequisite qualification for “New Start” funding
- Completion and web-based distribution of *Visioning Rail Transit in Northwest Arkansas* (current search for funding of hardcopy publication)

2006

- Transit Design Studio Faculty and NWA Light Rail Transit Steering Committee meet with the Federal Transit Administration and U.S. Senators in Washington D.C. to discuss NWA candidacy for “New Start” program for rail development assistance
- **Formation of the NWA Rail Transit Design Studio, including visiting faculty appointments, and completion of Spring and Fall design studios at partnering universities**

2005

- Publication and distribution of *Planning Primer Transit-Oriented Development (TOD): Lifestyles & Ecologies* to students and public

- Formation of the NWA Light Rail Transit Steering Community involving Transit Design Studio Faculty, and regional business and civic leaders
- Convening of over 400 participants at the NWA Light Rail Transit Public Forum
- Transit Design Studio Faculty keynote address to Arkansas Chapter of the American Planning Association