The Studio Purpose: Integrative Design

You will design a facility for a growing town along the Illinois high-speed rail corridor that combines childcare with care for senior adults, (known as an Intergenerational Care Center) together with a community center for civic groups and community members. By designing this mixed-use facility, you will engage your capacities for the orchestration of architectural production, beginning with schematic design and unfolding to place emphasis on comprehensive design and the integration of building systems, structure, programmed spaces, and site design. Your prior and continuing coursework outside of studio in structures and building systems will be invaluable to your professional development in this studio.

The Studio Problematic: Shifting Populations

Outmigration and population shifts throughout the twentieth century have left many rural areas in Illinois, and throughout the country, as a skeleton of once-thriving communities. While many residents vacated when agricultural labor opportunities withered, others left when small manufacturing businesses closed or moved to sites of cheaper labor in other states, the Global South and Asia. However, architecture can respond to social and political shifts in surprising, creative and effective ways. One such shift stems from the intersection of state/federal policy, economics and technology: The Illinois High-Speed Rail Corridor.
Three Studio Concerns: Labor, The Care of Dependents, and Materiality

This studio is animated by the new high-speed rail corridor planned between Chicago and St. Louis, conceived by the studio as a datum to organize three main concerns: labor, the care of dependents, and materiality. The corridor is nearing completion, with train speeds to increase from the current 79 mph, to 110 mph in 2019, with an ultimate design-speed of 125 mph in 2023.

Concerning labor, how might communities negatively impacted by twentieth-century population shifts be reimagined with shortened commutes to previously distant sites of employment upon activation of the high-speed rail corridor? Already, towns along the corridor such as Bloomington have responded to the potential with new transit oriented districts, including infrastructure, public spaces and new/renovated buildings nearby. Small towns have similarly responded with new train stations anticipating increased connectedness to St. Louis, Springfield, and Chicago. Globally, high-speed rail has allowed commuters to live distant from areas of employment (eg. Rome-Naples line, Beijing-Shanghai line) where housing is often more affordable and lifestyle may align with needs to care for seniors or children.

Concerning the care of dependents, how could towns served by new high-speed rail provide convenient access to childcare and dependent senior adult care? Crucially important to commuting workers is the care and development of those who are dependent upon them, namely, pre-school children and senior adults with supervision needs. Yet, small communities can lack adequate services, forcing workers to vacate towns and favor the city. Increasingly, Intergenerational Care Centers serve both populations, with senior adults and children interacting together in supervised, staff-programmed activities. Children gain enhanced social skills and develop positive attitudes about aging. Older adults can experience improved physical and mental health, and increased personal independence. Long a family care model deployed in places such as Scandinavia, this building type is gaining popularity in the United States (eg. Bethlehem Intergenerational Center, Grand Rapids, Michigan.)

Concerning materiality, what material concerns are appropriate to approach the context of rural-oriented towns? Likewise, what materials are appropriate for high-speed rail corridors? Finally, what ethical concerns do you match with materiality? Materials can be understood in terms of image and instrumentality, that is, material meanings and use-potentials. As a capstone studio, you will be expected to develop architectural responses that not only integrate building systems but also pay particular concern to dimensions of materiality.

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The Studio Projects

1. Speculative design project: Hyperloop terminal. This project is a short, two-week “sketch” problem to hone your speculative design abilities. It also serves as a visioning exercise to contextualize the more immediate concern for the second, rail-oriented studio project. Envisioning the future of high-speed travel, you will design a Hyperloop terminal for a hypothetical small town site along the recently-proposed Hyperloop corridor between Chicago and Cleveland, Ohio. This project, a “what-if” scenario, seeks to prepare you for the primary studio project by exercising your schematic design skills and broaden the time-horizon of your design thinking.

2. Primary design project: An Intergenerational Care and Community Center.
The primary project, challenging your ability to move beyond schematic design into the realm of integrative design, is a comprehensive design for an intergenerational care and community center for a town in Illinois along the high-speed rail corridor. This mixed-use facility will contain a community space for local civic groups, business groups, and individual use, and centrally, an Intergenerational Care Center. This project type, increasingly popular in the US, allows workers to place senior parents in the care of the Center during the day, and return to pick them up and resume family care after work. (eg. Presence Intergenerational Center, Kankakee) Uniquely, it is also a site for child daycare with specifically programmed spaces and supervised activities allowing interaction and mutual benefit between these two generational cohorts. The Intergenerational Care and Community Center you design aims to serve as a dynamic meeting, caregiving, and learning space for the community across generations.


Senior adults and children interact in staff-programmed activities to promote wellbeing for both. Photo: Bethlehem Intergenerational Center.