

## ARCH 5604 Architectural Design and Research

Spring 2023

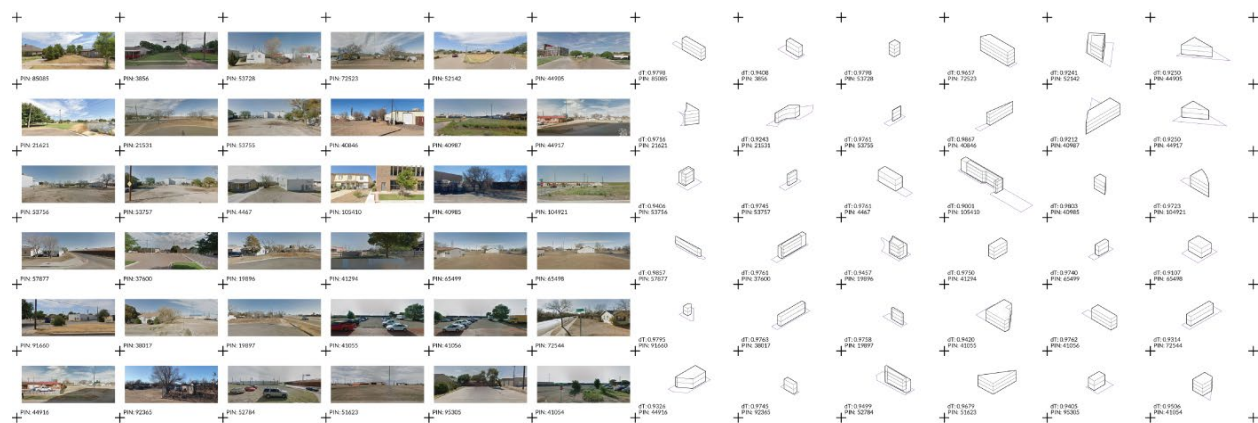
**Instructor:** Nate Imai, Assistant Professor, nate.imai@ttu.edu, office: 405C

**Schedule:** Monday + Wednesday + Friday 1:00pm – 4:50pm

**Studio Title:** Thirty-Six Views of Lubbock, Texas

### Studio Description:

Students taking this studio will be asked to develop custom mapping tools for increasing cities' housing supply through small-scale odd lots. As residuals of cities' shifting urban morphology, these uniquely shaped infill opportunities resist formulaic real estate speculation and require an architectural vision beyond the imagination of most developers. Utilizing GIS data with custom scripts, lot searching tools developed through this class will analyze locational data as well as shape metrics to determine a set of parcels for testing and applying architectural housing strategies at an urban scale.



*Thirty-six views of small-scale odd lots and their buildable massing in Lubbock, TX*

### 500 Word Description:

*How can digital cartographic tools be leveraged to increase cities' housing supply through small-scale odd lots?*

Digital cartography—long associated with the allied disciplines of landscape architecture, planning, and urban design—has become increasingly adopted and applied in the field of architecture as an instrument for revealing urban relationships and latent design opportunities. The growing prevalence and accessibility of geospatial data collected and shared by local municipalities and online communities has provided designers newfound capacities to identify and evaluate relationships between architecture and urbanism. Of these advantages, two in particular stand out: 1) the ability to develop design strategies that operate at the intersection of urban and architecture scales, and 2) the ability for architecture to collaborate with the fields of landscape architecture, planning, and urban design through data driven processes.

The studio references concepts from Gordon Matta-Clark's "Reality Properties: Fake Estates" and draws upon urban studies by architects and artists to examine architecture's relationship with urbanism from the bottom-up. Several key precedent projects will serve to historically ground the research and provide examples of architecture's capacity to engage landscape architecture, planning, and urban design through cartography and urban mapping methods.

This studio will be led in collaboration with the City of Lubbock and will respond to the city's new 2040 Comprehensive Plan, Downtown Master Plan, and form-based Unified Development Code (UDC) that establishes parameters for future development. The topic of housing will serve as a design framework for informing the development of the digital cartographic tools within the class; give form to the vision outlined in the 2040 Plan, Downtown Masterplan, and UDC; and address Lubbock's need to diversify and expand its housing stock in anticipation of its expected population growth.

The studio will be structured into four phases over the course of the semester. In the first phase students will conduct case studies of precedent projects to develop a graphic and conceptual understanding of how cartography has historically been leveraged within architecture to engage the disciplines of landscape architecture, planning, and urban design and reveal latent opportunities for design at the urban scale. In the second phase students will work collectively to develop a digital cartographic tool for identifying and representing small-scale odd lots and their potential buildable massing throughout Downtown Lubbock. A close reading of the 2040 Comprehensive Plan, Downtown Master Plan, and UDC in addition to the students' own research and analysis on the area will formulate a set of criteria that will then be encoded in the mapping tool for defining small-scale odd lots. In the third phase each student will develop a novel research question focusing on a specific housing type and demographic. Students will then customize the mapping tool developed by the class to create and represent their own set of thirty-six parcels representative of the criteria specified by their research. In the final phase students will develop a housing strategy to be applied at an urban scale across all thirty-six sites and at an architectural scale among select parcels.