

## Thick Infrastructure

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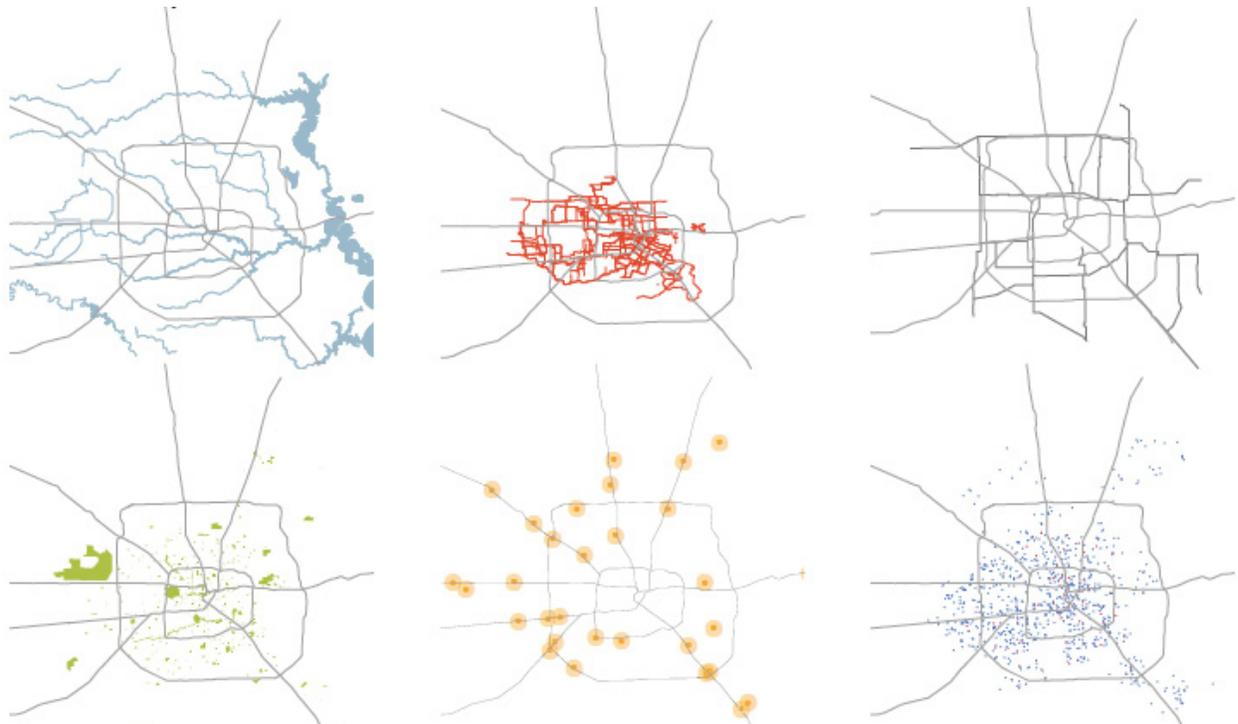


Figure 1. Infrastructure Networks

Infrastructure is the skeleton of the city, it frames development and dominates the landscape. In Houston, 575 miles of freeways (twice the lane miles of Los Angeles and 55% of the planned 1,000 mile system) spread out in 14 different directions connected with three loop roads with a fourth forthcoming. Appended to the freeway system are 100 miles of high occupancy vehicle (HOV) lanes and 28 supporting park and ride lots that are 50% occupied 50% of the time. 19 Transit Centers serve mostly those without access to an automobile, and provide no infrastructure on site with the exception of a roof

protecting riders from the elements. An eight-mile light rail line serves the "tourist-city." 2500 miles of bayous and waterways, including the Ship Channel, wind through the city in a predominantly east-west direction, draining it during frequent downpours, and providing the only sectional relief outside of freeway interchanges. Traversing the city in mostly a north-south direction, perpendicular to the waterways, are 200 miles of utility easements. Additional city infrastructure systems include schools, parks, libraries, and community centers.

2 million people • 575 miles of freeways • 1.5 linear feet for everyone • twice the lane miles of Los Angeles • 3 major rings • 14 spokes • 100 miles of HOV lanes • over 200,000 HOV users • 28 park and ride lots • with 32,293 spaces • 17,564 spaces

Layering these networks begins to illustrate where and how our infrastructure can be thickened.

THICK INFRASTRUCTURE, defined here as the expansion of public works projects to include elements that enhance civic and public spaces or the adaptation of existing, single-purpose infrastructural landscapes into more robust, multifunctional systems. This is a new conception of what infrastructure can be, and how decisionmaking processes can be transformed to merge public investments with the goal of enriching our diverse communities. The project advances the vision of infrastructure as multi-functional, designed, and integrated into the fabric of the city, replacing the reality of single-purpose, engineered, and disconnected infrastructural landscapes. Specifically, THICK INFRASTRUCTURE explores at multiple scales two related, but distinct questions, first, how can existing infrastructure be adapted for additional programs and functions, for example using utility right-of-ways for linear parks or the cultivation of switch-grass as a source for bio-fuel? And second, how can public works projects be “thickened” to include public and civic amenities, for example capitalizing on opportunities related to street widening to carve out small public plazas or green spaces? The project has generated design ideas that represent a full spectrum of both costs and timelines—from project budgets of \$10,000 to \$10,000,000, from projects that can be implemented tomorrow to long-term projects that would take a decade.



Figure 2. Proposal, Fuqua Park and Ride, Janine Nunfi o and Candy Gumandoy

used • 101 acres of paved parking surface goes unused daily • 44 miles of trails • 690 parks • 63,400 acres • 685 square feet per person • 8 miles of light rail • 20 miles of proposed light rail • average travel time to work 28 minutes.

28 METRO Park and Ride Lots are used 50% of the time at 50% of capacity. Finding new uses for the lots, especially on evenings and weekends, can transform this infrastructure from a singular purpose to multiple purposes. Community movies, lit sport courts, farmers markets (especially in food desert locations), auto repair training, small entrepreneurs—coffee, breakfast, auto detailing, and a myriad of other programs could add value to the sites.

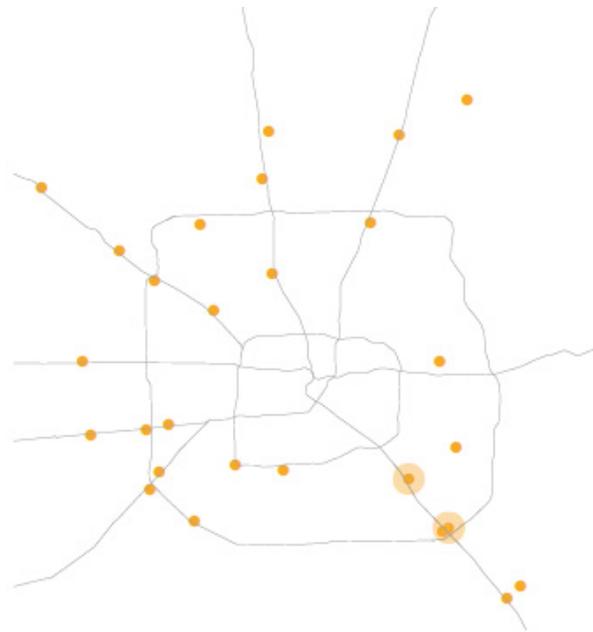


Figure 3. Park and Ride Map



Figure 4. Proposal, Monroe Park and Ride, Janine Nunfi o and Candy Gumandoyintervention.

Zooming into one neighborhood in Houston the potential riches of THICK INFRASTRUCTURE began to become clear. Utility easements, drainage channels, transit centers, and highway right-of-ways can be re-considered and new programs added to these mono-functional networks.

THICK INFRASTRUCTURE re-thinks and intervenes in the existing infrastructural landscape of the city to create a platform for new and creative thinking on

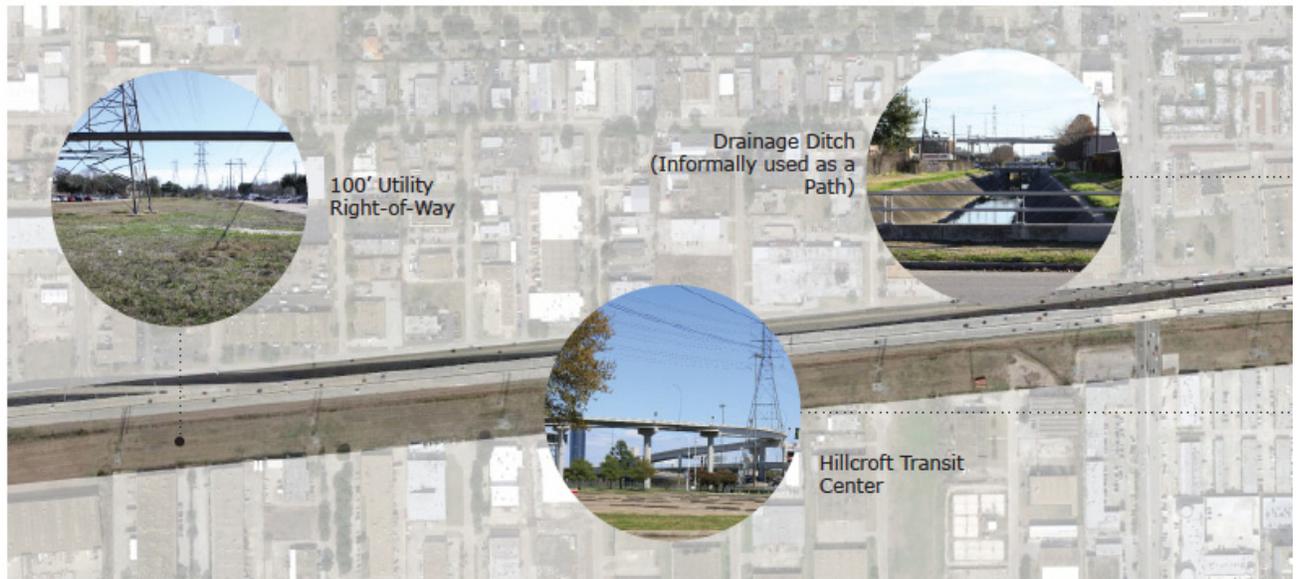
infrastructure systems from an applied and local perspective (at a time when investment in infrastructure is a pressing issue), and to influence future public works investments by presenting a catalogue of creative and viable design ideas. While Houston is the laboratory, localizing the project and providing specific conditions for exploration, the design ideas have broader application in a diversity of places across the globe.



Figure 5. Westpark Tollway Foodtruck Proposal, A. Lara, J. Nunfi o, S. Rehman, D. Alvarez, and N. Haimonty



Figure 6. Drainage Channel Proposal, A. Lara, J. Nunfi o, S. Rehman, D. Alvarez, and N. Haimonty



Houston has over 2,500 miles of bayous, waterways, and drainage easements. Many of the drainage easements, which are dry most of the time, weave through neighborhoods, connecting destinations. In a number of areas these easements already informally function as paths and places. Finding ways to support the transformation of these easements into community amenities could bring added value to this network.



Figure 7. Utility Easement Proposal, A. Lara, J. Nunfi o, S. Rehman, D. Alvarez, and N. Haimonty



Figure 8. Map of Utility Easements

