RECLAIMING VACANCIES:

A Community Revitalization and Resilience Strategy

PROJECT TYPE: Community Planning | Urban Regeneration | Green Infrastructure

SITE AND TIMELINE: Sunnyside, Houston, TX, USA | 2016-17

MEDIA: Interactive Workshop with community I ArcGIS I Photoshop I Illustrator I InDesign

PROJECT DESCRIPTION:

Socially vulnerable populations are often concentrated in flood vulnerable urban areas, resulting in multiple cultural, economic, and ecological issues.

Sunnyside, a 4096 acre historically African-American community in Houston. Texas faces issues regarding flooding hazards, high percentage of vacant lands, and low quality of life.

Through four months of public engagement, this research-design study incorporates citizen-driven decision making within the planning process.

After having identified the existing issues and future goals from multiple community meetings, the study develops a toolbox to reclaim existing vacant lands, depending on each lot's type, size, location, and flood vulnerability.

ISSUE: HIGH RATE OF VACANCIES Vacant Parcel Vacant Structure

Total Structure: 6558 (325 acres) Total Parcel: 9405 (2461 acres) Active Parcel: 7308 (2000 acres) Vacant Parcel: 7 (461 acres) Active Structure: 6182 (319.5 acres) Vacant Structure: 376 (5.5 acres)





FLOOD VULNERABILITY



100-year Floodplain 500-year Floodplain Sims Bayou

22%

Vacant Rate of Parcel

6%

Vacant Rate of Structure





Vulnerable Area



Flow Paths in Hazard Situation Large Ponding Areas in Hazard Situation Shallow Ponding Areas in Hazard Situation Small Ponding Areas in Hazard Situation



Open Ditches with Ponding Issues

PLANNING PROCESS:

Through four months of public engagement, this evidence-based design incorporated citizen-driven decision making for identifying existing issues and future goals. In Fall 2016, PLAN 662 Master of Urban Planning (MUP) class of Texas A&M University, with collaboration with Texas Target Communities, initiated the participatory engagement five times. During the meetings, a great interest was placed in reclaiming the vacancies in the neighborhood in Sunnyside as well as in other distressed neighborhoods in Houston with similar conditions.



"Revitalize neighborhood and increase flood resilience through Green Infrastructure network in underutilized vacant parcels. "

PLANNING GOALS:



Through the four planning goals, the local economy is boosted by redeveloping and reactivating vacant spaces with new employment, affordable housing, healthcare and community facilities, and compact development. Transit connectivity and walkability in the neighborhood were achieved by introducing new bus routes, an ecoboulevard, and an interconnected pedestrian trail system.

Active and healthy living among the residents was encouraged by the network of open spaces, community spaces and recreational facilities.

TOOLBOX FOR RECLAIMING VACANCIES:



flood potential of the parcels is essential to determine the type of proposed function and the proximity to church and school is important for potential partnership with these entities.

For example, if there is a cluster of multiple undeveloped vacant lands in the neighborhood in a flood potential zone and located near a church; following the matrix, it can either be a nature park, equestrian park, trail, small detention pond, infiltration park, bioswale, rain garden, or plantation.

PROPOSED DESIGN PROGRAM



Open Space

Playground Neighborhood park Sports field Plaza Recreation center





Urban Farm

Edible garden Flower garden Research landscape Farmer's market





Infill

Housing Grocery store Healthcare facility Retail Restaurant Bus stop









Trails

Nature park Equestrian park







Stormwater Management

Small detention pond Inflitration park **Bioswales** Rain garden Plantation





VACANT PARCELS SUITABILITY FOR GREEN INFRASTRUCTURE



SITE INVENTORY AND ANALYSIS







90% existing impervious surface



0% of the roads have sidewalks







9% existing scrub space

5% existing building footprint



0 food store, restaurant or bar





50% existing vacant parcels



A detailed site inventory/analysis of the sub-site revealed that only 18% of the area is accessible to bus stops within a quarter mile radius. There are no existing sidewalks and the open ditches along the streets makes them a health and sanitary hazard. No restaurants or grocery stores are located in the site making it a food desert. Around 9% is considered underutilized scrub space with no community use. Existing tree canopy covers 36% of the site, but there is no park facility located in the site. Ninety percent of the site is impervious and 50% of the parcels are vacant or abandoned.

In the next phase, four design schematics are developed.

a) The green infrastructure network is a connected set of open spaces for urban stormwater management.

b) Sunbeam St, acting an eco-boulevard, traverses the middle of the site connecting the area to the main arterial roads to the west and east.

c) Pedestrian trails are interwoven through the green infrastructure network, increasing pedestrian access to adjacent land uses and facilities.

d) The designed land use arrangement caters to urban regeneration and community revitalization. A large portion of existing vacant parcels are converted to parks, open space, and green infrastructure. Along the proposed eco-boulevard are neighborhood offices, neighborhood mixed-use, and increased housing density. To the north of the site, proposed private institutional land uses include a medical campus and healthcare facilities. Public institutional and civic clubs are scattered throughout the site as community anchor points. Clusters of commercial land uses are also dispersed to provide access to essential amenities within walking distance and increase jobs per acre. The remaining land uses are a mixture of existing and infill residential.





DESIGN SCHEMATICS

A) GREEN INFRASTRUCTURE NET-Active Recreation A DESCRIPTION OF TTTT C-- ARRENTER STREET Passive Recreation Water Conveyance Water Storage Eco-Boulevard Sims Bayou ----- Site Boundary **B) TRANSPORTATION HIERARCHY** TO 610 TO 610/ DOWNTOW Main Arterial Road Collector Road Local Road Eco-Boulevard Sims Bayou V AIRPORT BLVD TO SAM HOU Site Boundary - - -C) PEDESTRIAN TRAILS NETWORK TO SAM HOUSTON TOLLWAY Active Recreation Passive Recreation **BREER FTTT** (----Water Conveyance Water Storage Trails Eco-Boulevard Sims Bayou ----- Site Boundary

D) LAND USE



MASTER PLAN



PHASING STRATEGIES FOR MASTER PLAN IMPLEMENTATION



PHASE II: (5-10 years)



PHASE III: (10-20 years)

ECOLOGICAL LANDSCAPE AND ACTIVE LIVING





EMPLOYMENT GENERATION





Floodable Riparian Park



Community Center



Eco-Boulevard with Mixed-Use

DESIGN IMPACT PROJECTIONS



The plan is to be implemented in three phases. The first phase focuses on the development of a green infrastructure skeleton to help alleviate the flooding and ponding issues. The infrastructure not only mitigates flooding issues but also provide open public spaces for the residents. As the flow paths and ponding areas were mostly located along the streets, streetscape improvements and new stormwater mitigation facilities along the existing open ditches will help attenuate the impacts of proposed development. The floodable riparian park along the Sims bayou acts as a recreational community space for the neighborhood as well as for nearby residents.

Phase two aims at targeted development of housing options and community facilities. Various housing typologies including single family housing, multi-stories housing, duplex, and affordable housing cater to the needs of different ages and economic groups. By creating community support services as anchor points, phase two will set the stage for future economic development.

Phase three builds on the previous phases to spur development and attract new employment opportunities. The two largest employers are the hospital and medical campus currently located on large vacant lands reserved for private institutions. These employment generators can employ local persons as many residents in the neighborhood have specialized skills in the healthcare industry.

Within the span of 20 years, the proposed design programs will create 6,048 new jobs in three phases in the project area. This translates into 30 new jobs/acre compared to the existing 1.3 jobs/acre. The existing 50% of vacant/abandoned properties will be reduced to only 6%; simultaneously, green space will increase from 9% to 26%. The developed area will also increase from 33% to 58%.

CONCLUSION

Vacant lands and abandoned structures are excellent opportunity to increase resilience among hazard vulnerable populations. While the process for regenerating vacant lots can be complex, the community building process that occurs from a desire to build on these lots is part of the benefits.

This project should be considered as a starting point to for regenerating underutilized lots and increasing flood resilience in the community. The toolbox generated can help transform assist in future transformation and programming for vacant lots outside of the sub-site.