





for overcoming the hurricane katrina blues

a comprehensive strategy for building a more vibrant, sustainable, and equitable 9th Ward















# CONTENTS

## the ninth ward

03

- site background
- physical description

#### historic preservation

- historic districts
- character and identity
- st. roch market

## nfrastructure

05

- street conditions
- street and traffic signage
- repair and rehabilitation

# transportation



09

- bullet information bullet information

## municipal services

13

- bullet information bullet information

## etcetera 1

15

- bullet information bullet information
- bullet information bullet information

# about us

e t c

23

about us about us





## etcetera2

17

# etcetera three

19

## e tera four

etcetera5

25

etcetera six

29

etcetera 7

31

## Introductory paragraph here

paragraph here. introductory paragraph here.

introductory paragraph here. introductory paragraph

here. introductory paragraph here. introductory

paragraph here. introductory paragraph

here. introductory paragraph

here. introductory paragraph

here. introductory paragraph

etcetera 8

35

Cornell University

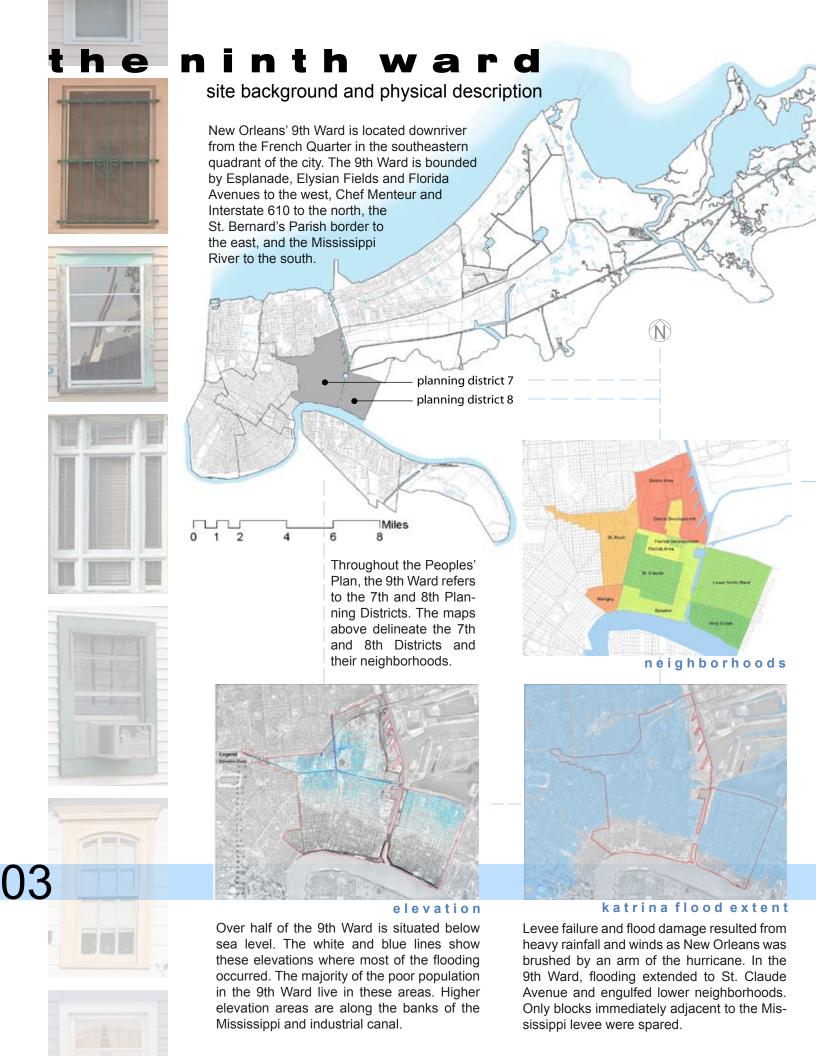
Columbia University

ACORN Housing Policy (Washington, DC)

University of Illinois - Urbana-Champaign

ACORN Housing (Chicago, Illinois)

ACORN (New Orleans, Louisiana)



# historic preservation

The rich social history, unique architectural features, protected open spaces and scenic views of the 9th Ward represent a significant resource, which, when guided by the local residents, institutional leaders, elected officials, and their regional and national allies, such as the National Trust for Historic Preservation, can support the long-term recovery of the 9th Ward.

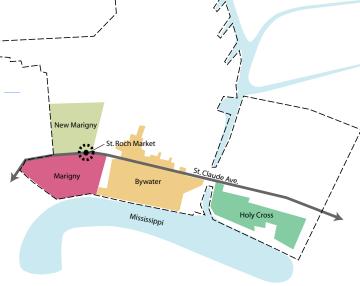
The 9th Ward contains **Four Historic Districts**, which appear on the National Registry of Historic Places:

Faubourg Marigny District

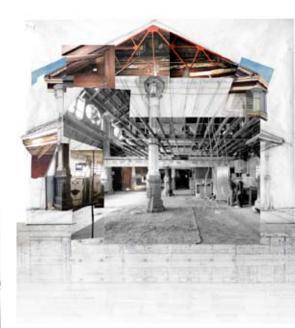
Holy Cross District

New Marigny District

Bywater District



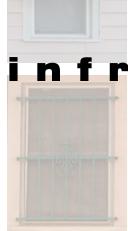
**St. Roch Market** is a historical structure and cultural landmark of great importance to the history, character, and identity of these neighborhoods. Bringing the market back could serve as a catalytic economic development project for the area and would offer an inspiration for other development and redevelopment projects.



04

Recognizing that there already was a deeply engaged group of citizens involved with the market and its future, a group of 36 students, 3 alumni, and 4 faculty from Cornell undertook a study trip in the Spring of 2006, assessing the market's post-Katrina condition and possibilities for rehab and redevelopment.











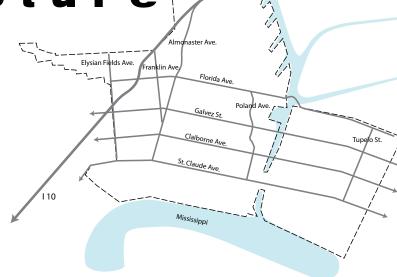




# nfrastructure

#### existing conditions

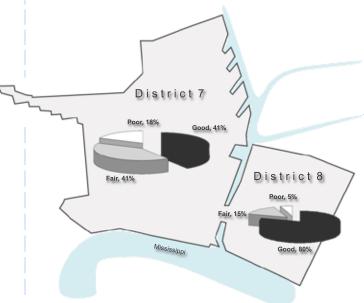
In order to determine key areas for investment in public infrastructure that will foster swift recovery, ACORN Housing – University Partnership team investigated current conditions of street-level infrastructure. We surveyed 42 sample blocks throughout the districts to assess the conditions of street infrastructure, including pavement conditions, street signs, fire hydrants, and storm drains.



main roads

I 10

Street conditions, even in severely flooded areas, were generally rated "fair" or better. Streets conditions were "fair" where the pavement allowed easy passage by car or bicycle but the presence of scrapes, cracks, or missing pavement require repairs. However, along several streets that rarely entered our sample, ground subsidence and pavement buckling has made street tops nearly impassable.



pavement conditions (oct. '06)

#### 9<sup>th</sup> Ward Infrastructure Survey (October 2006)

		PD 7	PD 8
Stop Signage			
	Standing	72%	71%
	Not Standing but in Ground	22%	5%
	Missing	6%	24%
Street Signage			
	Standing	53%	30%
	Not Standing but in Ground	0%	1%
	Missing	47%	69%

Most traffic lights surveyed were not functioning. Missing street signs announcing street names were more frequent than missing stop signs, but both pose a dangerous problem. In the Lower 9th, many unlabeled streets have been replaced by unofficial, hand-painted signs created by non-governmental organizations.

ad-hoc street signs





debris removal courtesy FEMA 2005

Systematic, block-by-block disposal of road debris by a conglomeration of residents from the area can prove more efficient and economical. The following steps will lead to a more rapid recovery:

- Initiate disaster debris pickup.
- Create a director's board.
- Award local contracts and encourage local hirings.
  - Repair houses and streets systematically and holistically.
  - Identify types of debris and designate locations for disposal.
- Consolidate similar materials to increase recycling possibility.

#### infrastructure repair courtesy FEMA 2005





#### median redesign and improvement

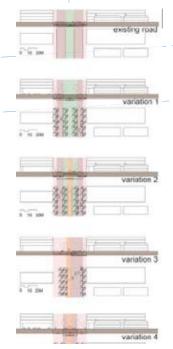
Street medians can become more functional and pleasing with some pruning, a series of targeted projects (e.g. the adopt-a-neutralground program from Parkway Partners), and a series of design projects:

Enlarge the median along St. Claude to accommodate a proposed street car line and walking-paths for pedestrians.

Bike paths can run along a center aisle

 Bike paths can run along a center aisle of the neutral ground for recreational and commuter use.

- Implement heightened curbs and pedestrian-protecting treatments (like curb 'skirts').
- Support continued tree planting efforts.
- Add street furniture along neutral grounds to set the tone of these avenues as civil, public spaces to be used recreationally and economically.



"Poor sidewalks - they are not maintained ... they have gaps. My daughter is in a wheel-

chair and the unevenness of the pavement makes it very difficult for her to get around."

(9th Ward Resident)

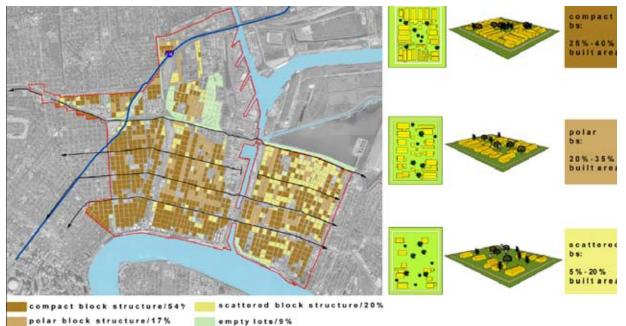
In an effort to encourage residents to return home, infrastructure repairs (water, electric, gas, sewer, drainage systems) should be made to the major arteries, collector streets, and service streets. These should occur first on a block-by-block basis where the rate of resident return is the highest with an eye towards future improvement costs. Drains need to be cleaned, lines restored, and streets repaved. Doing so without incurring future costs will depend upon thoughtful critique of existing systems, guidance of land use maps, and updating current infrastructure in conjunction with other city departments and the quality of life goals of residents.

# and use

While significant variations in land use exist within the various neighborhoods comprising the 9th Ward, residential uses, primarily single and small multifamily buildings (less than 5-unit buildings) dominate, followed by neighborhood-oriented retail, community and public facilities, industrial and warehousing facilities, and shipping and port facility uses. The neighborhood also contains three public housing facilities: Florida, Florida Avenue, and Desire. In the past, these projects provided critical housing for families with extremely low incomes.



pre-katrina land use



block structure

Four distinct block types have been identified in the study site: compact, polar, scattered, and empty. As one moves from the city center towards the outskirts of the Lower 9th, the progression from a solid, compact block structure in the Western part, to a dominantly polar type in the middle, and a predominantly scattered type in the East becomes evident. Another trend is the progression from a compact block typology along the banks of the Mississippi to a looser one in the Northern areas. The blocks that were worse off before Katrina were also the ones that got damaged the most during the hurricane.



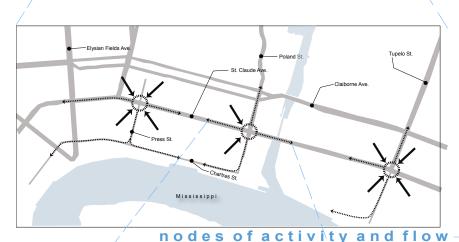






A new land-use plan for the Ninth Ward, devised with accurate flood plain maps and new building standards and designs could restore confidence in people to return and be used as a guide for ecologically responsible rebuilding in certain areas of the Ninth Ward. Maps that overlay topography, soil types, depth-to-water table zones, pollution zones, and main drainage areas ought to be compared to new building standard overlays after which local land use pattern options can be considered with the community.

A survey done by Cornell students and faculty in October 2006 showed that residents were mostly concerned about the undesirable appearance of the neighborhood, rent inflation and lack of funds to rehabilitate homes, shortage of local jobs and retail opportunities, poor educational facilities, endemic crime, and lack of alternative occupational/recreational opportunities for youth. Redeveloping the neighborhood's major arteries and creating a series of strategic nodes and condensers could respond to these problems by attracting people and businesses and by creating a vibrant and dynamic community.



We propose public investments in three nodes of activity: at the intersection of Press St. and St. Claude Ave., around the St. Claude bridge between the Lower Ninth and the Upper Ninth, and at the intersection of Tupelo St. and St. Claude Ave. These nodes should be landscaped and developed to include institutional and private uses that serve a large clientele. They could serve as points of socio-economic activity and as general meeting points for people.

N Robertson St.

Poland Avenue

Refines St.

St. Claude Bridge

green loop

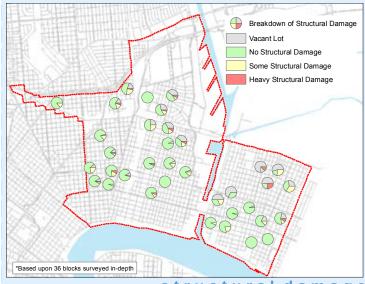
The Upper 9th, and the Lower 9th are separated by the Industrial Canal, with limited opportunities for bicyclists and pedestrians to cross over. We propose the creation of a green loop along the St. Claude and Claiborne bridges, bounded Westward and Eastward by Poland Ave. and Eastward by Reynes St. Enlarged pedestrian and bike paths along the bridges, as well as landscaping along the loop will serve as an invitation for people to cross from one neighborhood to another.

# housing(1)

### building damage

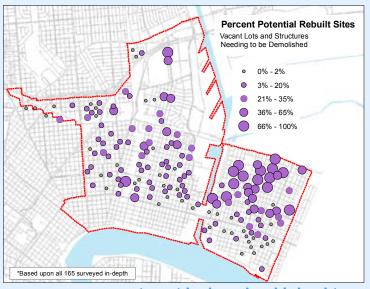
Fifteen teams of university students conducted a physical and recovery conditions survey of the residential housing on 165 blocks in Planning Districts 7 and 8. The survey covered 12% of the building stock in these districts. The teams captured information on the types of residential structures and the recovery activity evident at the time of the survey.

Over 90% of the approximately 3,000 parcels surveyed were residential lots. Of the lots with buildings on them, 85% had a main structure that was single story, 14% had a structure with two stories, and 1% had a structure over two stories.



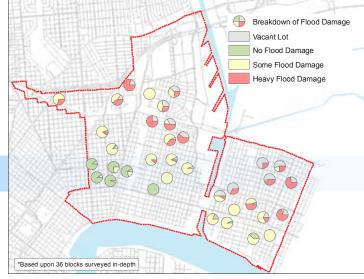
#### structural damage

Heavy structural damage was primarily limited to the northwestern corner of the neighborhood closest to the levee breakage. Over 10% of the standing houses in this neighborhood showed signs of heavy structural damage. Residential buildings in all other neighborhoods besides the northern section of the Lower 9th had little or no signs of structural damage. About 5% of residences along the border of the Florida and Desire Area neighborhoods and parts of St. Roch also had heavy structural damage. Houses with this level of structural damage will not be cost-effective to repair. They will need to be demolished.



#### potential rebuild sites

Vacant lots and structures needing demolition are concentrated almost exclusively in the northern section of the Lower 9th. The northern section of the Lower 9th has a high percentage of vacant lots, heavily damaged structures and structures with slab foundations. These lots are potential sites for future rebuilding. As such, this area is a potential site for extensive infill development and new large-scale development.



flood damage

09

Homes with heavy flooding will require the gutting beyond 50% of the structure height. Over half of the interior walls, flooring, paint, and electrical wiring will need to be replaced. The cost to refurbish these structures will be extensive, ranging from \$30,000-\$50,000. More critically, structures with this level of flooding damage typically need to be elevated to new FEMA foundation height guidelines. This will add \$15,000-\$25,000 to the cost of repair.

#### new development

Areas that were severly affected by the floods (such as the northern section of the Lower 9th), as well as

areas that are underutilized (e.g. the St. Claude commercial/retail/institutional corridor) are potential sites for new development, and mixed-use infill development.

The North-East Corner of the 9th Ward can be reconfigured as a residential neighborhood around a drainage system that protects it from future flood events, and uses the land-scape for educational, recreational, social, and economic opportunities.



These examples of housing types exhibit flood-resistant adaptations of architecture typical to the Lower 9th Ward, as well as contemporary interpretations of shotgun and bungalow homes.



#### the north-east corner



Structures that have a commercial/retail use on the first floor and housing on the second floor create a mixture aimed at satisfying both housing and amenities needs. These structures will largely provide infill

alternatives for parcels of land that are currently undeveloped or are occupied by decrepit or abandoned structures.









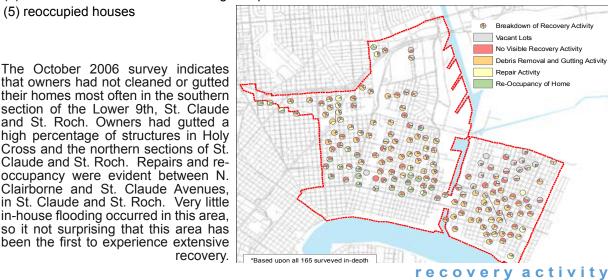
# housing(2)

#### building recovery

Fourteen months after Hurricane Katrina, the teams also recorded evidence of recovery and re-occupancy in the Ninth Ward for all lots within the 165 surveyed blocks. The process of recovery was broken into five categories:

- (1) vacant lots
- (2) residential structures that remained uncleaned and ungutted
- (3) structures that had been cleaned and gutted
- (4) houses where the owners had begun repairs
- (5) reoccupied houses

The October 2006 survey indicates that owners had not cleaned or gutted their homes most often in the southern section of the Lower 9th, St. Claude and St. Roch. Owners had gutted a high percentage of structures in Holy Cross and the northern sections of St. Claude and St. Roch. Repairs and reoccupancy were evident between N. Clairborne and St. Claude Avenues, in St. Claude and St. Roch. Very little in-house flooding occurred in this area, so it not surprising that this area has



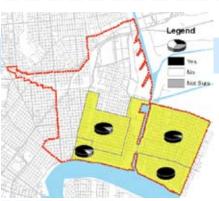
Percent Block Re-Occupied Trailer or Home Occupied 0% - 2% 3% - 20% 21% - 35% 36% - 65% 66% - 90% \*Based upon all 165 surveyed in-depth re-occupancy

Some residents are living in FEMA trailers on their lots, even though their homes are not repaired. These people are strongly committed to rebuilding their neighborhoods. When inhabitants are combined with residents who have reoccupied their homes, a pattern of residency emerges. This is shown in the map below. At the time the teams surveyed these neighborhoods, residents were living in trailers or in their homes in over 25% of the lots in Planning District 7. They were also residing on 15% of the lots in Holy Cross and 12% of the southern section of the Lower 9th. The only area with very little occupancy was the northern section of the Lower 9th neighborhood.

What condition is your home/apartment in New orleans now?

#### resident survey

While doing resident surveys we were struck by the resilience of residents in each of the four quadrants represented -- not only in their overwhelming desire to move back to New Orleans (94% Lower Ninth, 100% Holy Cross, 88% St. Claude and 85% Bywater (see figure 6.13), but also in their commitment to rebuilding and returning to their pre-Katrina homes.



Do you want to move back and stay in New Orleans?

# housing (3) opportunities

			Туре	Cost	Area	Individual vs Planned Construction	Sustainable Design Features
	na		Shotgun	\$15,000 - \$100,000 +	600-1400 sqft 3 bedrm	?	x
	pre katrina		Creole	\$15,000 - \$100,000 +	600-1400 sqt 3 bedrm	?	x
	Temp		FEMA (Federal Emergency Mana glyrmort Agebry) trailer	Free for 18 mths \$75,000 deliver and install	30- 40 ft travel trailers	Mass Produced Pre Fabricated Trailers	x
	wou plin		Katrina Cottage	\$45 - \$55/sqft or \$25,000 - \$50,000 above	300 - 1200 sqt 1 - 2 bedroom	DIY Easy fast to build Floor plan + materials at Lowes Takes 4-5 weeks	x
	Ready to build now		LIFT House by MIT	Material Cost Sweat labor - volunteer	Flexible	Unskilled and semi-skilled volunteers	x
	rrounding		St Bernard Parish Charette	\$80,000 - \$100,000	?	Resolution to the State of Louisana and to the Governor Blanco in support of the amendments to the Stattford Act proposed by the Louisiana Recovery Authority charettes, permitting the Katrina Cottage as similarly permanant housing solution as an atemate standard for FEMA trailers	x
Surrou	The state of the s	Biloxi Home Program	s170,000	12 Designs max. 1600 sqft size: 50' x 170'	Individual	Depends on individual proposal	
	etition		High Density on high Ground Competition	?	700.2 DO GU	prefabricated unites 160 units	Filters rainwater for plants
Competition	Comp		Sustainable Design Competition for New Orleans	Low can DIY	?	1.6 acres. 18 living unit (12 multi-family and 6 single family) and a community center.	rain water collection and recycle. No electrical bill.



Potential for Future Extension	flood Resistance	Hurricane Resistance	Repairability	Typical Floor Plan	Urban Typology	
x			pending			
x			pending	TOTAL STATE OF THE PARTY OF THE		
Temp Housing only Max 18 months	×	×	Repair Centre			
	×	withstand at least 140 mph winds (meet moet hurricane code). And withstand rain	?		?	
x	8 - 10 ft above ground	x	?	generic concept	×	
G A MARKET	Raised land or house 6-8 ft above ground	×	?	×	jamet James	
<b>✓</b>	6'-12' above ground		?	orientated on an east/west axis in the longer direction, setbacks; f20f side5, f25	×	
x		× ?		BE REE SO LESS EST		
x	Raised building. Use lower level for garden	x	?	The state of the s	自己	

# housing (4) ACORN Housing developments











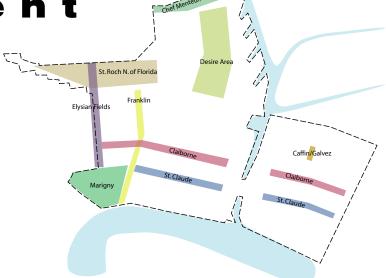




# development

#### business survey

Convenient access to basic consumer goods is an important requirement for any healthy residential area. The stability of a residential area's nearby commercial corridor is viewed by many would-be investors as a leading indicator of neighborhood stability. In a post-disaster context, the recovery of local commercial corridors offers returning residents access to goods, services, and jobs, and encourages further investments in the area.



#### business clusters







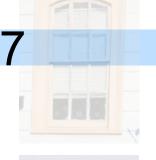
Restaurants and bars are by far the most common business type throughout the district. Almost 25 % of the total businesses surveyed — and of the open businesses — are restaurants or bars. Other local businesses include several grocery stores, salons and beauty shops, auto repair shops, and offices throughout the district. However, many of these businesses remain closed.



Whereas 80% of the businesses in the Marigny neighborhood appear to have successfully re-opened, fewer than half of the businesses located along the St. Claude and Claiborne corridors and in the Desire and St. Roch (north of Florida Avenue) areas have done so. In fact, only eight of the neighborhood's existing businesses were back in operation in the Desire area.



Businesses have been slowly returning to the 8th district. In October of 2006, only seven (11.9%) of the district's fifty-nine previously-operating business establishments were open, and 3 (5.1%) appeared to be under active renovation, while 49 (83%) remained shuttered.





In mid-October of 2006, nearly 60% of the commercial buildings within the district appeared to have sustained significant damage to their facades, while 39% of the establishments formerly operating from these buildings had severely damaged or missing signage. Approximately 30% of the district's vacant commercial buildings appeared to have experienced minimal structural damage and may be ready for immediate occupancy if the demand for this space should develop.

#### economic opportunities

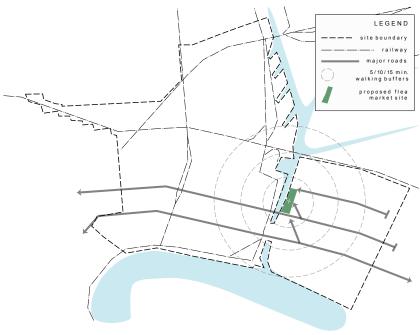
Apart from developing a series of commercial corridors (such as St. Claude and Claiborne), there are opportunities to bank on the available work-force in the 9th Ward, as well as on existing needs. In particular, we propose the development of a modular housing industry, in tandem with a YouthBuild program, and the development of a flea market.

A modular housing factory in the Ninth ward would offer well-paid employment opportunities in close proximity to an available workforce. This local industry would accelerate the neighborhood reconstruction process, generating infill housing that could be easily adapted for sites near the factory

The adjacent figure maps the areas with industrial zoning in the Ninth Ward. Also, the neighborhood's proximity to the Mississippi River and a nearby harbor, as well as an extensive railway system, could revive this underutilized industrial area into an important regional and national export zone. A modular housing factory couldserve its immediate area, and potentially act as a catalyst for housing production in the entire Gulf Coast.



modular housing factory



Giving the residents of the 9th Ward an outlet for small entrepreneurial opportunities could spur local economic synergies, and create venues for people to meet and greet. A flea market requires minimal public investments and could potentially provide a series of direct and fringe benefits that would make living in these districts more desirable. Especially as residents rebuild their neighbourhood, such a flea market could provide as a central place for the exchange of construction materials and services, as well as household goods.

The market could provide an important site for distributing information regarding health, education, welfare, housing, and job training services. The lead agency on such a project could be the city itself or a local NGO. A flea market is relatively cheap to organize, and charging sellers a small fee would provide money to maintain the market.

flea market



The physical rebuilding process in the Ninth Ward stimulates economic and workforce development, and an emphasis must be placed on developing local skills in the building trades. Community empowerment and swift redevelopment depend on programs that connect residents to careers in the building trades, which they can focus on the recovery of housing and business in their own communities. Such programs should, if possible, be developed around the sites of existing or proposed housing development facilities.

# municipal services



operational bus routes (oct. '06)

#### public transit

Public transportation services in New Orleans before Katrina were fairly good, with buses and light rail cars spanning most of the city. Currently, only 49% of all public transportation routes, and only 17% of bus routes are operational.



schools(oct. '06)

#### education

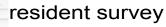
In December 2006, only 49% of New Orleans former public schools were open (as opposed to 74% at the regional level). In the 9th Ward, only three public schools reopened.



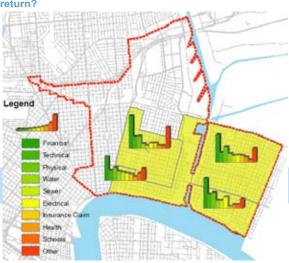


safety

There is only one police sub-station in the Upper Ninth Ward, and none in the Lower Ninth Ward. While members of the New Orleans Police Department and the National Guard regularly drive through the neighborhood, residents believe they made little effort to develop the kind of relationships with local residents needed to form an effective community-based crime prevention program. Fire stations appear to be appropriately located throughout the neighborhood in order to assure reasonable emergency response times.



What do you feel you need to have before you can return?



What things or services does the neighborhood need before you can return to it?

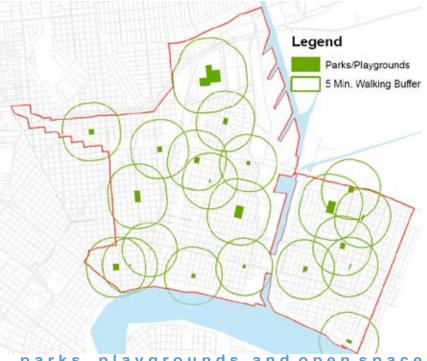


When queried about the types of services residents needed to return to their neighborhood, survey results indicate that residents placed a high priority on the need for schools, medical facilities, public transportation, community and recreational facilities, parks and playgrounds, affordable housing and grocery stores.

# parks and pen space

One team conducted a two-day survey of the 22 local parks and playgrounds in the 9th Ward. They documented whether the parks had been damaged, their current status and use. While neutral ground on many New Orleans Avenues is also often used for recreation, we did not survey these green spaces.

The adjacent map shows that the parks and playgrounds surveyed are within a 5 minute walking distance from many neighborhoods. Residents in Holy Cross and between N. Claiborne and St. Claude Avenues in the St. Claude neighborhood, however, did not have easy access to parks and playgrounds even before Hurricane Katrina.



parks, playgrounds, and open space

#### parks, playgrounds, and open space conditions (oct. '06)

District	No. Parks	Storm Damaged	pesolo	Used As Park	Status of Closed Parks/Playgrounds
7	7	6	4	2	Three overgrown or unkempt, one used as construction staging area.
8	15	13	11	4	Four used as FEMA trailer parks, one used as a parking lot, six overgrown or unkempt.
9 <sup>th</sup> Ward	22	19	15	6	

Over three-quarters of 9th Wards 22 parks showed signs of damage from Hurricane Katrina in October 2006. A third of the parks were open and used as parks. The remaining two-thirds of the parks were unmaintained or used for post-storm recovery. Five were used as FEMA trailer parks, another as a construction staging area, and a seventh as a gated parking lot.





parks converted to FEMA trailer park



#### new open space proposals

The need for open space, as well as the need to bridge the transition between neighborhoods, and between neighborhoods and working areas prompted the proposal of two parks: one along the Desire industrial area, and one along the railway-line separating the Upper 9th from the rest of the city.



Desire Park will become an extensive natural system that weaves together neighborhood's industrial past, new park spaces, and rebounding native habitats while providing links to the greater New Orleans park system through dedicated bike routes, nodes, and improved roadway connections.



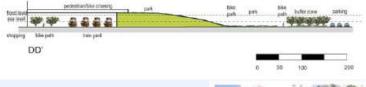








The Railway Park will act both as a buffer between the railway lines and the adjacent neighborhoods, and as a connector between the Upper 9th and St. Roch Neighborhoods. Existing bridges will be improved with separate pedestrian/bike lanes, and a new pedestrian bridge is proposed for the northern part of the site. The bridge will connect with a new community park built on a vegetative berm. This berm will also serve as a noise and flood buffer.





railway park





#### new play-grounds and tot-lots

Residents cite the lack of safe spaces for their children as one of their top concerns: several respondents to our surveys cited playgrounds for kids as the most important thing they would like to see incorporated in a recovery plan. A comprehensive system of playgrounds, often physically linked to community institutions like schools can help prevent criminal activity from taking control of single, unregulated playgrounds. Neighborhood participation in both the design and construction of these playgrounds increase both the quality of community stewardship over these new public spaces.

