CARVER PARK NEIGHBORHOOD
site specific distressed mobile home revitalization strategies

presented to the city of yuma_arizona
carver park neighborhood distressed mobile home park
department of community development + neighborhood services

prepared spring 2003
the university of arizona
college of architecture, planning, and landscape architecture
an interdisciplinary community design studio project
professor and faculty member_corky poster
students_eric grigel, david everson, and max benson

The Drachman Institute
College of Architecture and Landscape Architecture
Two supporting students: Jelica Stranks, Rachel Heimer
Presented to the city of Yuma, Arizona
Carver Park neighborhood distressed mobile home park
Department of community development + neighborhood services

Prepared spring 2003
The University of Arizona
College of architecture, planning, and landscape architecture
An interdisciplinary community design studio project
Professor and faculty member Corky Poster
Students: Eric Grigel, David Everson, and Max Benson
contents

project introduction 1

meeting notes:
  first meeting overview 2-4
  second meeting overview 5

mobile home manufacturing plant:
  aerial photograph 6
  overview 7-8
  production pictures 9-11

mobile home floor plans:
  precedent mobile home floor plan 12
  modified mobile home floor plan 13

existing on-site buildings:
  on-site building descriptions 14

cost analysis:
  site development cost analysis 15

presentation boards:
  floor plan 16
  scheme 1 17
  scheme 2 18
  scheme 3 19

appendix (separate bound booklet)

1. carver park neighborhood revitilization powerpoint presentation
   -as presented by the city of yuma, arizona

2. carver park neighborhood initial site specific analysis and documentation
   -this powerpoint was presented by eric grigel, david everson, and max benson, on friday april 11, 2003
   -this powerpoint includes:
     -demographics
     -physical characteristics
     -site specific housing options
     -topics of discussion
project introduction

The Department of Neighborhood Services in Yuma, Arizona proposed the use of a student group from the University of Arizona's Interdisciplinary Design Studio to assist in producing a redevelopment proposal for a sub-area within the Carver Park Neighborhood. This sub-area currently consists of four heavily blighted trailer parks and one single family home. The City of Yuma, Department of Neighborhood Services has been conducting an ongoing revitalization of the larger neighborhood and this area is one of the last projects of the revitalization. The primary goal of the project is to provide design proposals that will minimize any displacement of current residents, while providing for a safe and sanitary environment and contributing to a stable neighborhood.

Process:
The Project began with a presentation by Bill Lilly of Neighborhood Services, introducing the site, background, and project to the student group. Subsequently, the student group conducted a demographic analysis, a site analysis, and presented this to Neighborhood Services for feedback. This second meeting provided feedback for the student group necessary for the final redevelopment proposals.

Who we are:
The Department of Neighborhood Services was largely represented by Bill Lilly. The Interdisciplinary Design Studio was supervised by Corky Poster and comprised of Eric Grigel and David Everson, both fourth year architecture students, and Max Benson a second year planning graduate student.
overview of first meeting between city and students

Yuma: Mobile Home Housing Project
Carver Park 2003
02-28-03

Neighborhood Services
1 million dollars per year with entitlement
Dispersed impact of funds can often effect the community in minimal ways
5 year concentration of funds suggested
Strategy developed with HUD

Historical significance of Carver Park Neighborhood
Traditionally, poor neighborhoods or lower income people lived on cheap land along rivers and in flood plains

Initial Phase of Community Revitalization (Clean-Up)
City officials passed city ordinance to clean-up existing neighborhood
Residents were notified of the clean-up and all of their yards were identified as targets to be cleaned
Volunteers picked up trash and removed garbage from sites
Residents that did not clean-up their own yards or who did not give permission for city officials to do so were cited and taken to court
Divided into 7 areas:
291 tons of garbage removed
Home improvements
Vision: to develop collective ownership in our own community
overview of first meeting between city and students

Accomplishments
- Community interaction
- Neighborhood picnics
- Strategically located facilities to interact with residents collectively
- Education of residents and community members to prevent crime
  (Governor's Action Designation)
- Community center across the street from Carver Park
  Estimated $1,000,000 project

Rental Housing
- No permits required to be a landlord, no restrictions on rental housing
- City of Yuma has right to inspect all rental units to insure they are sanitary environments
- Health and Safety are the primary concerns

Mobile Home Park Concerns
- Improvements may displace the current families living there
- Want to remove the existing property owners legally
- Do not want to remove the residents
- New standards within the community
  - New trailers
  - New Access ways
  - Location Standards
overview of first meeting between city and students

Carver Park situation
2.5-3.5 acres in mobile home sites
Approx. 80 units, 95% with children
Looking to bring in new trees and vegetation, completely renovate existing parks
(aerial photos)
Existing owners
Sell the trailer to the immediate tenant so that they cannot be inspected as rental units (Contract Purchase)
Rent the land to tenants
$50-$100 a month for the trailer, landlord claims as a sale
$200-$300 a month for the land
Tenants
Primarily minorities of Mexican decent
When they move out of the park, even though they technically own the trailer, they end up leaving it behind because they are so expensive to move

Future plans for Yuma
Revitalize 10-15 additional substandard mobile home parks in the city
(One other park just down the road from this project)
Possible commercial revitalization in Yuma
NERD program (under utilized commercial facility)

Resources within city of Yuma
GIS department
Site plans for the development
Doug Hipp - Civil Engineer
overview of second meeting between city and students

After the first meeting with city officials, a second meeting was deemed necessary between the student group and the Department of Neighborhood Services before the design proposals were submitted to the City of Yuma. While the student group was generally familiar with the project, subsequent research questions arose. Further, the student group had an additional member who had not yet met with Neighborhood Services, nor conducted a site visit.

The presentation included an overview of demographics including neighborhood and city population characteristics, physical characteristics including the neighborhood and the immediate site, site specific housing options including possible housing options and solutions. The presentation concluded with topics of discussion.

The student group needed direction on several topics including: parking, site design, ownership structure, density of the site, and the size of the units. The meeting was successful in exchanging the information and in refining the focus of the student group before actually making site design proposals.

The powerpoint presentation, and the feedback from the meeting is attached in the appendix. In attendance was David Everson, Eric Grigel, and Max Benson from the University of Arizona Student group, as well as Bill Lilly and Javier Morales from the City of Yuma, Neighborhood Services department.
mobile home manufacturing plant  fleetwood homes Phoenix, Arizona

Site Visit and Tour on April 2003

Fleetwood Homes manufacturing plant
Fleetwood Homes of Arizona, Inc.
6112 N. 56th Avenue
P.O. Box 2629
Glendale, AZ 85311

Space allocation:
manufacturing plant (indoors): 114,000 sq ft
outdoor storage space: 660,300 sq ft
Paraphrased Questions and Answers from the Glendale Fleetwood Homes facility:
Present: University of Arizona: David Everson, Eric Grigel, Max Benson, Corky Poster
Fleetwood Homes: Mathew Klein Account Sales Manager 888-302-6327

1) Q: What process, and added costs would be associated with the customizing a floor plan? Specifically we are considering the use of structures which do not have doors or windows on one of the long sides to allow the resident facing that wall to have a useful yard.

A: Simple modifications such as 'flipping' a room should not require any engineering however some larger modifications may require an engineering fee. However, the engineering fee should be reasonable when split between a number of units. The concerns regarding not having doors and windows on one side include safety egress and ingress issues as well as the fact every room needs a window.

2) Q: What possibility exists for a production facility in Yuma, AZ? Bill Lilly suggested numerous methods to help make it a viable option including: A city-owned facility, YouthBuild, and incarcerated youth and adult work training programs, as well as other methods. He also believed that the local demand, existing Fleetwood homes dealer, and cost savings in transportation would make it cost effective.

A: Currently, the Glendale facility is below production capacity as are most other facilities in the country. Right now is not the time to expand production facilities.

3) Q: What cost savings exist for large orders? What difference would it make if the unit type varied? Ex: 50 identical units versus 15 units of model X and 15 units of model Y and 20 units of model Z totaling 60 units.

A: As a customer, your bargaining point is on volume, it should not matter if you mix and match or purchase the identical units.

4) Q: What is the time frame for installing approximately 50 units?

A: A good installer should be able to install approximately 3 units per day, so 50 units would take approximately one month.
5) Q: Is there an advantage or disadvantage of installing the units together or staging the installation process?
A: From a sales perspective, Fleetwood would prefer you order a large number of homes at once rather than do a phased installation with months in between installations.

6) Q: How much room is necessary on either side of the units for the installation process? We will need to evaluate the ability to safe on site vegetation as well as existing site built structures.
A: Not much! The installers are very skilled and can back units onto dense sites around a number of obstacles. Additionally, some trucks can "push" units as much as 12ft from where the truck parks.

7) Q: Most of our site is in a flood plain and consequentially most of the units will need to be elevated 4ft above the ground. Would Fleetwood homes provide the stilts, stairs and any other related materials related to elevated structures? Is this included in the estimate?
A: Unsure, however, porches are available on a number of units as an option which would be under the roof line of the unit.

8) Q: Are there any unknowns or things to be aware of which we have not asked?
A: Shipping cost from Glendale to Yuma would probably be near $1000 while shipping those units from the Waco, TX plant could cost $2000 so it may be preferable for the Glendale to produce the units if you are ordering a large quantity. Also, a one year warrantees comes with each unit as well as other individual warranties on the roof, appliances, etc.
mobile home manufacturing plant pictures  fleetwood homes, phoenix, arizona

floor joists are laid over the two chassis beams
after the joists are laid down the flooring is attached to the joists
after the flooring is attached, the pre-assembled walls are attached
the walls are completely assembled and then brought over to the assembly line for attachment
the walls are attached with interior surfacing, but no exterior surfacing
interior walls and exterior walls are attached at the same time, working from the inside out
Wall assembly

Wall assembly

Wall assembly

Electrical lines are wired at the plant

Finishing work is done on the interior

Roof trusses are manufactured at the plant and then moved over to the assembly line.
Trusses are then attached to the homes.

After the trusses are attached, the roofing is applied.

After the roofing is finished, the units are put together.

More finishing work is done before the homes are put in the exterior yards for storage or shipping.

The finished product is ready for shipment.
mobile home floor plans

carver park
The design solutions envisioned by the University of Arizona's interdisciplinary design team involved a variation on a standard manufactured home in order to facilitate the most efficient use of space. While manufactured homes come in numerous arrangements, none facilitated a zero lot line arrangement. The zero lot line arrangement maximizes the usability of a single yard by removing ineffective side yards. We chose this modification based on ease of creating a long dimension without windows or doors. Our best option was a variation of an existing 1 bedroom 1 bath 546 SQ ft unit. By adding a smaller accessory bedroom, our modified unit is now a 2 bedroom 1 bath 665 sq ft unit, with a single roof slope. While Fleetwood homes has not reviewed our final plans, this unit seems well within their capacity to produce given out earlier consultations. However, given existing flood plain regulations most of the units will have to be elevated 4 ft. from the ground meaning that the porches and stairs shown on the site design will need to be built on-site.
modified mobile home floor plan

Bedroom #1

Kitchen

Living

Bedroom #2

13'-8" x 19'

50' x 31'

Car.K...er. gar.K...er. modified mobile home floor plan

Carver Park
existing on-site buildings

carver park
existing on-site buildings

Building Area:

Perhaps most significantly, the site design involves choosing which structures to renovate and which to demolish. While numerous factors are important in making this decision one of the most relevant is the square footage of the structure, which is illustrated below. Buildings numbered four and five are both two story structures and hence benefit from increased density over single story replacement structures. However, the cost of renovation among other criteria can only be determined after an internal inspection which may not be possible until after the property is purchased or at least until the properties are assessed.

<table>
<thead>
<tr>
<th>Building Number</th>
<th>Total Building Area</th>
<th>Number of Units</th>
<th>Square footage of each unit</th>
<th>Comments:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>555</td>
<td>1</td>
<td>555</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>420</td>
<td>1</td>
<td>420</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>745</td>
<td>1</td>
<td>745</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>1660</td>
<td>2</td>
<td>830</td>
<td>2 stories</td>
</tr>
<tr>
<td>5</td>
<td>2070</td>
<td>2</td>
<td>1035</td>
<td>2 stories</td>
</tr>
<tr>
<td>8</td>
<td>1000</td>
<td>1</td>
<td>1000</td>
<td>Possible Laundry Room</td>
</tr>
<tr>
<td>9</td>
<td>975</td>
<td>1</td>
<td>975</td>
<td>Possible Laundry Room</td>
</tr>
</tbody>
</table>

...
cost analysis

carver park
cost analysis

<table>
<thead>
<tr>
<th>Scheme</th>
<th>Manufactured unit costs @ $17,145</th>
<th>Improvements and utilities for Manuf. Homes @ $6,000 per unit</th>
<th>Renovation cost @ $17 per sqft.</th>
<th>Permits and plan review @ $850 per rehab bldg</th>
<th>Sub-Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scheme 1</td>
<td>48 units @ $822,960</td>
<td>48 units @ $288,000</td>
<td>0</td>
<td>0 bldg</td>
<td>$0</td>
</tr>
<tr>
<td>Scheme 2</td>
<td>34 units @ $582,930</td>
<td>34 units @ $204,000</td>
<td>7425 sqft. @ $126,225</td>
<td>7 bldg</td>
<td>$5950</td>
</tr>
<tr>
<td>Scheme 3</td>
<td>31 units @ $531,495</td>
<td>31 units @ $186,000</td>
<td>7425 sqft. @ $126,225</td>
<td>7 bldg</td>
<td>$5950</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Scheme</th>
<th>Pavement est. @ $1.50 sqft.</th>
<th>Sidewalks est. @ $5.20/linear foot</th>
<th>Trees 1 per unit @ $100 each</th>
<th>Subtotal</th>
<th>Total + 10% contingency</th>
<th>Per Unit Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scheme 1</td>
<td>20960 sqft</td>
<td>2144 ft</td>
<td>$11,150</td>
<td>48</td>
<td>$4800</td>
<td>$47,390</td>
</tr>
<tr>
<td>Scheme 2</td>
<td>31000 sqft</td>
<td>2542 ft</td>
<td>$13,220</td>
<td>43</td>
<td>$4300</td>
<td>$64,020</td>
</tr>
<tr>
<td>Scheme 3</td>
<td>41108 sqft</td>
<td>2962 ft</td>
<td>$15,400</td>
<td>40</td>
<td>$4000</td>
<td>$81,050</td>
</tr>
</tbody>
</table>

The above cost analysis provides a rough guide to the costs of the three alternatives; however several factors may alter these estimates. Most importantly the price of the manufactured home units which will ultimately be negotiated between the City of Yuma and Fleetwood Homes or another manufactured home producer will have the largest effect on the total cost. The use of YouthBuild may effectively provide significant cost savings on both the renovation costs for the on site buildings in scheme two and three and the improvements to the manufactured homes. Cost savings may also be possible if the city waives permit or plan review fees. However, the miscellaneous costs such as hiring professionals as sub contractors for design work or other miscellaneous services may increase the estimates.

Notes: Estimates were primarily derived from conversations with City of Yuma staff, Corky Poster, and from the RS Means building Construction Cost Book 2003. Manufactured Home cost based on 10% over wholesale price, Fleetwood Homes Broadmore model 2482 a 640 sqft. 2 bedroom, 1 bath unit.
presentation boards (floor plan)
presentation boards (scheme one)

S C H E M E 1

13TH AVENUE
3RD STREET

ELEVATION

NUMBER OF FAMILIES: 48 (48 MANUFACTURED HOUSES, 0 REMODELED EXISTING STRUCTURES ON SITE)
- THIS SCHEME DOES NOT INCLUDE A LAUNDRY FACILITY OR AN INDOOR COMMON AREA

THIS LINEAR SCHEME PROVIDES THE MOST UNITS FOR DISPLACING THE FEWEST NUMBER OF CURRENT RESIDENTS. IN THIS MODEL, NONE OF THE EXISTING STRUCTURES ARE PRESERVED. HOWEVER, EXISTING TREES ARE PRESERVED IN SO FAR AS THEY FIT INTO EITHER A COMMON SPACE OR A PRIVATE YARD. IN ADDITION TO SIDEWALKS ALONG THE ROADWAYS, A FOUR FOOT WIDE PEDESTRIAN WALKWAY TRAVERSES THE SITE FROM EAST TO WEST. A LAUNDRY FACILITY IS NOT PROVIDED ON THE PREMISES, HOWEVER ROOM IS AVAILABLE IN EACH UNIT TO INSTALL A WASHER AND DRYER. COST SAVINGS TO THE RESIDENT MAY BE AVAILABLE BY PURCHASING THE WASHER AND DRYER FROM FLEETWOOD HOMES AS AN OPTION IN THE UNIT AT TIME OF SALE. FURTHER, ALL OF THE STRUCTURES ARE ORIENTED WITH ONLY NORTH OR SOUTH EXPOSURE MINIMIZING THE SOLAR GAIN AND REDUCING COOLING COST.
presentation boards (scheme two)

This scheme offers different housing options and renovates most of the existing site-built structures. Residents could choose to live in either the conventional manufactured housing unit of 655 square feet or an existing building. A private yard is provided for almost all of the existing structures; however, a laundry room and indoor common area is provided. This common area could be used as a play area for the toddlers during the day and as a meeting room in the evening. Pedestrian circulation on the western half of the site follows the roadways while on the eastern half of the site a four-foot walkway is stepped away from the laundry building. Of course, the integrity of the existing buildings must be analyzed before the final decision is made to preserve them.
presentation boards (scheme three)

This hybrid scheme provides centralized parking for most of the residents. It also preserves the most trees out of the three different schemes. This layout allows for a laundry building as well as preserving half of the existing structures. The manufactured homes on the east side of the property have a smaller lot than the homes on the west side of the property. The additional common area on the east of the property doubles as a retention basin.