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The Mobile Community Center: A Socially Restorative Solution for Federal Emergency Management Agency Disaster Trailer Parks in the American South

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THE MOBILE COMMUNITY CENTER:
A SOCIALLY RESTORATIVE SOLUTION FOR FEDERAL EMERGENCY MANAGEMENT AGENCY DISASTER TRAILER PARKS IN THE AMERICAN SOUTH

By

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A Thesis submitted to the Department of Interior Design in partial fulfillment of the requirements for the degree of Master of Science

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For: Mom, Dad, Brett, and Trent
Thank you for always believing in me.
I'm so blessed to have a family like you.
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ABSTRACT

Community centers have a long history of helping bring people together, giving a common ground for strangers to meet and interact. This study explored a potential design solution that could be beneficial to the people displaced due to natural disasters who are relocated to FEMA trailer parks.

This design thesis examines several different aspects important to the design of a community center for people who have been displaced, then applies these concepts to a theoretical design. Modular building units were used because they allow the center to be moved and quickly assembled. Place attachment allows a greater appreciation of the behavioral bonds associated with the displaced person’s homes that they were forced to abandon. Historic Southern architecture provides solutions to manage heat and climate conditions in the Southern states. Finally, architectural standards of successful community centers and architectural pattern theory are examined. This research forms the foundation for a theoretical community center design solution intended for a Federal Emergency Management Agency hurricane disaster trailer park.

The proposed design is a mix of shipping containers combined in a way to meet the displaced individuals’ social needs. Careful thought is given to the individuals’ social needs, helping to provide a solution for these new residents of Federal Emergency Management Agency’s temporary housing.

Possible search words: mobility, hurricane, FEMA
CHAPTER 1

INTRODUCTION

Community centers have a long history of helping bring people together to form social attachments. They give a common ground for strangers to meet, and activities with which to interact. Displaced hurricane victims may benefit from social interaction provided by a community center. Federal Emergency Management Agency (FEMA) trailer parks in particular may offer opportunities to construct such centers.

The Problem

The summer of 2004 was a difficult time for the state of Florida. Four hurricanes struck the state within two months, causing the state to scramble for money and supplies to take care of the thousands of victims (Goodnough, 2004). The state was not prepared and many of the emergency warehouses were empty.

Figure 1. Grande Lagoon Subdivision in FL after Hurricane Ivan (Lovett, 2005).

The Red Cross estimates that in 2004, approximately 25,000 homes were destroyed and 50,000 homes experienced major damage from the four hurricanes that hit Florida in August and September (Goodnough, 2004). In response to these disasters, the Federal Emergency Management Agency (FEMA), purchased 12,000 trailers on wheels at a cost of $25,000 each and 4000 mobile homes at a cost of
$28,000 each. Only about 8000 of the 8 feet wide by 32 feet long trailers were used in makeshift trailer parks. The FEMA plan called for approximately 200 trailers to be gathered in groups around sewer pipes “where the backyards should be” (p.14). The reality was much different. FEMA guidelines include no provision for gathering or community-shared spaces in concert with these trailer parks.

![Image](image.jpg)

**Figure 2.** Plumbing for the trailers (Kauffman, 2006).

In one community known as “Heritage Park” in Punta Gorda, FL, 300 trailers remain of the 571 that were originally installed as of 2006 (Singer, 2006; Proulx, 2006). The neighborhood is known for crime, and Proulx found that some locals referred to the temporary trailer park as the “bad part of town” (p.1). Life is difficult for the residents of Heritage Park. One resident by the name of Natoya Williams describes her situation thus:

“…they put us here in the middle of nowhere, we ain’t got no jobs, I lost my home, I got no car to get around to look for a job and they telling us they ain’t got no money to help us out. Now maybe there’s people worse off than us, I’ll give you that…”(Proulx, 2006, p. 2).

Proulx’s research describes a spiral of problems within the community (2006). Last Christmas a charity gave all the children in Heritage Park a refurbished bicycle. Within two days all of them had been stolen. Locks had all been broken and it was
common for people to steal from each other when no one was home. When FEMA discontinued security within the community, crime increased even more. Noreen, a Heritage Park resident describes the situation.

“The kids are bored, that’s why they get into trouble. They see people who got just a little something and they feel bad cause they know they can’t get it unless they steal it...They come around for meals, I hang with them and they think I’m cool...that’s why they don’t break into my place for stuff. I feed ‘em cause they got nothing left” (Proulx, 2006, p.4).

Figure 3. Heritage Park near Punta Gorda, Florida (Proulx, 2006)

The plight of Heritage Park and other similar disaster-related trailer parks prompts questions concerning the social workability of this architectural arrangement. For example, would closer social relationships, and more activities for youth, discourage some of the crime in this community? Social areas are not normally found in FEMA’s trailer communities. Renaissance Village, a FEMA trailer park outside Baton Rouge, Louisiana, is one of the few parks with a community space (Singer, 2006). As of March
2006, Renaissance village was the largest of the 65 FEMA run trailer parks in Louisiana with 600 trailer units housing 1,600 residents.

Table 1.
Number of Renaissance Village residents, by age. (Singer, 2006, p.26).

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Number</th>
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<tbody>
<tr>
<td>YOUNG CHILDREN</td>
<td>122</td>
</tr>
<tr>
<td>(Up to 4 years old)</td>
<td></td>
</tr>
<tr>
<td>CHILDREN</td>
<td>247</td>
</tr>
<tr>
<td>(5-12)</td>
<td></td>
</tr>
<tr>
<td>TEENS</td>
<td>209</td>
</tr>
<tr>
<td>(13-17)</td>
<td></td>
</tr>
<tr>
<td>YOUNG ADULTS</td>
<td>197</td>
</tr>
<tr>
<td>(18-25)</td>
<td></td>
</tr>
<tr>
<td>ADULTS</td>
<td>636</td>
</tr>
<tr>
<td>(26-64)</td>
<td></td>
</tr>
<tr>
<td>SENIORS</td>
<td>230</td>
</tr>
<tr>
<td>(65+)</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>1,641</td>
</tr>
</tbody>
</table>

Share our Strength, an anti-poverty group, established a 60 by 30 foot tent within Renaissance Village that was used for meetings, children’s events, health fairs, and religious events. FEMA expressed the intent to take away the space out of fear that people would feel too settled into the community. Likewise, FEMA wanted to take away any religious services such as worship and Bible Study. In response, public outcry reached as high as the White House, and religious services were reinstated.

Renaissance Village did not, however, have any other community spaces such as playgrounds, park benches, or dining halls. KETA, the company that fed the Renaissance Village residents, gave them their food in foam containers which residents then carried away from the doublewide used to serve these meals.

Non-profit worker Sister Judith effectively summarized the trailer park situation, describing that FEMA’s approach “gives you no way to create social fabric in that environment” (Singer, 2006, p.6). To date, FEMA has distributed about 48,000 trailers.
and mobile homes in Louisiana alone. This statistic suggests that hundreds of thousands of people (100,000 in Mississippi alone), already traumatized by displacement after a cataclysmic event, may be enduring an environment rife with crime and with little social connection to provide them strength and social support for needed recuperation (Lohr, 2006).

![Figure 4. Arial view of Renaissance Village (Singer, 2006)](image)

**Nature of and Justification for the Design Project**

Residents of Renaissance Hills seem largely in favor of their community space, which is little more than a large canvas tent. Given the success of this community-instilling element in Renaissance Hills, might Heritage Park benefit from a similar socially nurturing space? Perhaps relationships formed among the residents would encourage community spirit while concurrently discouraging crime.

FEMA’s assumption that encouraging community attachment makes it difficult to terminate residents’ eighteen month stay might be re-examined. The agency’s policy of eighteen month stay, in any case, is proving unrealistic. For example, many residents of Heritage Park are still living in the temporary facilities two years later (Singer, 2006; Proulx, 2006). It is possible that residents like Natoya Williams, who lacks a car, would benefit from having many services on the premises, such as a computer lab, religious services, and a mailroom. Communal food facilities, including preparation and dining, might allow the neighbors to communicate and form friendships, allowing the residents
to respect each other. This proved to be the case with Noreen, who fed the local youth (Proulx, 2006). Recreational activities such as visual and performing arts, basketball, and soccer may provide the youth an outlet for their boredom, thus decreasing some mischief and petty crime.

This thesis proposes the design of a community facility specifically for these trailer parks that will fill the need of instilling community, providing activities, and serving as a refuge. In so doing, the park may realize a decrease in crime and foster a sense of working together through a collective life-changing disaster rather than an ‘every man for himself’ mentality. The dining hall will provide a gathering space for meals, in addition to an assembly area, and a stage for performing. The mail room will allow for mail to be distributed and collected, and may help employment become more attainable. A computer lab will give the residents a chance to check email and take computer classes. Classrooms will be used for tutoring and arts. The basketball court will allow the youth and adults alike to expend some of their energy in a constructive way.

This project proposes to design a community center that honors the needs of the Southeastern hurricane victim, while being practical to the FEMA trailer parks temporary and mobile nature through its examination of place attachment, community centers southern architecture, and modular buildings. Because research suggests that the southeast United States is particularly vulnerable to a new, more active cycle of hurricanes forecast to occur during the next 10 to 25 years, the research and design for this community center will focus primarily on a mobile unit for this geographic area. The design for the community center will be contextual to the FEMA trailer park in that its modular unit construction can be easily shipped and installed using the same means of transportation that many of the trailers use. The units will have the option of different layouts, allowing them to be used at various locations.

The southeast United States is an area with a significant historic vernacular architecture that is uniquely suited to its geographical and cultural environment. This author feels strongly that structures, even temporary ones, should provide cultural connection for its users that denote respect and help forge bonds of connection among residents. Therefore, through research and planning, this community center will become
a central and necessary component of the trailer park and what may be a vital component leading to possible social restoration.
CHAPTER 2
REVIEW OF LITERATURE

Introduction

Many different considerations must be made when designing a temporary, mobile community center for the South. To better understand the needs of the individuals that will be using this space, it is important to understand their loss and connection to the location from which they are relocating. Second, an understanding of the history of community centers and elements that assist in providing for a successful center is beneficial. Third, it is prudent to examine the nature of disasters and their consequences for individuals living in affected region. Although there are several different forms of disasters, this research and design will focus on hurricanes, due to their connection and frequency in the south. Finally, an understanding of several different forms of architecture, including historical Southern architecture, modular construction systems, and community design will be examined.

Various search techniques were used to gain knowledge of community and issues impactful to the design of a community center intended for southeast hurricane victims. The study began by using www.Informedesign.com which permitted a preliminary search of sources that would best serve this research. In addition, the summaries presented other search topics that were related to place attachment such as “sense of place”. Many of the articles summarized within Informedesign could be found in print at the Florida State University Strozier library. Several of the articles were found through searching the online library databases. In addition to Strozier Library, the literature search was also conducted at the library at Western Carolina University in Cullowee, North Carolina, and Gunnin Architectural Library at Clemson University in Clemson, South Carolina. Both libraries contained invaluable information including a collection of books and theses on community centers, modular building systems, and community centers. Additional journal articles were found using Expanded Academic and Avery Index. The databases led to several important journal articles describing topics including “place attachment” and “sense of place”. Lexus Nexus and News
Resource, however, were the sources that provided the most recent articles, imperative in the research of a community center for hurricane victims due to the timely nature of this topic.

The hurricane seasons of 2004 and 2005 devastated many communities, and some neighborhoods, such as Gulfport, Mississippi, and St. Bernard Parish of New Orleans were no longer safe for residents to occupy (Hull, 2006; Lohr, 2006). These victims found themselves evacuated to a new living situation, away from many of their possessions, family, and friends. Often the new situation was a FEMA trailer park.

**Place Attachment**

The concept of place attachment can help designers create spaces of meaning within Federal Emergency Management Agency’s temporary communities. Most people have places or items that hold special memories for them. According to Browns & Perkins, (as cited in Harris, 1996), “place attachment describes a variety of processes operating when individuals or groups form affective, cognitive, and/or behavioral bonds to a particular sociophysical setting” (p.287). People are attached to these places for reasons that are sometimes unknown, or may seem trivial to the average person. Experiences within a place often represent strong ties that bind an individual to a place. Gieryn states that experiences that produce place attachment are “fulfilling, terrifying, traumatic, triumphant, secret events that happen to us there” (p. 481). Feelings or stories that accompany the numerous forms of place attachment are many, according to Gieryn. Designers that are aware of place attachment are better able to create a space that is both appealing and meaningful.

**Place attachment as expressed through community.** Place attachment is more than the physical environment around a person. Attachment is very dependent on the people and friendships formed around an individual. Brown states that “place attachments are nourished by daily encounters with the environment and neighbors, seasonal celebrations, continued physical personalization and upkeep, and affective feeling toward and beliefs about the home and neighborhood” (Brown et al, 2003, p.259).

Such statements demonstrate why New Urbanist neighborhoods are successful in creating a sense of community (Frantz & Collins, 1999). During their time living in
Disney’s New Urbanism community called Celebration, Douglas Frantz and Catherine Collins recounted many stories about community events and celebrations. New Urbanism is sometimes called Neotraditionalism, and describes the “revival and reinterpretation of traditional town planning” (p.43). The principles are designed to create a sense of community and “opportunities for social engagement”(p. 43).

Similarly, qualitative evidence of “sense of community” in New Urbanism was found by Joongsub Kim and Rachel Kaplan (2004) in their study of the towns of Kentlands and Orchard Village. Kentlands scored higher than Orchard Village in overall sense of community as assessed against the four domains created by the researchers. These domains included 1) community attachment; 2) community identity; 3) social interaction; and, 4) pedestrianism. Community identity and pedestrianism are both physical aspects that relate to the aesthetic qualities of the neighborhoods. Community identity and community attachment (quality of relationships) rely more on social and psychological aspects of the neighborhoods. Overall both communities scored very high on resident’s satisfaction with the neighborhood and attachment to the community.

*Figure 5. Children playing in a fountain in Celebration, Florida. The fountain becomes a community gathering spot.*

If community attachment is related to an attractive community as Kim and Kaplan’s (2004) study suggests, then it is evident why the researchers examining place attachment in a low income community assumed that the attachment would be less than
that of a higher income neighborhood (Brown et al, 2003). In keeping with prior research, the researchers were expecting that place attachment related closely with financial investments, social cohesion and control, and low fear of crime. The study revealed that residents of the neighborhood they were studying were extremely attached to their homes despite physical appearances. They did, however, find that low crime did in fact make the community more connected. People also valued their house over their community in terms of attachment, but they found that this attachment manifested itself in blocks. This meant that a whole block would be attached to their home. This shows that the community had a larger effect than the residents realized.

Socialization is a major aspect of feeling a connection with an individual place. In a study of elder care facilities, researchers found that residents of the facility or community felt more attached to the place when there was a community center close to the individual cottages (Sugihara & Evans, 2000). This, along with natural settings, gave the residents a strong sense of place, and thus a stronger place attachment. The sense of place also encouraged an easier adjustment, and often led to greater health. The researchers found that in addition to floor plans that encouraged planned community events, floor plans that encouraged unplanned social interaction were very important. Hallways where residents had a chance to communicate while passing created an “accidental intersection”. The above studies reinforce the idea that place attachment is connected with a person’s social network, and not related to the physical attraction of the neighborhood alone.

**Places as memory markers.** Places serve as memory triggers, much in the same way that items may trigger a memory. Many studies suggest place attachment forms when someone has spent a large period of time residing in certain places. In her study of location meaning, Manzo (2005) stated that “exploring place meaning by primarily examining experiences of the residence or rootedness in a community leads us to assume that those who do not have strong, positive affective bonds with their residence are placeless” (p.68). McElroy (as cited by Manzo, 2005), discusses the fact that some people feel more of a connection in the journey of going home than being at home itself. In fact Manzo found that when naming places of significance, many people named places that were part of their life’s journey. “For many participants, places that
served as markers in life’s journey were significant even if the experience in that place was less than ideal” (2005, p. 77). Surprisingly, many of these places named by the participants represented feelings of fear or sadness. Manzo shares the story of one of the participants in his study, the man who recounted traveling along the highway away from his home and abusive father for his yearly trips to his grandparents. Today, the man holds fond memories of the truck stops along the highway, and the freedom they represented. Other people viewed places as “bridges to the past”. One woman discusses how connected she felt with a department store in Los Angeles after the death of her mother. She and her mother had spent many happy moments there, and simply being at this store brought these memories back (Manzo, 2005).

Some places are valued for the attachment through family. A good example is Burley’s study of Grand Isle, Louisiana, a community marked by constant struggle with coastal land loss (2005). Burley remarked that “not surprisingly, the strongest links to place for these respondents are familial” (p. 20). Many people recounted stories of how their families have survived hurricanes for generations on this ever-changing island. The researcher said that many of the participants spoke in terms of which disaster they had survived. It seems these conditions do not cause the residents to leave, but rather unite them more to the island. The same attachment is evident in the case of recent hurricane victims. Reported victim Alex Norton after seeing her childhood home destroyed by Hurricane Ivan, “I miss my room and the bookshelves my grandpa built. My mom says home is where the heart is but my heart is still there” (Lovett, 2005).
Mobility and place attachment. Much research has been conducted on how place attachment is affected by geographic mobility. Of course, this assumes that place attachment is mainly formed through time in a residence (Manzo, 2005). Robert Hay (1998) found that mobility interferes with ability to form memories and place associations and prevents strong community involvement. Hay’s study also suggested that place attachment follows a cycle much like the human life cycle, or stages of life ranging from infancy to adulthood. Those who had passed through more stages of life had a greater sense of attachment to a place. Hay begins with early childhood and puberty. He states that the community of a child is very localized in that they normally travel between home, school, and play with local children. Hay’s interviews with school children suggested “a development of the embryonic stage of sense of place” (p. 17). In his study he found that in the puberty age students wanted to venture further from home, much like the participants in the adolescent age group. They commented that they were bored with the local activities, and wanted to travel in hopes of finding more
entertaining places. Adolescent participants were pushing their freedom to new lengths, aided by their ability to drive their own cars. Many of the students in this New Zealand study had been away at boarding school, and they reported having a stronger sense of place due to homesickness. This suggests that being absent from a location may actually make a person more attached to the place.

The next stage in Hay’s cycle is Young Adulthood. In his study many of the participants left the area for education and experience. Many of the participants in this age group returned to the town if it could support them financially. “There is an intense period of adjustment during early adulthood, with respondents reporting little time available to reflect on their place experiences” (Hay, 1998, p.19). Adulthood according to Hay is the period of time from participants’ mid thirties to the late fifties, when they start to see benefits of their labor and began to become the most involved in the community. When people reached the Young-old and Old-old stages the participants began reminiscing about the “old days”. Although they were not always physically able to participate in the community, their relationship with the community had already been formed.

According to Gustafson (2001), many studies in the past have positioned place attachment and mobility on opposite ends of the spectrum. These studies suggest that if one is attached to a certain place, then that person is probably not upwardly mobile. Some studies further suggest that mobility can be associated with wealth, and therefore place attachment is associated with poverty (Gustafson, 2001). However, Feldman (as cited by Gustafson, 2001) argues that “people who repeatedly change residence try to preserve ‘the continuity of residential experiences’” (p. 670). They do this by “moving to places that resemble their former home places, thus maintaining a ‘settlement-identity’”(p. 670).

Gustafson (2001) further identifies the difference between what he calls ‘roots’ and ‘routes’. Place attachment used to be identified in terms of roots, or the location where someone is from. To Gustafson, ‘roots’ imply that “place is something highly specific, something literally irreplaceable. Place is tightly bound on one hand to individuals, biographies, experiences, and emotions, and on the other hand to local social networks and the other forms of context-dependent knowledge and resources” (p.
The notion that attachment is associated only with roots is changing, and the experience of “obtaining new experiences” is gaining perspective (Gustafson, 2001). Gustafson also found that most people had established roots, whether they believed they had them or not.

**Place attachment through favorite places.** Most people can recall places that make them feel better for some reason. It may be a favorite hiking spot or a cozy nook next to the fireplace. One study accumulated and reported the results of what participants considered their favorite places. According to Korpela (2001), previous studies revealed that adolescents’ essays described retreating to their favorite places after “threatening or emotionally negative events to relax, calm down, clear their minds, and face troublesome matters” (p.576). Korpela’s study sought to determine the kind of places that people saw as favorable and unfavorable. Their results may assist designers in understanding characteristics of places that put most people in a favorable mood. Among the favorite places listed were natural settings such as beaches, lakes, oceans, parks, forests, hills, or mountains. Forty-eight percent of respondents listed viewpoints as their most favorable setting. The second most favorable setting with a frequency rate of 19% was residential spaces. Quality of feelings connected to these favorite places included ‘relaxation’, ‘calmness’, ‘comfort’, ‘happiness’, ‘enjoyment’, ‘excitement’, and ‘beauty’. The place that was listed as the least favorable was the ‘bad part of the town’. Interestingly, participants cited unpleasant people or culture for this choice. This reaffirms that place is defined as much more than a physical setting. The above research has several implications for designers including the use of natural settings, residential or “home-like” atmospheres, and colors and materials that calm and soothe the client or user of the space.

**Community Centers: A Place to Gather**

**Definition of a community center.** The origin of the community center is much in question. However, their purpose is fairly clear. Sternberg (1971) points out some of the important roles of the community center. The first role is purveyor of a sense of identity (p.9). This quality can range from that of a community as a whole to the identity of the individual person. Wates & Knevitt (1987) point out that these centers provide “a unique opportunity for people in a locality to discover each other’s talents and work
together” (p.98). Within their research study, people began confirming their own identity through these experiences.

Second, Sternberg (1971) discusses the “spirit” that allows the communities to tackle difficulties and find a solution (p.9). This attitude of self-determination is fueled by a well designed community center and should be considered while designing future centers. Wates & Knevitt (1986) reference an ancient Chinese proverb that helps illustrate this fact: “I hear and I forget, I see and I remember, I do and I understand” (p. 112). Research shows that when the community or neighborhood becomes involved in a project it simply functions better, enjoys higher initial quality and maintained to a higher level than a center that is designed without the involvement of the community (Wates & Knevitt, 1986). A sense of pride is established in the community when community members become physically involved in a project. For designers and architects, this means that they must find a way to engage and equip the community members to solve their own problems (p. 21). The emphasis becomes about the process and not simply the resulting building. The British organization Oxfam discovered a similar result while designing a transitional shelter for Tsunami victims in Sri Lanka (Murphy, 2006). Much of the skilled and unskilled work was accomplished by women and men who would soon be living in the shelter. This provided the workers, especially the women, “access to income and a sense of empowerment” (p.86).

The third role Sternberg (1971) assigns to the community center is host for the programs that encourage the community educationally and culturally. These needs are based on the local requirements of the community. Although Sternberg may have assigned these roles to the community center, he found that there was no standard in terms of programming. Each center’s design emanated from the individual needs of the community. Unfortunately many centers are never claimed by the community, and places such as shopping centers often serve this purpose. This is especially prevalent in low income areas.

**Architectural guidelines for successful community centers.** Sternberg offers these suggestions for a successful community center (1971). First a “stimulating architectural form” is important to the design (p. 11). Murphy’s study of a community center by Homeboy Industries exemplifies this idea (2006). Homeboy Industries is an
organization that takes young men, once involved in gangs, and gives them work experience and a support group as the boys leave what they considered to be a network of friends. The design for Homeboy Industries reinforces the values of the organization through many of the architectural decisions made in this building (Murphy, 2006). The purpose for this building is to give former gang members a chance at safety and a second chance. The designer sought to call attention to safety, albeit in a little different way than most organizations in the area. Most windows in the community were barred creating a visual barrier. The designers wanted the members to feel safe, but without the constant visual imagery of bars. The choice to install bullet-proof glass became an important decision, showcasing the organization’s idea to be open to the community, while still maintaining their safety. “In an act of solidarity and a show of resilience, Homeboy and Homegirl meetings take place right in front of the windows for all the neighborhood to see” (p.208). To the designers and the former gang members, the bars represented fear, not a value this organization wished to suggest to their members.

Sternberg’s second suggestion for a successful community center is to have “institutions” or “activities” that will cause people to leave their homes and spend time at the neighborhood center (1971, p. 11). These activities can include sports like basketball, educational pursuits such as reading and tutoring, or cultural events such as art classes. When Architecture for Humanity submitted a challenge for architects and health professionals to design a mobile AIDS unit for Africa, the winning entry was a design that met a diverse group of needs (Murphy, 2006). The clinic served as a marketplace during the day and a community gathering space in the evening. The community enjoyed movies in the evening made possible by a projection screen on the side of the building.

A third suggestion for an effective community center describes the flexibility a center should possess, fostering “an easy transition from passive to many kinds of active involvement, with abundant chances for people to meet and greet informally” (Sternberg, 1971, p.11). R. C. Fauth, T. Leventhal, & J. Brooks-Gunn (2004) studied families that were moved from low-income housing situations to middle class neighborhoods. Although these families appeared to do better physically and
monetarily, their social well-being decreased. They felt a great sense of safety in their new environment, but lacked the common ground or common place to socialize with these neighbors. This finding reinforces the need for a common location and underscores the impact of “loss of friendships, [which presents a] potential downside of neighborhood relocation efforts” (Fried & Gilcher, 1961).

Sternberg’s (1971) final suggestion describes that a community center must contain a “diverse group of people.” This is an important consideration when considering such a facility for hurricane victims. Evacuees are often a varied group, coming from many different neighborhoods and income brackets. In summation, research suggests that many different cultural impacts dictate what a community center program should contain. Environment, culture, and planned activities are merely a few of the considerations that should be kept in mind when creating a community center. According to Sternberg, “the community center’s historic role of building first a sense of identity, then a spirit of self-help to tackle community problems, combined with an immediate program of educational and cultural activities based on local needs and interests to enrich the daily life of residents, could be a vital one today” (p. 9).

**Hurricanes as Social Disruptors**

Hurricane Katrina, which hit Louisiana in September or 2005, disturbed life as many people defined it, much like many of the hurricanes of the past. Many people were no longer able to work, due to physical damage to their place of employment (Hull, 2006; Rodriguez et al, 2006). Homes were destroyed, and people who were used to being self sufficient had to look to others for help.

Banjree (2001), referring to Putnam, has suggested that there has been a decline in civic spirit since World War II, believing it is the influence of television news and the internet on modern society (p. 12). People are hardened by news stories, and are spending more time watching television and surfing the internet than becoming involved in community events. In contrast, researchers found that the aftermath of Katrina brought an overwhelming spirit of concern toward fellow man (Rodriguez et al, 2006). President George W. Bush said this regarding the behavior of Americans after Katrina:

…one of the lessons of this storm is the decency of people, the decency of men and women who care a lot about their fellow citizens, whether
they be elected officials or just folks on the ground… trying to make somebody else’s life even better than it was before. So we learned some lessons about how to respond, and we’re going to change. But some of the lessons shouldn’t change and that is the decency and character of the American people (FEMA, 2006, pp. 2-3).

Hurricane Katrina, by definition, was a “catastrophe”, meeting the six elements that must be achieved before a storm may be called a disaster (Rodriguez et al., 2006, pp. 86-87). These six elements were defined as the following by Quarantelli (2005).

1. The physical impact must by massive, in contrast to a localized impact. Damage happens in many hurricanes, but the impact of Katrina was major, costing billions of dollars over several states.

2. Local officials are unable to perform their normal work duties. For example, many of the police officers and firemen were unable to continue in their normal duties after Katrina.

3. Help must come from very distant areas. Aid for Katrina came in from all over the United States.

4. Community functions are harshly interrupted.

5. Non-local media, normally cable, reports most news for the area. This means the damage was significant enough to cause normal reporting to cease and the news of the damage was noteworthy enough for the whole country to share interest. Many sociologists believe that the reporting of the effects of Katrina on the locals was not accurate as many of the reports only focused on behavior such as looting (Rodriguez et al, 2006). However, when sociologists investigated this behavior, they found that the looting was a social norm for many of these offenders, and their actions were not the result of the storm. Most of this was occurring prior to the storm, but lacked the media attention. Conversely, the researchers found that stories of decency and pro-social behavior were prevalent. One example is the “Robin Hood Looters”, a group
of friends from childhood who sent their family to safety, and then spent about two weeks going from house to house looking for people who needed to be rescued (Rodriguez et al, 2006, p. 91). They derived their name from the fact that they took food and water from homes in order to continue their work. “Among the important norms that developed were that they were going to retrieve only survivors and not bodies and that group members would not carry weapons” (p. 91).

6. The final element of catastrophe that Hurricane Katrina met was that “very high level officials and governmental agencies from the national level became directly involved” (p. 87).

Hurricanes, such as Katrina, interrupt the daily patterns with which many people are accustomed, such as the news, or receiving mail. The community center could possibly help establish routines such as receiving mail, and interacting with a regular employee that might make life seem more normal.

Hurricanes leave a much more serious impact on people than simply changing their daily routines. According to the American Psychological Association (2004), people commonly experience strong emotional reactions to distressing situations. The reactions differ within the individual, but two of the most common initial feelings are those of shock and often denial. As the initial shock resides some reactions will arise that are important to consider when building a community center for these displaced persons. Irritability is heightened, along with more drastic mood swings. A sensitivity should be given to “triggers” that range from anniversaries of the event to physical reminders (American Psychological Association, 2004). These triggers are often accompanied by fears that the events may reoccur, and often physically affect the person such as causing headaches, nausea, and chest pain. Equally important to consider are the recommendations given to help the individuals deal with the situation. Routines that are healthy and well-balanced should be established or re-established, giving some semblance of more stable times. Communication is also imperative. Individuals need to share experiences and emotions with their friends and family. Support groups, and trained individuals, are especially important to people that lack a strong personal support system. A community center for the displaced individuals can
provide opportunities to establish new routines, along with places to hold support
groups which may become the displaced individual’s support system.

**Patterns**

A community center is about human involvement and human interaction. It is
important to include architectural features that will accommodate this human interaction.
Christopher Alexander included many of these features in his 1977 book, *A Pattern
Language*. There are many examples of patterns that might be directly applicable to
community centers. Patterns such as stair seats become an excellent seating option,
providing an exceptional vantage point and the chance for the person to be immersed in
the action (p. 604). For the community center these stairs may provide seating for an
assembly or become risers for a church choir during worship services. The design for
these stairs may not differ much from the stairs leading up to front porches throughout
the South.

Porches themselves are much like the pattern called Arcades (p. 580). Arcades
are described as covered walkways at the edge of buildings, which allow people to be
both inside and outside at the same time. The pattern entitled “Six- Foot Balcony”
suggests that porches that are less than six feet wide will hardly ever be used (p. 782).
Many other patterns will enhance the design of the community center as well, such as
directives that address that rooms should be adequately lit with sunlight. All told, a total
of 10 patterns were examined here and found particularly helpful in community center
design. Interestingly, many of these patterns follow traditions of Southern architecture,
helping ground and confirm their importance in the design of this center.

**Southern Architecture**

Many of the patterns Alexander (1977) wrote about such as pattern 167, a “Six
Foot Balcony” are found in buildings throughout the Southern United States (p. 781).
For this reason, coupled with the tendency of hurricanes to affect the Southern United
States, it is important to examine Southern architecture. Walter Gropius stated “we have
become aware that tradition in design has always meant the preservation of essential
characteristics which have resulted from the eternal habits of the people” (Rael, 2005,
p.84). He believed these “eternal habits” were the result of trial and error, and could
teach modern society a great deal about architecture. Constructing buildings with better
ventilation, due to the extreme heat, would be an example of one of these traditional characteristics.

Architectural elements like porches, which have become an iconic southern image, were born of necessity in a time before air-conditioning and commuting to work and echo Gropius’ observation above. People walking to and from work were much more apt to speak with their neighbor sitting on their front porch than the person who spends most of their time in a car, pulling into their garage at the end of the day. When many of the New Urbanism neighborhoods such as Disney’s Celebration were planned, porches became an architectural feature of almost all the homes and many of the buildings (Frantz et al, 1999). The porch is actually believed to be an African American creation resulting from slaves’ experiences’ in Africa (Upton, 1986). Tropical heat and humidity inspired front porches and verandas on many African homes. Armed with this knowledge, slaves began constructing them on their residences, along with many of their master’s homes. According to Upton, researchers have not discovered a precursor for the front porches seen in the South anywhere else in Western Europe or England.

Other creations such as the “Dog Trot” or “Possum Run” house helped their residents escape some of the heat brought on by the Southern climate (Hatton, 1987, p. 39). These homes were named for the ability of a dog or other animal to run through the central breezeway, which was often contained only by a roof. Construction of “Dog Trot homes” often continued over several decades, the result of time and need. When the family needed a larger home, or finances allowed for an addition, the owner would construct extra rooms leaving large breezeways that separated the rooms. Circulation of air did not end with the large breezeway in the middle of the home. Many windows and doors were often installed to allow for ventilation (Hatton, 1987; Upton, 1986). The high pitched roof permitted an attic, another feature which improved air circulation (Hatton, 1987). These roofs often had a deep eave that allowed for the porch and interior rooms to be shaded, fostering cooler temperatures. Most of the homes were built on piers, which increased air flow in the home in addition to preventing dry rot underneath. The Louisiana Creole home was designed to have these piers knocked out and replaced when rot began to compromise the structure (Upton, 1986).
Figure 7. Diagram of a Louisiana Creole Home’s piers (Upton, 1986).

Figure 8. Front view of Dog-Trot home (Matthews, 1994-2006).
Figure 9. Image of a Dog-Trot home’s piers (Matthews, 1994-2006).
Figure 10. Side View of Dog-Trot Home (Matthews, 1994-2006).

Figure 11. Dog-Trot home’s porch (Matthews, 1994-2006).
Southern lifestyle not only had an effect on the form of the building but color as well. Color can be much more than decoration, serving as a symbolic and “oral tradition of a viewer’s heritage” (Hutchings, 2004, p. 57). Certain colors hold importance that might be incorporated within architecture when designing in the South. For example, the color green is considered an unlucky wedding color in Texas. More relevant to this chapter’s discussion, red is associated with protection from evil spirits. Researchers believe that the use of red comes to the South from West Africa by way of the West Indies (Hutchings, 2004). Other colors hold importance as well. For example, in many coastal areas porch ceilings and many exterior walls are painted “haint blue”, a light tint of the hue, that slaves believed warded off evil spirits (Rada, 1995).

Figure 12. “Haint Blue” painted on a porch ceiling (http://www.terryjonesrogers.com/Page5.html).

Paul Rudolph, a well known Sarasota architect, believed that an understanding of historic architecture was imperative to creating successful modern buildings in the South (Rael, 2005). While studying architecture in Alabama, he worked for the Historical American Buildings Survey, documenting traditional buildings, and taking note of
features such as adjustable shutter systems, and porches. Years later, Rudolph delivered a speech at a conference entitled “Regionalism and the South” where he outlined traditional southern characteristics he believed should be incorporated into modern architecture. These features included “verandas, porches, exterior circulation and sun control devices...as well as emphasizing visual ties such as scale, color, and texture” (p.84). Rudolph saw these traditional devices as the result of time and experience dealing with the climate in its purest form before the creation of air-conditioning. His understanding of historic architecture echoes another famous architect, Walter Gropius. The “eternal habits of people”, as Gropius had referred to them, could be used to design an efficient community center, which works with the climate, and is not manageable solely because of air conditioning and electricity.

**Figure 13.** Paul Rudolph’s Cocoon House (Sarasota County History Center).

**Figure 14.** Sketch of Paul Rudolph’s Cocoon House (Sarasota County History Center).
Modular Building

Typical southern architecture is an important case study to examine when better understanding how to design a community center for displaced persons as the result of hurricanes. Equally as important is designing a center that has the ability to be constructed quickly, and moved often. Modular building methods meet both of these needs.

In his 1931 book *Toward a New Architecture*, Le Corbusier compared the building to a machine. He predicted that industry would begin constructing buildings in much the same way that automobiles were built. Le Corbusier stated that the “actual needs of the dwelling can be formulated and demand their solution” (p. 240). Trailer homes, which are built with an axle and wheels, similar to the automobile, exemplify Le Corbusier’s description.

Space is at a minimum in a trailer, and every need must be formulated and demand a storage solution. The travel trailer received its boost in the 1920’s when automobiles become powerful enough to pull these traveling cottages (Hatton, 1987, p. 173). The trailer lifestyle became increasingly popular in succeeding decades, and many owners found themselves content with the community atmosphere of life in the “Tin Can Tourist Camps” (p. 173). Many trailer owners appreciated the mobile nature of their residence (Hatton, 1987). “Galvanized ghettos” became parks with trailers as permanent homes, where retirees, small families, and migrant workers began setting up their residences. These “mobile homes” were mounted to concrete foundations and began to be manufactured in modular units, but were still forced to register with the Department of Motor Vehicles,. As of 1989, more than one-third of new single-family homes sold are classified as 'manufactured' (Hatton, 1987, p. 174). It is within this cultural environment that the travel trailer has become FEMA’s answer to hurricane victims’ needs.

Mobile homes are still popular in rural areas due to their low cost (United States Census Bureau, 2006). Last year 16,000 mobile homes were purchased and placed in the state of Florida, excluding those purchased by FEMA. Rezoning often becomes a problem, and many owners often have to relocate their home due to this difficulty.
Currently, mobile homes fall under the category of modular housing. However, modular housing is moving far beyond the travel trailer or mobile home. Adam Kalkin (2001) built a series of homes he called the “Butler Variations,” made from Butler manufactured buildings and large oceanic shipping containers. He found a way to take the industrial factory-like containers and make them into residences, a strategy not very different from the shapes of Le Corbusier’s proposed homes (Le Corbusier, 1986). Modular building systems are not used for just residential facilities. A mobile gallery was designed around the work of photographer Bill Bamberger (Rael, 2005). The design for the gallery is composed of a steel tube frame clad with a panel system made of steel corrugated sheet metal, Lexan, and plywood. The units are created in such a way that they can be moved as standard truck freight, or by rail and boat. Snyder describes that the gallery, “…employs a material and detail palette which lies somewhere between the cargo containers, the Airstream, and the Butler building…” (p.129). The gallery’s components can be put together in different ways, allowing for the design to change with the needs of the site. The adaptability of these designs offers potential perspective on the design of a community center.
Figure 16. Mobile Gallery being installed (Rael, 2005).

Figure 17. The Mobile Gallery installation (Rael, 2005).
One of the components used in the mobile gallery, the shipping container, provides a functional option for the mobile community center. According to Kosbab
(2005), shipping containers are becoming increasingly popular as a modular building component for several reasons. First, the 20 foot and 40 foot long containers are already fabricated, cutting production time. Second, due to their design, the containers can be easily transported by boat, truck, or train to their new location, a concern often raised with other forms of modular building components. Finally, the containers are economical and environmentally conscious due to the excessive amount of used containers in most United States ports (Kosbab, 2005).

Figure 20. Studio 320, a building created out of shipping containers (http://www.hybridseattle.com/).

Figure 21. 20 foot steel shipping container (http://www.containerarchitecture.co.nz/containers.html).
Conclusion

The mobile community center for FEMA’s trailer parks will serve a diverse population. Understanding the needs of this population, and the connection held to their former neighborhoods, is important in helping predict a future relationship with their neighbors and community center. Studying previous community centers shows what elements are necessary, and gives the designer an idea of what can be streamlined for a more economic center. Finally, through an examination of the Southern building styles, coupled with an understanding of mobile units, knowledge is gained of the abilities of the materials and the needs of the climate. These elements join together to create a solution for the mobile FEMA trailer park community center.
CHAPTER 3
THE PROGRAM

The design for a community center may represent a very important addition to temporary FEMA trailer enclaves found throughout the southeast. This chapter will detail the program for such a proposed community center, describing the target clients, their needs, and explaining the proposed design response.

Trailers within FEMA villages are stacked close without allowing for much personalization. Consequently, a sense of community is not really found. To many people, the trailers are a temporary solution to a larger community and housing need. As fourteen-year old Cory Arsenault reported to Gaines in a National Geographic magazine story on hurricanes, “I wish we could go somewhere with houses and plants and colors” (2006, p. 65). Fights and drug deals were common in Cory’s FEMA trailer community near Punta Gorda, Florida, a city devastated by Hurricane Charley in 2004.

Figure 23. Cory Arsenault photographed in the Punta Gorda, FL FEMA village (Gaines, 2006).

Client

The clients for the proposed portable community center are people like Cory Arsenault, his family, and persons in similar plights who have been forced out of their
homes and into trailers by hurricanes. Most of these residents are lower income and are forced to live in these trailers due to lack of financial resources. Cory Arsenault’s mother is working in an attempt to find a better living situation, like many of her neighbors. Many of these people are proud and would prefer to not receive money from handouts.

The program’s trailer neighborhood mimics those of actual FEMA trailer villages. Residents are of a mix of many kinds of ethnic backgrounds, including African American, Caucasian, Hispanic, and others. Ages range from elderly to newborns. While these persons may differ in education and political viewpoints, they share the important issue of the recent loss of their home. As a consequence, these persons are thrust into a new and foreign environment of the FEMA trailer park.

Although some needs vary from individual to individual, many of the needs are universal. Renaissance Village, the largest of FEMA’s Louisiana trailer parks, has a population of approximately one third school aged children and adolescents (Singer, 2006). Activities and locations designed to accommodate these individuals are important. Playgrounds for smaller children could give them a physical outlet for their energy. Creative outlets allow many of the adolescents to learn a new skill like painting or culinary skills. These opportunities can stimulate their minds along with giving them social interaction. Social interaction and communication is important to the adults of the community as well. An assembly area gives the residents a location to gather with friends and a place to be briefed about any community wide announcements. Feelings of isolation can be eliminated by opportunities to communicate with friends and family, whether it is through mail, email, or telephone. Basic needs such as meals also need to be provided. Renaissance Village, in Baker, Louisiana has a location that distributes prepared meals, but lacks opportunities for individuals to socialize while consuming their meal. Considering all these needs of the individual helps drive the design of a successful community center.

**Existing Site Conditions**

The community center will be designed in such a way that it may be used at several different sites depending on need. For this design proposal a hypothetical site outside Tallahassee will be used. Tallahassee is a logical location given its location approximately twenty miles inland from the Gulf of Mexico and its proximity to Interstate
10 on the north side. Close interstate access is important because trailers, construction trucks, and new residents can access the site more efficiently due to its availability to transportation. The site is largely free of trees, which allows the trailers to be arranged for maximum capacity. In addition, the site’s lack of trees will compel the design to truly consider heat and ventilation, much like the challenge an actual FEMA village would present. The location of the property is approximately four miles from employment opportunities and shopping centers. All these aspects are important and will help to enhance the design of the community center.

**Social and Political Context**

Political debates commonly arise in communities that are chosen to host a FEMA trailer park (Proulx, 2006; Singer, 2006). Crime within these trailer parks is common and well documented (Proulx, 2006; Lohr, 2006). Hostility of the neighbors must be considered in the reception of these displaced individuals at local jobs, schools, and shopping centers, and efforts will be taken with the community center design to help provide a much needed feeling of acceptance to these displaced residents. The center’s design will exceed simply giving adolescents a place to play sports. That is, a sense of common ground for all residents will be sought in which no invitation is needed and anyone can gather at any time. For the individuals feeling claustrophobic in their cramped quarters, the community center may offer needed refuge.

**Developer**

The community center will be owned and assembled by FEMA, and this agency will be able to store the modular units at one of their facilities until they are needed. True to the temporary nature of FEMA trailer parks, the center will be able to be disassembled relatively easily and moved to other locations. The facility itself will be run by FEMA with the help of local residents and non-profit organizations. This will provide the residents the opportunity to claim the facility in some measure as their own, fostering a sense of responsibility and, hopefully by extension, community. In addition, it will allow people who use the facility to know the employees working at the center.

A second option for ownership might lie with a non-profit organization such as the Red Cross. Alternately, several different organizations could choose to donate a unit or feature of the center. For example, given the potentially philanthropic nature of the
community center, a computer company may choose to donate the equipment, furniture, and modular unit that form the computer lab.

**Image, Character, and Construction**

The nature of a Federal Emergency Management Agency temporary housing is one of manufactured buildings. Metal is common, and many of the communities lack diversity in types of trailers. The community center will bring a highlight to the endless sea of trailers, providing focus and a ‘town center’ that reinforces its community-building nature.

The design will borrow elements from Snyder’s mobile gallery (Rael, 2005). Like the gallery, the center will be a fusion of characteristics from Butler buildings, trailers, and shipping containers. Shipping containers will be the primary building component, each unit designed from one or more eight foot by twenty foot, or eight foot by forty foot container. Borrowing from southern architecture’s dogtrot home, windows will be constructed for ventilation (Hatton, 1987) and porches will be used for people-watching, community gatherings, and shade from the sun. In the spirit of the historic southern home that often had many additions, this building will change to meet the needs of the current residents. Heavily populated communities may need more units than the initial design requires. Some units could be doubled if the community required, for example the computer lab or classroom.

**Energy and Conservation**

Whenever possible, materials will be used that are both durable and sustainable. In so doing, the message of social responsibility will extend not only toward human beings, but also toward the environment. The building will strive to be a solution in all aspects rather than the problem. Solar panels will be used on the roof not only for conservation, but also for efficiency and practicality. The panels will allow electricity to flow to the community center, even if standard electricity has not yet been established at the residential buildings.

**Space Requirements**

The community center must meet the needs of a diverse population. Recreation facilities such as basketball courts will allow teenagers a place to meet and get involved while providing them some measure of adult supervision. For younger residents, a
playground will be included to provide interaction for children and their supervising adults.

Table 2.
Program and projected square footages for the proposed large community center.

<table>
<thead>
<tr>
<th>Space</th>
<th>Quantity</th>
<th>Area</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classrooms</td>
<td>2</td>
<td>480 ft²</td>
<td>Used for tutoring, art, etc.</td>
</tr>
<tr>
<td>Computer Lab</td>
<td>1</td>
<td>360 ft²</td>
<td>Used for checking email, teaching basic skills</td>
</tr>
<tr>
<td>Food Preparation</td>
<td>1</td>
<td>320 ft²</td>
<td>Food Preparation for socials</td>
</tr>
<tr>
<td>Dining Hall/General Assembly</td>
<td>1</td>
<td>600 ft²</td>
<td>Used for announcements, socials, plays, music performances, etc.</td>
</tr>
<tr>
<td>Mail Room</td>
<td>1</td>
<td>238 ft²</td>
<td></td>
</tr>
<tr>
<td>Mail Storage</td>
<td>1</td>
<td>145 ft²</td>
<td></td>
</tr>
<tr>
<td>Restrooms</td>
<td>4</td>
<td>160 ft²</td>
<td></td>
</tr>
<tr>
<td>Stage/backstage</td>
<td>1</td>
<td>320 ft²</td>
<td>Used for plays, choral events, and religious services</td>
</tr>
<tr>
<td>Food Storage</td>
<td>3</td>
<td>160 ft²</td>
<td>Two will be refrigerated and one will be for dry storage</td>
</tr>
</tbody>
</table>

Outdoor Facilities

<table>
<thead>
<tr>
<th>Space</th>
<th>Quantity</th>
<th>Area</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basketball Court</td>
<td>1</td>
<td>Half Court</td>
<td>Used for leagues, pickup games, professional coaching</td>
</tr>
<tr>
<td>Playground</td>
<td>1</td>
<td>400 ft²</td>
<td>Located near the grill area and garden</td>
</tr>
<tr>
<td>Projection screen/ for outdoor video viewing</td>
<td>1</td>
<td>500 ft²</td>
<td>Projected on the outside wall of the tower</td>
</tr>
<tr>
<td>Gardens</td>
<td>1</td>
<td>½ acre</td>
<td>Plots give to residents to grow vegetables, flowers, etc.</td>
</tr>
<tr>
<td>Grill Area</td>
<td>1</td>
<td>500 ft²</td>
<td>Grill for community use, 8 linear feet of counter</td>
</tr>
</tbody>
</table>
A classroom facility will be included to allow for arts and crafts, business workshops and other types. The community center will also allow for cultural appreciation classes, one of the suggestions Sternberg (1971) discusses in his design of community centers. In response to the psychological and social needs of the population, special effort will be expended to provide residents with a creative outlet through art and cultural opportunities. The tower, a beacon due to its height, will become one artistic and therapeutic opportunity for the children in the community. A large canvas role will allow the children to paint their feelings and expressions on this canvas. The canvas will continue to be unrolled, allowing the artwork to grow upward toward the tower’s top. The canvas wall will also portray the emotions of the children as they live their lives in this community, constantly changing as the canvas is enrolled. The other side of the tower will have a canvas for projecting movies. The neighbors can join together in watching films outside on blankets or lawn chairs. The movie will be an attraction to the residents in their trailers drawing them out of their new home, and encouraging them to meet their neighbors.

Food will be an important aspect of this facility. Areas will be provided for outside gathering spaces that permit the use of large grills for social barbecues. In this way the facility will permit food to act as the natural, important link it can be to draw the community together with activities in a common area. Similarly, a community center kitchen will allow the residents to get out of their own trailer’s kitchen, will promote socialization and teach the younger neighbors about cooking. Food, friends, and family are something that all these residents will share despite their location or heritage, even though the food types may differ. Gardens will allow the residents to grow some of their own vegetables, and allow them to work on something that produces positive change and improvement in a period of time manageable to their length of stay. In summation, the program for this design allows an opportunity for the residents of FEMA trailer parks to escape the small living quarters provided by their trailers and experience their neighbors in an atmosphere more akin to the pleasant times prior to the causative disaster. Cook-outs, religious services, arts and crafts, and pick-up games of basketball will give the victims a creative outlet for their stress. The neighbors can possibly begin
to rebuild their lives together, better understanding each other through communicated, shared experience.
CHAPTER 4

THE PROPOSED DESIGN

FEMA trailer parks are constructed quickly in locations where populations have been displaced. The community center for a FEMA trailer park should have the ability to be quickly assembled, much like the neighborhood in general. The center can be created by moving in the components and arranging them in response to the population that will be housed in the park. Larger populations require more units, and thus more storage, classrooms, and other amenities.

![Figure 24](image)

**Figure 24.** Perspective of community center for 600 trailers.

The community center will be constructed of shipping containers that have been retrofitted to function in the southern American environment that is characterized by the heat and humidity of hurricane season. Examples are windows and ceilings that have been heightened for ventilation. Due to the shipping containers’ industrial nature, the community center will assume an industrialized appearance largely devoid of applied ornamentation. Much of the color will come from the clothing of the community using the space and the resident’s artwork that will populate the center.
Figure 25. Arial view of the site with trailers and community center.

Although there is not access to the site from the interstate, there is an exit approximately a mile from the site. The center will be centered toward the middle of the trailers, which will allow it to be in close proximity to all the residents of the trailer park.

Figure 26. Study model with tower.
Figure 27. Parti diagram with spatial use designations shown.
Figure 28. Study model with canopy canvas represented.
The garden will provide the opportunity for the residents to work with the land. The garden has the ability to be rows of vegetables, or a flower garden with a meandering path; the choice will be left to the residents. Not only can the inhabitants see their plants flourish with dedication and care, they will have the opportunity to form friendships with the other residents working in the garden. A grill area will be close by, giving a location for families to have a place to gather for barbecues and parties.
Children can play on the playground while their parents work in the garden, or grill their supper. The note tree will serve importance as a monument. The tree will be an abstract sculpture, which gives the residents a place to post their letters of honor, poetry and memories.

*Figure 30. Exterior finishes.*

Each unit will be created from shipping containers that are either 8’x20’ or 8’x40’ in size. These shipping containers are built to be durable, and can be recycled to use as building components in each unit of the community center. Much like the Dog-Trot
house, careful consideration is given to ventilation without the need of air-conditioning. The dog trot home allowed for cross-ventilation through breezeways, and windows that lined up to allow for a breeze. As an example the classroom has a large opening that goes to the porch and stair seats. This opening will allow for breezes, as it is directly across from the windows in the reading nooks. The roof provides a large overhang that will shade the porch and protect from rain.

![Diagram of shipping containers]

*Figure 31. Shipping containers form classroom.*

Shipping containers will be retrofitted with materials specified for that particular unit. The containers will then be connected when they arrive at the site.
Figure 32. Plan of computer lab, media display, and tower.
The computer lab will be one of the few air-conditioned units in the community center. The structure will be created by adding two large pop-outs on an 8’ x 40’ shipping container. Each cubicle within the trailer will be equipped with a desk and a phone for contacting friends and family. Basic computer classes will be held here, allowing residents to develop a marketable skill.

The news center will serve as a connection to the outside world and activities within the neighborhood. A television screen will be tuned at all times to a major news channel, such as CNN. The unit itself will become a bulletin-board where residents can place announcements, and companies can place notices of employment. Seats allow the residents to sit and watch the news or visit with a neighbor. The news center’s design makes it a strong candidate for a meeting spot or a way-finding device.

The tower will serve as an inspirational beacon to those living in the park. It will rise to nearly twenty-four feet, three times the height of the average trailer. The tower

Figure 33. Perspective of the news center.
will contain the mail room, a vital source of communication for residents and their off-site families, friends and employers. Maintaining a reliable mail address for insurance checks, job communications and other crucial communications impart a sense of function to this icon. The tower will also serve a psychological role for the community center. On the exterior of the tower there will be a large canvas that will be unrolled as the children of the park paint their feelings and experiences on the canvas. As the canvas unrolls and raises the artwork toward the tower’s top, the neighbors can see the changes in their children’s happiness or grief. On the other side of the tower is a blank canvas which will have movies projected on its surface. The residents can gather on the lawn with blankets, chairs, and popcorn to watch a film, enjoying a community gathering.

Figure 34. Perspective of tower.
Figure 35. Plan of Classroom.
Figure 36. Perspective of Classroom.
The classroom will be used for a number of different purposes including art activities, crafts, formal classes, and tutoring. The desks are mobile and can be arranged to suit the various activities.

Figure 37. Sketch of “reading nook” in classroom.

The “reading nooks” will give the children a special place to read, create healing journals, or simply daydream. Built in seats is Pattern number 202, a validation of the value of this inclusion (Alexander, 1977).

Figure 38. Sketch of stair seats.
The stair seats will be directly off the side of the classrooms providing a seated view of the courtyard and allow the spectator to be part of the action. These stairs serve multiple purposes such as risers for choral activities, seats for assemblies, and outside classroom setup. In addition, the stair seats are not that different from the steps that lead to many of the old porches in the south.

Figure 39. Perspective of stage.

The stage will be used for assemblies, choral events, plays, and religious services. Solar-powered illumination permits evening events.
Figure 40. Plan of kitchen.

The kitchen will be the location of food distribution and other activities involving food. The kitchen is used for small cooking classes, and socials involved around cooking. Many of the displaced residents previously lived in homes with kitchens that allowed them to cook for many family members and neighbors, and this kitchen will allow the residents the same privilege. As many regions have their own cuisine, the kitchen will ensure the basic need of food is met while facilitating specialized cooking that honors the residents’ heritage.
Figure 41. Furniture Specifications.

Due to the mobile nature of the building, the furniture must also be mobile. All the chairs will be stackable and resilient. Since many of the finishes are natural to the industrial material, bright colored furniture will be used. Opportunities to honor the
resident’s southern heritage arise through reinterpretation of the furniture color. “Haint blue” is not simply a color on a porch ceiling but rather a chair color. The red rumored to ward off evil spirits will appear in chair colors and trim on some of the units. In addition, many of the colors will come from artwork created by the residents of the community. As this chapter’s proposed design solution illustrates, the design is about the inhabitants of the center. The center will continue to grow or change as the needs and the residents change.
CHAPTER 5

CONCLUSION

The devastation brought on by hurricanes can often change the lives of residents beyond any resemblance to their past experience. An example of this is the neighborhood of St. Thomas in New Orleans, Louisiana (DeParle, 2006). DeParle was a resident in this neighborhood in 1984. Despite poverty and violence, he remembered Christmas holidays with fondness:

“It was a glorious day. Neighbors sat on stoops with their stereos loud, swapping plates of corn bread and shrimp-stuffed squash. Kids--happy kids--played everywhere, with toys that looked especially new in barren courtyards. Big Wheels, bikes, robots and dolls, they had been liberated from layaway with dollars squeezed from welfare and menial job” (2006, p. 26).

A year after Hurricane Katrina, DeParle was unsettled by the now empty neighborhood, void of kids and bicycles in the middle of the summer. The neighborhood schools were all closed, many of the students and families had relocated, including Kel’lis Blanks now of Renaissance Village.

Figure 42. Kel’lis’s Playground (Kenneally, 2006)
As 2006, Kel'lis shares a FEMA trailer with her mother, Natchia, 28, her sister, Yajaira, 11, and her brother, Keree, 7. Concerned at the violence reported in the park, Kel'lis’s mother restricts her children’s play to the gravel right outside their trailer door. Space is cramped in their trailer and like many of their new neighbors they could benefit from a space that allowed some escaped from their cramped quarters.

A community center, a building style which has a long history of bringing people together, may prove beneficial. Families may begin to serve “cornbread and shrimp-stuffed squash” created in the community kitchen. Kel'lis’s mother would have the ability to involve her three children in activities housed at the center. Her brother Keree, 7, could play soccer and basketball, get tutoring for math in the classroom, or learn computer skills in the communication trailer. Her sister, Yajaira, 11, could work with art therapists, learn culinary skills from her neighbors, or sing with the choir at Sunday morning worship in the multipurpose courtyard. A car would not be a necessary requirement to get the family involved in more activities due to the close proximity of the community center. Residents would not have to wait a long time for the center to be assembled, as all the units could be moved in at the same time as the residential trailers. Through simple events such as neighbors meeting through activities or simply picking up their mail, this park could begin to resemble and act like a community.

Figure 43. Kel'lis’s family (Kenneally, 2006)
Reflections on the Project Thesis Research and Resulting Design

The design for this community center has evolved greatly over the duration of the development and schematic phases. Initially the importance of mobility was not fully recognized. At the project outset it was proposed that the design would consider one region, such as New Orleans, and construct a permanent building that represented the needs and vernacular architecture of this area. This initial idea proved impractical and failed to recognize the needs of future hurricane victims. For example the lengthy construction phase of a permanent structure would take excessive valuable time when the victims needed the center the most. Upon further consideration, mobility of the community center became a necessity. Shipping containers were not the first construction type considered, but became a viable option due to their mobile nature and ability to withstand many extreme weather conditions. Designing the center in units allowed for the center to be tailored to specific requirements and provided flexibility for future needs of the center. The units chosen to form the center have also been streamlined since conception.

Similarly, a unit was initially conceived that would serve as a convenience store. Further reflection revealed that a convenience store would fail to consider the immediate needs of the individuals living in the park. This gave way in importance to actual food storage for the residents living in the park, who lacked immediate funds to purchase food.

Research proved to be very important to changing the author’s pre-held beliefs. For example, the assumption was wrongly made that low income neighbors would not be attached to their homes as strongly as the residents of more picturesque, middle- to upper-class neighborhoods. Research proved that assumption wrong, showing the importance of creating a space that disaster victims, many of which are from a lower income background, can call their own. The human statistics of FEMA-run trailer parks also proved to be surprising. Although conditions of these parks are often discussed, reviewing interviews and charts of the actual number and characteristics of occupants in places such as Renaissance Village helped solidify an image of life in these parks.
Recommendations

Although this project thesis can provide an initial concept for the design of a mobile community center, it is in no way the only or necessarily best solution for the need for community space for hurricane victims housed in FEMA trailer parks. One problem that should be further researched is the impact of weather. Heat is a major consideration in the south, and this design was created without the need for air conditioning in most units. However, a design that incorporates air conditioning may be useful in many ways.

Initially, the community center was envisioned to be owned and operated by FEMA. Although this is still a relevant possibility, another opportunity has arisen. This center could be a partnership with major corporations; perhaps a different corporation might own each unit. This solution would eliminate the strain on FEMA's budget, and quiet some of the critics that may question the need to spend federal money on a community center. In addition the corporations will receive acknowledgement for their philanthropic efforts. One corporation has already expressed an interest in learning more about the possibilities this center may offer.

This design for this center could also be used to encourage community for other disadvantaged populations. Natural disasters continue to happen throughout the United States, and the world. The residents of these locations may benefit from a center that would encourage community involvement. The arrangement and needed units may, however, differ. A similar center in India may not have the need for a basketball court or grill area, for example. This center could also benefit impoverished areas by joining the community together, and perhaps discourage crime.

Further research would benefit the design of this project and future designs of a similar nature. One aspect that would benefit from further study is the psychology of the spaces. An example of this would be expanding on the idea of allowing the workers and residents to be on the same level, physically, much like the service window. The classrooms may benefit from further reflection on learning styles and desk arrangements. Finally, as the center is considered for different locations and demographics, it is important that an understanding of the culture is infused in each center.
One of the most important issues to remember about this project is that while the design is negotiable, the need for a center is not. Many different designers could present well functioning proposals. The need for this center must be addressed in this author’s opinion. Society needs to help these victims create some semblance of a normal life and a community. The 14th Dalai Lama (1989) stated the following in his acceptance speech for the Nobel Peace Prize:

“Responsibility does not only lie with the leaders of our countries or with those who have been appointed or elected to do a particular job. It lies with each of us individually. Peace, for example, starts within each one of us. When we have inner peace, we can be at peace with those around us. When our community is in a state of peace, it can share that peace with neighboring communities, and so on. When we feel love and kindness towards others, it not only makes others feel loved and cared for, but it helps us also to develop inner happiness and peace” (http://nobelprize.org/nobel_prizes/peace/laureates/1989/lama-lecture.html).

Perhaps this center could encourage an inner peace that would facilitate real change, not only for the individuals housed in these parks, but humanity at large.
REFERENCES


Catastrophe: The Emergent and Prosocial Behavior following Hurricane Katrina. The ANNALS of the American Academy of Political Science and Sociology, 604, 82-101.


BIOGRAPHICAL SKETCH

Kelly Williamson was born and raised in Saint Petersburg, Florida. She received her Bachelor's of Science degree in Architectural Design from Clemson University in Clemson, South Carolina in 2003. After graduating she worked for Harvard Jolly architectural firm in Saint Petersburg, Florida. In 2005, Kelly entered the Masters of Science program in Interior Design at Florida State University in Tallahassee, Florida.