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Improving the Design Process

Communication, understanding and respect for the client's need should be the prime motivation for design. Strict attention to national building codes and regulations should be integrated to achieve a safer project. Using creative thinking for design should allow even the smallest budget result in a functional and aesthetically satisfying final project. Using two high profile projects currently under construction, and a low budgeted home for people with mental retardation completed in 2002; this paper will discuss how the process of good design goes deeper than the paper, pencil and creative juices of planner, designer, or the architect.

Key Words: Communication, education, experts, planning, end user

Case study #1

The Fourth Bridge in Venice

Venice has a population of a bit more than 60,000 and, according to the current mayor of Venice, Massimo Cacciari, hosts between 12-16 million people a year. The waterways are the main streets of Venice, bridges are the avenues to cross the waterways, and the vehicles are the motorized boats and gondolas.

Filled with the splendor of its past, it is a city that is trying to adapt to the 21st century while preserving its environment and cultural heritage. It was with the future in mind that prompted the decision to build a fourth pedestrian bridge across the Grand Canal, near the railroad station, public parking lot, bus depot, and the planned municipal center. This decision has been the cause of conflict, disagreements, legal battles, and disappointments since 2001.

Santiago Calatrava was retained as the architect and it carries his signature. It is beautiful. The design, and the architect must have blurred the vision of reality. The contract was signed, the construction started. The

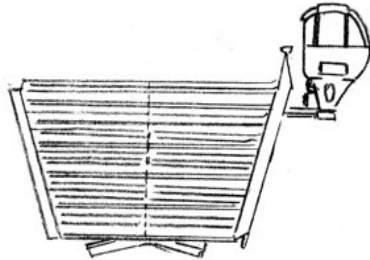
bridge is not accessible. Petitions started almost immediately but were ignored. Construction started in early 2002. Information was not shared.

Late December 2002 Mayor Costa, the mayor at that time, finally agreed to meet with representatives of the main advocacy groups involved with the protest. Several months later he stopped the construction, declaring that the design had to be modified to conform to the accessibility codes.

HBGroup, located in Milan and represented by architect Paola Bucciarelli, was invited to submit proposed changes to the existing design. They submitted seven possible solutions and those were given to the architect. Refusing to make any changes another firm was hired to meet the request of the Mayor.

An "Ovovia" was designed that would carry people using wheel chairs across the bridge. A suspended closed cable car, riding on the under side of the suspended bridge, was designed and is reported to have been built. The HB GROUP, or any other interest group, never reviewed the design. The projected is rumored to cost approximately 800,000 euros.

Fig. 1 Ovovia suspended from bridge
(drawing)



“Uncalculated” mistakes, wrong dimensions of supporting steel beams, tidal depths of the canal caused many delays. Figure 2 shows the covering around the site, figure 3 show the collection of garbage within the covering. Photos were taken April 2006.

Fig. 2 cover

Fig. 3 Inside

Spring 02



The original schedule for completion was 2004; the new projected completion date is rumored to be Spring of 2007. Cost overruns are unknown at this time and legal battles are said to be waiting in the wings.

Case Study #2 The String Bridge, Jerusalem, Israel

In 2004 I met Mr. Avi Ramot, director of The Israel Center for Accessibility, in Jerusalem. He told me that the problems Venice experience over ~~this~~ [their](#) bridge alerted the city planners in Jerusalem, when they decided on retaining the same architect to design a pedestrian bridge. This empowered them to insist, and get, a fully accessible bridge from the same architect. It is part of their new light rail system. Because of constant communication between local, national, international organizations, and the end user, Jerusalem, will have a fully accessible bridge tied into a new fully accessible light rail system that everyone will understand and use.

In 1902, Theodor Herzl, the father of Zionism, envisioned “modern neighborhoods with electric lines, tree-

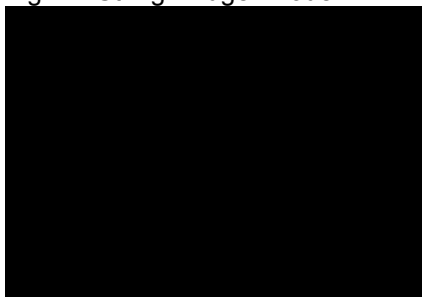
lined boulevards. In 1994 the Jerusalem Transportation Master Plan, jointly administered by the Ministry of Transport and the Jerusalem Municipality, was established and charged with finding a solution that addresses the city's pollution, transportation problems, bring about urban renewal and encourage its acceptance by the people. A light rail system (LRT) was decided upon.

The first LR includes the pedestrian bridge. The line will be 13.8 km. long. The bridge is 120 meters long, and will serve as the main gateway into the city. Learning from the accessibility issue of Venice, the design was thoroughly reviewed and then approved. "The Bridge of Strings", designed and named by Santiago Calatrava, will still display his genius for engineering and design, have his signature of glass and native stone, but will be completely accessible. Alongside the LRT track, there will be a protected pedestrian walkway, which will offer a breathtaking view of the city, and allow for a landscaped pedestrian mall under its span.

Unlike the "under-wrap", secrecy of planning, the design, and the

progress of the Fourth Bridge in Venice (people call it the Calatrava Bridge), brochures of the complete project are freely disbursed in several languages, updates and an open line for information are part of the entire process.

Fig. 4 “String Bridge” model



Case Study #3 The Kentucky House

(A group home, now an Intermediate Care Facility for Mentally Retarded (ICF/MR))

In 2008 the average annual cost for per person in an institutional setting-Intermediate Care Facilities for the Mentally Retarded (ICF/MR) is \$94,000 vs. \$30,000 in a supportive group home setting with live-in personal assistance.

Group homes are smaller, usually housing 6 or fewer clients per home. In Virginia 3,757 out of 7,373 person with Mental Retardation or Developmental Disabilities (MR/DD). MR/DD what? are still in institutions, despite the Olmstead Act. (Braddock-2005 State of the States in Developmental Disabilities (for FY 2004).

In 2000 I was asked to review architectural plans for a group home for low functioning adults with mental retardation by the project director. I met with several parents involved in this project, visiting their homes to review the accommodations they made as caregivers, and to discuss the future needs of their children. I also toured the school and respite center the children attended to see what accommodations were made there. The parents never met with the architect or reviewed the plans, and were questioning the ability of the facility to accommodate their children. They feared that their dream of a group home for their children would become their nightmare.

A quick review of the plans revealed many areas that needed modifications if this home was to function properly and be in code. I listed

the changes, made the modifications and presented it first to the caregivers and then to everyone involved in the project director's office. After the presentation, the architect declared "the train has left the station" and no changes would be made. He also said that if I supplied the lever switch plates I suggested, he would have them installed. Building permits were not signed. Construction was not started. And indeed no changes were made.

I heard nothing about the progress of the building until I received an invitation to the ribbon cutting two years later. None of the children who were slated for this home could be accommodated and stayed at home.

Below is an interview of one parent, speaking for all of the parents involved in the project. It will conclude this paper. To save space I have included only highlights of the conversation as it relates to The Kentucky House.

Shirley (S): "Wondering how The Kentucky House is functioning? Has it met the need of the residents? I will use this experience as an example of what happens when architects don't listen to

end users.”

(LINDA) L: “All of us purged the files but this what we all remember: Kentucky House started as a 8 bed group home and changed to ICF/MR almost immediately. The agency who sponsored the project now gets one million [dollars](#) for 8 kids.”

S. “Did anything have to be redone?”

L.” Here is what we pulled together for you:

1. Didn't meet fire codes. No central sprinkler system (because of cost) so bedroom doors were replaced with fire doors and had to remain closed at night.
2. Kids needed constant monitoring. Cameras, requiring light, installed in each room for staff monitoring, [The Light](#) disturbed kids with sleeping problems. Replaced cameras.
3. Poor design of roll-in showers and inadequate drainage caused mildew, requiring renovations of drainage system, replacement of walls, carpet.
4. Kitchen not accessible.
5. Installation of toilets too far from wall makes it vulnerable to breakage when kids have seizures, no room for caregiver to assist “kid”.
5. Storage space does not accommodate wheelchair, walkers,

- exercise mats, assistive technology
- 6. Problems with exterior drainage system, security, sun protection.
- 7. Front door(s) open directly into living room where “kids” lie down, crawl, exercise and floors get wet, muddy. Rooms are drafty.
- 8. Hot water tanks were installed in the attic. They; leak, ruining walls, electronic equipment, and office records.
- 8. Carpet replaced two months after home opened.
- 9. Halls too narrow, tight corners, kitchen too small, 1 1/2" lip to get in front and back patio door. Shall I go on?

Most of us have purged all that "history" but we've certainly learned from it...the planning, the approach, the priorities, etc. Just have to have a sensitivity of issues from architects, developers, and providers. They must be willing to listen, research trends, learn ADA, etc. It's not only creative financing...but also creative design. Then, and only then, can we have a successful, functional home for the 'Kids". Linda"



Fig. 5 Entry/exit



Fig. 6 roll-in shower

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Kentucky House