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Center for Children with Special Needs

Located in Fargo, North Dakota

*Investigating architectural design through
a child's perception of place.*

Wild, Michael P.
Center for children with
special needs

Arch.
Thesis
2005
Wild



Department of Architecture and Landscape Architecture
North Dakota State University

Michael.Wild
2005

Center for Children with Special Needs

Investigating architectural design through
a child's perception of place.

A Design Thesis Submitted to the
Department of Architecture and Landscape Architecture
of North Dakota State University

by

Michael P. Wild

In Partial Fulfillment of the Requirements
for the Degree of
Bachelor of Architecture



Steve C. Martens, Primary Thesis Critic
Associate Professor of Architecture



Rebecca Pinkston, Secondary Thesis Critic
Assistant Professor of Architecture



Don Faulkner, Blind Thesis Critic
Thesis Committee Chair
Associate Professor of Architecture



Paul Gleye, Ph. D., Department Chair
Professor of Architecture



Ganapathy Mahalingam, Ph. D., Program Director
Associate Professor of Architecture

Submitted and approved: May 2005





Introduction

A father and his young daughter took a walk one cool and peaceful winter's eve. They came to a house and noticed a snowman standing proud in the front yard. As they continued along their walk, the young girl looked up to her father and asked, "Don't you think that guy better get some clothes on, because he looked awfully cold?"

Erin O'brien (as told by Steve C. Martens)

Embodying energy, emotion and youthfulness, children are a delicate and sensitive part of our communities. Unfortunately because of their size and growing immune systems, when faced with illness children tend to need special attention in order to regain their bodies balance and health. Therefore, developing a building and creating a special environment for children with special needs [and their families] to come to for treatment and education will be an important feature within the Fargo community. The building[s] will need to encompass the children's creative thoughts and



Figure 1. *Child as client. While developing a design for healthcare environments, it is important to stay in contact with the people we are designing for; children and families. (Source: www.fpsol.com/adoption/advocates.html)*

Intro cont'd

ideals, sustaining a typology which will support them, while learning to adapt with their disabilities.

The design of the building[s] will possess a strong relationship between form and function using children's perceptions of place as the underlying theme. The goal of this center is to provide follow-up, transitional style care for children between infant ages on up through early teens. It will cater to children with special needs, where both the child as well as the parents will need to learn and understand adapting to a new special style of care.

The hardships a parent and child go through when a child sustains a neurological disorder through birth or through an illness, accident or disease are tough enough as it is. Then to compile the need to learn a new way of living is an added measure that can make it that much more complicated. The goal of the Center is to make this transition as smooth and comforting as possible, providing a professional level of care to the child which will also nurture their sensitive, intrinsic values.

Healthcare has made a swing in the last decade to a more visually comforting approach to providing care for both children and adults (Harwood 1997). For the most part, hospitals, clinics and care centers are designing their facilities with a more friendly approach in order to create a more appealing environment. The design trend has been to get away from the cold, sterile old world buildings and interiors of the past, to much more soothing, serene, and friendly environments. Still keeping the strict policies and codes that applied in the past, the use of warmer colors and softer material palettes have left behind the sense of uneasiness, for a more comforting, relaxed feel.

In the case of children, this is especially important, as a positive impression is necessary for them to feel comfortable in this style of environment. Children desire to have control over place; their perceptions

Intro cont'd

of place, however, differ from that of an adult, so it is important to understand these perceptions and use them in a positive way which will enhance their experience. Utilizing these fundamentals and incorporating them into a design solution will make the difference between an ordinary place and an extraordinary place.

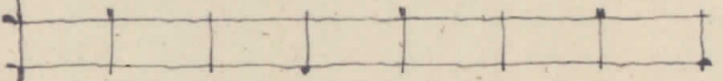
The fact that children perceive their environments differently from adults needs to become a mainstay within the design. Since the goal of the building is to encompass children, provide familiar scenes, make them feel at home, and provide comfort and care, it is imperative the design of the buildings reflect these ideologies. By utilizing the vernacular of North Dakota residential communities, child perceptions and scale, and modern building technologies, all while providing a safe, aesthetic environment for children will make this clinic a success.



Figure 2. *Providing appropriate and supportive environments for children and their families should be top priority for a designer. (Source: www.futurefocus.net/af/scenario2.htm)*

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conceptual premise



“The essential experience derived from its forms, spaces, colours, textures, and scents is one of healing. The environment helps to strengthen the will, believed to be essential to the process of self-healing and rebalancing the individual.”

Erik Asmussen

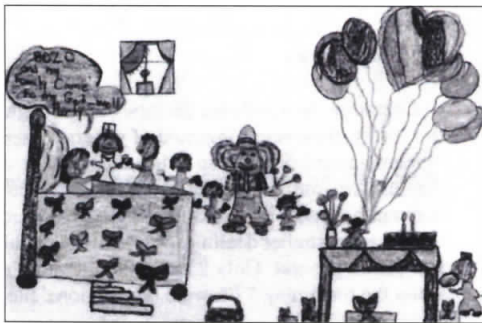


Figure 3 & 4. *Children perceive their environments in different ways. (Source: Fournier, McDougal 1998)*

The physical environment colors our sense of well-being, but does it play a role in healing? Are the impact of technology and the nurturing of loved ones so powerful that our surroundings become less significant? Is it possible to suggest that everybody can remember times when the physical environment influenced our state of mind—the invigoration of a walk through the woods in autumn, or the musty smell of a dank basement? Unfortunately, the impact of architecture on healing is not known (Fournier, McDougal 1998).

We can assume, however, that the environment is a contributing factor. Research has demonstrated a relationship between the quality of a spatial experience and psychological measures of stress and cognitive performance (Fournier, McDougal 1998). Since ancient times, human connections with nature, fresh air, and sunlight have been identified as influences on outcomes of health.

If we accept that space is an important factor in healing, then designers should provide supportive environments for all facets of design—healthcare seemingly the most obvious. If a designer can intertwine their knowledge of design with cognitive relationships of perceived

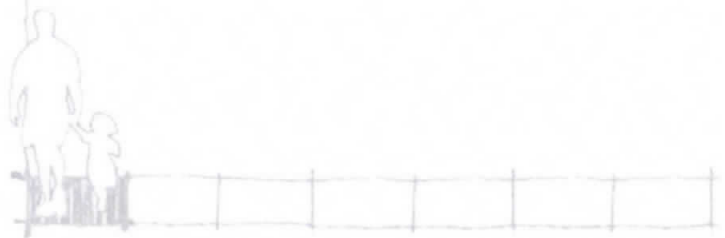


healthy, natural environments, then in theory that marriage would create an environment that promotes healing.

More importantly, in the case of the Children's Recovery Center, understanding the children's intrinsic desire to cognitively control their sense of place is crucial in the overall success of the design. Because children tend to have a different sense of reality than adults (eidetic vision), it is important to understand their realities and use them in a beneficial way—especially for children facing lifelong neurological disorders.



Figure 5. *Children want control over their environments. They want to feel safe, secure and be familiar with their surroundings. (Source: oregonstate.edu/research/Feature.html)*



site information

- Site Analysis
- Site Context
- Site Images

City of Fargo

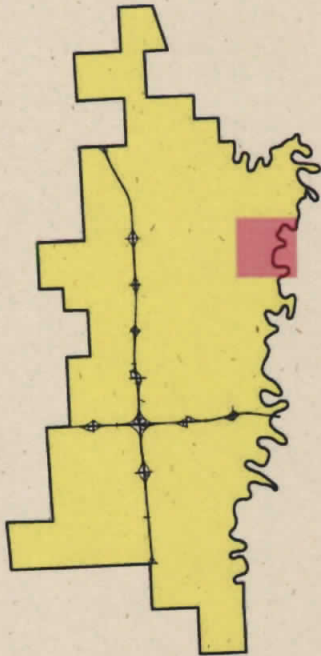


Figure 6. (Source: City of Fargo/modified)

North Fargo Location



Figure 7. Overall aerial photo showing site. (Source: City of Fargo/modified)



site analysis

Location:

Northwest corner of 17 ½ Avenue North and Elm Street in Fargo, North Dakota



Figure 8. Site area showing annex.
(Source: City of Fargo/modified)

The lot at present contains a large green area at the Southeast corner with eight residences flanking the North and Northwest edges. These residences and lots will need to be purchased and annexed in order to obtain the proper square footage for the new buildings and exterior functions.

Parcel No.	1890-19000	64,003.4 sf
(annex)	1890-07800	7149.5 sf
	1890-07700	7149.6 sf
	1890-07600	6939.2 sf
	1890-07500	8780.6 sf
	1890-07400	7416 sf
	1890-07300	7416 sf
	1890-07200	6798 sf
	1890-07100	6798 sf

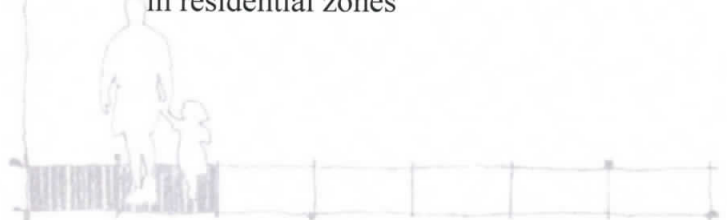
Gross adjusted lot size: 122,450.2 sf

Zoning:

The site will be zoned MR-2 (Multiple Dwelling)

The MR-2 Development district is an overlay zoning district that permits greater flexibility of land planning and site design than conventional zoning districts.

- Provides flexibility in architectural design
- Encourages the conservation of natural features
- Provides efficient use of public services and improvements
- Encourages opportunities for energy efficiency
- Promotes attractive environments that are compatible with surrounding environments
- Promotes an attractive safe living environment in residential zones



Setbacks:

Minimum setback from abutting side or rear lot line.

Off-street parking	10 feet
Driveways	10
Off-Street loading	10
Accessory buildings	10
Principal buildings	15
Dumpsters	20

Heights:

Unless approved, structures may not exceed 35 feet in height within 75 feet of any residential zoning.

Building Coverage:

Unless approved, the maximum building coverage is 45 percent of the gross land area.

Roadway Access:

Unless approved, the principal vehicular access must be from collector and higher classification streets.

Open Space:

At least 10 percent of the gross land area must consist of open space.

Landscaping:

- 1 street tree per 35 lineal feet (local streets).
- 1 street tree per 50 lineal feet (collector and arterial streets).
- At least 3 plant units required per 1,000 sf of lot area.
- Continuous shrubs with a minimum 3 feet buffer width for 1 to 50 parking spaces.

(Source: Land Development Code, Fargo, ND)



Topography:

The site contains minimal to no change in elevation. This will make the site relatively easy to build on, however, considerations will have to be made in the case of watershed.



Figure 9. Site showing topography. (Source: personal sketch)

Traffic:

Elm Street, which is adjacent on the east edge, is the only major traffic corridor. It runs North and South and serves as one of the cities emergency routes. Noise from this traffic corridor will be minimal.

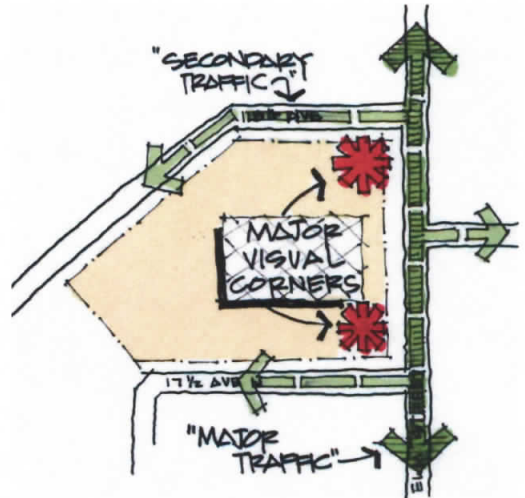
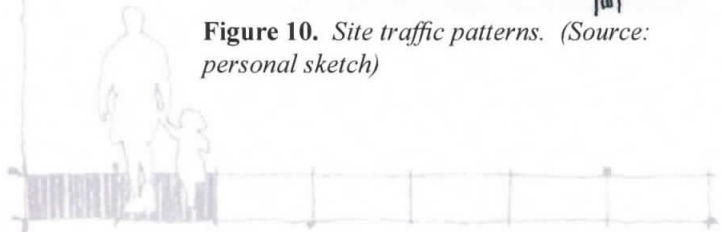


Figure 10. Site traffic patterns. (Source: personal sketch)



site context

Location:

The site location is ideal for the Center. The children's awareness of their environment is an important aspect to the design and location of the center. Because the site is adjacent to residential neighborhoods, Elephant Park, and the Red River it keeps a connection with elements familiar to a child. Also in connection with the site are the VA Medical Hospital, University of North Dakota Medical Education Center, and Elm Street, which serves as an emergency traffic corridor that is within minutes of MeritCare Hospital and Broadway Clinic.

The 2.8 acre site provides sufficient room for the center as well as proper parking and exterior function spaces. Also, its location utilizes both highly visible corners along Elm Street which provides an excellent opportunity for the center to become a visual landmark for the North side of Fargo.

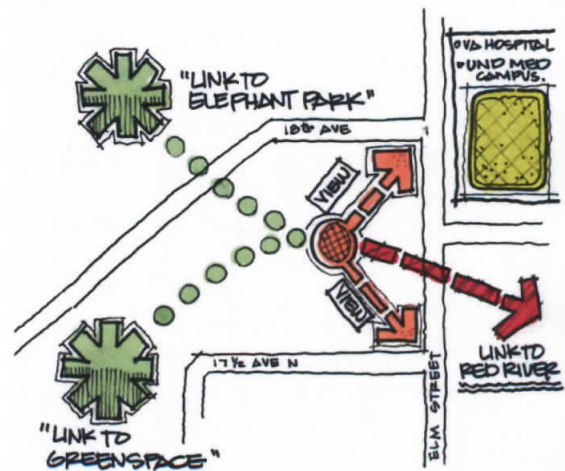


Figure 11. Site showing links and view corridors. (Source: personal sketch).

Site Opportunities:

The most successful way to be mindful of the site and its surrounding context is to utilize aspects of neighborhood design philosophies. The site will become a campus where the main building will flank the East edge of the site and a village of residential style suites will create a neighborhood atmosphere. Uniquely linked together, the campus will incorporate the importance of nature, daylighting and exterior green spaces to enhance its neighborhood perceptions and values.

There are two important green spaces which tie into the site and are located to the North (Elephant Park) and the East (Open green space and the Red River). Providing a connection to both, will give the children and their family's options to traverse into the beautiful parks and neighborhoods will also play an important role in the healing process. The cognitive link to nature, familiar sites, and play are spirited values which possess strong, emotional links to a child's psychological well being.

Site Constraints:

The site constraints are fairly minimal. Because of the specific zoning type, there are limitations to setbacks, landscaping, building coverage, and roof heights. These limitations, however, in conjunction with the conceptual neighborhood design style work well to the site's advantage.



**Time
and Place:**

It is a time of health and well being. The countries ideologies of health and wellness have shifted and the outlook is positive. People are watching what they eat, exercising and becoming healthier citizens.

Children as well are reaping the benefits of this shift and playing as hard, if not harder than ever. Yet, it is necessary to provide health and wellness for children who aren't capable of playing as hard because of neurological disorders. As they begin their healing process, it is important to remember that they still are children and still have the cognitive ability to be aware of their surroundings and play to whatever level is possible. Both the children and their families going through the process of learning, healing, and recovery need to have all the amenities they deserve (Ruth 2000).



Figure 12. Children who are well-surrounded by families and by caring medical staff have quicker response time healing. (Source: www.early-intervention.org/)



site images



Figure 13. (Source: personal photo)

View looking North



Figure 14. (Source: personal photo)

View looking Northeast

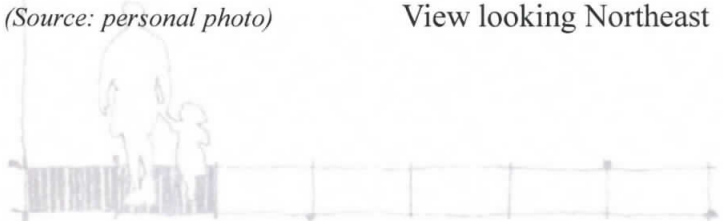




Figure 15. (Source: personal photo) View looking East-Northeast



Figure 16. (Source: personal photo) View looking Northwest

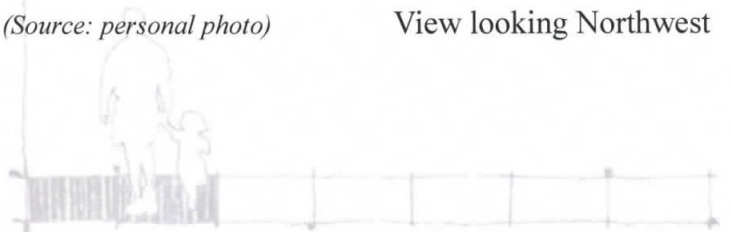
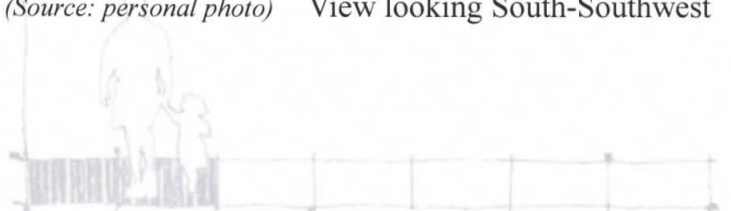




Figure 17. (Source: personal photo) View looking Southwest



Figure 18. (Source: personal photo) View looking South-Southwest



Precedents

- **Shenandoah Regional
Campus Learning
Corporation**
Manassas, Virginia
- **Dr. Donald & Beret Mott
Children's Center**
Puyallup, Washington
- **Craig Hospital - Family
Housing**
Englewood, Colorado
- **Evergreen Hospice
Center**
Kirkland, Washington
- **Acadia Hospital**
Bangor, Maine
- **Children's Hospital
and Health Center**
San Diego, California



Shenandoah Regional Campus Learning Coporation

Manassas, Virginia

“Neighborhood Style”



Figure 19 & 20. (Source: Nesmith 1995)

The Shenandoah Regional Campus provides residential health care and therapy for victims of traumatic head injuries (Nesmith 1995). The concept of the building was relatively recent when the campus was developed, however, before advanced technology was brought to emergency medical care, many of the clients at Shenandoah would not have survived their initial injuries.

Located on the site of an abandoned nineteenth-century estate, the Shenandoah campus is a six-building complex that includes both renovated and new buildings. The entire campus is wheelchair accessible, but the facility does not resemble a hospital environment that cushions its occupants. Many of its patients still possess physical capabilities, so a major part of their treatment is relearning how to function in traditional settings and deal with physical barriers.

Treatment and therapy functions are separated from the living areas and the patient bedrooms are placed into three individual houses to lessen the buildings size and help to blend in with the scale of the residential neighborhood. Each of the residences are designed to support varying levels of support and are arranged around a central courtyard, with backyards for recreational activities and a formal front lawn facing the street.

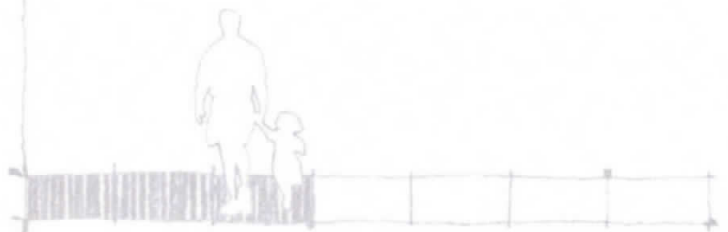




Figure 21. (Source: Nesmith 1995)

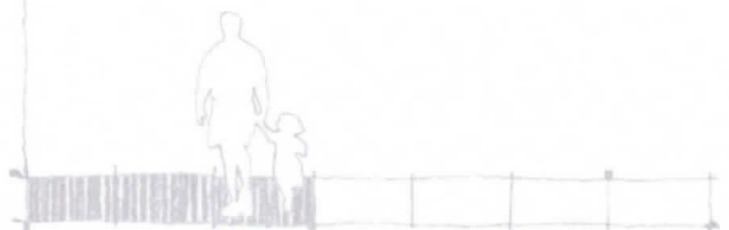
Conclusions:

The campus is very characteristic to modern residential design, perhaps neo-traditional in style with many modern flares.

Campus contains a “Teaching Barn” which is where patients go to relearn certain everyday activities.

The interior is very calming and warm in appearance. The facility caters to adults, yet it still appears very comforting and familiar as a residential concept.

The site is 100% wheelchair accessible.



Dr. Donald & Beret Mott Children's Center

Puyallup, Washington

“Safe Passage”



The Children's Center is a comprehensive medically based facility, providing multidisciplinary services to children through adolescents with special healthcare needs. The building was completed in September of 2000. The building size is 43,500 square feet and at the cost of \$186 per square foot, was completed for \$8,600,000 (Healthcare 2003).



The Noah's Ark metaphor responds to the hospital's desire for a special place that captures the imagination and spirit of those who visit and work there; the Children's Center was built to invite and protect the most vulnerable and to provide “safe passage” through the most difficult physical and mental challenges.

The metaphor of the ark is brought to life through the innovative use of an exposed curved timber structure and ship forms, allowing the building to rest gently on the landscape, with vaulted and light-filled places within.



The site was sculpted to form “waves” around the ark, and patterned concrete masonry on the side and rear of the building represents the rock upon which the ark is perched (Healthcare 2003).

Figure 22,23,24. (Source: Healthcare Design 2003)

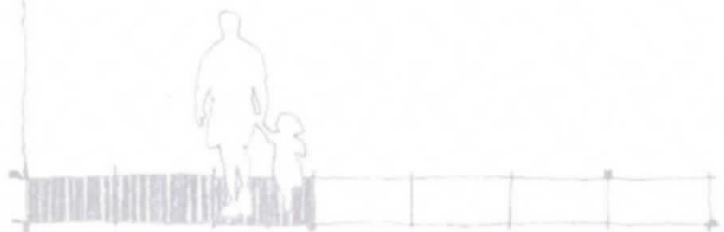




Figure 25 & 26. (Source: *Healthcare Design 2003*)

The building is a highly functional and efficient workplace for staff, and a non-institutional setting designed to inspire the children and families who use it.

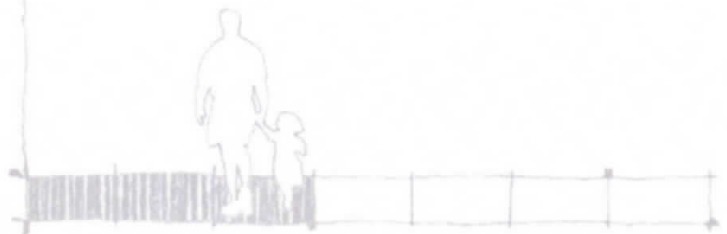
Conclusions:

The building envelope tends to read “high-tech,” yet the metaphor speaks well to a child’s perceptions.

The site plays upon the metaphor and works interactively with the building.

Inside, the building appears a little sterile and unfriendly, yet certain parts appear to cater to a child’s fun sense of play.

The scale seems a bit too big for children. An important aspect to children is to create something they can use – bring it down to their scale.



Craig Hospital - Family Housing

Englewood, Colorado

“Friendship Center”



Craig Hospital, on of the top 10 rehabilitation hospitals in the nation, recently completed the Family Housing project. The new apartment-style facility was designed with 34 accessible units where family members of newly injured spinal cord or brain injury patients are strongly encouraged to be present for their loved one’s stay, to provide support and learn about the challenges of living with a disability.

The residential-style character and design provide a more hospitable feel during the patient’s recovery. A Colorado theme was introduced to provide an inviting, non-clinical fell to the entry and public spaced.

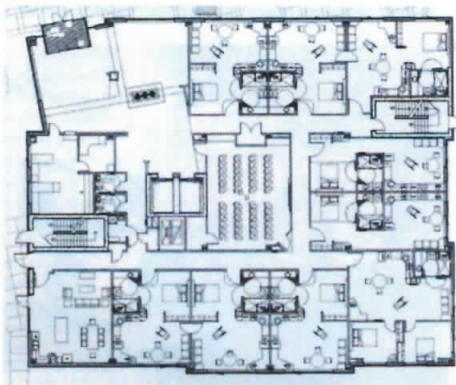


Figure 27 & 28. (Source: Healthcare Design 2003)

Each apartment is spacious, light, and cheery, with equipment and accommodations specifically designed for the rehabilitation of patients in wheelchairs and their families. The comfortable, yet functional design is key to the families and patients as they learn to adapt to a new way of living.

The building is a “friendship center” for patients and families.

Total building area: 57,000 square feet
Construction cost: \$167 per square foot
Total cost: \$9,500,000
(Healthcare Design 2003)

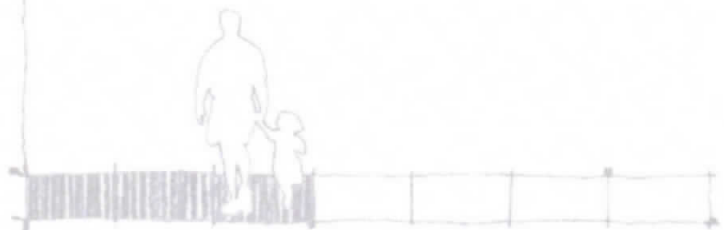




Figure 29. (Source: *Healthcare Design 2003*)

Conclusions:

The housing is along the same lines as the proposed Children's Center, yet the Craig Hospital Center is geared more towards adults, therefore scale and amenities differ some.

The idea of accessible efficiency units possesses merit and also accommodates families.

The site is 100% wheelchair accessible.

Housing style concept works well with the neighborhood feel, yet it also seems too residential as it lacks aesthetic appeal.



Evergreen Hospice Center

Kirkland, Washington

“Reflection”



Although subject to the same strict technical requirements as a hospital, the Evergreen Hospice Center was designed to create a non-institutional facility with the physical and spiritual comforts of home. The Hospice is comprised of four, residentially scaled wings with steeply pitched roofs. Each patient room is expressed on the exterior as a single dormer with double-hung windows.



The approach to the Hospice is along a winding pathway, and the entrance lobby resembles a typical residential living room. Patient rooms are clustered so they share a “family” room and kitchen.

The facility’s “reflection room” features full-height windows that overlook a semiprivate garden outlined with a circle of aspen trees. Built-in window seats are designed to allow patients to get as close as possible to the outdoors without having to go outside (Nesmith 1995).

Figure 30 & 31. (Source: Nesmith 1995)

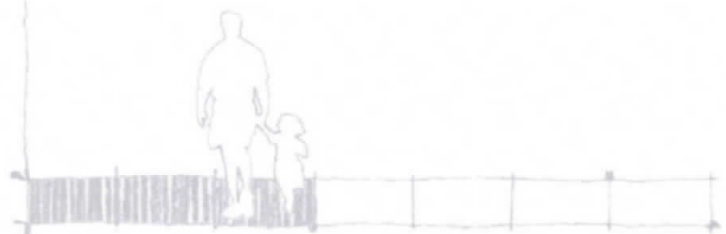




Figure 32 & 33. (Source: Nesmith 1995)

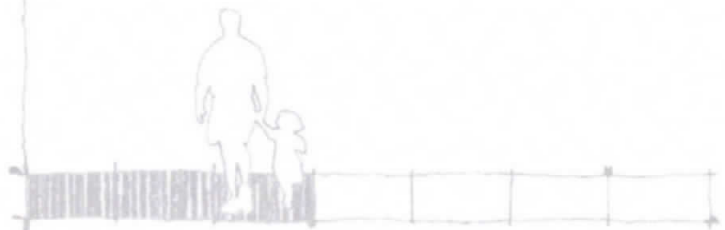
Conclusions:

Catering towards older adults, the Hospice still possesses many valuable features to the neighborhood style.

The grounds are organized around a central landscaped courtyard, which has a running stream and a reflecting pool.

The Hospice includes a patient hygiene room for special care such as massage, hair washing, and Jacuzzi bathing.

The Hospice has a very nice residential quality to it. Combined with the courtyard, a nice marriage is made between the Hospice and the neighborhood with which it resides.



Acadia Hospital

Bangor, Maine

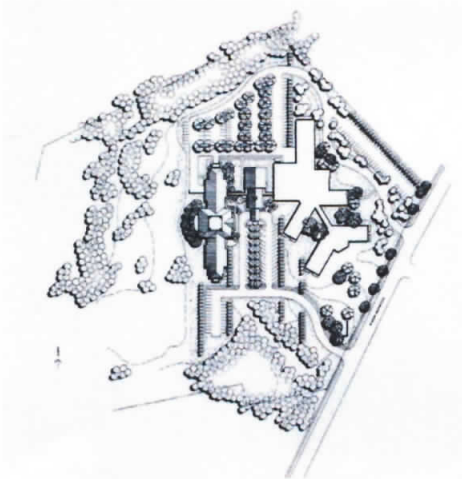
“Vernacular”



Guided by the metaphor of vernacular New England architecture of the farmhouse, barn, and field, this private hospital is arranged in a campus style with domestically scaled buildings.

The main building of the compound—the farmhouse—accommodates inpatient functions including admissions, dining, and crisis intervention.

Patient rooms are organized around back-to-back nursing stations so that a unit can be expanded or reduced depending on census.



The main entrance of the complex is housed in a barn-like structure, designed as a loft space to house the public lobby and reception area.

Conclusions:

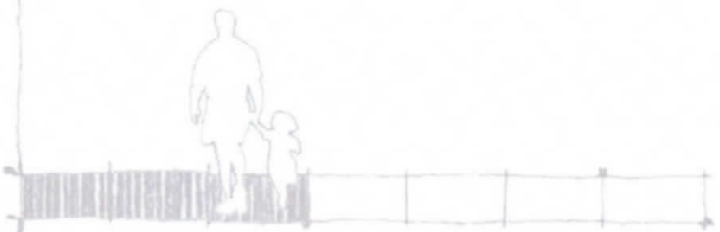
A large scale project, yet one that is designed around the vernacular of its surroundings.

The entrance features a gabled portico, and the main building serves as the link between the other three buildings.

The grounds contain a large courtyard area for gatherings, as well as private courtyards for more individual based enjoyment.



Figure 34 & 36. (Source: Nesmith 1995)



Children's Hospital and Health Center

San Diego, California

“Playful”



This new patient wing at the Children's Hospital affords not only the space but the opportunity to practice a new kind of medicine, one that is sensitive to what scares children and what helps them recover, and one that involves the entire family in the healing process.



Situated between two busy north-south freeways, Children's Hospital looks like a fantasy castle atop a mesa perch, with its red roof, a 60-foot-tall clock tower, lively facades, and playful detailing. Familiar residential forms and ornaments provide a psychological comfort for children upon their arrival (Koniske 1999).

The design utilized thirty-bed nursing sections situated as “neighborhoods,” with ten patient rooms clustered around a nursing station designed to recall images of home. This compact design gives nurses more immediate access to each child.

Conclusions:

The hospital has a fiber-optic constellation of twinkling lights which animate the ceiling above the nursing station.

Individual patient rooms were designed with built-in fixtures and playful details to evoke images of home.

Even though the scale of the hospital is grand, a good job was done in down-scaling the interior for children.

The color palette is fun and invigorating – very much eye appealing for children.



Figure 37 & 39. (Source: Koniske 1999)

Spatial Summary & Activity Description

- **Program Requirements Preface**
- **Program Requirements**
- **Spatial Matrix**
- **Ancillary Considerations**



program requirements

preface

In order to properly identify spaces - user behaviors and expectations, activities and functions, and material and performances characteristics must be defined. By understanding individual room needs, a more complete design package can be generated, which in turn minimizes questions during the design process.

The following subcategories will be found after each room type and can be identified and understood as follows:

User Behaviors & Expectations:

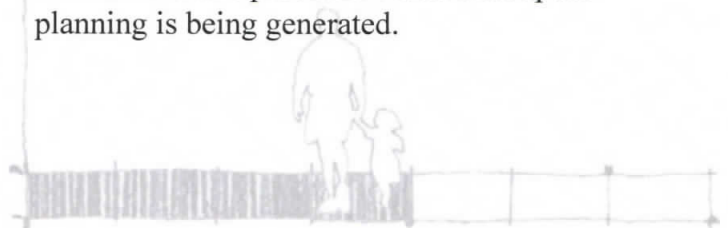
This category entails what the eventual design is expected to communicate about users of the Facility (Martens 2004). What certain expectations might need to be considered as well as when a users first impressions might be significantly important to an individual space and the overall success of the building.

Activities & Functions:

This category represents types of activities and functions that will take precedent within the space. Understanding specific spatial functions and activities corresponding to those functions will help communicate into the design solution in order to make the space more successful.

Material & Performance Expectations:

Knowing before hand the specific material requirements of a room and how the space is to function according to performance criteria are also important in creating a design solution. Listing needs in terms of electrical, plumbing and mechanical requirements for individual rooms alleviates future problems when final space planning is being generated.



program requirements

Public Spaces

Total square feet

Entrance Vestibule (8.0 x 8.0)

64 sf

User behaviors & expectations:

Space needs to be inviting, comforting and playful. Overall first impressions are made here and the child needs not to be afraid to enter. Wheelchairs will be coming through regularly so allow proper space allocation.

Activities & functions:

Entry, exiting and waiting.

Material & performance expectations:

Interior walls and flooring need to be durable. A cabinet unit heater will be necessary within the vestibule. Doors to have automatic openers.

Gathering Space / Lobby (15.0 x 15.0)

225 sf

User behaviors & expectations:

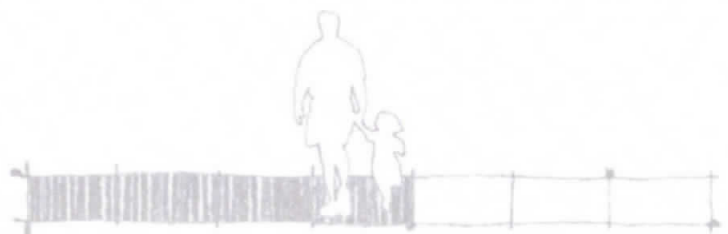
This is a space for the gathering of family members and friends as well as waiting to see your loved one or waiting for a ride. Keeping in mind the child is the client, the space needs to fun yet possess an atmosphere of home.

Activities & functions:

Waiting and conversation will be the predominate functions occurring in this space, yet their will need to be activities for children as well as fun places for them to sit and play.

Material & performance expectations:

Durable, playful materials and color palettes will be important. An entertainment niche, a telephone, and an individual playroom scaled down for a young child is also desired.



Registration desk (12.0 x 8.0)

96 sf

User behaviors & expectations:

This is a staff occupied space. The desk will function as registration for incoming patients, phone services, and computer records.

Activities & functions:

Registering new patients, answering phone calls and record documentation

Material & performance expectations:

Consider a thematic style desk with both upper and lower transaction surfaces. A computer, printer, phone and fax will occupy the space; therefore the need for receptacles for both phone and data will be required—expansion for additional staff possible.

Conference (10.0 x 12.0)

120 sf

User behaviors & expectations:

Staff and families

Activities & functions:

Conference space for staff and families. Needs the ability to be private.

Material & performance expectations:

Professional office style with conference-style phone and data connections. TV and VCR also needed, as well as a 4'x8' conference table with chairs. Window is desired.

Public Restroom (6.0 x 9.0 – typical of two)

108 sf

User behaviors & expectations:

For use with the families who are waiting. Not for staff use.

Material & performance expectations:

Toilets need to be accessible. Use tile on floors and a wainscot of tile on walls in a playful color scheme.



Business Services and Records

Total square feet

Patient Services Office (10.0 x 12.0)

120 sf

User behaviors & expectations:

This is an office for one staff member. Needs the capability to be private.

Activities & functions:

Senior staff will occupy. Phone and computer work will ensue. Light levels will need to meet performance criteria for computer work.

Material & performance expectations:

Warm color palette with professional look. Must have window to the outside and a door for privacy. Phone and data hook-ups and office style furnishings.

Scheduling / Support Office (10.0 x 12.0)

120 sf

User behaviors & expectations:

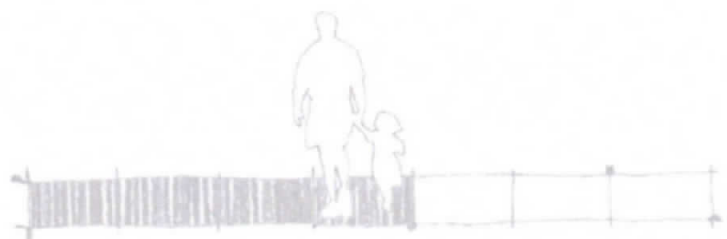
This is an office for one staff member. Needs the capability to be private.

Activities & functions:

Senior staff will occupy. Phone and computer work will ensue. Light levels will need to meet performance criteria for computer work.

Material & performance expectations:

Warm color palette with professional look. Must have window to the outside and a door for privacy. Phone and data hook-ups and office style furnishings. Needs a window.



Equipment / Workroom (8.0 x 12.0)

96 sf

User behaviors & expectations:

Space needs to be efficient with lots of storage

Activities & functions:

Mail receiving and sending, copying and misc. office work. Vertical file cabinets necessary

Material & performance expectations:

Because of the copier and mail machine, good ventilation will be needed to alleviate overheating. Phone and data necessary. Prismatic lighting. Does not need a window.

Medical Records Storage (12.0 x 12.0)

144 sf

Activities & functions:

Storage of patient medical records. Need for 8 tall vertical file storage systems.

Material & performance expectations:

Prismatic lighting, does not need window.

Staff Work Area (9.0 x 9.0)

81 sf

Material & performance expectations:

Upper and lower storage cabinets, sufficient work surface, does not need window.

Transcription and Coding (6.0 x 9.0)

54 sf

User behaviors & expectations:

Used by staff for medical transcription, need workstations

Activities & functions:

Transcription and coding requires 2 phones and 2 computer terminals.

Material & performance expectations:

Parabolic lighting due to computer stations, phone and data terminals does not need a window



Supply Storage (9.0 x 9.0)

81 sf

Material & performance expectations:

Wall mounted storage shelving, typical of 3 sides.

Meeting Room (12.0 x 18.0)

216 sf

User behaviors & expectations:

Used by staff, can double as large conference if needed.

Activities & functions:

Inter-staff meetings and Classroom.

Material & performance expectations:

Window wall preferable, VCR/TV, video screen, data and phone terminals, can / parabolic lighting.

Building Support

Total square feet

Staff Entrance Vestibule (5.0 x 7.0)

35 sf

User behaviors & expectations:

Used only by staff

Activities & functions:

Linked to staff parking

Material & performance expectations:

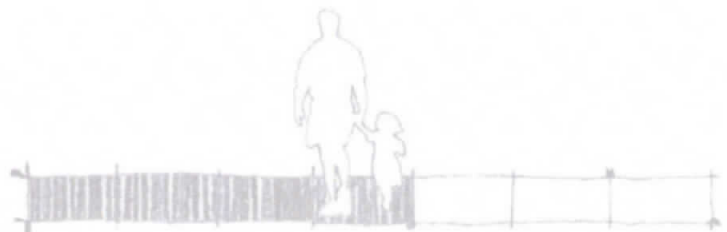
Need cabinet unit heater, time clock, doors to be security doors.

Staff Toilet (6.0 x 9.0)

54 sf

Material & performance expectations:

Needs to be accessible with durable finishes.



Staff Breakroom (15.0 x 15.0)

225 sf

User behaviors & expectations:

Used only by staff

Activities & functions:

Break room and lunch room

Material & performance expectations:

Need kitchenette along one wall with microwave, fridge, and coffee maker. 3 tables with chairs and room for vending machine.

Laundry (12.0 x 16.0)

192 sf

Activities & functions:

To be used by staff for washing and folding linens

Material & performance expectations:

Durable wall finishes, commercial washer and dryer, and proper air ventilation

Receiving Room (12.0 x 12.0)

144 sf

User behaviors & expectations:

Used only by staff and shipping crews

Activities & functions:

Linked to staff parking and in close proximity to dumpsters. All receiving and shipping to be contained here.

Material & performance expectations:

Durable wall finishes, small overhead door, exposed ceiling is fine, try to keep site lines away from street

Recycling Alcove (4.0 x 9.0)

36 sf

Material & performance expectations:

Need recycling bins

Supply Storage (12.0 x 18.0)

216 sf

Activities & functions:

Storage of all supplies, linens, etc.

Material & performance expectations:

Durable finishes



Electrical Service / Distribution (7.0 x 9.0)

63 sf

Material & performance expectations:

Durable finishes, proper electrical and data terminals

Data / Telephone Service (7.0 x 9.0)

63 sf

Material & performance expectations:

Durable finishes, proper electrical and data terminals

Computer Server Room / Service Room (9.0 x 12.0)

108 sf

Material & performance expectations:

Durable finishes, proper electrical and data terminals

Mechanical Room (24.0 x 34.0)

816 sf

Material & performance expectations:

Exposed floor and ceiling okay, ships ladder to roof within room



Patient Services

Patient Suites (1000+/_ sf - typical of 6)

Total square feet
6000 sf

User behaviors & expectations:

Patient rooms will consist of: patient room, staff workspace, additional sleeping room, shared bathroom, gathering space, kitchenette, and exterior function space.

The patient suites need to cater to the child, using color and material palettes consistent with that of a residential style home and playful niches to create interest.

The entry to the patient suite should be consistent with a residential style entry in order to communicate the feeling of home.

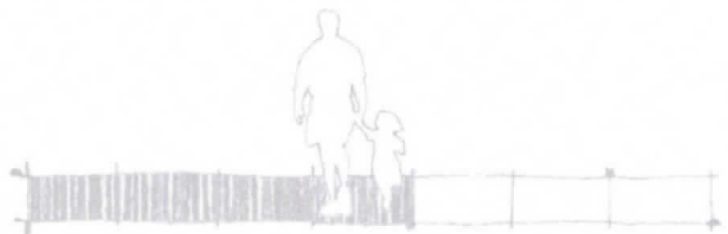
The scale of the room and the items in the room and on the walls shall also be consistent with that of a child and home.

Activities & functions:

This space will act as an apartment, with the capabilities of being private, yet staff will have 24-hour access to patient sleeping room and staff workspace.

Material & performance expectations:

The space will accommodate special needs equipment for the patient, equipment for staff, shared shower/toilet room, 4x8 table and chairs, living room style seating area with entertainment center, kitchenette, and an access to individual patios.



Treatment Spaces (12.0 x 20.0 – typical of 2)

480 sf

User behaviors & expectations:

Used only by staff, patients, and families

Activities & functions:

This space is important in that it represents the healing process in physical action. Games, one on one play, and mild treatments will take place here. Include safe, easily cleaned furnishings, lockable cabinets, and play equipment for active and quiet play areas. The children need to be able to engage in physical activities, as well as dramatic and imaginative play.

Material & performance expectations:

Durable, safe and easily cleanable equipment, storage cabinet both tall and short, bright-playful colors

Outpatient therapy (12.0 x 16.0 – typical of 2)

384 sf

User behaviors & expectations:

Used only by staff and patients

Activities & functions:

Used for pediatric therapists, doctor consults, speech therapy, etc.

Material & performance expectations:

Durable finishes, bright-playful color palettes, special needs equipment, exam table, waiting chairs, data and phone service

Shared Playroom (16.0 x 30.0)

480 sf

User behaviors & expectations:

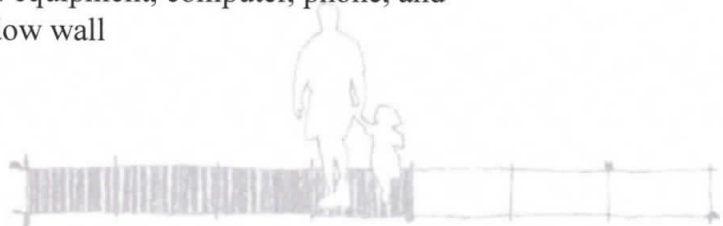
For use by patients

Activities & functions:

Playroom use, with functions of active and private play

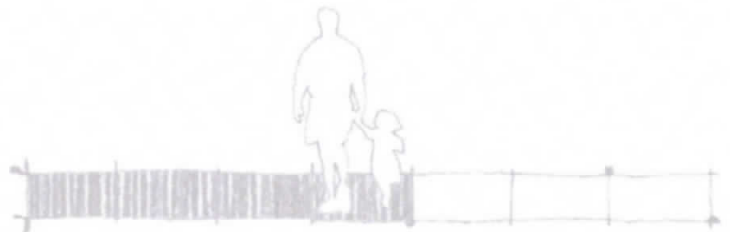
Material & performance expectations:

Durable finishes, bright-playful color palettes, special needs equipment, computer, phone, and needs a window wall



Subtotal – Total Building Net SF	10,821 sf
Departmental Grossing Factor (Net x 1.4) <i>Accounts for wall and halls within departments</i>	15,149 sf
Exterior Wall Multiplier (Net x 1.1) <i>Adds exterior walls into interior SF program</i>	16,664 sf
<hr/>	
Total Program Area	16,664 sf
<hr/>	

“Buildings, too, are the children of Earth and Sun.”
Frank Lloyd Wright



Spatial Matrix

Strong Relation
 Relation
 Little or no relation

	Entrance Vestibule	Gathering Space / Lobby	Registration Desk	Conference	Public Restroom	Patient Services Office	Scheduling / Support Office	Equipment / Workroom	Medical Records / Storage	Staff Work Area	Transcription and Coding	Supply Storage	Meeting Room	Staff Entrance Vestibule	Staff Toilet	Staff Breakroom	Laundry	Receiving Room	Recycling Alcove	Supply Storage	Electrical Service / Distribution	Data / Telephone Service	Computer Server / Service Room	Mechanical Room	Patient Suites	Treatment Spaces	Outpatient Therapy	Shared Playroom
Entrance Vestibule		●	○																									
Gathering Space / Lobby			●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
Registration Desk				●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
Conference					●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
Public Restroom						○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
Patient Services Office							●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
Scheduling / Support Office								●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
Equipment / Workroom									●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
Medical Records / Storage										●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
Staff Work Area											●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
Transcription and Coding												●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
Supply Storage													●	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
Meeting Room														○	○	○	○	○	○	○	○	○	○	○	○	○	○	
Staff Entrance Vestibule															○	○	○	○	○	○	○	○	○	○	○	○	○	
Staff Toilet																●	○	○	○	○	○	○	○	○	○	○	○	
Staff Breakroom																	○	○	○	○	○	○	○	○	○	○	○	
Laundry																		○	○	○	○	○	○	○	○	○	○	
Receiving Room																			○	○	○	○	○	○	○	○	○	
Recycling Alcove																				○	○	○	○	○	○	○	○	
Supply Storage																					○	○	○	○	○	○	○	
Electrical Service / Distribution																						○	○	○	○	○	○	
Data / Telephone Service																							○	○	○	○	○	
Computer Server / Service Room																								○	○	○	○	
Mechanical Room																									○	○	○	
Patient Suites																										○	○	
Treatment Spaces																										○	○	
Outpatient Therapy																										○	○	
Shared Playroom																											○	

Figure 40. (Source: Mike Wild 2004)



Ancillary Considerations

“Grown-ups never understand anything for themselves, and it is tiresome for children to always and forever be explaining things to them.”

Antoine de Saint-Exupery

External view of building

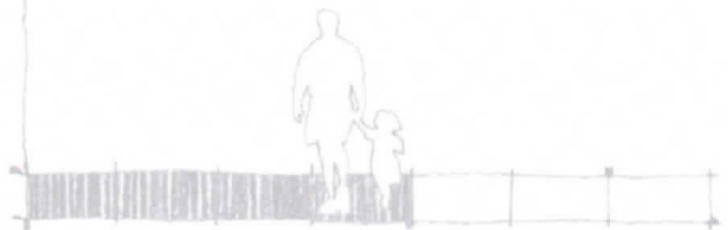
The design and material palette of the exterior portion of the building should reflect the vernacular of the surrounding neighborhood and community. Children need to perceive the building as “home away from home,” therefore the material and color palette needs to feel familiar and nurturing.

Windows

Window design and placement provides a unique aspect and function to any building. In the center’s case, it will be appropriate to provide windows proportionate and consistent with that of the ‘neighborhood-style concept.’ Providing larger windows in spaces where children and families will have direct visual access helps provide focus for conversation, as well as a place for imagination and distraction.

Finishes

Different methodologies for floor, ceiling and wall coverings have been investigated and found that in the cases of facilities where children are the client, a warm, playful color palette



works most effectively. Using the neighborhood theme in combination with child perceptions of play and familiarity of home is the most successful. Also, the finishes need to be durable and possess an ease of maintenance.

Color

It has been proven that children possess an intrinsic value associated with color and mood association. Bright colors give children a sense of happiness, and dark colors, in contrast, give children a sense of sadness and discomfort. Children tend to consistently desire cool hues and high saturation (Andrews 1993).

Acoustics

High noise levels are disrupting and tend to affect a child's sleep patterns. Therefore, keeping 'back of the house' activities away from patient suites will enhance the patients stay. Also, when children are receiving one-on-one treatment, noise tends to be disruptive when coming from outside sources. It is important that noise-level reduction should be attempted wherever necessary.

Temperature and Humidity

Temperature and humidity settings in patient suites should be controllable by the users. These settings in public spaces and staff areas should be moderated at a normal level, yet comfortable for the child.
(Founier, McDougal 1998)



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Nesmith, Eleanor Lynn (1995). *Healthcare Architecture – Designs for the Future*. Rockport Publishers, Inc.: Rockport, MA.

Ruth, Linda C. (2000). *Design Standards for Children's Environments*. McGraw-Hill: New York, NY.

Previous Thesis Documents:

Miller, Erica D. (1999). Birthing Center: Investigating the Impact of Architectural Design on Pregnancy and the Birthing Process. NDSU.

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Internet Information:

Children's Hospital of The King's Daughters:

http://www.johnsoncontrols.com/CG-Cases/childrenhosp_virginia.pdf

St. Mary's General Hospital:

<http://www.c2p2online.com/documents/StMarys-lawns.pdf>

Toronto Region Sustainability Program:

<http://www.c2p2online.com/documents/SickKidsCaseStudy.pdf>



Appendix A

- Statement of Intent
- Proposal



Center for Children with Special Needs
Promoting a balance between health and spirit

Embodying energy, emotion and youthfulness, children are a delicate and sensitive part of our communities. Unfortunately because of their size and growing immune systems, when faced with illness children tend to need special attention in order to regain their bodies balance and health. Therefore, developing a building and creating a special environment for children to recover in is an important feature to the Fargo community. The building[s] will need to encompass the children's creative thoughts and ideals, sustaining a typology which will support and nurture their time of healing and recovery.

In order to create a building typology that derives itself from children's ideals, while also imposing a healthy environment which supports the three thresholds of recovery, the principle of Anthroposophy will be used as the underlying concept. The following is an excerpt from Gary J. Coates and Susanne Siepl-Coates's article "New Design Technologies: Healing Architecture, A Case Study of the Vidarkliniken," published in the Journal of Healthcare Design, volume 8, in 1998.

"In anthroposophy, illness is not seen as a failing of body parts, but as an imbalance between a person's inner and outer world; between the person's physical body and the nonphysical aspects of the body, soul, and spirit. The goal of anthroposophic medicine is to reestablish this balance by engaging the patient in a conscious process of self healing and spiritual growth..."

The design of the building[s] will possess a strong importance between form and function using children as the underlying theme. Unique forms which will support their functions and portray a collaboration between art and architecture, establishing a sense of place within the community.



Design Thesis Proposal
Michael.Wild
October 07. 2004

who is it for?

The *Center for Children with Special Needs* is going to focus its care predominately to children between the ages of 18 months up through middle-teens. The nature of the center is to provide transitional care for children with neurological disorders sustained through birth, disease, illness or accidents, an environment which will not only help them recover and rehabilitate, but also help the parents understand and learn all facets of care for their children whom are not going to be able to provide care for themselves. This facility will be linked with the surrounding hospitals and offer children not directly in need of medical attention, a “home away from home” atmosphere, where palliative care will be provided to allow the children to regain their bodies balance and health.

In addition to the children and their parents, several user groups will need to be incorporated into the buildings design and function. Because children are such a delicate life form, a special staff consisting of doctors, nurses, physical therapists, volunteers and maintenance engineers will also inhabit the building. There will also be a need for 24-hour staff, which is yet another element to the design of the building.

spatial elements

- Lobby
- Reception Area
- Gathering Space
- Interior Healing Garden
- Exterior Healing Garden
- Patient/Parent Suites
- Staff Offices & Workspaces
- Public Toilets
- Circulation
- Maintenance & Mechanical Spaces
- Parking

site location and impact

The Fargo based site is located one block Southwest of the VA Hospital on Elm Street in North Fargo. It is situated on an a large open section of property, which blends uniquely into the surrounding neighborhood, yet because of its location adjacent to Elm Street, it is provided with an important emergency corridor. The idea of neighborhood plays an important role in the ideology of the center, therefore, placing the center within an established neighborhood context and within close proximity of Elephant Park and the Red River to the East, makes the site an ideal location.

The site anchors the block on the Southeast corner and because of its attractive location, there are many possibilities for beautiful pedestrian pathways not only within the site , but also to the neighboring parks and river. Keeping within the residential context allows the child to feel more at home, as well as provide a serene setting where the child can use the benefit of nature to recover in body, mind and spirit.

design significance

In order to create a building typology that imposes a healthy environment, supports the thresholds of healing and recovery and maintains a proper balance between children's social and behavioral tendencies, the main focus for the building will be to learn and understand the psychology of children, and incorporate those elements into the design of the building. Providing a place of comfort adapted to children and how they relate to their environments, will help maintain their healing process and provide the natural warmth and security that a home would.

Since the center is related to the medical field, it will need to adhere to the professions strict design codes, yet being a children's transitional care center it will need to encompass different ideals and design criteria. However, since the nature of the center is to be in context with the surrounding neighborhoods, it will also need to appear in that context yet with a professional stylistic approach.

getting started

- a. Definition of a research direction
Research will be a key element in understanding and designing this building. Finding case studies which will help support these ideas will be crucial in understanding current trends found in recent recovery and rehabilitation centers. Interviewing people within the profession, as well as child psychologists will also provide important information for the center.
- b. Design methodology
Using my design premise and gathering information through the components of written literature, design studies and interviews, I will incorporate that knowledge into a design solution. By also receiving advice and criticism I will derive a solution that accompanies my concept as well as outside knowledge into a culmination of fact and theory which will be proposed into a successful design.
- c. Documentation of the design process
Keeping documentation on all forms of research will be crucial to the success of the design solution. Maintaining organized folders of all the information from the various proposed information gathering will hold to be invaluable when preparing the final presentation.

d. Schedule of workplan

week 1	October 07	<i>Thesis proposal & Student critic preference slips due</i> Open & questioning phase
week 2	October 14	<i>Faculty return preference slips to main office</i> Open & questioning phase
week 3	October 21	<i>Primary and secondary critics announced</i> Investigation & discovery
week 4	October 28	<i>Last day of AR/LA 561 class</i> Investigation & discovery
week 5	Nov. 01-05	Hunting & gathering
week 6	November 11	Veteran's Day Holiday Hunting & gathering
week 7	Nov. 15-19	Final week of design studio Hunting & gathering
week 8	Nov. 29 - Dec. 03	Closed & knowing phase (Happy birthday - have a beer!) Assembly & review of program
week 9	December 09	<i>Final thesis program due to primary critic</i> (Last day of classes Dec. 10)
week 10	December 16	<i>Program grade due to AR/LA course instructor</i>
week 11	Dec. 13-17	Final examinations
week 12	Dec. 20-24	Try and remember what I was doing... Reopen & question phase (2)
week 13	Dec. 27-31	Remembering where I was... Begin organizing the pieces to the puzzle (design)
week 14	Jan. 03-07	Making something out of everything... Let's design a building!

d. Schedule of workplan (continued)

week 15	Jan. 10-14	Visions of a building dancing in my head...keep it up. (Classes begin Jan. 11)
week 16	Jan. 17-21	No time for holiday's...keep working. (Martin Luther King, Jr. Holiday Jan. 17)
week 17	Jan. 24-28	I should be close to having something really good...
week 18	Jan. 31- Feb. 04	Oops, I probably missed something important. Wait a minute...I found it - no worries.
week 19	Feb. 07-11	It's my wife's golden birthday: Remember to buy present and take time off since I have been so busy!
week 20	Feb. 14-18	It's serious now! Models, drawings, answers (hopefully).
week 21	Feb. 21-25	Keep it up...almost there!
week 22	Feb. 28- Mar. 04	No time to start slacking - finish what you started!
week 23	Mar. 07-11	<i>Mid-semester thesis reviews</i> Oh-oh, halfway there...I see a light!
week 24	Mar. 14-18	I haven't taken a spring break yet...might as well work! <i>Spring break</i>
week 25	Mar.21-25	Time to start making things look nice.
week 26	Mar. 28- Apr. 01	Are they looking nice? Keep going...
week 27	Apr. 4-8	oooooh...that is looking good!
week 28	Apr. 11-15	Time is running out - make sure you've done everything you set out to do!

d. Schedule of workplan (continued)

week 29	Apr. 18-22	Get out the white glove...make sure to set aside time to plot...hand it in - have a beer!
week 30	April 25 April 26-27 April 28 April 29	<i>Thesis projects due at 4:30pm in the Memorial Union</i> Annual thesis exhibit in Memorial Union <i>Final thesis reviews</i> <i>Draft of thesis document due to primary critic</i>
week 31	May 06	Last day of classes
week 32	May 12 May 09-13 May 13	<i>Final thesis document due at 4:30pm</i> Final examinations Commencement at 4:00pm Fargodome

e. Previous studio experience

2nd year	Milt Yergens	Dwelling wall, Additive/ subtractive forms, bistro design
spring	Vince Hatlen	Prairie Green design, Pocket park College of Business at NDSU
3rd year	Steve Martens	Interpretive center, Airport
spring	Mohamed Elnahas	Experimental theater, Masonry competition
4th year	Cindy Urness, Mark Barnhouse, Joshua Walter	Urban design - Downtown Fargo
spring	Darryl Booker	Marvin Windows competition, High-rise design
5th year	Steve Martens	Architectural preservation for Valley City, ND

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Appendix B

- Additional Reference Material

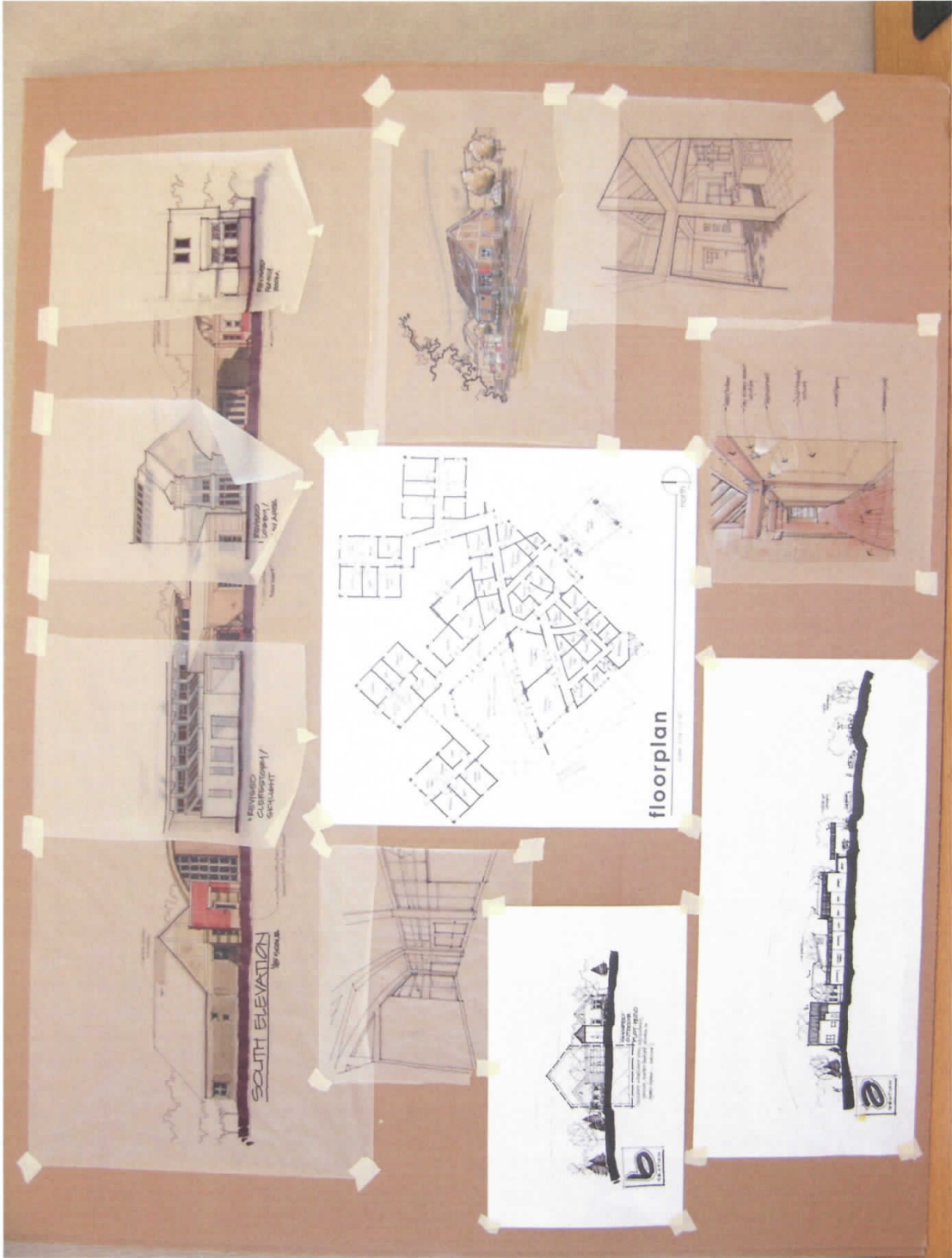


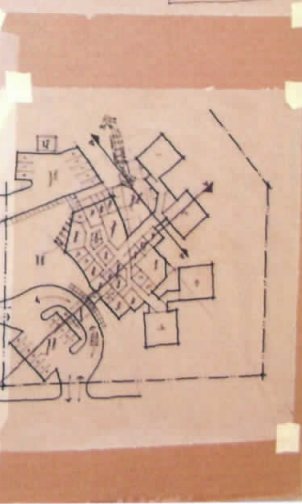
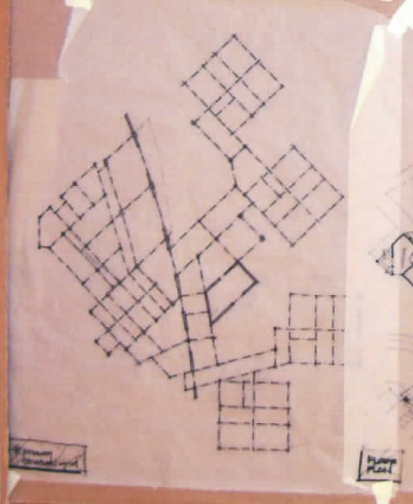
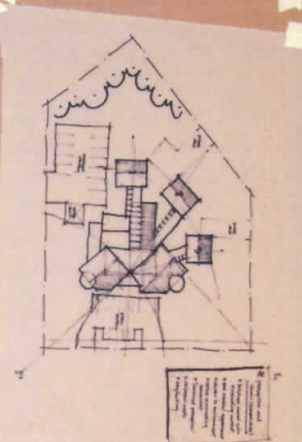
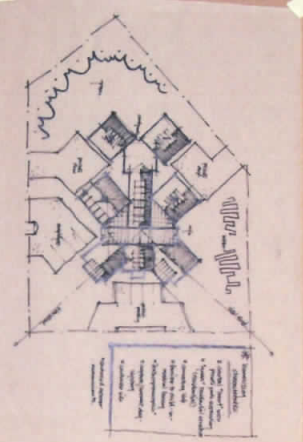
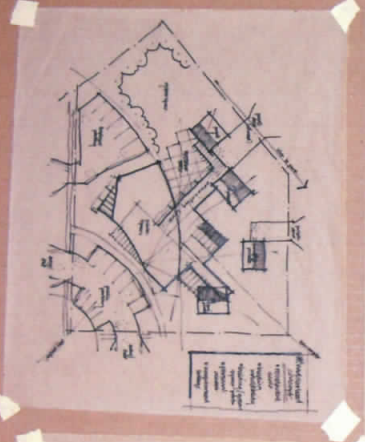
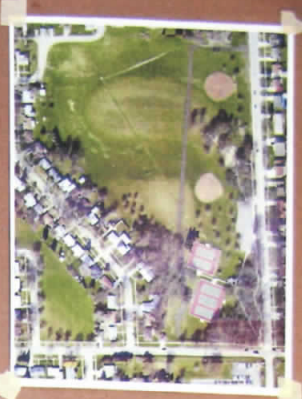
Final Documentation

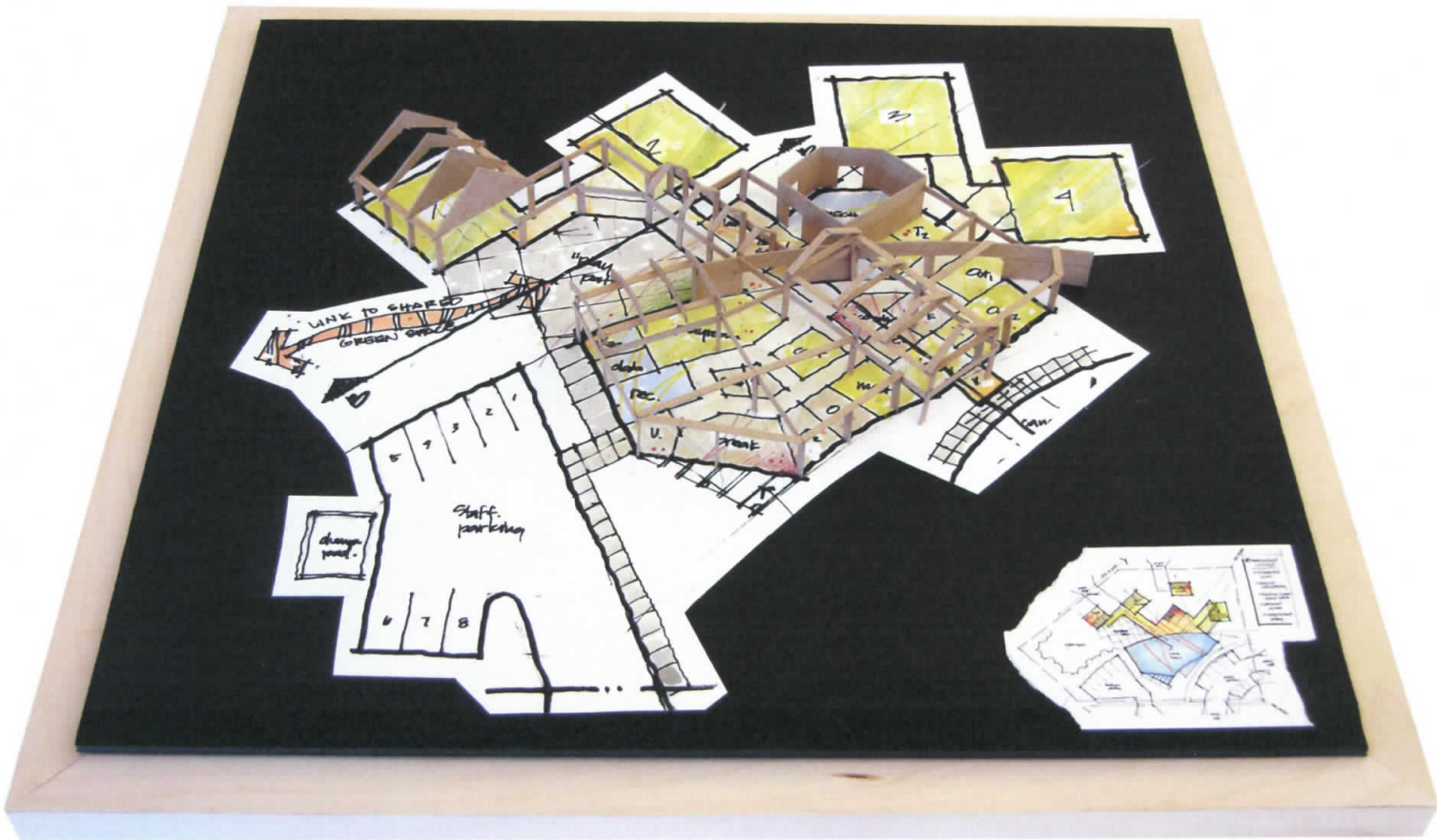
- Process Documentation
- Project Solution Documentation
- Personal Identification
- Digital Media

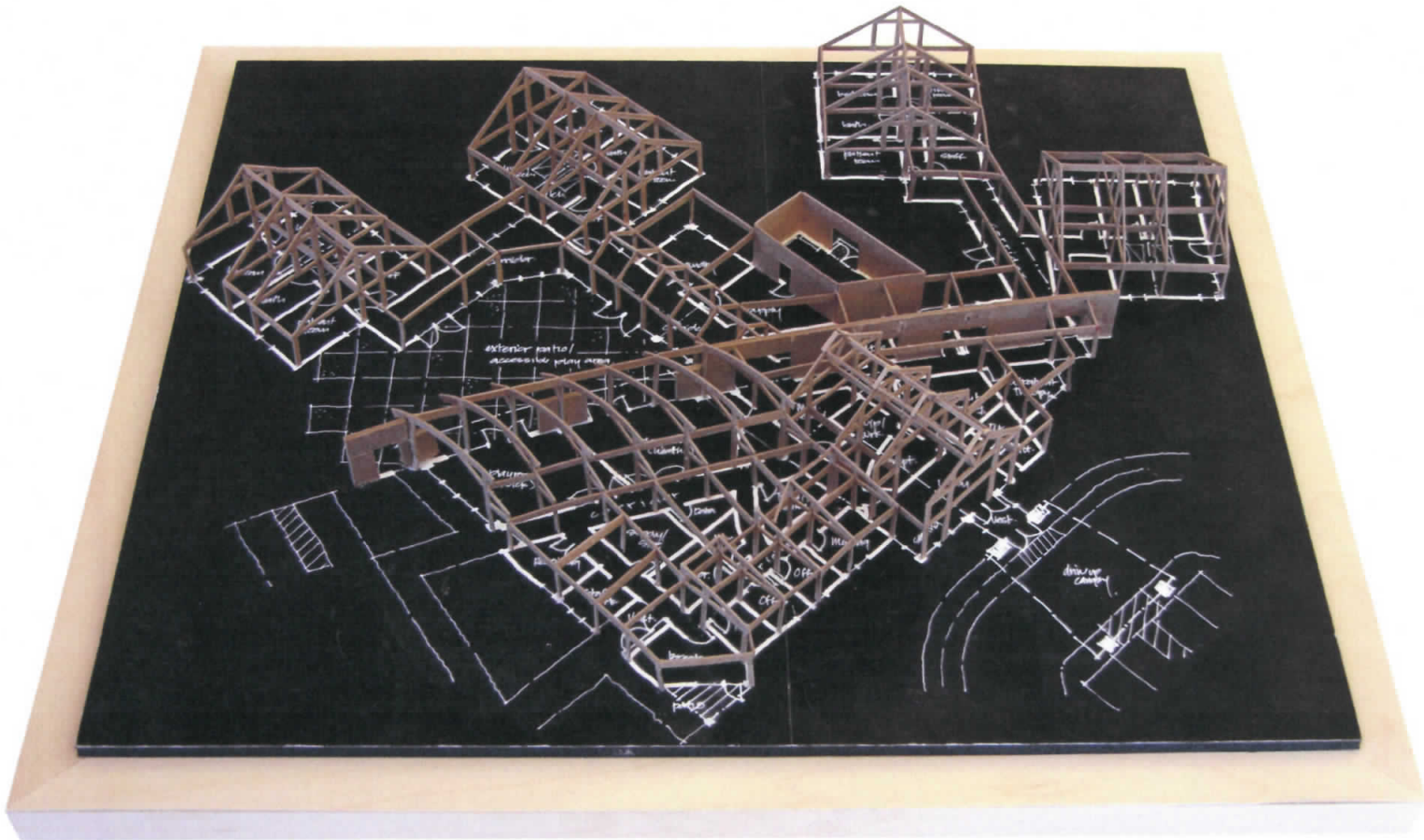


Process Documentation









**Project
Solution
Documentation**



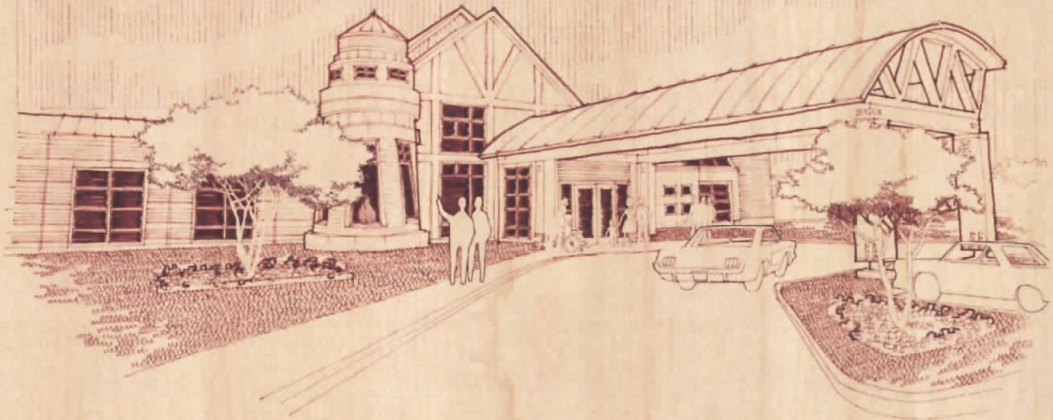
Center for Children with Special Needs

Located in Fargo, North Dakota

Introduction

A new trend steaming the healthcare industry is becoming more and more popular. The trend is a push towards moving specialized healthcare fields outside of main campus hospitals and into smaller scale environments in order to promote and sustain a proven healthier and quicker recovery for patients with special needs.

The "Center for Children with Special Needs" utilizes this idea by creating a children's healthcare facility placed within a residential neighborhood and constructed in such a way that it gives the child control over their environment, making sure to sustain the idea of 'child as client'. To successfully attain this goal, quality of experience will be achieved through craft, context, beauty and sincerity, leaving behind the previous healthcare mindset of cold, sterile environments for a more desired approach which utilizes the elements of comfort and familiarity.



expressive potential



The site is located at the Northeast corner of 17 1/2 Avenue North and Elm Street in Fargo, North Dakota. The site has enormous potential as it is located adjacent to a residential neighborhood, Elephant Park, and the Red River. The nature of these surrounding features support the child familiarity ideology as well as offer numerous possibilities for design potential.

A key feature to the site is the adjoining park to the North, which if utilized correctly can offer an important link between recovery and nature, which has been proven to be beneficial in child health and speed of recovery.

"Child as client. While developing a design for healthcare environments, it is important to stay in contact with the people we are designing for; children and families. (source unknown)"

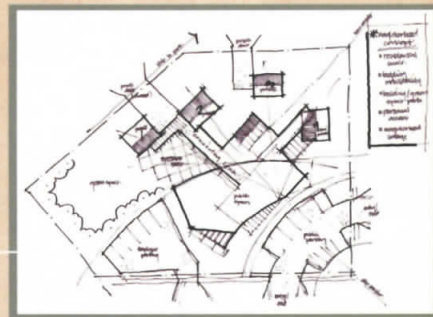


There are a total of nine houses that will need to be acquired in order to support the layout and function of the facility. One of the nine will support the link between Elephant Park and the children's healthcare facility.

Expanding the body of knowledge cultivated throughout the programming phase, it was necessary to follow the initial design directives in order to create conceptual relationships between the acquired information and the site issues. This process helped derive a design solution which was taken and further development to expose its maximum potential. Three conceptual forms were created which helped humanize the site as well as offered three different points of departure. They were:

- 1 Perception & Scale
- 2 Humanizing Characteristics
- 3 Neighborhood Context

Ultimately, the "Neighborhood Concept" was chosen because it had a scale and overall design sense about it which was worth investigating to uncover its full potential. Design development helped expose its conceptual potential and brought a series of plans and elevations, which in turn were continuously redeveloped in order to establish its expressive potential.



process

The developmental process in design begins with basic line sketches. These graphic representations distill important design information into its purity. The evolution can begin with simple forms until manipulated several times over in order to resolve a solution into a completed design thought.

Schematic design can be thought of as "graphical serendipity" - meaning a series of graphical events taking place in order for discovery and maturation of the design evolution.

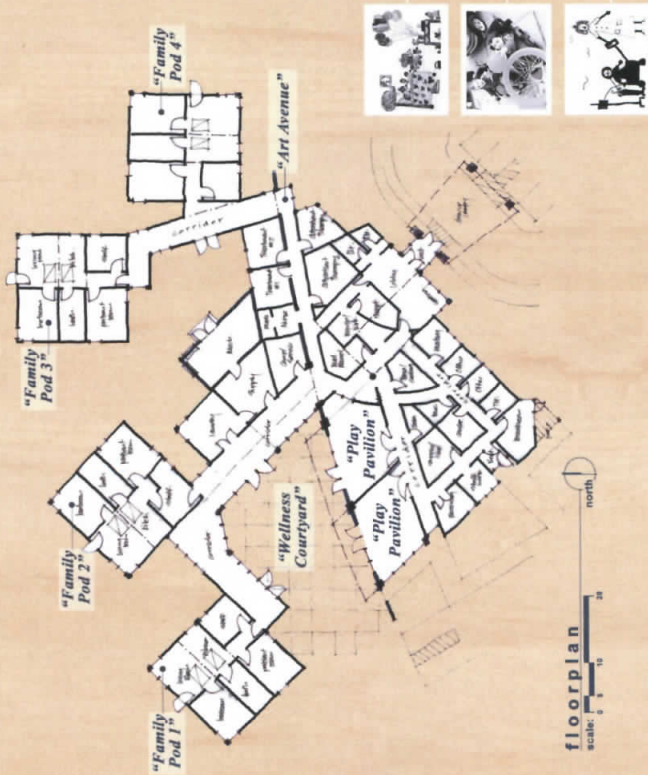


The schematic phase is important to a project because it is where design begins.

footprint for wellness

The footprint of the Children's Center is situated on the southwest corner of the site and its organic form responds to the irregular shape of the surrounding block, as well as to the view planes and site lines intrinsic to the site. By placing the building here it allows the public side of the building to face the major traffic corridor along Elm Street. It is then bisected by a masonry dividing wall separating public space from the more private space of the "Family Pods".

The Neighborhood Concept provided a framework for the radial layout of the footprint and also the spatial arrangement within. Utilizing the residential scale, building individuality, great space and neighborhood linkage helped in creating the overall aesthetic to the building form.



boundless children's park



A barrier-free play area uses accessible playground equipment and many variations of paths to combine fun and interest into one area. The City of Fargo does not yet contain an accessible park. Therefore developing the Northwest corner of the Children's Center property into an accessible park responds to the design team.

Providing children with disabilities the chance to enjoy an aspect of the not readily available is important to the enhancement of their young lives. Incorporating various play nodes as well as providing pathways and links for wayfinding increases the park's desirability.

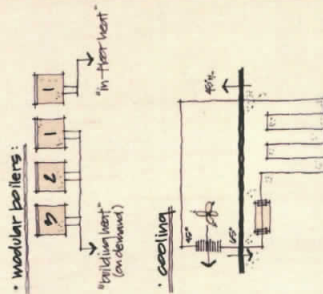
Because of the park's location, a visual link already connects the accessible park with Elephant Park situated to the North. To further complement the accessible park, more property will need to be obtained to create a successful link between the two parks. This ideology brings both disabled children and non-disabled children together to play in harmony, creating a heightened experience for one and all to enjoy.

healthful space conditioning

Healthcare codes require fairly exacting control over space conditioning and air quality. Specific humidity and air filtration systems are required to ensure proper atmospheric control in certain areas where wellness is achieved.

The Children's Center provides a space conditioning system that promotes a healthy environment. Modular boiler systems provide on-demand heat for all rooms and run in series to supply additional heat when outdoor temperatures drop. Combined with in-floor heat which creates a comforting thermal mass, a quality spatial heating system can be achieved.

Cooling is provided by a Geothermal system. By utilizing ground temperatures and con-trolled sources, air conditioning can be attained in a healthy manner. Although cool air and air circulation are systematically filtered to ensure the cleanest air quality possible.



- ISSUES:**
 - + infection control
 - + humidity
 - + acoustic control
 - + view planes
 - + future flex in services
- NEEDS:**
 - + humidity control
 - + filtration
 - + mechanical exhaust control
- SYSTEMS:**
 - + modular boilers
 - + radiant floor / heatpump
 - + geothermal
 - + air filtration
 - + mechanical exhaust



“healthy wall”

Many technical issues dealing with infection control have extreme importance in the design of a healthy children's facility. Others issues dealing with humidity, sound control, thermal envelope, sustainability and future flex also have an important role in the design of healthcare environments.

The 'Center for Children with Special Needs' accounted for these technical issues by developing a "Healthy Wall" system. Heavy timber being the main structural system is clad in a special structural insulated panel system that provides the wall with the technical aspects, yet keeps the innate aesthetic value of the timber. The exterior wall is designed in such a way that it is allowed to breath, and the interior finishes create a comforting environment that alleviates mold, allergens and bacteria from becoming present.





Cedar shingle
Roofing paper
Insulated roof panel - R30
T & G Roof decking

Line of heavy timber
structural frame beyond
4" Cedar siding
Strapping allows any moisture that
permeates the siding to drip away
or dry through evaporation
Felt paper
Vapor barrier
Structural Insulated Panel - R35
2 1/2" Steel stud
Service Cavity"

Prefinished aluminum
window system
5" Reinforced concrete floor with
in-slab radiant heating
Under-slab supply duct
Sand
Undisturbed earth

Reinforced footing &
foundation
2" Rigid insulation
Drain tile

Healthy Wall



play pavilion



The "Play Pavilion" provides a therapy and play space for both sick and well children by creating two like spaces linked together by an interior corridor or an exterior "Wellness Courtyard." These spaces utilize the warming elements of timber and masonry juxtaposed against the soft quality of glass, which provide both daylighting and views to the outside.

Incorporating soft, yet exciting colors provide a fun, familiar and comfortable atmosphere for the children. The beauty of the heavy timber joinery, and the organic volume of the space allow for a quality spatial experience.

"The essential experience derived from its forms, spaces, colours, textures, and scents is one of healing. The environment helps to strengthen the will, believed to be essential to the process of self-healing and rebalancing the individual."

Erik Asmussen



family pods



The "Family Pods" provide a private acclimation space for the child and his/her parents. Accessible by staff, each pod is linked with the main building yet also has individual access for family and friends.

The theology behind providing individual spaces to a family is to create a familiar atmosphere for the child while both child and parent learn to adapt with their new disabilities. The link provides staff support as well as any necessary internal functions.

The desire for parents to participate and learn proper care for their child is an important factor for both child and parent. The aesthetic of the pods creates a familiar and comforting environment for all and because of its setting within a residential neighborhood, it heightens the sense home.

Understanding the children's intrinsic desire to cognitively control their sense of place is crucial in the overall success of the design.



art avenue



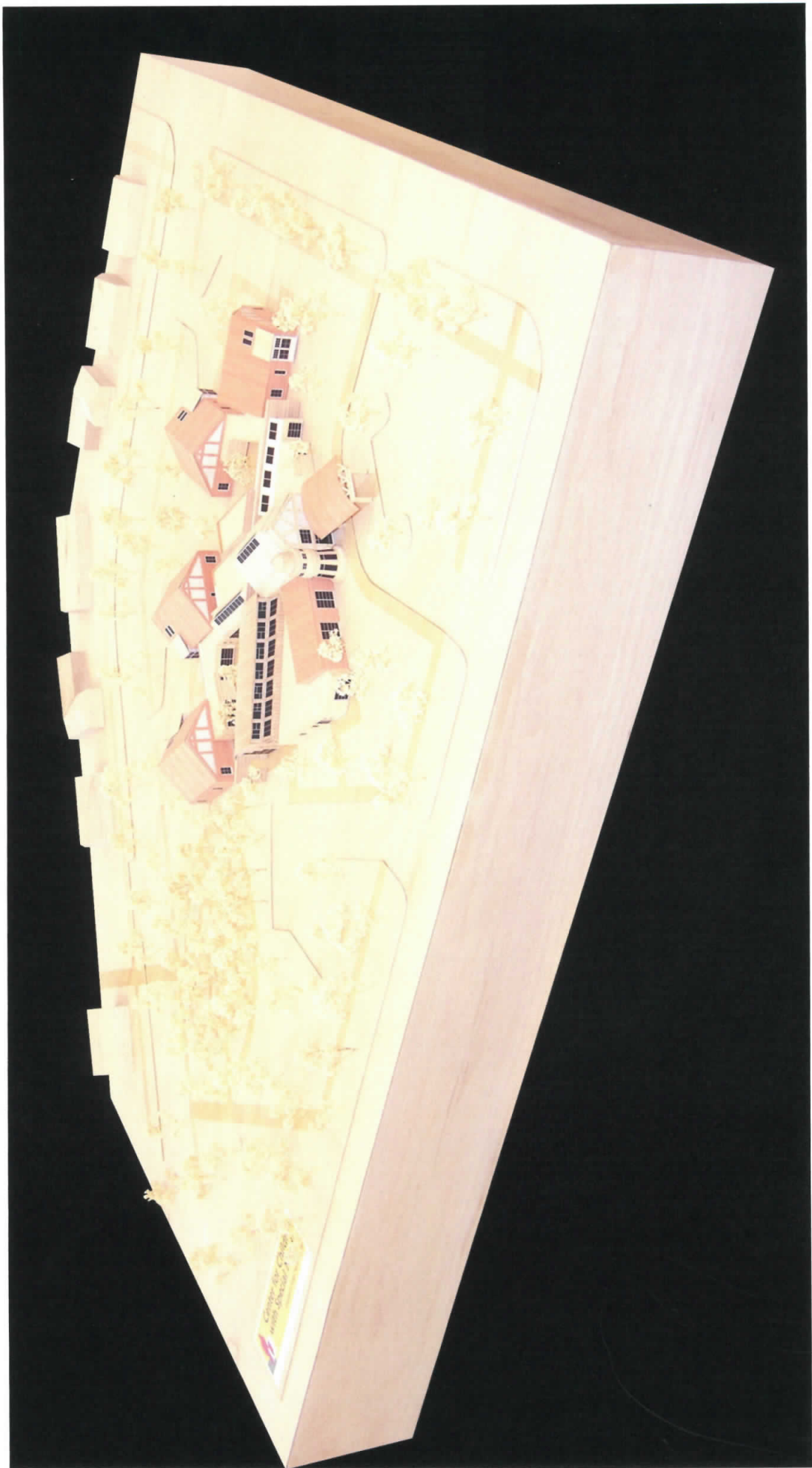
"Art Avenue" is a circulation link which provides an exciting environment for the child. Following the subtly curving path of the dividing wall, it is brightly exposed to the sky through a series of overhead skylights.

Filled with child fantasy familiar elements, it turns what could be an ordinary corridor into a veritable fun house for the child. A key element to "Art Avenue" are the interactive art centers, which let each child design a work of art to be left behind for the next child to see and then re-create for the next lucky onlooker.

Once again, fun yet comforting colors are obtained which provide a delightful experience. Textures also come into play as natural daylight bounces off the masonry wall giving subtle change to the adjacent plaster walls.

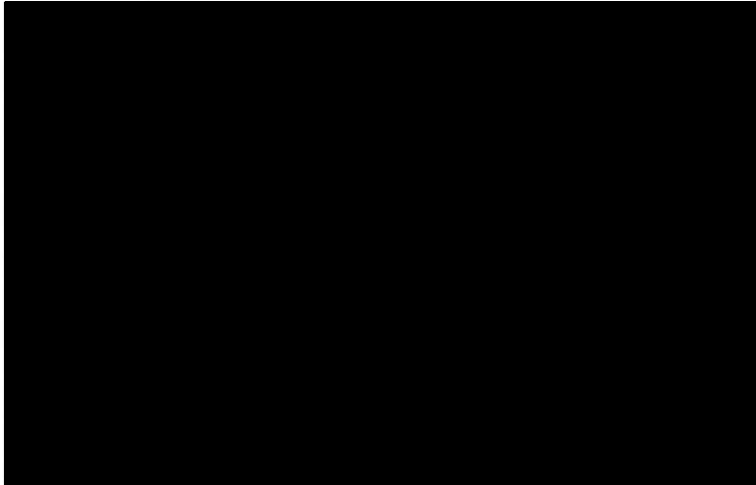
*"Children who are well-surrounded by families and by caring medical staff have quicker response time in healing."
(source unknown)*











This document signifies the capstone of my architectural degree. Through late nights, early mornings and the occasional libation with fellow schoolmates, I was able to accomplish what I initially set forth to do in 1992. During this period, my wife Kari and I had two boys (Lake & Kine) and with their love and support I was able to achieve my goal.

A special thanks to Steve Martens for all the "Good Things" he provided to me throughout the journey...very much appreciated!

Personal Identification