THESIS DESIGN DOCUMENTATION

A YOUTH SERVICES CENTER FOR MUNCIE, INDIANA

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Spring Quarter, 1978

for: Professor Robert Fisher
   Professor Bruce Meyer
Humanistic values - the worth and importance of the individual; the need for community; the contribution that human concern and empathy can make toward improving people's lives - these are things that must be addressed in the design of the Youth Services Center. Often they are expressed in conflicting design requirements or perhaps they are hidden in some rather nebulous design parameters. Whatever, they are there and they must be sought out and understood.

Once the conflicts are resolved, the paradoxes understood and the compromises drawn, physical form and space can be established.

It is my sincere desire that the physical forms and spaces that resulted from this design process are, in fact, an expression of basic human values as well as the logical solution to an architectural problem.
The Youth Services Center is a do all child welfare facility for the community of Muncie, Indiana. A modern residential center for treating emotionally disturbed children and young adults is combined with out-patient counseling and offices for a variety of youth oriented organizations. The facility is located near Ball State University so that it may also serve as a learning lab for student enrolled in the counseling curriculum.
Too often good intentions get lost in a quagmire of disorganization and, in the end, do no one any good. Such is the condition of the services and counseling offered to the youth in Delaware County. There is a full spectrum of services provided by capable and concerned agencies. However, duplication of services often exists and the inefficient use of resources results. In some cases, political considerations or legal restraints cause a serious lack of communication. In both cases, the quality of services available suffers and those who should benefit, suffer.

This thesis project proposes to develop a facility (somewhat prototypical but based on the conditions existing in Delaware County) that would more efficiently and thoroughly fulfill the needs of Delaware County young people, especially those with special emotional problems.

Background

To understand the present situation and the problem, a listing of agencies and services that provide counseling would be helpful. It should be noted that these facilities are scattered throughout the City. Some are full-time, professional organizations, others are strictly volunteer operations. Some are government sponsored agencies, others benefit only from private funding. Determining the quality and scope of services offered (not to mention trying to locate all of the facilities) is a formidable task. It is easy to relate this experience to that of a frustrated, concerned parent trying to find professional help for his/her offspring.

Alateen: offers guidance and counseling to children of compulsive or problem drinkers.

Aquarius House: provides information about drugs and counseling; twenty-four hour hotline.

Big Brothers/
Big Sisters: facilitates relationships between one-parent children ages seven to seventeen with qualified adult volunteers. Also acts as a referral and counseling agency for one-parent families.
<table>
<thead>
<tr>
<th><strong>Background (continued)</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Boy Scouts of America:</strong></td>
<td>provides a program which develops mental and physical fitness for boys ages eight to twenty-one and girls ages fourteen to twenty-one.</td>
</tr>
<tr>
<td><strong>Cambridge House:</strong></td>
<td>residential care and therapy for pre-delinquent girls ages eleven to eighteen. Presently, there are twenty-eight girls in residence and a staff of twenty.</td>
</tr>
<tr>
<td><strong>Children's Home, Delaware County:</strong></td>
<td>residential care for neglected, unwanted, and abused children. Counseling provided as need is determined, education provided by public school system. Presently there are thirty-five children in residence, though fifty is a more usual occupancy.</td>
</tr>
<tr>
<td><strong>Comprehensive Mental Health Services:</strong></td>
<td>provides therapy and counseling of all types and in-service training for Ball State students in appropriate programs.</td>
</tr>
<tr>
<td><strong>Crisis Intervention Center:</strong></td>
<td>provides &quot;hot line&quot; counseling service.</td>
</tr>
<tr>
<td><strong>Department of Public Welfare, Delaware County:</strong></td>
<td>provides child welfare, foster home placement, follow-up on child abuse complaints, etc.</td>
</tr>
<tr>
<td><strong>Family Counseling Service:</strong></td>
<td>serves families and individuals under stress.</td>
</tr>
<tr>
<td><strong>Junior Achievement:</strong></td>
<td>instills in teenageers a positive attitude toward the private enterprise system.</td>
</tr>
<tr>
<td><strong>Juvenile Aid Division:</strong></td>
<td>part of the Police Department - established to prevent and control juvenile delinquency.</td>
</tr>
<tr>
<td><strong>Muncie Boys' Club:</strong></td>
<td>provides programs for the character development and physical well-being of boys seven to eighteen years of age.</td>
</tr>
</tbody>
</table>
Background (continued)

Icerman Dental Clinic: provides dental services free of charge to children that qualify for the program.

Neighborhood Youth Corps: offers employment to youths sixteen to eighteen years old who show financial need.

Parents Without Partners: provides activities and support for single-parent families.

Police Athletic League: establishes good relations between the police and youth of the community and provides programs for the prevention of juvenile delinquency.

Probation Department: part of the county courts system - processes youths referred to juvenile courts and assists youth and families with social and delinquent problems.

Project Y.E.S.: finds summer employment for youth ages thirteen to seventeen.

Wapehani Girl Scout Council: trains girls ages seven to seventeen to be better citizens.

Well Child Clinic: provides free immunizations and nutrition counseling to families in need.

Y.M.C.A./Y.W.C.A.: provides programs in physical education, recreation, and service for the residents of the community.

Youth Service Bureau: provides out-of-court services for youths judged to be pre-delinquent.

Special comment should be made concerning the residential care provided for children in Delaware County. The present Children's Home is, at best, antiquated. It is, in most respects, an example of 19th Century social welfare planning and it bears little relevance to current social welfare
precepts. The staff is sincere in their concern for the children who reside there, but they are hard pressed to offer anything beyond basic "maintenance functions" (food, clothing, shelter). Minimal funding, a remote location in a commercial-industrial part of Muncie, and the large dormitory sleeping areas, are representative of the problems that should be dealt with if children who live there are to participate in normalized social relationships.
**Issues**

The issues raised by this Youth Service Center are numerous and complicated. Political, social, psychological and behavioral issues are all entwined in this project and must be dealt with as sensitively as possible.

Site selection clearly illustrate this point. Traditionally, residential care and treatment facilities (read institutions) were located in decidedly rural settings, away from the corruptions and evils of the city. However, as understanding of child development increased, it was realized that such a location did little to prepare children for the environment and problems with which they would ultimately have to cope. Thus, the proposed Y.S.C. should be located in an urban setting but finding the most advantageous location within the City brings to point some other formidable issues. For instance, this facility should provide a normal family environment as possible and promote proper child development. This would most easily be accomplished if it was located in a solid residential neighborhood. But because such a facility would house emotionally disturbed children and children from lower socio-economic groups, it would not readily be accepted in a typical middle-class neighborhood. The stigma is real to the point that many cities use zoning regulations to keep residential treatment facilities out of "desirable" neighborhoods.

Another, somewhat conversely related, issue is pointed out by this matter of location. Suppose the Y.S.C. finds a suitable location in a solid residential neighborhood. Would such a location identify too strongly with that neighborhood and alienate people who did not feel a part of that neighborhood? That is, would people living in Whitely or Munseana be apprehensive about using the Y.S.C. if it were located in Halterman Village? To resolve these and other problems of site selection, we must look to the basic purposes of this project and answer this question: "What is best for the children who need this facility?"

Some other significant issues:

1. The atmosphere of such a facility - an "institutional" feeling and character is not proper for a therapeutic environment. What can be done to emphasize a healthy "home" environment?

2. Security versus Trust - what level of security is required in a facility housing adolescents with mild emotional disturbances and behavioral problems? Will obvious security measures (tall fences, etc.) have a negative effect on behavior, i.e., will they present a challenge that must be conquered?
3. Multiplicity of function - what must be done to ensure the success of all of the programs that will take place here? Can a residential treatment program and an outpatient program benefit each other?

4. What can architecture do to promote the emotional security that is desired in such an environment?

5. How can residents be made to feel a part of the surrounding community?
Goals

The issues, parameters and contexts that make up this design project are complex and would overwhelm an organizing process if they were not viewed in light of a controlling thought or idea. For the Youth Services Center the controlling goal can be expressed thusly: provide a facility that will enable the youth of Delaware County (and perhaps east-central Indiana) to receive the counseling and guidance they need to deal more positively with the society around them.

Supporting and enhancing this primary objective are these noteworthy sub-goals:

1. Make outpatient counseling and information as accessible as possible for the general public.

2. Provide a residential facility that would promote a progressive, innovative treatment program.

3. Make efficient use of staff and facilities. Cut down on the wasted time and effort that the present disorganized array of facilities engenders.
DESIGN INFORMATION AND PARAMETERS
Spatial Functions

1. Residential Treatment:
   -- sleeping
   -- study
   -- lounge and relax
   -- group discussion
   -- informal counseling
   -- dining
   -- entertaining
   -- play
   -- personal hygiene

Staff Living:

   -- sleeping
   -- study, read
   -- relax
   -- counsel
   -- personal hygiene

2. Counseling and Guidance (Individual, Group, Family):

   Staff - Client:

   -- interview
   -- group discussion
   -- observation
   -- testing
   -- materials storage
   -- waiting and reception
   -- intake

   Inter-staff Functions:

   -- read, study
   -- relax
   -- clerical
   -- record keeping and retrieval
   -- planning
   -- dining
   -- accounting

3. Special Education:

   -- personal study under supervision
   -- reading
Spatial Functions (continued)

4. Physical Health Care:
   -- immunization
   -- examination
   -- health and nutrition counseling
   -- health education
   -- treatment of residents
   -- record storage

5. Recreation:
   Outdoor:
   -- supervised play
   -- unsupervised play
   -- athletic activities
   -- observation
   -- relaxing and contemplation
   -- formal meeting and gathering
   Indoor:
   -- social gathering
   -- community meeting
   -- all types of play

6. Special Programs and Education:
   -- information distribution
   -- public relations
   -- clerical
   -- observation
   -- group meeting

7. Service and Support:
   -- food intake and storage
   -- supply intake and storage (office, housekeeping, maintenance)
   -- trash pick-up
   -- food preparation and serving
   -- laundry
   -- staff parking
   -- visitor parking
   -- mechanical service and distribution


**SPACE REQUIREMENTS**

**Residences:**

<table>
<thead>
<tr>
<th>Room Type</th>
<th>#</th>
<th>Sq. Ft.</th>
<th>Total Sq. Ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Bedroom</td>
<td>2</td>
<td>100</td>
<td>200</td>
</tr>
<tr>
<td>Double Bedroom</td>
<td>1</td>
<td>180</td>
<td>180</td>
</tr>
<tr>
<td>Quad Bedroom</td>
<td></td>
<td>360</td>
<td></td>
</tr>
<tr>
<td>Bathrooms</td>
<td>2</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td>Lounge &amp; Recreation</td>
<td></td>
<td>480</td>
<td></td>
</tr>
<tr>
<td>Dining Room</td>
<td></td>
<td>210</td>
<td></td>
</tr>
<tr>
<td>Kitchen</td>
<td></td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Laundry</td>
<td></td>
<td>30</td>
<td></td>
</tr>
</tbody>
</table>

**Houseparent:**

<table>
<thead>
<tr>
<th>Room Type</th>
<th>#</th>
<th>Sq. Ft.</th>
<th>Total Sq. Ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bedroom</td>
<td>1</td>
<td>120</td>
<td>120</td>
</tr>
<tr>
<td>Office/Sitting Room</td>
<td>1</td>
<td>160</td>
<td>160</td>
</tr>
</tbody>
</table>

Net: 1,940 Sq. Ft.

Storage, Circulation & Mechanical: 970 Sq. Ft.

Gross: 2,910 Sq. Ft.

14 On-Site Residences 40,740 Sq. Ft.

2 Off-Site Group Homes 5,820 Sq. Ft.

**Counseling and Administration:**

<table>
<thead>
<tr>
<th>Room Type</th>
<th>#</th>
<th>Sq. Ft.</th>
<th>Total Sq. Ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chief Administrator</td>
<td>1</td>
<td>180</td>
<td>180</td>
</tr>
<tr>
<td>Area Directors</td>
<td>4</td>
<td>150</td>
<td>600</td>
</tr>
<tr>
<td>Counselors</td>
<td>8</td>
<td>120</td>
<td>960</td>
</tr>
<tr>
<td>Visiting Consultants</td>
<td>1</td>
<td>120</td>
<td>120</td>
</tr>
<tr>
<td>Group Counseling and Conference</td>
<td>1</td>
<td>300</td>
<td>300 Sq. Ft.</td>
</tr>
<tr>
<td>Small Conference</td>
<td>1</td>
<td>210</td>
<td>210 Sq. Ft.</td>
</tr>
<tr>
<td>Children's Playroom</td>
<td>1</td>
<td>400</td>
<td>400 Sq. Ft.</td>
</tr>
<tr>
<td>Observation</td>
<td>1</td>
<td>50</td>
<td>50 Sq. Ft.</td>
</tr>
<tr>
<td>Audio-Visual Equipment</td>
<td>1</td>
<td>100</td>
<td>100 Sq. Ft.</td>
</tr>
<tr>
<td>Reception and Waiting</td>
<td>1</td>
<td>200</td>
<td>200 Sq. Ft.</td>
</tr>
<tr>
<td>Intake and Testing</td>
<td>1</td>
<td>200</td>
<td>200 Sq. Ft.</td>
</tr>
<tr>
<td>Executive Secretary</td>
<td>1</td>
<td>100</td>
<td>100 Sq. Ft.</td>
</tr>
<tr>
<td>Secretarial Pool</td>
<td>10</td>
<td>46</td>
<td>460 Sq. Ft.</td>
</tr>
<tr>
<td>Files and Record Storage</td>
<td>1</td>
<td>150</td>
<td>150 Sq. Ft.</td>
</tr>
<tr>
<td>Accounting</td>
<td>1</td>
<td>120</td>
<td>120 Sq. Ft.</td>
</tr>
<tr>
<td>Public Relations</td>
<td>1</td>
<td>120</td>
<td>120 Sq. Ft.</td>
</tr>
<tr>
<td>Staff Lounge</td>
<td>1</td>
<td>180</td>
<td>180 Sq. Ft.</td>
</tr>
<tr>
<td>Program Counselor</td>
<td>1</td>
<td>120</td>
<td>120 Sq. Ft.</td>
</tr>
</tbody>
</table>

Net: 4,570 Sq. Ft.

Storage, Circulation & Mechanical: 2,285 Sq. Ft.

Gross: 6,855 Sq. Ft.
### Children's Health Clinic:

<table>
<thead>
<tr>
<th>Room Type</th>
<th>Count</th>
<th>Sq. Ft.</th>
<th>Total Sq. Ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Examination Room</td>
<td>1</td>
<td>110</td>
<td>110</td>
</tr>
<tr>
<td>Consultation and Office</td>
<td>1</td>
<td>120</td>
<td>120</td>
</tr>
<tr>
<td>Nutrition Consultant</td>
<td>1</td>
<td>120</td>
<td>120</td>
</tr>
<tr>
<td>Lab</td>
<td>1</td>
<td>120</td>
<td>120</td>
</tr>
<tr>
<td><strong>Net:</strong></td>
<td></td>
<td></td>
<td><strong>470</strong></td>
</tr>
<tr>
<td>Storage, Circulation &amp; Mechanical</td>
<td></td>
<td></td>
<td><strong>235</strong></td>
</tr>
<tr>
<td><strong>Gross</strong></td>
<td></td>
<td></td>
<td><strong>705</strong></td>
</tr>
</tbody>
</table>

### Public Meeting & Community Eating:

<table>
<thead>
<tr>
<th>Room Type</th>
<th>Count</th>
<th>Sq. Ft.</th>
<th>Total Sq. Ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Banquet - Cafeteria (130 Capacity)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kitchen</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dishwashing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trash and Garbage</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dry Goods Storage</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Refrigerated Storage</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Receiving (Dock)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Net:</strong></td>
<td></td>
<td></td>
<td><strong>2,610</strong></td>
</tr>
<tr>
<td>Storage, Circulation &amp; Mechanical</td>
<td></td>
<td></td>
<td><strong>1,305</strong></td>
</tr>
<tr>
<td><strong>Gross:</strong></td>
<td></td>
<td></td>
<td><strong>3,915</strong></td>
</tr>
</tbody>
</table>

### Educational Facilities

<table>
<thead>
<tr>
<th>Room Type</th>
<th>Count</th>
<th>Sq. Ft.</th>
<th>Total Sq. Ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning Disabilities Classroom</td>
<td>3</td>
<td>250</td>
<td>750</td>
</tr>
<tr>
<td>Resource Center</td>
<td>1</td>
<td>400</td>
<td>400</td>
</tr>
<tr>
<td>Offices</td>
<td>3</td>
<td>100</td>
<td>300</td>
</tr>
<tr>
<td>Conference - Work Rooms</td>
<td>1</td>
<td>210</td>
<td>210</td>
</tr>
<tr>
<td><strong>Net:</strong></td>
<td></td>
<td></td>
<td><strong>1,660</strong></td>
</tr>
<tr>
<td>Storage, Circulation &amp; Mechanical</td>
<td></td>
<td></td>
<td><strong>830</strong></td>
</tr>
<tr>
<td><strong>Gross:</strong></td>
<td></td>
<td></td>
<td><strong>2,490</strong></td>
</tr>
</tbody>
</table>
### Indoor Recreation:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gameroom</td>
<td>400 Sq. Ft.</td>
</tr>
<tr>
<td>Hobbies and Crafts</td>
<td>300 Sq. Ft.</td>
</tr>
<tr>
<td>Music Rehearsal</td>
<td>300 Sq. Ft.</td>
</tr>
<tr>
<td>Gymnasium</td>
<td>4,000 Sq. Ft.</td>
</tr>
<tr>
<td>Lockers and Showers</td>
<td>2 @ 350 Sq. Ft.</td>
</tr>
</tbody>
</table>

**Net:**

<table>
<thead>
<tr>
<th>Area</th>
<th>5,700 Sq. Ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage, Circulation &amp; Mechanical</td>
<td>2,850 Sq. Ft.</td>
</tr>
</tbody>
</table>

**Gross:**

<table>
<thead>
<tr>
<th>Area</th>
<th>8,550 Sq. Ft.</th>
</tr>
</thead>
</table>

### Rental Office:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Offices</td>
<td>3,100 Sq. Ft.</td>
</tr>
<tr>
<td>Conference</td>
<td>500 Sq. Ft.</td>
</tr>
</tbody>
</table>

**Net:**

<table>
<thead>
<tr>
<th>Area</th>
<th>3,600 Sq. Ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage, Circulation &amp; Mechanical</td>
<td>1,800 Sq. Ft.</td>
</tr>
</tbody>
</table>

**Gross:**

<table>
<thead>
<tr>
<th>Area</th>
<th>5,400 Sq. Ft.</th>
</tr>
</thead>
</table>

### Chief Administrator's Residence

<table>
<thead>
<tr>
<th>Activity</th>
<th>Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 Bedroom Home</td>
<td>2,500 Sq. Ft.</td>
</tr>
</tbody>
</table>

**Total Gross Area:** 81,535 Sq. Ft.
Clients and Users

Ideally, the clients for this project would be a county agency whose responsibility would be ensuring the well-being of the county's young people. However, the traditional structure of county governments and the quasi-independent nature of many of the agencies involved make this a near impossibility. Recent attempts to consolidate a number of youth services at one location have failed. If a Y.S.C. were to become a reality within today's governmental structure, it would most likely operate under the auspices of the Delaware County Welfare Department.

For the design of this project, it is important to identify and become familiar with the users of this facility. In broad categories they include the children of Delaware County ages five to eighteen, the families of these children, the professional counseling staff, the support staff and a variety of citizens from the community. More specifically:

-- neglected, unwanted or abandoned children.
-- children in need of emergency shelter and care.
-- children with mild emotional disturbances and/or behavioral problems who would benefit from residential therapy.
-- children requiring counseling and guidance on an out-patient basis.
-- parents in need of counseling and guidance.
-- economically deprived children in need of medical attention (immunization, etc.)
-- children and parents needing information about the many programs and services available to Delaware County youth.
-- community groups and organizations utilizing meeting facilities at Y.S.C.
-- community youth utilizing recreation facilities at Y.S.C.
-- professional counseling staff and support staff (see organizational chart following).
-- agencies renting office space.
-- faculty and students of Ball State University using the Y.S.C. for research, observation and in-service training.
Building Codes

Design and construction of the residential facilities is governed by Rules and Regulations for Licensing of CC Facilities set forth by the Indiana Department of Public Welfare and referrals to the Uniform Building Code. According to the Code, child care facilities are classified. Basic information for the classification "Group I, Division 2" is found in Tables 5-A through 5-D and Sections 902, 1109, 2003, 2203, 1803, 1903 and 2103.

Counseling and meeting spaces would be classified "Group A, Division 3. Sections 702, 1109, 1803, 1903, 2003, 2103 and 2203, as well as Tables 5-A through 5-D, provide basic design information."
Financial Consideration

Funding for the Y.S.C. would most likely come from State and Federal grants, matched by community monies. Depending on Ball State University’s participation in the project, it should also be counted on to supply some capital. Funding would most likely be available under the Law Enforcement Assistance Act and the Implementation of the Education of the Handicapped Act (P.L. 94-142). Monies from these programs would be available because the Y.S.C. would assist in the prevention of juvenile delinquency and would also provide educational opportunities to emotionally disturbed children with learning disabilities. Ball State would be counted on to contribute if it proposed to use the facility as a learning lab for University degree programs in counseling and related fields.

A good indication of the rough cost of this project is supplied by the facility being constructed in Wayne County, Indiana. It is strictly a residential custodial facility, with no treatment or diagnostic facilities on the premises. Living quarters are provided for twenty children and one set of house parents. The estimated cost is $300,000 or $15,000 per resident. Consideration must be given to the variety of facilities the Y.S.C. provides before an accurate cost estimate can be made.
Growth and Change

The future need for residential treatment facilities will undoubtedly be expressed more in terms of quality rather than quantity. Stabilization and even reductions in the school age population (Muncie Community Schools showed an enrollment drop of 415 from 1976 to 1977) is a prevalent trend. Also, in the field of child care there has been an increasing number of foster home placements and adoptions. These trends would mean the eventual phasing out of most custodial child care. However, an increase in the number of children requiring residential treatment can also be predicted. This area of counseling is not more than thirty years old and, as such, it is not fully developed or utilized. As sophistication of diagnostic techniques increases and as the problems are better understood, more children will be found that will benefit from residential treatment. Thus, it is predictable that the need for such a facility will remain close to constant for the near future.
BUILDING TYPES STUDY
**SITE:** The Nagasaki Children's Center is located in a lower-middle-class suburb. Residences surround it (½ to ¾ acre lots) and a secondary freeway street borders the south edge. The administration building and infants' home define the automobile entry to the site. The construction they form, has an almost gable-like quality. Pedestrian access to the site is not well defined as this facility is based on an open concept. The surrounding community is encouraged to use the recreation facilities thus increasing interaction and normalizing the lives of the children in residence.

**Circulation:** Autos don't intrude on the site, except at the entry. From the pedestrian pathes branch out. A main path connects the residences while access is provided to and through the administration building.

**Spatial composition is defined by function.** That is, separate buildings house separate functions: living facilities are in a loosely structured area around administrative functions. Even the children's houses are defined: each houses a different age group which helps foster peer and personal development.

**Orientation:** The residences are oriented inwardly toward the communal areas they roughly focus on the large meeting room at the north end of the administration building. This is the location of communal gathering for the center.

**Boundaries:** Site boundaries are minimal so that the non-institutional character is maintained. Within the site there are some significant delineations of space. The row of camphor trees south of the homes subtly divides the active play area from the passive space surrounding the homes. On the east edge of the play area, the administration building provides the necessary separation between cars and kids.
**SPACE/HIERARCHY:** The importance of the meeting space is emphasized by location, height, and area. It is the center for communal activities, functions (on a site-wise scale) seem to radiate from it.

**COMPOSITION-TYPGRAPHY:** It's almost a modern day shopping mall.

**FUNCTIONAL ZONING:** Colors denote three functional groups - 1) meeting, recreation, 2) administrative & children's services, 3) education.

**CIRCULATION:** A major axis that is intersected at one point and interrupted at another. This creates interest in a potentially boring situation.

**MEETING**

South entry and passage have added significance as "view framers" and penetrations thru the barrier created by the office wing.

**STRUCTURE:** Column and beam with infill walls; spaced as required by functions. The structure is especially noteworthy in the meeting room. The four columns define the main space. Areas under the cantilevered corners are for special ancillary functions (library, children's play, penetration of the plaza, and entry).
TYPICAL CHILDREN'S HOME

SPACE: FUNCTIONAL ZONING * SERVICE COME, LIVING SPACES, SLEEPING SPACES.
* ACTIVE-PASSIVE SPATIAL DEFINITION: ACTIVE SPACES ARE IN THE CENTER, PASSIVE SPACES ARE AROUND THE PERIPHERY.
* TRANSITION FROM PUBLIC TO PRIVATE IS WELL DEFINED:

<table>
<thead>
<tr>
<th>COMMUNAL</th>
<th>CONTROLLED</th>
<th>PUBLIC INDOOR SPACE</th>
<th>PRIVATE SPACES</th>
</tr>
</thead>
<tbody>
<tr>
<td>OUTDOOR</td>
<td>OUTDOOR</td>
<td>SPACES</td>
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<tr>
<td>PLAY AREA</td>
<td>TERRACES</td>
<td>LIVING SLEEPING</td>
<td></td>
</tr>
<tr>
<td>PATIOS</td>
<td>KITCHEN</td>
<td>WARDS</td>
<td></td>
</tr>
<tr>
<td>POOL</td>
<td></td>
<td>STUDY BATHES</td>
<td></td>
</tr>
</tbody>
</table>
* HIERARCHY: EMPHASIS IS GIVEN TO COMMUNAL SPACES BY MAKING THEM 2 STORIES TALL.

STRUCTURE: TWO MODULES ARE EMPLOYED:
1) A WIDER SERVICE AND COMMUNAL SPACES UNIT. 2) THE NARROWER SLEEPING WARD UNIT, CHANGING LENGTHS AND VARIED SETBACKS GIVE THE BUILDING LIFE AND INDIVIDUALITY IN A STRONGLY ORDERED ENVIRONMENT.
* ENCLOSURE, BEARING WALLS CONTROL ORIENTATION AS WINDOWS ARE IN END WALLS.

NO SCALE
SITE: THE FACILITY IS SITUATED IN A DEEPLY SUBURBAN ENVIRONMENT. ALL BUILDINGS FACE TOWARD THE MAIN STREET, IN THE ACCEPTED SUBURBAN MODE. THERE IS NO FOCUS ON A COURTYARD OR ANY ATTEMPT TO DEFINE OUTDOOR SPACES. A CERTAIN AMOUNT OF OUTDOOR TERRITORY IS CLAIMED BY EACH RESIDENCE HOWEVER.


* CIRCULATION: AUTOMOBILE PATHES PHYSICALLY DIVIDE THE BUILDINGS, THOUGH FUNCTIONALLY THE LACK OF TRAFFIC MEANS LITTLE INTERFERENCE WITH PEDESTRIAN MOVEMENT. IN FACT, THE SERVICE ROUTE IS A PRIMARY PEDESTRIAN WALKWAY.

* SPACIAL COMPOSITION: BECAUSE FUNCTIONS ARE SEGREGATED IN SEPARATE BUILDINGS, THE CHILDREN'S HOME HAS A DECIDEDLY CAMPUSS-LIKE QUALITY. THE SPACIAL ARRANGEMENT IS A BASIC CROSS-AXIS COMPOSITION; RESIDENCES FORM ONE AXIS, ACTIVITY-PUBLIC BUILDINGS FORM THE OTHER. AT THE CROSSING OF THE AXIS IS THE CAFETERIA. THIS IS A FOCAL LOCATION, IS THIS BUILDING DESERVING OF THIS ATTENTION, EITHER FUNCTIONALLY OR AESTHETICALLY?

* HIERARCHY: BUILDINGS RECEDE FROM THE STREET ON A PUBLIC TO PRIVATE GRADIENT. ADMINISTRATION IS THE MOST PUBLIC FUNCTION (ALSO IT CONTROLS ENTRY). CAFETERIA HAS SOME PUBLIC FUNCTIONS (IT HOSTS LIONS CLUB MEETINGS, ETC). THE RESIDENCES ARE SEMI-PUBLIC IN THAT PARENTS DO COME TO VISIT THEIR CHILDREN. THE ACTIVITIES CENTER IS PRIVATE AS IT IS USED ONLY BY RESIDENTS AND STAFF.
TYPICAL CHILDREN'S HOME

SPACE: Functional zoning; two sleeping wings, central service core, and communal living wing. Sleeping wings are private, living wing is public. This also defines active and passive zones. Hierarchy is not well defined; movement to public spaces is the same as movement to private areas, except its on axis with entry.

STRUCTURE: Light wood framing with brick veneer. Module was probably determined by the availability of standard pre-fab trusses. The emphasis was on maintaining a residential scale and image even though it people reside here. The floor plan is primarily responsible for keeping the structure in scale with its neighborhood (see illustration). Fenestration also plays a key role in carrying out the urban image.
WAYNE COUNTY YOUTH SHELTER
RICHMOND, INDIANA

* This building proved to be an anti-building type.

SITE: An Indiana cornfield, decided rural.

No boundaries, except highway and cornfields in the fall.

STRUCTURE: Typical frame construction;

Enclosure strives to communicate single family residence, though building houses 22 people.

CIRCULATION: Main entry thru courtyard, private entry for house parents & staff. No pattern of circulation, no real hierarchy perceivable.

SPACE: Zoning, public to private; public, traditional home functions are in the center block. Private, individually controllable spaces are in the wings. Basement contains many of the most public functions (conference) with no direct access.

* Zoning, traditional home spaces on 1st level.

Nontraditional functions are in the basement.

* COMPOSITION: None worth mentioning, except traditional separation of boys and girls.

* Hierarchy: Spaces closest to the front door are most important?
Rationale

As noted in the discussion of significant issues, the selection of a site requires a great deal of sensitivity, especially since some of the essential criteria may be viewed as contradictory. The parcel selected is located in Muncie, Indiana, on the northeast corner of University Avenue and Tillotson. It contains approximately 3.6 acres and is presently used as a recreation field by Ball State University. The positive aspects of the site are 1) its close physical relationship to the university, 2) its peripheral relationship to a stable residential neighborhood, 3) easy access via public transit or private vehicle, 4) availability of all city utilities, and 5) the proximity of emergency services. The problems that the design must overcome are 1) acceptance by the surrounding community (integration without intrusion) and 2) possible identification with the Westwood-B.S.U. neighborhood and alienation of segments of the population in need of counseling services.
Surrounding Environs

The neighborhood surrounding the proposed C.Y.S.C. is distinctly suburban in character. Mature trees, well kept streets, and middle class housing establish the atmosphere. The high volume of traffic on Tillotson Avenue creates the greatest conflict with the predominant mood.

To the west of the site is the Kenmore Subdivision with its stone pillars "symbol of entry." This is one of the more desirable neighborhoods in Muncie. North of the site is Christy Woods, a nature preserve owned by Ball State University. The mature trees form a strong visual boundary for the site and provide a serene backdrop to any activity in front of them. East of the site is a B.S.U. staff parking lot and more athletic fields. An access drive to the parking denotes the eastern edge of the site.

The Ball Memorial Hospital Complex is southeast of the site. Parking, three well-kept homes, and a vacant lot form the site's southern edge. Views of this housing through the street trees present a pleasant, domestic setting.
Circulation and Access

Pedestrian: There is light pedestrian traffic around the site. Students walking from Kenmore Addition to Burris School and B.S.U. students parking along University Avenue are the only perceivable group using the sidewalks. There is no strong "point to point" routes (i.e. dorm to classroom) or concentrations of people to make present circulation a significant influence on the design of this facility.

Public Transportation: The Muncie Bus Company serves the site with the Ball State-Jackson route. Buses pass the site every half hour from 7:30 A.M. to 10:00 P.M.

Automobile Access: Muncie is not an easy city to move about. Few direct transportation routes exist. Such is the case with the C.Y.S.C. site. Tillotson provides a reasonable access route from the south. Jackson Street provides the most direct route from downtown and the east. People from the north would most likely use Bethel Road.
Zoning and General Information

The site chosen for the proposed Youth Service Center is located in northwest Muncie, Indiana on the northeast corner of University and Tillotson Avenues. It is owned by Ball State University and is presently used as an athletic field and student parking lot. This parcel contains approximately 200,000 sq. ft. of buildable land.

The City of Muncie Zoning Maps show the proposed site and much of the surrounding land to be classified as "R-2, Residential Zone." The blocks south of University Avenue are classified as "R-4, Residential Zone." Zoning Standards for the City of Muncie allow "buildings owned, leased, or used by municipal, township, County, State, or Federal governments" as well as "public schools, colleges, universities, nursery schools and child care centers" to be located in these districts. Zoning requirements to be met are:

- **Setbacks:**
  - front yard: 30'
  - side yard: 8'
  - back yard: 30'

- **Building height is limited to 2 ½ stories or 30'**

- **Hedges and fences:**
  - rear and side yards: maximum height, 6 ft.
  - front yard: maximum height, 3 ft.

- **Parking and loading:** 1 truck space 12' x 35' for every 20,000 sq. ft. of building

- **Parking:**
  - office: 1 space per 300 sq. ft. of floor area in excess of 2,000 sq. ft.
  - for meetings: parking for 30% maximum number of people
Soil Information

Type: Blount Silt Loam, 0 to 4% slope

Characteristics: deep, level, poorly drained
slow runoff
seasonal high water table: 1' - 3' below surface
slow permeability: .63 - 2.0 "per hour"
suitability for foundations for low buildings:
high shrink-swell potential, perched water

table must be accounted for
Climatic Data

Temperature

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<th></th>
<th>JAN</th>
<th>APR</th>
<th>JUNE</th>
<th>OCT</th>
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<tr>
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<td>Monthly Maximum:</td>
<td>40°</td>
<td>60°</td>
<td>95°</td>
<td>65°</td>
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<tr>
<td>Monthly Minimum:</td>
<td>20°</td>
<td>40°</td>
<td>65°</td>
<td>40°</td>
</tr>
</tbody>
</table>

Cooling: Degree Days: 1,000
Heating: Degree Days: 5,500

Earliest Freeze of Season: October 5
Latest Freeze of Season: May 1

Days with Temperature below 0°: 6

Precipitation

Rainfall: 40" per year
Days per year with rain: 130
25 year rain: 2.5"/year

Snowfall: 16" to 32" annually
27 days of 1" or more snow cover per year

Relative Humidity:

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<tr>
<td></td>
<td>75%</td>
<td>70%</td>
<td>80%</td>
<td>70%</td>
</tr>
</tbody>
</table>

100 Year Flood Elevation: 934, site elevation: 942+

Sunshine

2600 hours per year

Wind

Prevailing Summer wind from southwest
Prevailing Winter wind from west and northwest

Wind Speed:
- Average January Speed: 4 m.p.h.
- Average June Speed: 1.5 m.p.h.

No recorded tornadoes in Muncie, Indiana
C.Y.S.C. SITE

FIRST IMPRESSION:
TABLE FLAT

THE SITE EXTENDS ACROSS TILLOTSON

VISUALLY, THE SITE FEELS LINEAR

ANNOYING... NO INSPIRING VIEWS PROMPT TO THE SITE

VIEWS ARE CONTROLLED BY TREES (H & V)

DENSE, SERENE WOODS

PICNIC SHELTER

OPEN LOT

25-30 M.P.H. VIEW THRU THE TREES

HOSPITAL PARKING

SENSORY

STOP SIGN

TRAFFIC NOISE

TILLOTSON AVE. 20-35 M.P.H.

SIRENS

FIRE STATION

MILES

OPEN: ATHLETIC FIELD

PANORAMA VIEW OF COOLING TOWER & PHYSICAL PLANT

BOUNDARY ON THIS EDGE OF SITE
SYNTHESIS
MICRO-CLIMATE

SUN AZIMUTH

SUN ALTITUDE: NOON

SUN ALTITUDE: 8:00 A.M. & 4:00 P.M.

PREVAILING WINDS
<table>
<thead>
<tr>
<th>FREQUENCY OF USE</th>
<th>PATHS, LINKS, &amp; RELATIONSHIPS</th>
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<tbody>
<tr>
<td>○ DAILY</td>
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<td>○ FREQUENTLY</td>
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<td>○ OCCASIONALY</td>
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<td>○ RARELY</td>
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<th>RESIDENTS, M 12-14</th>
<th>RESIDENTS, M 15-17</th>
<th>RESIDENTS, F 7-8</th>
<th>RESIDENTS, F 9-11</th>
<th>RESIDENTS, F 12-14</th>
<th>RESIDENTS, F 15-17</th>
<th>VISITING PARENTS</th>
<th>RESIDENTS &amp; FRIENDS</th>
<th>THE PUBLIC</th>
<th>SECRETRANYS</th>
<th>ADMINISTRATORS</th>
<th>COUNSELERS</th>
<th>CHILD CARE WORKERS</th>
<th>VISITING STAFF</th>
<th>COMA SERVICE STAFF</th>
<th>BSCU STUDENTS &amp; STAFF</th>
<th>MAINTENANCE STAFF</th>
<th>HOUSEKEEPING STAFF</th>
</tr>
</thead>
</table>
PRECEPTS AND CONCEPTS
There is a basic need for a well-defined privacy gradient.

Private space: *Instills and/or reestablishes self-worth and self-esteem.
* Serves as a retreat.
* A starting point for responsibility.
* Security

Public space: *Promotes socializing and socially acceptable behavior.

1. Personal space, both assigned and claimed; private; under the individual’s control.
2. Peer group spaces; a small group exercises domain over the space; easily perceived boundaries (i.e., a residence).
3. Controlled public territory; places that evoke or bring about a feeling of ownership or domain (i.e., my street, my park).
4. Public spaces: places an individual has to deal with, without the security of domain or ownership (school, downtown).
5. Other people’s private spaces.

There is often need of a barrier, or some sort of protective layer.
The youth services center is a community for some very special people. It is a place for emotionally disturbed kids to restructure their lives through activities in a social therapeutic environment (emphasis on community).

Perhaps the single best spatial expression of community is the traditional small town square. This village green—courthouse square was/is the center for business, politics, recreation...all aspects of social intercourse.

No matter what the scale of the community, open space of one sort or another is the focus. It is the symbol, the physical organizing element.

College campuses clearly demonstrate the open space as organizer concept. Modern as well as established campuses feature "the quad" or "the green" or whatever. The various buildings form the boundaries and social interaction is promoted in the open area as a matter of routine function.
MIU THERAPY: All contacts and experiences should have a therapeutic effect. There is no experience that is more important than any other.

STRUCTURES DEFINE THE SPACE

CONTROLABLE & OWNABLE
SOCIALIZING SPACE:
THE PLAYFIELD

AN INVITATION:
THE PLAYGROUND

PUBLIC PEDESTRIAN ACCESS
VIEW ACCESS

STRUCTURES ARRANGED AROUND THE CENTRAL SPACE TO SUGGEST EQUALITY, NOT A HIERARCHY.

BASIC PROBLEMS
1) FAULTY SOCIALIZATION
2) EMOTIONAL NEGLECT
3) IRRESPONSIBLE BEHAVIOR (LACK OF DISCIPLINE)

CONCEPT #1

ACCESS FROM BSU
RESIDENTIAL TREATMENT: Most children admitted to this facility come from negative family situations. An essential component of a successful therapy program is the establishment of a meaningful home environment.

CONCEPT #2

Street | Front Yard | Single Family Residence | Backyard | Alley

Public Space | Controlled Public - Private Territory | Controlled Private Space | Private Area; Recreation | Service
Children admitted to this facility do not exhibit socially acceptable behavior; they have no feeling of responsibility for their actions—they lack discipline. A highly visible organization and order in the physical environment would enhance the restructuring of these children's lives.

A grid is a logical two-dimensional expression of a disciplined environment. Similar slopes to roof planes would be a logical 3rd dimension expression. Such an environment must be softened and humanized, much as discipline must be tempered with love.
DESIGN DEVELOPMENT
The design of this project cannot adequately be described in terms of linear processes. The multitude and diversity of considerations and constraints makes an easily discerned, well organized, "step 1, step 2, ..." process impossible. Rather, the final design is the result of a great swirling synthesis of academic research, human empathy, altruistic goals, intuitive feelings, social welfare planning, and "post modern" (can "fence post modern" be far behind?) design theory. Following is an attempt to document some of the more significant aspects of the design and their relationship to issues and problems previously discussed. Through the research process, it became apparent that attention had to be focused on two issues: 1) siting an institution in a predominantly residential neighborhood and 2) designing a personal space that would be a base for a therapeutic living experience. After these issues were dealt with, other functions and activities could be fitted into a successful design.

Site and Context

Vehicular and pedestrian circulation are separated. Automobiles and trucks are confined to the periphery of the site; pedestrians dominate the interior of the site.

Public pedestrian access to the site relates strongly to public transportation. It is emphasized and made more inviting through the use of a purgola.

Vehicular access is off of Tillotson Boulevard. It's not an ideal choice, but in terms of design parameters and goals, it's a workable compromise.

Access from B.S.U. is a secondary consideration, therefore the path is neither direct nor strongly delineated.

Effort was made to promote circulation around the Green and not through it.

Parking is as far removed from the Green and as close to public functions as is possible.

Residential scale: Two-story buildings are predominant. The gymnasium is located underground to minimize its visual impact and to maximize useable space on the site (roof top play area).

Image: The dominant physical character of the buildings speak to traditional residential forms and materials - gabled roofs, porches, chimneys, driveways, clapboard siding, shingle, etc.
Site and Context (continued)

The facility was designed with a "face" that was sympathetic to the neighborhood and its residential context.

The public oriented functions on the site are clustered around an inviting landscaped court. This enhances entry to the site and provides a good "image" view from the Tillotson - University Avenue intersection.

Outdoor spaces that fit into the privacy gradient were provided. They represent a variety of scale and function: small spaces where one can be alone with his/her thoughts; spaces to be shared with a friend; patios for peer group activities; large areas for play; "discovered" spaces; an area for formal meetings (an amphitheater provides informal seating as well).

Places were provided to view from and places were provided to be seen in.

An overall informal but perceivable order is a part of the design. A simplicity of building materials and consistent uses of forms and shapes promote this image.

The circulation is arranged so that "the Green" is separated by a transitional space from the public areas of the site. This was done to promote a sense of territoriality, to give them a space at the community level over which they have control and for which they have responsibility. Children from outside the Y.S.C. can be invited in but wouldn't feel comfortable there if they weren't invited.

See Graphic A for a functional diagram of the site.
The Personal Space

For reasons of order and economy, this space was designed as a module and was sized for use with modular furniture.

The "L" shaped configuration gives character to the space while providing for a variety of furniture arrangements (see Graphic B). This is important as it allows the child a degree of control over his personal space.

A goodly amount of tackboard is necessary for the personalization of the space.

Each space has a window not just to meet building codes, but also an identifying element. ("That's my window - that's my room"). It's a good place to see and be seen from.

The size of the space is a compromise of the program. The 110 sq.ft. + may seem large to a seven year old, while a sixteen year old may find it cramped.
The Residential Unit

Scale: Most social planners feel a peer group of 8 - 10 children with live-in house parents is the ideal residential unit.

To meet the various needs of the children, sleeping quarters were provided in a variety of single, double and dormitory spaces (dorms being an open combination of the individual module. The modularity would facilitate changing the sleeping rooms from singles to doubles, etc.).

Personal spaces are grouped around small communal activity spaces.

Communal spaces were designed with lots of corners. These are spaces that offer psychological security and that can be claimed as territory. It's this sort of space that helps a child establish his/her self-identity within the group. It is an easy base from which a socially unsure child can reach out and can become more aware of social behavior.

The dining room and kitchen encourage the togetherness of the whole peer group. The open kitchen arrangement was meant to facilitate activities there and make the house feel more like a home.

Bathrooms rather than gang showers were provided. The compartmentalization of the bath offers the privacy of a family bath in a group living situation.

Exterior space (patio, porch, front lawn, back yard) extend design precepts to outside the house. Both image and function are reinforced by these areas.

A certain level of security and surveillance must be maintained. It's a delicate subject - responsible behavior must be encouraged, but it must also be realized that quite a few disturbing things will happen and house parents need to know about them. The multi-level, open-balcony design of the residential units allows knowledge of what is going on in many parts of the house to be perceived most anywhere. It is a compromise of sorts that relies on audio, rather than visual surveillance.

Private quarters, separated from the main body of the units are provided for house parents. Sometimes they need a place to go and "get away from it all."

These residential units have a rather two-faced nature. To the surrounding environs they must give the image of fitting in - "we're a part of the neighborhood". But for the kids they must say "we're our own community - something you can relate to." The change of axis of the spaces (45°) and the difference in facade expression was meant to convey this aspect of the design.
Dining-Meeting Facility

This building is an interface between the city and the Y.S.C. When it is not used by residents for dining, it can be used by civic groups for luncheons, etc. The more people who are familiar with the facility, the easier it will be for the Y.S.C. to be accepted as a part of the community.

The dining space is flexible - it can be a large open hall, or with the addition of movable partitions set up, it can be scaled down to family sized eating areas.

An open truss ceiling is necessary in a space of this size to keep the height of the space from becoming too confining.

Convenient access to delivery and service docks is provided.

Access to parking is also important.

Generous lobby space for informal gathering in conjunction with meals is desirable. This space relates both to the public and the private aspects of the site.

The "L" shaped configuration of this building gives it a less massive appearance and keeps it within the residential scale of the complex.
Activities Center

This is a place to be busy, to be involved. Recreation is emphasized; athletics, arts and crafts, and a variety of table games are all included.

It is also a place to relax and a place to socialize, in a less active context. A passive space, somewhat removed from the activity areas encourages these activities. The nature of this space is enhanced by the fireplace. It becomes a focus for the space and gives people a reason to use the space.

The active nature of the space is enhanced by the openness and interaction of the spaces.

Drama is added with the use of clearstories and skylights.

Broad steps and the rooftop play area help the building to become a real indoor-outdoor sort of space.

The problem is critical in a building so large: to lessen its impact on the residential character of the facility, it was placed at the periphery where its mass could serve as a spatial boundary rather than disturb the sensitive and complex site design.

Materials common to the composition of the Y.S.C. were used to help this building fit into the residential image of the complex.
RETROSPECTIVE RESEARCH

(documentation of research completed
Exploring and studying children's homes in the Greater London area proved to be a very worthwhile finale for this thesis project. At the outset there was no clear organization to the study or objectives to be accomplished. It was simply an opportunity to explore a facet of British architectural and social thinking. But as the exploration progressed, directions of study began to emerge. These were keyed by the preliminary library research and built upon thorough interviews and tours of the various facilities. For example, site design and outdoor space become an obvious matter for study. How were the open areas used? Were courtyards utilized or did the open space serve as a surrounding buffer? How did the open space relate to the function of the institution and to the children living there? Was it a "designed" aspect of the program? Answers to such questions provided the basis for instructive comparisons and gave structure to the information presented in this portion of the thesis.

Perhaps the most rewarding aspect of this research was comparing these British facilities to the thesis design. Differences in function and scope meant that selective extrapolations and interpolations had to be made to produce "apples to apples" comparisons. Once this intellectual exercise was accomplished, certain concepts appeared throughout the breadth of facilities studied, and most notably, in the thesis design. Being able to see that open spaces are a focus of activity, that a personal space is essential for the formation of a strong self-concept, that a hierarchy of social spaces does promote social growth provided a positive indication of the validity of the thesis work.

There was another noteworthy facet to this research process. Most of the facilities studied were designed and constructed in the late 1960's - early 1970's era (Great Britain at that time was on a significant child welfare bent). As befits the dawn of a new social direction, the children's homes were reviewed in the architectural publications. The hopes and dreams of the social planners, the theories and objectives of the designers, all were documented in these magazines and made readily available for comparison with the eventual construction. This furnished an excellent starting point for a "mini post occupancy survey." Being able to see the success, or the failure, of the theories was enlightening and instructive.
Shawcroft School

Shawcroft School is located in an idyllic rural setting outside the Village of Bromley just south of London. It is operated by the Inner London Educational Authority. Fifty boys between the ages of ten and sixteen are housed and educated here. Because of emotional maladjustment, these boys have developed behavioral problems and cannot perform effectively in the traditional school system. The Shawcroft environment gives these boys a chance to escape the pressures of their normal environment and through a program of intensive guidance, helps them learn.

Spatial Composition

The dominant element in the site plan is the central courtyard. The various buildings of the facility are grouped around it and rigidly define the exterior space. This relationship of open space to buildings makes the courtyard a focus for social interaction. Informal seating areas and landscaping details promoted the social nature of this space.

There is a very orderly arrangement to the buildings. Educational functions are to the east, where outdoor work spaces for the shops can be provided. Communal, recreational, and service facilities are on the south side, where access by service vehicles is easiest. Administrative functions are on the west side. This becomes the entry point for the visiting public. A two-story wing on the north side provides living quarters for the boys on the second floor and for some of the staff on the first floor.

Outside the tight cluster of buildings are ancillary facilities: Athletic and play fields, gardens, parking, and some staff housing.

Structures are either one or two-stories tall and strongly promote a residential rather than an institutional image. Moderately pitched roofs with a few clear stories accentuate the residential character while making the entire composition more interesting.

The residents' quarters are divided into five living units of ten boys. Each unit contains two single rooms, dormitory space for eight more boys, a lounge, bath and shower, and a kitchenette. The dormitory spaces are effectively divided into double rooms by 6½ foot tall walls. These define private spaces for each boy yet let a feeling of community permeate the space.
Shawcroft School (continued)

Circulation

The approach to the facility is via a drive which curves gently through a dense woods. This informal approach enhances the calm and sheltering image of the buildings.

Vehicular traffic is limited to the west and south sides of the site. Visitors park and are received on the west at the administrative offices and service vehicles load and unload near the kitchen and supply rooms.

Parking is minimal and becomes very unobtrusive because of sensitive landscaping and site design.

Broad overhanging eaves provide a sheltered exterior path from building to building. Given the relatively mild climatic conditions, most of the pedestrian circulation can take place outside the building and interior corridors are minimized.

Paths to ancillary facilities are very informal and are delineated only by woodbark mulch.

Structure

Materials and structure that enhance the residential, rural character of this facility were essential. An existing brick garden wall from a nearby 19th century manor house is used as a boundary for part of the facility. The brick of the wall became the obvious choice as the primary material for the facility.

Exterior walls are 10 1/2 cavity construction, brick exterior, block interior, with rigid insulation. In the two-story wings, second floor partitions do not align with the ground floor partitions. Consequently, the first floor block interior walls are load bearing and support a reinforced concrete second floor slab. This allows for a freedom of placement of the second floor partitions.

Prefabricated wood trusses clear span the space and transfer all roof loads to the exterior walls.
Shawcroft School (continued)

In the single floor wings, continuous runs of windows are a dominant design feature and have a definite influence on the structure. Rather than exterior bearing walls, the interior cross walls become structural. The glass areas were spanned with encased laminated plywood purlins. Thus the brick in these glass walls is nothing more than an infill material.

Problems and Shortcomings of the Design

Problems with Shawcroft School are few and there is only one worth noting. The boys living quarters is directly over the staff flats and day sitting rooms. Noise that is bound to occur when boys live in a communal arrangement causes a great deal of disturbance to the staff members and their families. This suggests that all the staff living quarters should have been located away from the main cluster of buildings.

Analysis

Shawcroft School was the most successful purpose built environment visited during this research. The success was due in a large part to the dedication and commitment of the school's headmaster, Mr. Azarpardi, and its staff. But it is not insignificant that this was also the most pleasant physical environment visited. The sensitive selection of an open rural site (the antithesis of the crowded urban environment most of the boys came from) was a basis for creating a therapeutic environment. This sensitivity is carried through in the design of the buildings, both from the point of view of function and of character. Images of shelter and security are easily inferred from the humanly sympathetic scale and the broad overhangs. And the clear and logical organization of the spaces makes day-to-day living at the school much easier.

Another but perhaps more subtle aspect of the design is the well defined privacy - community gradient. Each boy has a personal space defined by the area of his furnishings (or in certain cases, the single rooms). Most boys have to share a room, defined by the 6½' tall block walls, with a roommate. The next level of community encompasses the unit lounge, bath, and kitchenette. This helps define an easily perceived family scale group of ten boys and their assigned live-in counselors. Finally community at the largest scale is given physical form in respect to group functions for the whole school. The courtyard, gymnasium, dining hall, etc. are the expression of this level of community. From here the boys are encouraged, both consciously and subliminally, to relate to the broader community - that surrounding the school.
Shawcroft School (continued)

Greater mention should be made of the underlying order of the school. It is a casual and informal order visually best expressed in the common roof slopes and treatment of fenestration. Programatically it is perceivable in the well defined function of each wing. Such order stands in sharp and sympathetic contrast to the complicated urban environment with which the boys are most familiar. To have this perceptively orderly and understandable environment as a home (something that you can stand on emotionally) makes adjustment to and coping with more chaotic environments of urban life an easier task. It is after all the purpose of such a facility to deal with the residents' emotional and behavioral problems and get them back into a productive living situation outside the confines of the school.
Children's Home at St. Stephens Road

The Children's Home at St. Stephens Road serves as a temporary home for children in the care of the municipality of Westminster. The children are brought here for a variety of reasons and with a variety of problems. Testing and observation programs are carried out before decisions are made about future placement. Most likely the children will go on to foster homes or, for the more disturbed, treatment is sought in one of the government's residential care facilities. Of course, a number of children will be returned to their families and the problems will be dealt with by counseling visits to the home.

Spatial Composition

The site: this building is situated on a corner lot in a stable residential neighborhood. The atmosphere is very conducive to the success of the Home's program. The tranquility, the repose, and the very hominess of this setting can do nothing but comfort the troubled children who are brought here.

The facility is sensitive to its neighborhood. Low, stepped walls and landscaping continue the themes that other properties establish. The building itself has a very neutral character and a minimal impact on the character of the neighborhood. The white metal panel and glass facade could easily go unnoticed by passers-by. Rather than attempt to fit into a rather involved context, this building becomes content to just minimize its impact.

The plan of the building is organized around a central utility core.

Communal and administrative spaces are on the ground floor while sleeping rooms and staff quarters occupy the upper level. The larger area of the upper floor overhangs the lower floor and provides a degree of shelter (probably more of a mental image of shelter rather than actual protection).

Problems and Design Shortcomings

While the utility core provides for efficient and economical use of the building systems, it does not benefit the function of the Home. The issue in question is a sensitive one - the feeling of security children get from the building. The compact plan and location of the utility core effectively cut off any communication between the floors and various parts of the Home. This makes perception of security difficult for the children and, in a situation where they have been removed (probably traumatically) from a familiar environment, they need all the reassurance of security and stability that they can get.
Children's Home at St. Stephens Road (continued)

The image of the building also bears comment. The criteria with which the architects worked was difficult and their design has created an unpleasant paradox. The "International School" aesthetic of the building offers a viable solution to the difficult problem of fitting into the neighborhood. But it also presents a rather cold, characterless face to the children who have to use this building. Again, these children are in need of all the reassurance and psychological reinforcement they can get. A building so lacking in character and warmth can do nothing to comfort the children.

The positive aspect of the site design was how the edges were designed to fit the design into the surrounding environment. Seemingly design stopped there and the site does nothing more than serve as a base for the "sculpture of the building." A play area, looking much like an afterthought, is located outside an entrance to the building, but otherwise the site is unused. While the site is rather small, it would seem that somehow it could have been used to enhance the program of this purpose built environment.

Analysis

The Children's Home at St. Stephens Road addresses the issues of context and function fairly positively. But it seems that too much attention was paid to International School aesthetics and not enough to basic human psychological needs and requirements. A warmer, more humanly sympathetic environment would make the difficult transitions the resident children are going through that much easier and that much less psychologically damaging.
St. Christopher's Community Home at Hillingdon

St. Christopher's provides a therapeutic environment for inner city boys with severe emotional and behavioral problems. Most of the residents at this facility are in their teens and have established a history of criminal activity. The primary goal of St. Christopher's is to establish a sense of responsibility and self-worth through a program of intense counseling and therapeutic living experiences. Secondly, the boys are given vocational training to reinforce their concepts of self-worth and to establish a direction for more productive behavior in their lives.

Circulation

St. Christopher's Home is set well apart from neighboring structures and occupies the center of a very open site. The approach is direct and uneventful. Public access to the facility is via the main drive which leads to the administrative offices.

Vehicular circulation is confined to a route around the perimeter of the complex. Conflict between pedestrians and vehicles is minimized. The road serves as the access to loading docks and also to the staff residences.

Pedestrian circulation within the site is an essential element to the concept of this project and is best discussed under "Spatial Concepts."

Spatial Concepts

The massing of St. Christopher's gives an initial impression of a small village. It is perhaps the most "residential" image of any of the complexes visited. One and two elements are predominant but larger masses such as the gymnasium add interest to the composition and provide a counterpoint for the residential scale of the rest of the buildings.

There is a loose yet perceivable order about the composition without any of the formality or stiffness usually associated with "order."

Five residential units house from 10 to 14 boys each. Accommodations include singles, doubles, and four person dorms. Each residence houses boys with special needs. One, for instance, is made up entirely of single bedrooms for boys who are very much in need of a personal space. Another houses boys who have secured outside employment and require a bit more independent lifestyle.
St. Christopher's (continued)

Clustered with each residence are two staff houses, one for the housemaster and his family and one for the assistant housemaster.

Exterior space in the complex is divided into a series of small courtyards. Each residence has access to a well defined paved area for group activities or rest and relaxation.

All of the primary functions are linked by an interior circulation spine (a social street, if you will). Most of the movement through the complex takes place along this corridor.

Part of the central circulation spine is an indoor forum. Large steps provide seating for both informal gathering and stage presentations. For larger presentations the stage can be oriented toward the gymnasium with its larger seating capacity.

The teaching spaces and vocational shop are located on an axis perpendicular to the main corridor. This provides a central location without infringing on the spine and its function.

Structure and Materials

The construction of this building uses common techniques and is very straightforward. Perimeter strip foundations and slabs-on-grade support typical insulated brick and block cavity walls. Upper floors are wood joists and roof structure is wood trusses. The roofs are covered with asbestos shingles. The gymnasium and flat roofed areas are structured with steel which is in turn spanned by wood-wool planks. The protective coating is a synthetic rubber roofing compound.

As in most other facilities reviewed, the use of brick, pitched roofs, wood windows and doors, and residential design details gives a very good sense of scale and downplays the undesirable "institutional" feeling that so often permeates such homes and spoils otherwise sound programs.

Problems and Analysis

St. Christopher's is a classic example of the "good concept-poor-execution - Dr" syndrome. The basic idea of an informally ordered group of buildings in a village like setting has much merit from the point of view of human scale and the therapeutic impact of the environment. But the final result for a variety of reasons is not a positive component in the milieu of therapy.
St. Christopher's (continued)

Heaviest blame must be placed on a basic misunderstanding of the severity of problems dealt with at St. Christopher's and/or an improper design response to them. Most of the boys have a history of violent "acting out." Special security measures were necessary but were not instigated. Nor was the level of finishes able to withstand the abuse that the facility faces. These shortcomings led to a series of less than successful stop-gap solutions. The final result is a rather shabby, disheveled environment, an environment that does more to reinforce boys' negative self-concepts rather than to solve their problems.

A second basic design fault is the compactness of this cluster of buildings. Spaces are too cramped and too close together to function properly. A great deal of effort was expended to give physical definition and identity to the residential units. Yet, the most used, and the most seen part of the residence, the front door, is nothing more than a nondescript door along the main corridor. Were there an area separating the door from the "street," identity and the sense of place would have been reinforced not compromised.

The proximity of staff housing and the boy's residences is not a desirable situation either. The general noise and behavioral disturbances are a daily disruption to normal family life. If the staff housing were removed some distance from the main body of the complex, the situation could be alleviated.

On a smaller scale the lack of proper spaciousness and size is evident in the personal space of the residents. Single bedrooms feel cramped and claustrophobic (a large walk-in closet would be a close comparison) and 4 person dorm rooms offer little privacy or opportunity for personalization. This is a disastrous situation in a facility that is trying to help emotionally disturbed young adults establish positive self-concepts. The need for some sort of physical reflection of the mental process and results is basic; it is a very tangible reinforcement for some intangible precepts. St. Christopher's falls short of fulfilling this necessity.

A complaint put forth by the staff concerned the location of the educational spaces within the main group of buildings. It was felt that a more definite home-school relationship was desirable. There is a certain emotional oppressiveness associated with being confined to "one" building for any length of time. Physically separating the teaching block from the residential and social functions would be a step toward alleviating that feeling. This would also reduce the disturbances to classes caused by the present proximity of classrooms and the main corridor and also offer more privacy for boys who wish to concentrate on their studies (the present "open" library is of no value because of the ease of distraction.).
St. Christopher's (continued)

The use of this particular site for such a facility as St. Christopher's must be questioned. To insure the security of the surrounding residences, a tall chainlink fence had to be installed. This, coupled with the rather tight cluster of buildings at the center of a rather generous site, gives the initial impression of a minimum security prison. Such an image can not have a positive effect on the youths who must come here. The contribution of the physical environment must be considered with respect for the severity of the behavioral problems that are being dealt with even in the selection of a site. Perhaps in this particular case a site much more distant from the community (a place where fences would not be required and the buildings could spread out) would have been more appropriate and offer a more therapeutic situation.

The use of flat roofs proved to be an aggravating design flaw. They are an encouragement to boys who are "acting out" to climb and as a result are a source of innumerable maintenance problems.

The school greenhouse stands as a noteworthy paradox to the problem of vandalism and perhaps suggests a direction for positive responses to the issues of such homes. Though it would seem to be a natural target in a facility with such a high incidence of vandalism, the greenhouse remained relatively unscathed. Staff members explained that most of the boys grew their own house plants and that there seemed to be a sense of pride and responsibility connected with the activity, hence the respect for the greenhouse. If other aspects of the physical environment could be designed to combine involvement with positive responses, the milieu of therapy would become more successful.

Perhaps the most positive component of this facility is the main corridor which serves as a link between the various facilities. Because of its physical function it becomes a lineal focus for social interaction and because of its physical configuration, the social interaction tends to approximate the "street" behavior of the boys who are sent to St. Christopher's. Staff members feel that observing these social patterns provides insight into the boys lives. Understanding this observed "street" behavior then becomes a valuable aid in forming a relevant therapy and counseling program.
Argyle Manor Children's Centre

Located in suburban Ealing west of London, this "purpose built" facility was originally designed to accommodate 32 children ages 3 to 18, house a residential staff of 10, and provide necessary classroom facilities in a fairly conventional orphanage environment. But the evolution of social welfare programs in Great Britain has forced a new use upon the facility. Now it functions as a "reception and assessment center." Children with very serious emotional and behavioral problems are brought here for an intense 28 day period of psychological testing assessment. The results of the testing and staff observation determines the placing of the child in a home or institution.

Site

Decidedly suburban.

Circulation

The site is open and the facility sits well away from the street. A paved drive leads the visitor to a parking court.

Entrance to the facility is defined by passage through a cut out section of the first two-story block. The main door is across a well defined courtyard in a parallel two-story block.

Service traffic uses the main drive and the service court is located to the west of the main parking lot.

Pedestrian access to the site was not considered.

Pedestrian circulation on site will be discussed in conjunction with Spatial Concepts.

Spatial Concepts

The main body of Argyle Manor is comprised of two (2) two-story parallel blocks, connected at the second level to define an exterior courtyard.

A short distance apart is the "teaching block" containing 3 classrooms. There is also a large hard surface play area.
Argyle Manor (continued)

Facilities on the first floor of the main block include administration, recreation, dining, mechanical and services. The second floor contains all the sleeping quarters for residents and staff. Residents sleep either in singles or three person dorms.

Structure and Materials

This is a systems building based on components designed and engineered by the Consortium for Method Building.

Brick is the dominant material, but concrete components are also exposed and express their structural function.

Problem and Analysis

Much like St. Christopher's, Argyle Manor gives the feeling that it is too constricted; that it's so tightly organized that it doesn't take full advantage of its site. The teaching block is separated from the main building (staff thinks it should be even further away to enhance the home-school relationship) but all other functions are grouped rather tightly about the central courtyard.

This courtyard was meant to be a focus of social interaction but it seems to be so small to fulfill its intended function. It becomes a fish bowl - a space that offers no privacy and is psychologically uncomfortable. You feel as if you're constantly under observation. Few people were ever seen meeting or gathering here and it would seem that the space was a failure. This is especially unfortunate as there is no other exterior space that promotes social interaction.

This facility sits in the midst of a very pleasant suburban neighborhood. But because the buildings are centered on the open site, Argyle Manor seems to be set apart from its neighborhood. Given its purpose, it could safely fit into its neighborhood. Perhaps something as simple as sitting the buildings as close to the street as the neighboring multifamily housing would have a positive effect on the image and the function of this facility.

Systems building components were utilized because of the inherent first cost economies. This initial savings in construction cost however, has to be weighed against the lack of flexibility of this particular system. Changes in program that necessitated physical changes were not easily accomplished. In the end the systems components became a rather expensive hinderance and a detriment to the program.
The limitations of the building components were responsible for another basic flaw in the design. Hallways are long and straight and very institutional. This is regrettable in a structure that goes to great effort otherwise, to promote a residential, humanely sympathetic environment.