ST. MARY'S
A Neighborhood
&
A School
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Thesis Introduction

The names, "St. Mary's Neighborhood" and "St. Mary's School" both developed out of the location of the neighborhood development and the development of a high school for St. Mary's Catholic Church in Muncie, Indiana. St. Mary's church is an identifying mark of this side of town. It is prominent from both Jackson and Tillotson Streets. Therefore it seemed logical to name both after St. Mary's.

My project is twofold:
1. A neighborhood developed utilizing "The Timeless Way Of Building", as outlined by Christopher Alexander in his works.
2. A Catholic Parochial, College Preparatory High School, on the grounds of St. Mary's Church.

The neighborhood was done as an experiment using the concepts of Alexander's "Pattern Language" process.

The school is an answer to a growing existing need. St. Mary's Parish is a large family oriented parish, on the west-south side of Muncie, Indiana. Muncie has two Catholic parochial grade schools, and one junior-high school. The closest Catholic high school is in Marion, a forty-five minutes drive to the north-west. There is currently a high school study committee in the parish.
Site Analysis

Liabilities

- Lack of identifiable boundaries
- Too many Entrances
- Noise from Jackson and Tillotson streets
- Commercial center poorly oriented
- Some housing poorly situated
- Scale problems with Ball Hospital

Housing Cluster Test Site
Solutions to Site Problems

Close certain streets to limit access to automobiles, to increase neighborhood control, limit infringement by "outside users" and eliminate cross-traffic.

Create definable major auto entrances to neighborhood.

Create identifiable boundaries, where needed, providing an exterior "skin" to the neighborhood which is punctured by the car only when absolutely necessary.

Reorient the commercial towards an inner court, also creating new spaces.

Reorient badly situated housing so that it will become associated with the neighborhood instead of the streets around them.
Design Discussion

The method used in the design of this cluster and in the repair of the existing neighborhood is "The Timeless Way of Building" as described by C. Alexander in "The Pattern Language". I attempted at all times to adhere to the process as is outlined in the books.

I was aiming at a level of client participation above that of a typical project. I wanted to prove that a client is capable of making design decisions at more than a rudimentary level. I chose a group which was made up of a teacher, four students, a chemist and his wife, and a grocer and his wife. Through a series of discussions we learned the design method together. Then we proceeded to design on-site using stakes and string to mark decisions made. These were recorded with photographs. By doing our design on-site we were able to eliminate much of the abstraction of the schematic design process, which is often the cause of confusion between the client and the architect. We were able to make exact decisions concerning such issues as, property design, house location and house orientation.
Pattern List

This list is not complete, for the complete pattern language see, "A Pattern Language", by C. Alexander, S. Ishikawa, M. Silverstein, M. Jacobson, I. King and S. Angel.

These we used to establish a neighborhood environment.

Four-Story Limit
Nine Percent Parking
Life Cycle
Men and women

With these three we shaped and characterized the commercial area.

Eccentric Nucleus
Shopping Street
Night Life

These concepts we used to establish the type and character of houses on our site.

Household Mix
Degrees of Publicness
House Cluster
Row Houses
Old People Everywhere

These were used to design and regulate the auto/pedestrian interface.

Green Streets
Network of Paths and Cars
Main Gateways
Road Crossings
Raised Walk
Bike paths and racks
We further organized the cluster with these.

These concepts helped establish the types, our houses would be, and organized our ideas into definite groups.

These were instrumental in making decisions concerning the overall house cluster.

This is the first group of concepts to deal with the houses themselves. With them we decided:

a. where to locate the houses.
b. how to orient them.
c. the relationship between the interiors and exteriors.

Quiet backs
Accessible Green
Small Public Squares

The Family
House for a Small Family
House for a Couple
House for one Person
Your Own Home

Building Complex
Number of Stories
Circulation Realms
Small Parking Lots

Site Repair
South Facing Outdoors
Positive Outdoor Space
Wings of Light
Long Thin House
Again, these dealt with the houses' 
a. entrances.
b. auto/pedestrian relationships.
c. the relationship between roofs, one to another.
d. the relationship between the eavesline and ground.

Main Entrance
Half-Hidden Garden
Entrance Transition
Car Connection
Hierarchy of Open Space
Cascades of Roofs
Sheltering Roofs

Intimacy Gradient
Indoor Sunlight
Common Areas at the Heart
Entrance Room
The Flow Through Rooms
Short Passages
Staircase as a Stage
Zen View
Tapestry of Light and Dark

These concepts dealt with 
a. movement through the house.
b. the relationship between light and dark.

We used these to arrange the private spaces in our houses.

Couple's Realm
Sleeping to the East
Farmhouse Kitchen
A Room of One's Own
Bed Cluster
Bathing Room
Bulk Storage
These six were to used to design the exterior edges of each house.

With these we organized the exterior spaces around the houses.

As was stated at the beginning of the pattern list, this list is not complete. It is as far as we were able to design in the time allotted.

Light on Two Sides of Each Room
Building Edge
Sunny Place
North Face
Outdoor Room
Connection to Earth

Fruit Trees
Garden Growing Wild
Garden Wall
Trellised Walk
Schematic Design

Our first priority when we met on site was to tour the neighborhood and discuss the amenities and the liabilities. Since the housing cluster was to revolve around an area of commonly owned land, it made sense to locate it first. This would establish the "character" of our cluster.

Once we had located the common land, the next step was for members of the cluster to decide upon housing sites. Instead of subdividing the land irrespective of the landscape, we chose "centers of gravity" for each home. This was a point which would signify the emotional/spiritual center of each home. From this point we established directions each would face. Along with directions, the points gave us starting places to design from. Each plot was to be somewhere near 8,000 s.f. This number was derived from the average lot size in the surrounding neighborhood weighed against the projected number of houses in the completed neighborhood. As we decided the sizes of them we marked them with stakes and twine. Our houses were oriented into three groupings of two houses each. This happened due to close friendships between each two group pairings.

After locating our houses we spent time deciding the arrangement of the common land, establishing paths and boundaries, entrances and garden spaces.
Model Photos

The original plan was to design the houses on-site until we were unable to progress further. This would happen at wall fenestration. Unfortunately due to bad weather and scheduling conflicts we were unable to do as planned. Instead we designed on a one/tenth scale model. The photos are of this model, the detail is at various stages of development from very beginning to, ready to advance to one/fourth scale, which was to be the next step in the process.

Photos:

1. House cluster from above.
2. Cluster from north-east, looking down path.
3. Aerial from east.
4. Aerial from south-east.
5. Aerial from south.
6. Aerial from south-west.
7. Aerial from west.
8. Aerial from north.
9. Low level showing scale.
10. Aerial showing author’s house.
Commercial Center

As well as housing, there was also to be a small addition to the existing commercial center. To provide a terminus for the neighborhood. This never progressed beyond the large scale schematic patterns.

The commercial center was to include

- a night spot with entertainment, music and a restaurant by day with indoor/outdoor dining.

- a children's clothing store to compliment the existing women's store.

- a men's clothing store.

- above these shops were to be apartments. These were to include studio and two bedroom styles.
St. Mary's Catholic Parochial College
Preparatory High School

School should be;
- a joyful experience.
- an environment where learning is a gift not a "dare".
- the beginning of a life of learning, where one is trained to view situations in the light of "What can I learn here?", not "How do I get out of this?"
- a place for making friendships which will last the test of time; both student/student and student/instructor.
- a place where the student is taught to reason.
- a place where morality and ethics are more than just ideas which are presented with lip service.

In short, school is more than a place or a building where all the above is presented. It is a place where one is given the start towards becoming a "whole" person.

What I am trying to accomplish with this part of my thesis is to create an environment in which all this can take place in pleasant surroundings.
Problem Statements

As stated, school is a place for learning. The architecture should reflect this, by being both straightforward and honest in nature. The spaces created, both interior and exterior, should be pleasing to the senses and functional.

Part of the program is to be able to expand upwards to meet possible growth in the student body in the future. This would be done by finishing out the second floor areas above the Math, English, and History classrooms.

The school will provide spaces for a full range of educational experiences, fine arts, applied arts, home economics and business classes. A full sports program is also to be implemented using the existing gymnasium and by making arrangements with the other schools in the area for outdoor sports.
Site Analysis

Amenities

Nice, wooded setting.

Expansive grounds, topography relatively flat, easy to build on.

Existing building layout, with the exception of the Cyr Center, is fairly sympathetic to the area and human scale.
Site Analysis

Liabilities

- Traffic cuts site in half.
- New Cyr Center is badly out of scale and is out of character for the site.
- Lack of usable building spaces without trees.
Conceptual Design
Main Entrance

The concept of the main entrance is to be easily visibly from the main avenue of approach and to give the viewer a definite first impression.

Circulation

Interior circulation is viewed as a "spine" to structure the whole project. The exterior circulation is one of a series of courtyards and interior passages. The arrangement of entrance rooms will create a "point to point" style of movement.

Massing

Two large masses balanced against each other by the main body of the school.
Structure

Post and beam, the posts being brick piers and the beams timber. The structure is to be exposed in the main circulation spaces in the form of large brick piers and exposed wood beams.

Room and Entrance Groupings

Rooms and entrances are grouped according to the type of class in them. They are grouped in sets of two's and threes.

Roof Arrangements.

Roof's cascade down to keep the scale at an humane level.
St. Mary’s High School

Square Footages, Space Summary

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<td>Vice Principal’s office</td>
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<td>Dean/Counsellor’s office</td>
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<td>Nurse’s office</td>
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<td>Fine Art’s</td>
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<td>Music/ Band Room</td>
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<td>Theater</td>
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<td>backstage</td>
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<td>stage</td>
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teacher's office storage, bathrooms and projection rooms. 2652

| Drawing studio | 1920 |
| Sculpture      |      |
| studio         | 1292 |
| firing room    | 280  |
| storage        | 288  |
| office         | 264  |
| Printing/ Newspaper | 1088 |

**Industrial Arts**

| Drafting       | 972  |
| Auto/Metals Shop | 1020 |
| storage        | 144  |
| painting       | 160  |
| welding        | 140  |

<p>| Wood Shop      | 872  |
| office         | 244  |
| storage        | 196  |</p>
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<td>Cafeteria</td>
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<td>Student Space</td>
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<td><strong>Restrooms</strong></td>
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<td>Men’s</td>
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<td>Women’s</td>
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Final Assessment of The Two Design Projects

"St. Mary's Neighborhood"

While this design is not finished beyond the first level of information; neighborhood planning, site planning, and schematic planning. I feel that I have accomplished much of what I set out to do. I originally set out to design a neighborhood cluster using client designers who had no previous design experience. This is what I did.

My clients and I were very pleased with the results that we reached. Generally the more that I allowed them to follow their instincts, the more they surprised me with solutions that were very sophisticated in both technology and form. They proved exceedingly interested in the whole process of design.

The design process used in my project was not typical in many senses. Probably the most noticeable is the fact that if carried to the extreme, the process which I used would do away with the architect as he is known currently. What would replace him would be a class of professional designer who would be both more accessible to the client and humane in his practices.

On the whole I would assess my design a success to the level achieved.
In this project, my second thesis, I was simply fulfilling the requirements of the thesis program. I had no philosophical ideas to prove and no cross to bear. As I did the project I tried to keep in mind the idea that there is a very real possibility that this could one day be built. With this in mind I tried to make my project as real as I could. Unlike the first, I met no resistance to my ideas and no blocks were thrown in my path. I think that this project should be carried farther than it is and I intend to.

Like the first I would say it is a success to the level achieved.
Conclusions

My thesis experience has definitely been one of learning and relearning. More than just architecture, I have learned much about life itself in my dealings with my clients. This program has much going for it as well as against it, I only hope that what is against it won't drag down the whole program. Its students are its greatest asset, and it is up to them to demand that the school maintain a high level of education.

So this is it, it sure doesn't feel like five years have gone by. When I was a first year student, a thesis student told me that it would go by faster than I would know, I didn't believe him. He said to make strong friendships early on, ones that would last the long haul. Unfortunately many of those dropped by the wayside. He said that he envied those of us who were starting out, I didn't believe any of what he said then. I do now.
Acknowledgements

When ever you do something on your own you always end up thanking those around you for their support.

For your friendship and all the help over the long haul, I thank you:

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Stan Mendlesohn  Prof. Arch.
Uwe Koehler  Prof. Arch.

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Rob North

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David Porter
Fr. Phillip Mahalic

For your help and friendship, thank you.

David G. Morin

And for you Alison, no one can do the things you do.

Most of all to the One who I owe my allegiance, who carries me through the hard times and walks beside me during the easy ones.