Design and Experience, Secondary Schools for Cambridge

by Dennis J. Fogarty
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Author

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Thesis Supervisor

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Chairman, Departmental Committee on Graduate Students
ABSTRACT
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Purpose of Thesis
Realizing that learning occurs by experiencing and
imagining experience, and that learning is neces-
ssary to decision making,
the purpose is to Design by considering experiences.

Project
Drawing on the activity and organization of this city
as the subject of Secondary Education, and working from
the Secondary Schools proposals completed for the School
Committee of Cambridge, I assembled a program of opportun-
ities available in the city.

Then, for the major location, I developed site plans,
in which the school was part of the organization of that
neighborhood of the city.

Deciding on one of the site proposals, I designed
the new school facilities as a series of places used by
independent groups.

Thesis Supervisor: R. C. Tremaglio
Contents

Title Page 1

Abstract 2

Introduction 4

Part ONE. Organization of the School 4

Part TWO. Site Planning 11

Part THREE. Designing of New Facilities 19

Bibliography and sources 26

Note to Reader:
The written text is included as an explanation of what may be seen in the drawings.
Introduction

The process of this project has been to gather as much understanding of the Secondary school situation as possible, and to develop a strategy for the occurrence of Secondary Education, that I might then design school facilities for this city. The planning and designing has occurred in three parts, the Organization of a School in this city, Site Planning for the major site, and Designing of New Facilities for that site. It is intended that this work develop design of experiences to a point useful in the planning of the Secondary Schools.

ONE— Organization of the School

Education is a vehicle to acquire ability to act, and experience creates a need to learn. Then learning should involve experience, and study of the activities of the city. For this reason I have regarded all of the city as possible sites for Secondary Education, and selected locations which might be interesting and available for school facilities. Since students would move through the city to study locations, each site would be a facility of the school rather than a school itself. But rather than expect to have the community provide the secondary education, I expected that small segments of the school could be transplanted to centers of activity, and at these places the operations of offices, businesses, and industries could be studied. From a west Cambridge site Industrial operations could be studied, and from Harvard Sq. could occur the study of Business and Planning projects. Each of these segments would be part of a Constellation located at a major school site.

On the map are located the two major sites, Broadway and the City Land Fill. I have noted some possible locations for small facilities after some slight understanding of the C.I.T.Y. program, a current study for the Educational uses of Mass. Ave., and the Philadelphia Parkway School.
Working from the two Secondary School studies, A + B, I formulated two school organizations:

C. By which schoolhouses could be located in different parts of the city, one at Broadway and one at the City Land Fill; with occupational clusters at either site, and students moving between a schoolhouse, an occupational cluster, and the small facilities.

D. By which there could be one general studies group, and five occupational clusters. These could be located in the city according to available sites and proximity to similar professional activity.

In order that students could study courses in and about more than one occupation, and since students would travel to study locations, I saw a need for a general studies facility. Academic studies could be the basis for these general studies, and as a facility they could form a pathway, or introduction, to the more specific studies in occupations.

Students and staff would participate in the general studies group and in an occupational cluster.
above diagramed from A Program for the Cambridge High Schools
<table>
<thead>
<tr>
<th>Engineering</th>
<th>Agriculture</th>
<th>Music</th>
<th>Culinary Arts</th>
<th>Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transport...</td>
<td>Planning...</td>
<td>Construction...</td>
<td>Eng.</td>
<td>So.Sc.</td>
</tr>
<tr>
<td>Media Center</td>
<td>Visual Performing Arts</td>
<td>Administration</td>
<td>Guidance</td>
<td>Physical Ed.</td>
</tr>
</tbody>
</table>

Above diagrammed from Educational Requirements and Site Analysis for High School Facilities, Cambridge, Mass.

General Studies | Occupational Clusters

<table>
<thead>
<tr>
<th>English</th>
<th>Social Studies</th>
<th>Math...</th>
<th>Dining Service</th>
<th>Admin. Services</th>
<th>Guidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field House</td>
<td>Student Activities</td>
<td>Health Services</td>
<td>Media Center</td>
<td>Business Ad.</td>
<td></td>
</tr>
</tbody>
</table>
The strategy for locating the facilities involved identifying the characteristics of the sites.

City Land Fill - as a place close to Industrial operations and Fresh Pond, with athletic facilities, skating rink, and less dense activity.

Broadway site - close to, and involved in the city activity with a Library, Park, and athletic building for community use.

Rindge building - made especially as a classes facility

CHLS site - a place to build independently new types of school facilities

These characteristics are more permanent than educational programs. Then, a school facility located accordingly, as a facility in an area of the city, might be more likely to withstand the changing nature of educational programs. At the same time the locations offer opportunities for different experiences within one school; this could not occur within a single-facility school.

Locations:

City Land Fill site - Engineering and Natural Resources Cl.
Communications Cluster
some General Studies
Field House
Dining

Broadway site - Business Administration and Human Res. Cl.
Communications Cl.
Auditorium
Media facility
General Studies
Food Service
Site planning for the Broadway site occurred through two sets of considerations; one, the organization of the school, and the other was the role of areas of the site in the surrounding neighborhood. Site Study A is a zoning of the kind of use for each area on and near the site. It is a basis from which I could locate and define activities so that they might occur without disrupting each other. By directing movement and locating two zones, one for school use and one for community use, it is possible for a Park, Library access, recreation areas, School access, and street traffic to occur adjacent to each other.

Through this zoning each area of the site acquired a strong use or identity. These identified uses mean, that as educational needs change one type of facility may change independently of others. For example, Rindge may be sold or replaced, the Auditorium may become used primarily by the community, or the New types of Facilities may be designed independently of rehabilitated buildings.
TWO

Into the Rindge classes facility I located class spaces for the General Studies, (English and Languages), the Administration, and two Occupational clusters, (Human Resources and Business Ad.), on the upper floors. In order that each cluster might be entered without passing through another, an addition of open stairways and entrance areas could be made to the east side of the Rindge building.

Facilities comprising new types of spaces and equipment (labs, dining, Media, Auditorium), could be built along the public area of Broadway, also including some General Studies areas.

As a way of strengthening the use of the Library, itself, the Park, the War Memorial, and a new Auditorium could form an area for community use.

As a model, the hospitals along Cambridge St. are located on half-blocks so that public movement into them does not occur through the adjacent housing. The closed edge (property boundary), makes it possible for the housing to remain a large stable group, and protects an area of the institution's site.

With this in mind, the Ellery street housing might be replaced on the vacant and parking lots along Hovey street, so that it might be in a more private, stable place. Along the closed edge of the enlarged site the neighborhood could have a recreation area on raised ground. A parking garage could be shared by the hospitals and school facilities.
THREE- Designing of New Facilities

In order that Occupational clusters and General Studies departments may organize their spaces independently, I have designed the facility as a series of buildings connected along an entrance way. This way occupies the position of a courtyard in the old school facility. Movement through this way, which consists of Resources areas and some class areas for the General Studies, would allow a survey of the activities and places occurring in the clusters, or in other school facilities.

Each department has two sizes of class areas, for 100 and 200 students. This is based upon the assumption that 4 or 5 teachers and 100 students could form a General Studies group. The Small Classes area has light from one side; the Large Classes area has light from both sides, with a core area, for stairs and light, in its center.
THREE- Designing of New Facilities
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Cambridge, Massachusetts, 1974


Books


Maps

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Broadway site, Hill, Miller, Friedlaender, Hollander, Inc.