

## CHAPTER VI

# THE INTERDISCIPLINARY DESIGN TEAM AS A MEANS TO SOLVE URBAN PROBLEMS

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### ORIGIN OF THE TEAM APPROACH

When work was initiated on the city plan of Newark, New Jersey in 1912, the city followed the practice started by the McMillan Committee in Washington in 1901 by assigning the work to a team of experts, in this case an architect and an engineer. The McMillan Committee had used a team of four: two architects (Daniel H. Burnham and Charles F. McKim), a landscape architect (Frederick Law Olmsted, Jr.) and a sculptor (Augustus St. Gaudens). (1)

In the first decade of this century, there was no profession trained in, or even exposed to, city planning. Charles Mulford Robinson, the first professor of Civic Design (and Harland Bartholomew's predecessor) at the University of Illinois was responsible for the emergence of much of modern city planning. Robinson was born in 1869 and was trained as a journalist, editing newspapers in Rochester, Philadelphia, and New York and contributing articles to various journals. He wrote articles on municipal improvement, which were published in the *Atlantic Monthly* in 1899. This caused *Harper's Magazine* to commission him to visit Europe and write a similar series on European cities. All of this

led to a series of three books, which were profoundly influential: *The Improvement of Towns and Cities*, 1901 (2); *Modern Civic Art*, 1903 (3); and *The Width and Arrangement of Streets*, 1911 (4). The third book was the result of his study at the Department of Landscape Architecture at Harvard University as a special student in 1910.

Robinson was appointed to the Illinois position in 1913. He died in 1917. Robinson believed that the comprehensive plan should be made by an "expert commission" stating:

*In the composition of such an expert commission, it would be well -since city-building is a science as well as an art - to add to the representatives of the fine arts an engineer, and one member who would stand not for engineering alone, nor for architecture alone, nor for landscape design alone, nor for sculpture alone, but for all of these together and comprehensively, as one who has made a special study of the general science and art of city-building. And so there would be created an expert commission of five, to put before the community a vision of what its own town might be and should be.*

The vision would be so compelling that all of the multitude of public and private actions that together build the city over time would fall in line and follow the plan.

The five-person "Expert Commission" was not chosen as American cities began the planning process. Instead, more broadly based plan commissions of citizens and officials, or of citizens alone, were established. While Robinson in his description of the "generalist" member of his expert commission did outline the need for, and function of, a completely new profession (now with some 10,000 members), he did clearly identify the need for involvement of a number of disciplines if a community was to "secure" a satisfactory comprehensive plan. This group, which we now call an "interdisciplinary team," was placed on the lower and more working level--on the staff, rather than on the commission itself, as was the case in Newark, New Jersey in 1912.

Because of Robinson's writings and their widespread influence, the need for an interdisciplinary approach to the preparation of a comprehensive plan was recognized when Harland Bartholomew entered the infant planning profession. At that time, there was no thought of having "planning" as an activity without a "comprehensive plan." There could be no planning without a plan.

There was the problem of preparing the plan (or "securing" it), and the problem of carrying it out. Only later did it become evident that how you prepared the plan had much to do with the ability to carry it out. Harland Bartholomew was never interested in preparing plans as such, but deeply interested in preparing plans that were carried out, such as those used as the basis for public policy decisions that affected the physical environment.

Yet all of Robinson's career and the formative years of Bartholomew's were before municipal zoning. The heavy burden, administratively and politically, that zoning was to place on the planning process was

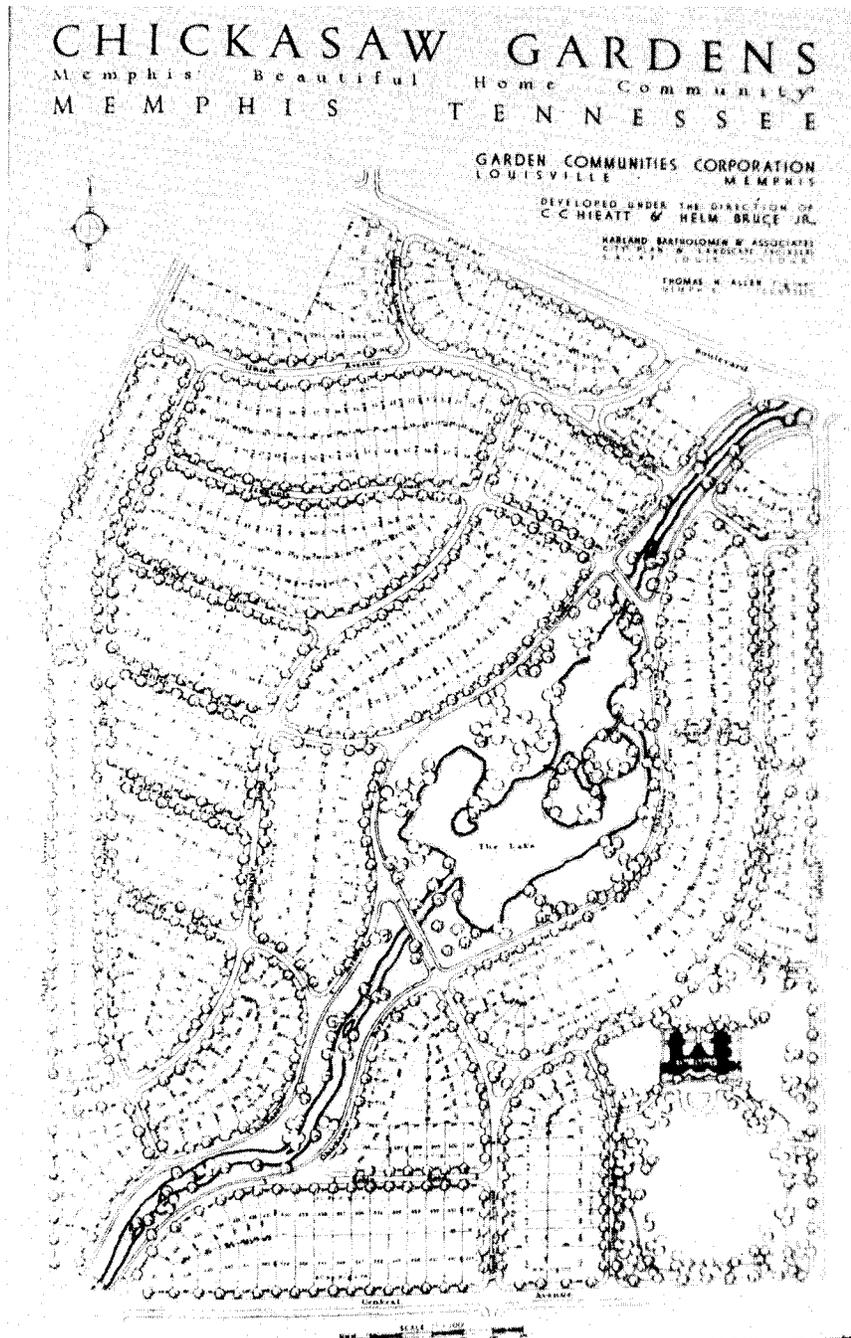
not foreseen. That the whole process, perhaps not too well thought out anyway, would crack under the strain is not too surprising. Zoning and planning were part of the same thing. Zoning gobbled up the planning, which then almost disappeared.

In this formative environment, Harland Bartholomew came to St. Louis in 1916. Because of the scarcity of people with planning experience, his ability, and his growing reputation, he was importuned to help other cities, at least with his advice. The "in and out" work of the "consultant" was not satisfactory. You received all of the blame and none of the credit. He was trying to do planning without a plan and it did not work. What the cities needed were comprehensive plans and not just advice. Why not develop an organization, a firm, to prepare comprehensive city plans?

#### A PERMANENT DESIGN TEAM

What should such a firm look like? There were none of Robinson's "generalists"(i.e., city planners) around. Nor did Bartholomew feel that sculptors had that much to contribute except occasionally. But the remaining three of Robinson's five--architect, engineer and landscape architect--could be put together into a team that would engage in preparing comprehensive city plans, or in helping cities "secure" them, as Robinson had expressed it.

Thus, the ad hoc "teams" that had designed the Chicago and St. Louis World's Fairs of 1893 and 1904, which had developed the McMillan Plan for Washington of 1902, and which had prepared the Newark Comprehensive Plan of 1912 would be institutionalized and made more or less permanent. Then, as the members of this team became used to working with each other and became more



52 Plan of Chickawaw Gardens, Memphis, Tennessee. Assignments to design subdivisions became a flourishing part of the firm's practice. Strict rules were observed to avoid conflicts of interest. All proposals of a comprehensive plan had to be observed. If under contract with a city or county permission had to first be obtained. Familiarity with developers' needs improved the staff's ability to prepare comprehensive plans that were practical and realistic.

and more experienced in their work, the work would improve in quality and comprehensive plans become better and better. It was a good idea.

Harland Bartholomew brought into his firm, on a permanent basis (not just for a project), the three major design professions with some exposure to urban problems--architecture, civil engineering and landscape architecture. By the early 1920s, Bartholomew had three partners, each a member of one of these professions: Earl O. Mills, architect; L. Deming Tilton, landscape architect; and William D. Hudson, civil engineer. This approach was used throughout the history of the firm. Professions represented have increased in number to include structural engineers, city planners, botanists and biologists for environmental studies, and, sometimes, sociologists, geographers, and economists.

There is much more to an effective design team than having a number of different type professionals under one roof, however. The team has to be trained in team operations. No such training is given in the usual professional curricula. Instead, students are indoctrinated with a certain amount of arrogance concerning their own profession that actually interferes with their being an effective team member. There needs to be an element of humility in each team member, a willingness to listen to and even accept ideas from other members of the team.

Early in his career, Frederick Law Olmsted, Jr. was assigned to the design team for the Chicago World's Fair of 1893. He described his reaction to the workings of the team in these words:

*The most exhilarative thing about it was the prevailing spirit of self-subordinating cooperation in the joint pursuit of a common aim - an enthusiasm*

*for an artistic ideal. Here I first encountered the stimulus and satisfaction of working, even though as an unimportant youngster, with the ablest architects and artists in the country, and with the best of engineers and executives. Notable among these personalities were McKim among the architects, St. Gaudens and French among the sculptors, Millet among the painters, and my father among the landscape architects. The give-and-take, the fructification of new ideas to which none of the group had risen individually, or probably could have arisen alone, and the ungrudging acceptance of the better ideas without regard to pride of personal authorship, offered an amazing indication of how human abilities can be multiplied when such a spirit of frank cooperation is once aroused. The catalyst largely responsible for these group reactions was a peculiar quality of contagious enthusiasm for an ideal on the part of the leader of the group - Burnham.*  
(5)

Of equal importance to this "contagious enthusiasm" is the ability of a job manager to know when to bring in the other team members for consultation in the making of a plan or a recommendation. Each team member must actually make a contribution and not just be there for "window dressing." Yet, this is difficult to put into practice. When I was in charge of the firm's St. Louis office, I found it necessary to scatter the various professionals around so that there was never an indication of a planning "department" or an engineering "department" or a landscape architecture "department." Yet, good planning only comes when there is participation by professionals who really know their field. For example, a zoning ordinance regulating shopping centers will be much more effective if a person who has actually designed a shopping center has assisted in its preparation.

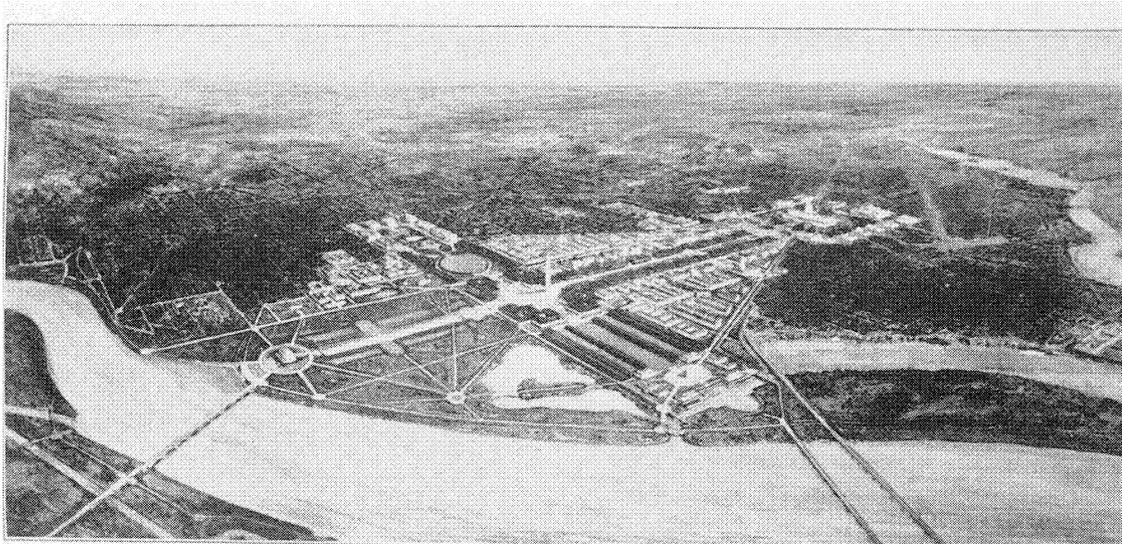
Most multidisciplinary firms are not design teams at all but rather



*53 Court of Honor, World's Columbian Exposition, Chicago, 1893. One of the most dramatic examples of the work of an interdisciplinary design team ever seen.*

representatives of different professionals hired and put under one roof where they pay no more attention to each other than to a stranger that they may pass on the street. Real design teams are very few in number. Institutionalizing of the interdisciplinary team as the way to prepare comprehensive city plans was the basis for the formation of Harland Bartholomew and Associates. This was a professional contribution of Harland Bartholomew, and one whose full potential is yet to be realized. Unfortunately, lists of people on the staff of Harland Bartholomew and Associates were not kept on a systematic basis, along with a record of their professional training and experience. This

was particularly true in the 1920s. While a list could be made from personal recollections, names mentioned in conversations and in reports, such a list could not help but be incomplete. Two lists were preserved: employees between 1940 and 1953 and employees between 1954 and 1957. These have been combined and are found in Appendix G. Many of the names will be familiar to those who have followed the course of American urban planning during the past several decades.



Courtesy of National Capital Park and Planning Commission

#### WASHINGTON OF THE FUTURE

54 *General Plan of Washington, 1902, prepared by perhaps the first major interdisciplinary design team used in American city planning. This work brought L'Enfant's Plan into the 20th Century and is the foundation for the beautiful city we see today.*

#### FOOTNOTES

- VI-1 See also: *The Nation's First Comprehensive City Plan: A Political Analysis of the McMillan Plan for Washington, D.C., 1900-1902*, Jon A. Peterson, *Journal of the American Planning Association*, Volume 51, No. 2, Spring 1985, page 134.
- VI-2 *The Improvement of Towns and Cities or The Practical Basis of Civic Aesthetics*, by Charles Mulford Robinson, published for the Bay View Reading Club by G.P. Putnam's Sons, Copyright 1901, Fourth Edition, 1913.
- VI-3 *Modern Civic Art or The City Made Beautiful*, Charles Mulford Robinson, G.P. Putnam's Sons, Copyright 1903, Fourth Edition 1918
- VI-4 *The Width and Arrangement of Streets, A Study in Town Planning*, Charles Mulford Robinson, the Engineering News Publishing Company, New York, 1911
- VI-5 Quoted in *Frederick Law Olmsted 1870-1957, An Appreciation of the Man and His Achievements*, E. C. Whiting and W. L. Phillips, *Landscape Architecture*, April 1958

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*A zoning ordinance will give stability and character, as well as encouragement to the proper development of the city. A zoning ordinance provides three kinds of regulations, which affect (1) the uses of property and buildings, (2) the heights of buildings, and (3) the size and arrangement of buildings upon lots and of open spaces about such buildings.*

- Memphis, 1924