Mapping Downtown Development in St. Paul: A New Geographic Information System for Understanding the Past
by Roger Miller

The downtowns of American cities have changed dramatically in the last 125 years, but it is hard to chart the changes systematically, much less explain them. In the beginning, most urban cores were jerrybuilt assemblages of buildings that grew up over time, with little forethought. By the end of the nineteenth century, civic leaders were beginning to argue that the development of the central business district was too important to be left to happenstance. In the 1920s, most American cities were being rebuilt according to new planning ideas and ideologies, a process that has only accelerated in the years since then.

The city of St. Paul provides an excellent case study of the changes that a typical American downtown has gone through, both before and after the introduction of formal planning mechanisms. The scale of the city is manageable—not so immense as to be overwhelming, like New York or Chicago, yet large enough to contain a full set of urban functions in both the nineteenth and twentieth centuries. Good sources of information exist for St. Paul's downtown development at fairly regular intervals. These include maps, census registers, business directories, public works records, aerial photos, and more fugitive sources, housed in collections maintained by the Minnesota Historical Society, the Ramsey County Historical Society, the Borchert Map Library at the University of Minnesota, and city agencies. These sources indicate that the transformations of the downtown in St. Paul are fairly typical of other North American cities.

One can follow how economic development shaped the city, how advances in transportation and building technology al-
Figure 2. Downtown St. Paul, 1886


...spond to important historical eras in St. Paul's economic and development history. Maps of 1887 will show the city at the height of the steamboat days and at the end of the pioneer settlement era, when St. Paul was first becoming a mercantile and industrial center. Although we do not have a good base map from this time, an excellent bird's-eye-view lithograph exists (see page 1). It should be possible to start with a later map and subtract streets and buildings that do not appear in the 1867 lithograph.

By 1886, the railroad had appeared and St. Paul was well-established as a wholesaling center for the northwestern United States. The 1886 map is a combination of the 1884 Hopkins city atlas and the 1886 Sanborn fire insurance atlas. By 1903, railroads had almost entirely supplanted steamboat traffic. St. Paul had a well-developed streetcar system, and the downtown core was being rebuilt for the first time. The 1903 map, based on two fire insurance atlases, will show the central business district after the Depression and recovery of the 1890s.

By 1928, major rebuilding of St. Paul's downtown was complete. Mercantile and industrial activities were still important in St. Paul, but the downtown was increasingly the location of commercial and consumer-oriented retail activities. Many earlier industrial activities had been displaced or moved to peripheral locations. The automobile had supplanted the horse, and was beginning to challenge the streetcar as a means of local transportation.

Between 1930 and 1950, the pace of downtown development slowed dramatically. A few buildings were completed, but almost all of those had been started before the Depression. A number of public works projects were initiated, including the transformation of Third Street into Kellogg Boulevard and cantilevering the roadway and a strip park out over the Mississippi River bluff. However, the combination of the Depression and World War II severely limited construction in the central business district. Choosing 1949-50 to represent this era, captures the downtown after twenty years of stagnation, and just before the Capitol Approach project. Base maps will include several fire insurance atlases, as well as planning maps.

By 1970, after the balkanization of downtown caused by the development of...
Using the Atlas for Analysis

One type of information found on the original atlas plates is the type of material used in building construction, an important consideration for fire insurance underwriters who were among the principal users of these maps. Seeing general patterns of building types and materials, however, is difficult using the original plates, both because of their limited area coverage and the amount of information competing for attention. Using the GIS map, on the other hand, buildings can easily be sorted by construction material and general patterns become immediately apparent. We can see, for example, that brick buildings were concentrated in a small downtown core, from 3rd Street (now Kellogg Boulevard), to 7th Street, Wakouta Street, to St. Peter Street, with extensions up 3rd Street to Seven Corners, near the present-day Civic Center (Figure 3). Stone was used only for major institutions, including churches and government buildings. Most wooden buildings were considerably smaller than those built of brick (Figure 4). The exceptions were the large wooden sheds built for the rail yards along the riverfront east and west of the downtown core. Detached wooden single-family homes, along with twins and row houses, were located just beyond the brick-built core, much closer to downtown than homes are today. A map of stables (which were a separate category on the original atlas plates) shows an interesting distribution pattern (Figure 5). In the downtown, they existed as large livery stables. In the residential areas surrounding the downtown, they were typically alley and backyard stables. The pattern is analogous to the current distribution of large downtown parking garages and small garages near private residences.

GIS technology also allows us to examine change over time. Looking at the same twenty-one-block area over a hundred-year period provides us with a remarkable contrast. In 1886 narrow brick buildings predominated, reflecting both typical patterns of land ownership and building technology (Figure 6). By 1928 larger buildings were the norm, sometimes taking a quarter to a half of a block (Figure 7). By 1990, after the clearances associated with urban renewal and the development of high-rise office towers, typical buildings covered entire blocks, and were linked by a skyway system (Figure 8). We often don't realize the degree to which our downtown urban environments undergo rapid and thorough change. Not a single building from the 1886 map survives in the central business core in 1990!

Adding Information from Other Sources

Including addresses for the buildings in the 1886 GIS map of downtown St. Paul allows relationships to be drawn with other sources where data are linked to address. A major source of information on occupations and land use was the business directory, the nineteenth-century precursor to our present-day Yellow Pages (Figure 9).

Figure 3. Brick and Stone Buildings in Downtown St. Paul, 1886
Listings in the business directory were organized by occupation or business type, together with the names of individuals or firms and their addresses. By putting this text information into a database, we will be able to match occupations or businesses with buildings on the basis of address, producing maps locating different types of business activities. In the same way a number of other data sources can be linked with the GIS maps of St. Paul. These include:

- views of the city
- building permit records
- promotional material from speculative real estate activity
- photographs of buildings
- tax rolls
- annual city reports, which include records of infrastructure improvements as well as maps
- city directories (precursors to our telephone white pages)
- reverse directories, organized by address and indicating the occupants of each building

Completion of the St. Paul Downtown Atlas is only the first phase of the St. Paul Downtown Project. After using the atlas to establish the kinds of change that have occurred in downtown St. Paul over the last 125 years, the development process will be analyzed. We will examine how that process has reflected changes in both the national and local economy, how it has reflected changes in technology and changes in the provision of infrastructure, and how it has reflected changes in development strategies and planning ideology. To what extent did St. Paul mirror ideas that were current in the planning ideology of the United States? Ideas about what was right or accepted had to be modified to account for local conditions. To what extent did St. Paul follow national trends? And to what extent did it diverge from them, or even take the lead?

Ultimately, the St. Paul Downtown Atlas Project will help us to understand why the downtowns of United States cities have changed so dramatically, how much of that change was incremental and unplanned, and how much was the result of conscious modification according to systematic ideas that can be deduced from local and national sources.

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