Materials for Como Park Pedestrian Bridge include engineering drawings of the bridge replacement, with pedestrian path over the bridge and a bicycle path passing underneath. Historic images of the streetcar bridge are included, as well as a brief history of the bridge and park.

## A History of Como Park

Both concrete and steel were becoming more available for bridge construction in the late nineteenth century. This inspired designs for systems of steel reinforcing to produce longer concrete spans. Austrian engineer Josef Melan introduced a system in 1892 that used arched steel beams set in concrete. Melan arch bridges could be constructed quickly and were stronger than many other designs, leading to their widespread use.

Frederick von Emperger, described as a "go-getter in engineering," came to the United States from Germany in 1893 to promote Melan's system. The following year, he oversaw the construction of the country's first Melan arch bridge near Rock Rapids, Iowa. Within ten years, there were nearly 300 Melan arch bridges in the United States, and by 1924, that number had grown to an estimated 5,000. Due to its ease of construction and aesthetic appeal, the Melan arch remained a popular bridge design in this country until the 1930s

There is "no reason why a system, which has proven better than stone, should not be extended and reach the highest span in use with iron arches."- Engineer Frederick von Emperger, whose promotion of the Melan arch popularized its use in the United States.

This 1916 photograph shows the construction of a multiple- span Melan arch bridge. The arched steel beams were placed above the formwork before the concrete was poured.

Melan arches were used for both the footbridge over the streetcar tracks and the Lexington Avenue Bridge in Como Park. The William S. Hewett Company, a prominent Minneapolis bridge contractor, designed both bridges. The five steel ribs in the footbridge's arch featured a lattice design, used instead of arched beams in Melan bridges with long spans. Two streetcars could pass beneath the clearance of the 50'-wide arch, which was both strong and beautiful.

The structure of the Melan arch is more exposed in the Como Park footbridge than in the Lexington Avenue Bridge behind it. Work on both bridges began in 1903 and was finished in August 1904.

## Restoring the Footbridge

Increasing car ownership and the TCRTC's conversion to buses resulted in the end of streetcar service in 1954. No longer needed as a grade separation, the Como Park footbridge was rarely used and fell into disrepair. After concrete began spalling off the structure and vandals destroyed the railings, the bridge was closed and the area fenced off to protect visitors.

The bridge's future brightened when the Saint Paul Parks and Recreation Department obtained funds to stabilize the structure. Engineers initially assumed that it could not be used again, but discovered that it was both physically and financially possible to completely rehabilitate the structure. In 2013, a $1.2 million project reconstructed the bridge's decorative railing and restored the concrete, returning the bridge as a functional landmark in Como Park.

The missing railing was reproduced using an original drawing from Engineering News 1905.

Streetcars to Como

From Horse Car to Streetcar

The Saint Paul City Railway used horse cars for its first route in 1872, but horses were expensive to feed and susceptible to disease and injury. As an alternative, the company tried cable cars in 1888, but an experimental electrical line in Minneapolis convinced both cities to adopt that technology. Converting from horsepower to electricity was a $6 million process that took three years to complete.

An interurban line along University Avenue linked the two cities in 1890. C0nnections grew stronger the following year when the Twin City Rapid Transit Company (TCRTC) united both cities' streetcar lines into one of the most sophisticated networks in the country. Como Park was located well outside of downtown, requiring travel by carriage or a long walk from the closest streetcar line. This limited the number of people who enjoyed improvements made to the park in the late 1880s. In 1893, TCRTC extended a line to the park with an open-air station.

Four years later, Saint Paul permitted the company to construct a line through the park that was part of a high-traffic interurban route. The city agreed to erect a pavilion in Como Park and install other attractions to draw visitors. After the line opened in July 1898, streetcars arrived daily loaded with passengers from both cities. The Como-Harriet-Hopkins line became the longest in the system and was, according to historians John Diers and Aaron Isaacs, "the most scenic, traversing some of the most beautiful neighborhoods in the Twin Cities."

Separating Traffic

In December 1902, Saint Paul's park board and the transit company agreed to realign a section of the streetcar route through Como Park and add a second set of tracks. Although extensive construction work would disrupt the park for a short time, the project would shorten the route and remove tracks along Lexington Avenue.

Park visitors would be tempted to cross the tracks, inevitably resulting in accidents, so the transit company installed a tall fence between the two sets of tracks. A curved path like the one to your left, west of the depot, led people up the slope to the pedestrian "grade separation" bridge that opened in 1904. Another grade separation was installed at the same time for automobiles traveling on Lexington Avenue. Thousands of grade separations were built across America in the early twentieth century in response to injuries and deaths at the increasingly busy intersections of cars, trains, streetcars, and pedestrians.

With the grade separation provided by the footbridge, visitors could safely cross over the two streetcar tracks to reach the new waiting station, constructed in 1905.

After streetcar service ended, the tracks and the wrought-iron fence that kept people from crossing them were removed. (Saint Paul Dispatch and Pioneer Press photograph.

Como's Early Days

Saint Paul set aside land for parks as early as 1849 but did little to develop these areas because green space was plentiful and accessible in the small metropolis. As the population grew, however, creating parks became a priority. In 1873, the city purchased land along Lake Como, a beautiful setting located a convenient distance from the city. Although many felt the $100,000 purchase was too costly, it went forward thanks to the support of prominent citizens. For fourteen years, Como Park received few improvements. When the Saint Paul Board of Park Commissioners was formed in 1887, though, its first project was to expand and develop the park. The board enlisted nationally renowned landscape architect Horace W. S. Cleveland to draft a comprehensive landscape plan. Inmates from a nearby workhouse provided much of the labor to start implementing the plan, which included a grading and constructing roads and planting more than 5,500 trees and shrubs. A Changing Landscape

Only part of Cleveland's vision for the park was completed before Frederick Nussbaumer became superintendent of the park system in 1891. While Nussbaumer carried out large parts of Cleveland's plan and appreciated the importance of preserving the natural setting, he knew that visitors also enjoyed more decorative features-and he was well aware that their taxes paid for the park's operation.

Nussbaumer created diverse and exotic gardens that drew enthusiastic crowds. Palm trees lined the Banana Way and giant lily pads floated in the Aquarium pond during the hot summer months. Elaborate topiary sculptures were also popular. Recognizing the importance of recreation, Nussbaumer developed baseball diamonds, tennis courts, and other areas for sports and play in the early twentieth century. High demand required a second round of construction in 1914, including facilities for skiing and for ice skating.

Painting the Land

Britain's Industrial Revolution created gritty urban centers. By the late eighteenth century. Nostalgia for the countryside and an increasing appreciation for nature gave rise to the "Picturesque" aesthetic, a term derived from the Italian word pitteresco ("in the manner of a painter").The Picturesque emphasized the beauty of nature and the innate, emotional experience it inspired . "

Scenic tours become popular among the leisured class and influenced many to create naturalistic landscapes at their properties. In landscape design, the Picturesque featured informal, asymmetrical plants and local vegetation.

Faced with its own Industrial Revolution and a disappearing frontier, the United States looked to Britain for models of landscape design. Landscape architects Calvert Vaux and Frederick Law Olmsted were

proponents of the Picturesque Style and used it for large-scale projects like New York City's Central Bark, influencing park designers nationwide.

“A Delightful Picture of Rural Peace"

In the nineteenth century, more Americans lived in cities than ever before. Many believed that social ills were caused when people were cut off from nature, but only those with the resources to travel could enjoy natural settings outside of urban areas. City parks were established to remedy this problem by bringing nature into the city.

The Picturesque Comes to Saint Paul

Horace W. S. Cleveland was a protégée of Frederick Law Olmsted. As people left the country for economic reasons, Cleveland believed that landscape architects should to reunite them with nature in the city. He advocated simple landscapes that promoted natural features without superfluous decoration or elaborate design.

In 1887, the Saint Paul Board of Park Commissioners hired Cleveland to create a landscape plan for Como Park. He envisioned an oasis of nature where city dwellers could escape from the unhealthy stresses of urban life. Although much of his ambitious plan was not immediately carried out, his grand vision became the foundation for the park's design.

Influenced by his work with Olmsted and his friendship with poet Henry Wadsworth Longfellow, Horace Cleveland's plan for Como Park preserved and enhanced existing features with curvilinear paths, naturalistic planting arrangements, and numerous trees.