IV. Historic Context and Precedent Case Studies

Chapter four provides a summary of the Historic Context and Precedent Case Studies for the Warehouse District Heritage Street Plan. The Historic Context summarizes the contribution of the historic paving to the signifigance and integrity of the Warehouse Historic District. The second part of this Chapter provides examples of how other industrial historic districts across the nation have achieved access for all modes of transportation, complied with the Americans with Disabilities Act (ADA), retained historic street character, and dealt with confined right-of-ways.

Historic Context

This historic context study was prepared as part of the Heritage Street Plan to examine the significance of the Warehouse Historic District's remaining historic wood, brick, and granite paving materials. The purpose of this study is to establish that the brick, stone, and granite pavements are among the most important features that contribute texture and scale, as well as utility, to the significance and integrity of the Warehouse Historic District.

The following summary details the period of significance and history of the Warehouse District and provides insight for the different types of street pavements and the significance of the street pavements within the Warehouse Historic District.

Street Paving in the Minneapolis Warehouse Historic District: A Public Works Context, 1882-1936 provides a contextual background for the Minneapolis Warehouse District Heritage Street Plan. An overview of the development of this area is provided in the *Minneapolis Warehouse Historic District Designation Study (2009)*. Research for the context study relied on *Annual Report of the City Engineer of the City of Minneapolis (1889-1934)*, other public works supplemental reports, *Minneapolis Tribune* articles (ca. 1972-1922), engineering periodicals, and published works. Photographs from the Minnesota Historical Society provided a visual record of paving changes throughout the late nineteenth and early twentieth centuries.

As determined by the local designation study, the period of significance for the Warehouse District is from 1865 to 1930. These dates span from construction of the earliest extant building, the Pacific Block at 224 Washington Avenue N., to the decline of the area during the Depression. The history of paving improvements within the district boundaries begins in the 1880s. Each decade of subsequent paving work reflects national planning and engineering trends as well as site, budget, and political conditions unique to Minneapolis. Concurrently, the Minneapolis City Engineer also oversaw extensive water, sewer and bridge improvements that underpinned the area.

During its first decades, the area within the boundaries of today's Warehouse District comprised retail businesses, dwellings, and churches as well as railyards, factories and shops. By 1900, once light-duty streets required upgrading to support the demands of increasingly heavy traffic serving railyards, warehouses, factories, and many other commercial and industrial businesses. Economic expansion would require not only new streets and bridges, but design of an extensive water and sewer system. Minneapolis looked to other cities across the county for comparative information about the success and failure of various materials, and Minneapolis engineers including Andrew Rinker were leaders in the debate over the merits of creosoted wood block paving

The improvement of the city's streets was an important aspect of the early-twentieth-century City Beautiful Movement and leaders such as Charles Loring were advocates of modern paving; Loring and others particularly endorsed creosoted wood block for its durability and sound

qualities. Between 1882 and 1940, streets in the Warehouse District were paved with a succession of materials tested across the city and, after about 1900, was also adapted to the transition from horse-drawn conveyances to automobiles and trucks. Granite, cedar block, creosoted wood block, vitrified brick, sandstone, asphalt, and concrete were laid within the boundaries of the present-day Warehouse Historic District at various times and, in some cases, removed soon after installation due to failure. Selection of the best paving materials and techniques for the Minneapolis landscape and climate would be based on decades of research and much trial and error. By 1889 the entire city had 24 miles of paved streets. About 16 miles were in cylindrical cedar block laid on a plank bed, rammed with fine gravel and cemented with coal tar; four miles were granite, and one-half mile was asphalt. Four years later, in 1893, 40 miles of paved streets included about 33 miles paved with cedar block. Natural or artificial stone ("cement") sidewalks lined the streets in the central business district; plank sidewalks also remained in use.

By 1917, following increased national standardization of materials and installation practices, paving within the boundaries of the present-day district included a mix of creosoted wood blocks, asphalt, brick, sandstone and granite. Despite the growing popularity of asphalt, traditional materials remained in limited use. Re-cut granite, for example, replaced sandstone on 2nd Street N. from 1st Avenue N. to the railroad bridge. In 1930, 5th Avenue N. from Washington Avenue to 3rd Street N. was laid in brick.

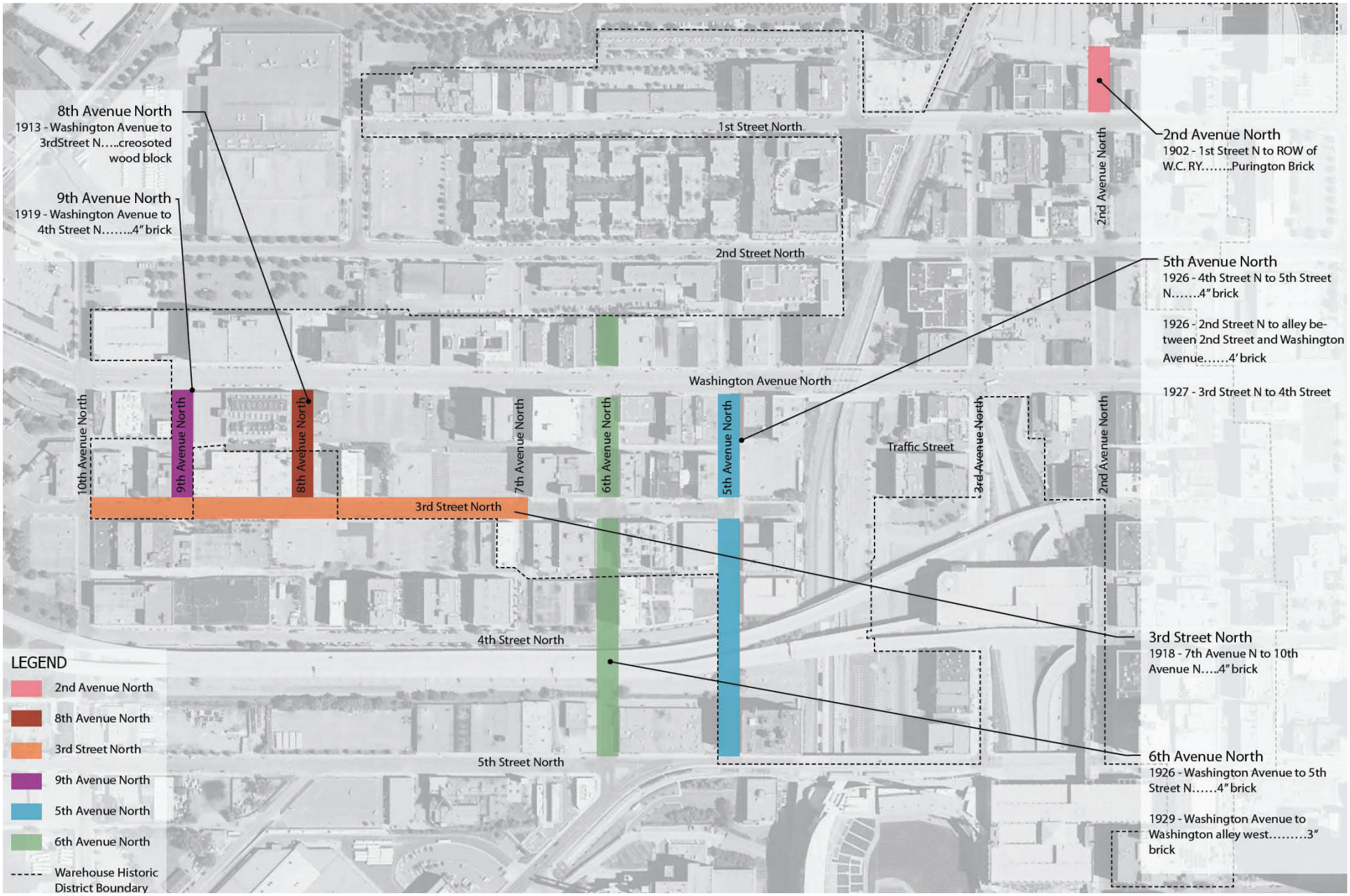
Extensive areas of brick and granite paving were covered over with asphalt following World War II. Wood block was apparently removed prior to resurfacing. Complete reconstruction of most Warehouse District streets was apparently not a priority, resulting in significant remaining areas of brick paving, sections of granite and creosoted wood block, and granite curbing. The yearly progress of paving programs in the Warehouse District is documented by *Office of the CityEngineer's Annual Reports*. A summary of the information in the reports is included in Appendix 2.

The rehabilitation and retrofitting of many Warehouse Historic District buildings began in the 1970s. Along with new construction, revitalization of the area has brought scrutiny to the survival and condition of historic paving materials and infrastructure such as loading docks.

Heritage Street Paving Map - Period of Signifigance

The following map identifes the specific Heritage Streets that were constructed with brick, wood or granite pavements during the period of signifigance (1865 to 1936) in the Historic Warehouse District. The year of construction for the Heritage Streets are as follows:

- 1902 - 2nd Avenue North (*1st Street North to ROW of W.C.RY)*. Paved with Purington Brick.
- 1913 - 8th Avenue North *(Washington Avenue to 3rd Street North).* Paved with creosoted wood block.
- 1918 - 3rd Street North *(7th Avenue North to 10th Avenue North).* Paved with 4" brick.
- 1919 - 9th Avenue North *(Washington Avenue North to 4th Street North).* Paved with 4" brick.
- 1926 - 5th Avenue North *(4th Street North to 5th Street North)* .Paved with 4" brick.
- 1926 - 5th Avenue North *(2nd Street N to alley between 2nd Street and Washington Avenue).* Paved with 4' brick to replace (1903) sandstone blocks
- 1926 - 6th Avenue North *(Washington Avenue North to 5th Street North).* Paved with 4" brick to replace (1911) sandstone blocks
- 1927 - 5th Avenue North *(3rd Street North to 4th Street North).* Paved with 4" brick
- 1929 - 6th Avenue North *(Washington Avenue to Washington alley West)*. Paved with 3" brick
- 1930 - 5th Avenue North *(Washington Avenue to 3rd Street North).* Paved with 4" brick



Heritage Street Paving Map - Period of Signifigance

Precedent Case Studies

Case study research performed for the Minneapolis Warehouse District Heritage Street Plan looked to historic warehouse districts and/or cities for guidance on how to preserve historic infrastructure while accommodating ADA requirements, confined right of ways, and the need for street and sewer repairs.

Six sites were studied based on the belief they would provide needed precedence, best practices, and/or creative design solutions. All sites identified displayed characteristics similar to those of the Minneapolis Warehouse District.

Plans, drawings, policies, and guidelines gathered from each identified site informed the project team on topics such as infrastructure retention, ADA compliance, and/or solutions to constricted right of ways. Collected facts were also used to compile a hybrid of "best practices" in relation to the retention of historic infrastructure.

Purpose

The use of precedent to inform the development of the Warehouse District Heritage Street Plan provided distinct chunks of knowledge, predictability in outcome, acceptance of design decisions, and overall staff efficiency.

Overarching Lessons

- Many cities that have retained their historic street materials and related infrastructure have implemented a heritage streets maintenance plan and have separate funds available for needed maintenance.
- Successful district rehabilitation projects used a combination of funding sources including (but not limited to) governmental funding, grants, tax credits, private investments, and TIF.
- Flexibility of design in historic districts can be granted by governing entities when focus of project serves a communal need, i.e. complete streets, ADA accessibility, sustainabililty, etc.
- Creative design options are necessary to make streets/district ADA compliant (sidewalk areas adjacent to historic infrastructure, accessibility in industrial districts with active loading areas, exterior elevators on loading docks, building orientation access, ADA compliant pavers, narrow public ROW, PED strips, loading dock ramps, etc.).
- "Best Practices" for the removal, repair and replacement of historic pavements. Also an understanding of general maintenance practices and policies for street repair and utility work.
- Downtown Improvement Districts can be instrumental in executing projects such as historic street restoration.
- Expect most projects to be multi-year and multi-phased.
- Natural ecology as a storm water management tool can function in an historic district.

Process

To identify cities and/or historic districts that had addressed issues similar to those previously cited, we reached out to numerous professionals in fields related to architecture, city planning, and heritage preservation.

After reviewing all suggestions, the following cities were selected as case studies:

1. Dubuque, IA
2. DUMBO District, Brooklyn, New York, New York
3. Philadelphia, PA
4. Rock Island, IL
5. Sacramento, CA
6. St. Paul, MN in relation to the Ramsey and Crocus Hill Street Replacement Project

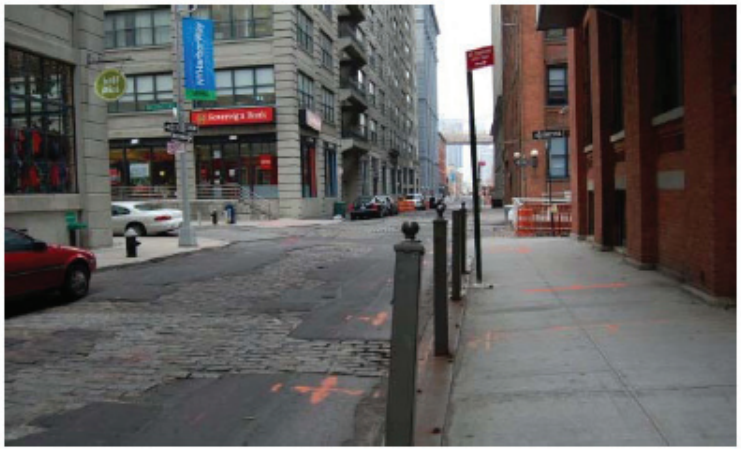
Phone interviews were conducted with City staff, planning staff, and local organizations regarding their warehouse districts and/or street materials. A set list of questions was used to provide continuity of information. Key contacts were asked to provide supporting documentation.

A summary of each precedent study can be found in Appendix 2 of this report.

10th Street to 11th Street. Looking east from 10th Street, existing conditions (left) and with proposed improvements (right).

11th Street to 12th Street. Looking east from 11th Street, existing conditions (left) and with proposed improvements (right).

Case Study: Sacramento, CA - "R" Street Redevelopment



BEFORE reconstruction. October 2009, Water Street looking towards Washington St.

AFTER reconstruction. October 2010.

Case Study: Brooklyn, New York - Dumbo District Street Reconstruction

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