ANALYSIS OF EFFECTS FOR THE PROPOSED PILLSBURY "A" MILL COMPLEX PROJECT MINNEAPOLIS, HENNEPIN COUNTY, MINNESOTA

Submitted to:
City of Minneapolis

Submitted by:
The 106 Group Ltd.

February 2005

ANALYSIS OF EFFECTS FOR THE PROPOSED PILLSBURY "A" MILL COMPLEX PROJECT MINNEAPOLIS, HENNEPIN COUNTY, MINNESOTA

SHPO File No. 2003-3346
The 106 Group Project No. 03-14b

Submitted to:
The City of Minneapolis

Submitted by:
The 106 Group Ltd.
The Dacotah Building
370 Selby Avenue
St. Paul, MN 55102

Report Author:
Betsy H. Bradley, Ph.D.

February 2005

MANAGEMENT SUMMARY

This report has been prepared to address cultural resource and historic preservation issues for an Environmental Impact Statement (EIS) regarding the Pillsbury "A" Mill Complex project (the project) and to assist in consultation that may be necessary as part of the environmental review process. As mandated by the EIS Scoping Decision Document, the report describes the resources affected by the project and evaluates direct project effects using the *Secretary of Interior's Standards for Rehabilitation* and the pertinent regulatory guidelines adopted by the Minneapolis Heritage Preservation Commission (HPC). Accompanying analysis addresses the visual and cumulative effects of the Pillsbury "A" Mill Complex project and two additional projects currently under review, The Phoenix and the 520 and 521 2nd Street SE projects.

The project is located within the National Register of Historic Places (NRHP) St. Anthony Falls Historic District, a group of significant archaeological, historical, and architectural properties. The historic district is managed as a local historic district by the Minneapolis HPC, which has adopted a set of guidelines for sub areas of the district. The project is located in the East Bank Milling Area (EBMA) portion of the historic district, which is both the setting for and the area to be impacted by the project. The Pillsbury "A" Mill Complex project proposes the rehabilitation of a group of historic buildings in the Pillsbury "A" Mill complex, including the Pillsbury "A" Mill (a National Historic Landmark [NHL]), for residential and some limited retail and commercial use. The project proposes the construction of six new buildings, also for residential use.

Historic Preservation Component. The Pillsbury "A" Mill Complex project has a strong historic preservation component that would meet the *Secretary of Interior's Standards* and insure the long-term preservation and use of the Pillsbury "A" Mill NHL, as well as seven additional historic buildings and structures. The project would result in the loss of one contributing property, the Concrete Elevator in most of the alternatives, and in this way does not meet the *Secretary of Interior's Standards*. However, with the retention and rehabilitation of the Red Tile Elevator, the Pillsbury "A" Mill complex would continue to have all of the important property types for, and characteristic features of, a flour milling operation. The project meets the *Standards* with regards to maintaining the historic street pattern of the EBMA, minimizing the impact of parking, and addressing archaeological resources.

New Construction Component. The proposed new construction component of the project does not, however, meet the *Secretary of Interior's Standards* for compatible new buildings in a historic district. The extent and scale of the new construction is the basis for it being incompatible with adjacent historic buildings and structures and intrusive in the EBMA setting. However, as this report illustrates, this incompatibility is virtually inevitable in a location with the considerable amount of land area available for new construction in the Pillsbury "A" Mill Complex project. The finding that the various configurations of the proposed new construction in Alternatives 1 through 4 are incompatible and intrusive supports the conclusion that it would be difficult to propose

new construction that would be fully compatible. Alternatives 1 and 3 include residential towers that would rise above the Red Tile Elevator, the tallest historic structure in the EBMA, the height of which has been established in the HPC guidelines as a cap for new construction. Though these two alternatives do not meet the guidelines for maximum height, the location of the tallest proposed towers helps to maintain the presence of the Red Tile Elevator as the tallest of the historic resources.

Visual Effects. The Pillsbury "A" Mill Complex project, and other projects included in the analysis, would contribute to visual effects on the view sheds of the Waterpower Area of the St. Anthony Falls Historic District, the PIZ for visual effects. This PIZ for visual effects is larger than that for cumulative effects in order to encompass views to, from, and within the project areas. Obstruction of the views of the Pillsbury "A" Mill and its associated historic complex is the most critical type of visual effect. The three proposed projects would have visual effects by introducing a shift of emphasis from the historic milling complex to the new residential area that would be created, affecting the perception of organic change over time, and reducing the presence of the historic district. These types of changes to views occur often in urban areas, including those with historic resources. Ultimately, because the projects would not obstruct views of the Pillsbury "A" Mill complex, the visual effects are not considered to be adverse.

Cumulative Effects. The determination of the three projects' impacts as adverse cumulative effects is based on the loss of contributing properties and introduction of incompatible and intrusive new construction. However, it is important to note two points concerning this conclusion. Given the size of the area within the historic district that is comprised of non-contributing properties and therefore likely to be redeveloped, it is possible that the overall effect of the anticipated new construction would be incompatible due to its extent and scale; the finding of adverse cumulative effect could be hard to avoid. Also, despite the effects of the new construction on its setting, the Pillsbury "A" Mill complex of resources would continue to convey the historic significance of water power use and flour milling.

Conclusions. While the Pillsbury "A" Mill Complex project does not meet all of the *Secretary of Interior's Standards for Rehabilitation* and related guidelines, it does meet many of them. The project is aligned with the goals adopted for the St. Anthony Falls Historic District in 1980, although it challenges the height restriction set for the EBMA. The new construction component of the project does not meet the *Secretary of Interior's Standards* for compatibility and would pose an adverse effect on the Pillsbury "A" Mill complex and the EBMA. There would be, however, no adverse effect on the Pillsbury "A" Mill NHL. Overall, the Pillsbury "A" Mill Complex project presents historic preservation merits, as well as adverse effects, components that are often inherent in a project of its scope and scale. The Pillsbury "A" Mill Complex, The Phoenix, and the 520 and 521 2nd Street SE projects are considered to pose adverse cumulative effects due to the loss of contributing properties and the introduction of incompatible and intrusive new construction; they are not considered to have adverse visual effects.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

1.0 INTRODUCTION

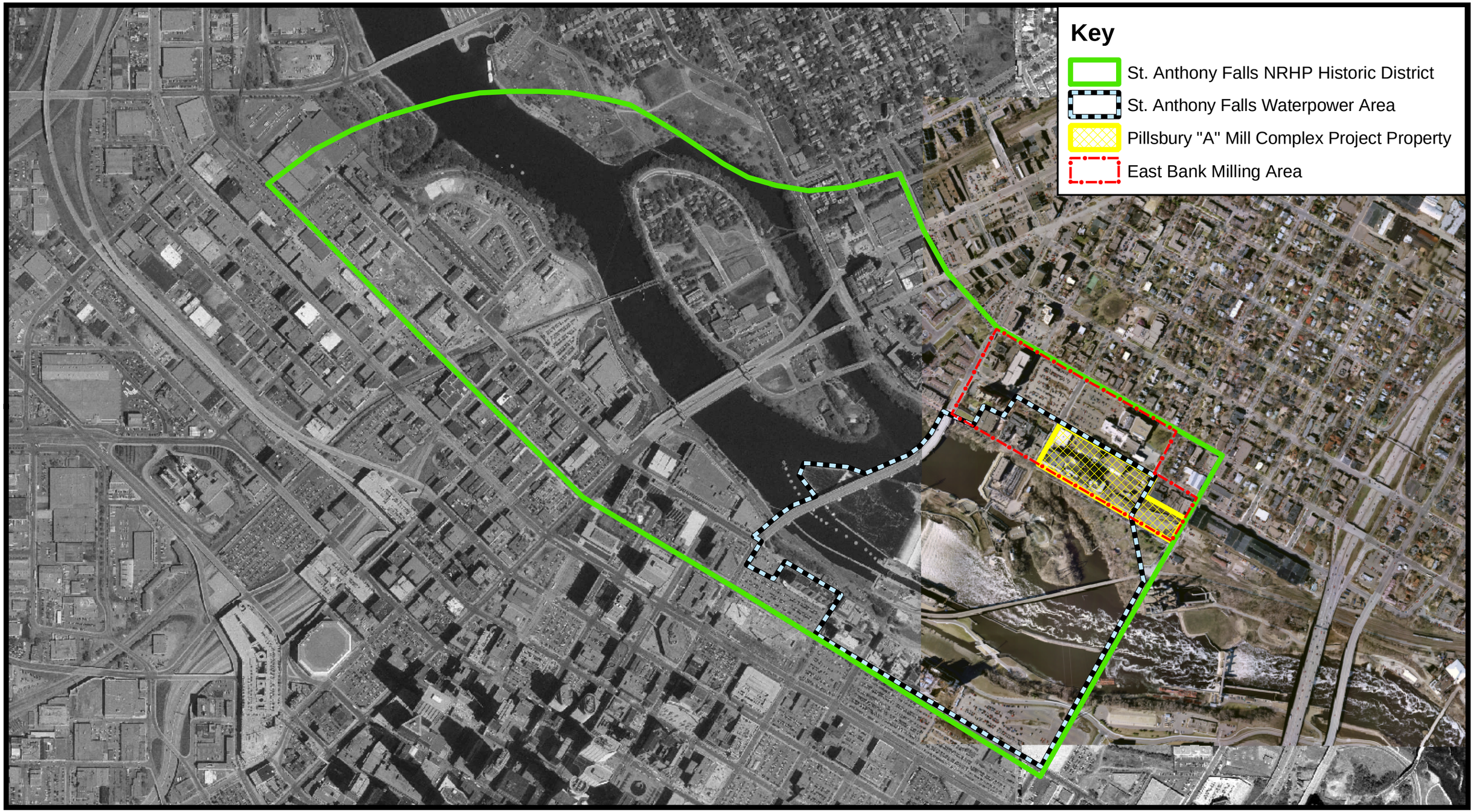
This report has been prepared to address cultural resource and historic preservation issues for an Environmental Impact Statement (EIS) regarding the Pillsbury "A" Mill Complex project (the project) and to assist in consultation that may be necessary as part of the environmental review process. The report describes the resources affected by the Pillsbury "A" Mill Complex project (the project) and evaluates the effects of that project in terms of the *Secretary of Interior's Standards* and guidelines adopted by the Minneapolis Heritage Preservation Commission (HPC) that cover the project area. This analysis of effects also addresses the visual and cumulative effects of two additional projects currently under review. The EIS follows an Environmental Assessment Worksheet (EAW) for the Pillsbury "A" Mill Complex project that was prepared in 2004.

The Pillsbury "A" Mill Complex project proposed the rehabilitation of a group of historic buildings in the Pillsbury "A" Mill complex, including the Pillsbury "A Mill, a National Historic Landmark (NHL). The project proposes the construction of six new buildings and the demolition of one historic structure. The project is located within the National Register of Historic Places (NRHP) St. Anthony Falls Historic District, a group of significant archaeological, historical, and architectural properties (Figures 1 and 2). The historic district is also reviewed as a local historic district by the Minneapolis HPC, which has adopted a set of guidelines for the district.

1.1 PROJECT REVIEW AND REGULATORY FRAMEWORK

Minnesota Historic Sites Act (M.S. 138-661-138.669) establishes a consultation process for projects that will affect historic sites. As federal mandates apply to federal undertakings, so this state mandate applies to any project receiving funding or licensing by the "state, or state departments, agencies, and political subdivisions" (M. S. 138.666). The Minnesota Historic District Act (M.S. 138.71-763) included the St. Anthony Falls Historic District is one of the districts authorized by the act and mandated a St. Anthony Falls Heritage Board to develop a comprehensive plan for the area.

The Deputy State Historic Preservation Officer (SHPO) recommended that the guidelines in the *Secretary of Interior's Standards for Rehabilitation* (National Park Service 2004b) and the Minneapolis HPC *St. Anthony Falls Historic District Guidelines* (Minneapolis HPC 1980) be used to analyze project-related impacts to historic resources for the Pillsbury "A" Mill Complex project (Bloomberg 2004). The Scoping Document for the EIS identified the same set of standards and guidelines to be used to evaluate the potential effects of the proposed Pillsbury "A" Mill Complex project (City of Minneapolis [Minneapolis] 2004a).



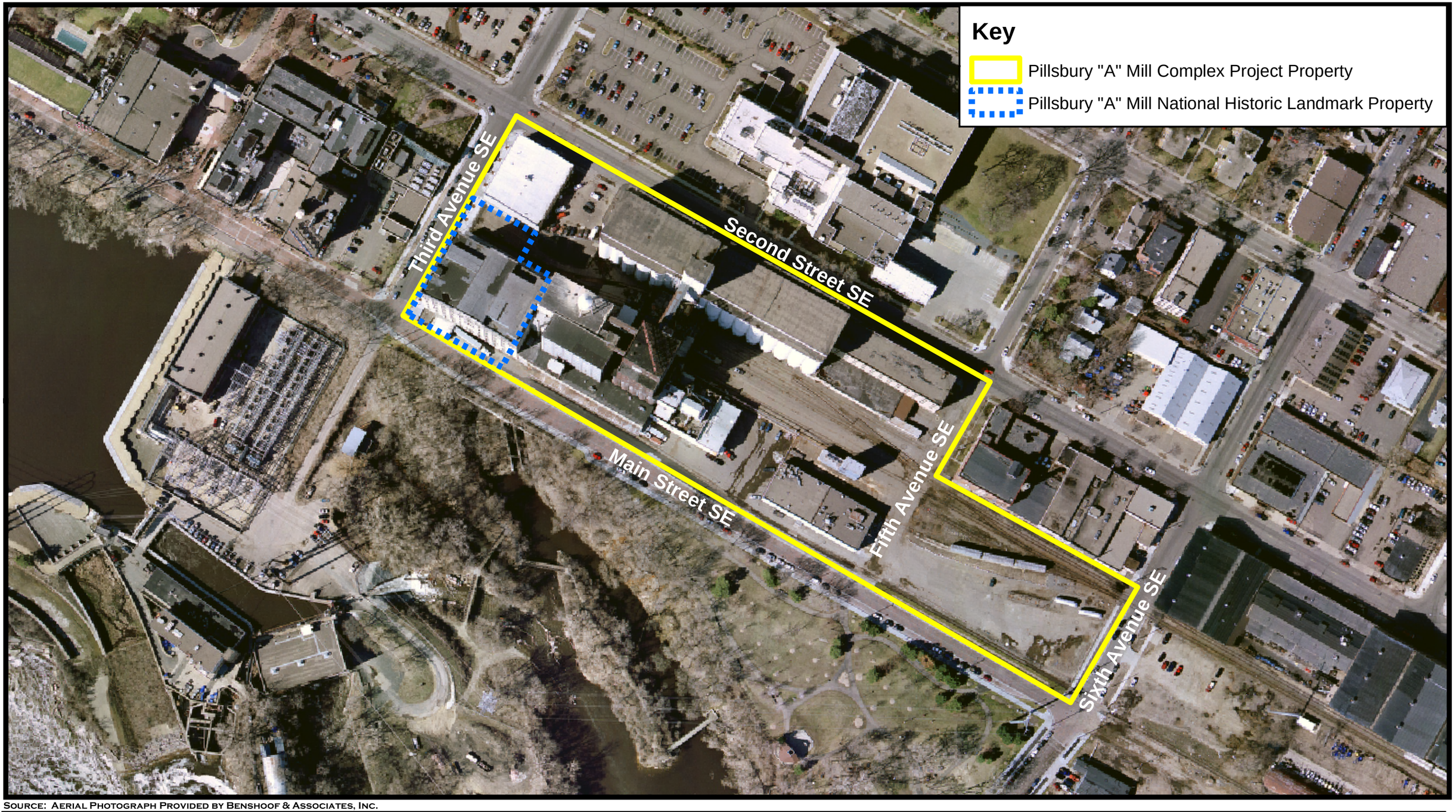
SOURCE: AERIAL PHOTOGRAPH PROVIDED BY BENSHOOF & ASSOCIATES, INC.

Pillsbury "A" Mill Complex Project
Analysis of Effects
Minneapolis, Hennepin County, Minnesota

Project Location within the St. Anthony Falls Historic District

N
W E
S

Figure 1



SOURCE: AERIAL PHOTOGRAPH PROVIDED BY BENSHOOF & ASSOCIATES, INC.

Pillsbury "A" Mill Complex Project
Analysis of Effects
Minneapolis, Hennepin County, Minnesota

Project Site and Surrounding Area

N
W E
S

Figure 2

1.1.1 Secretary of Interior's Standards for Rehabilitation

The U. S. Department of the Interior developed the *Secretary of Interior's Standards for Rehabilitation* in 1978. These standards are part of the more encompassing *Secretary of the Interior's Standards for the Treatment of Historic Properties*. The National Park Service (NPS) used the standards initially to evaluate applications for the Historic Preservation Fund grand-in-aid program and Tax Act projects; many states and municipalities have adopted them to guide the evaluation of project proposals. The standards are intended to apply to a wide variety of resource types, historic districts as well as buildings, sites, structures and objects. The standards, revised in 1992, were codified as 36 CFR Part 68 in the July 12, 1995 Federal Register (NPS 2004a).

1.1.2 Minneapolis HPC St. Anthony Falls Historic District Regulation

The Minneapolis HPC reviews projects in this historic district under the provisions of the Minnesota Historic District Act (Bloomberg 2004:2). The Minneapolis HPC issues Certificates of Appropriateness for projects it approves and has the responsibility to review the impacts of the proposed project on cultural resources.

The Minneapolis HPC adopted the St. Anthony Falls Historic District Guidelines in June 1980. In addition to supporting the stated purpose of the preservation, protection and perpetuation of the historic district, the regulations set policy directions for future land use within the district. The guidelines were intended to:

1) preserve the memory of past events;
2) encourage sympathetic new development;
3) encourage and enable access to the river; and
4) foster along the riverfront and adjacent areas a viable community geared to the pedestrian (Minneapolis HPC 1980).

The St. Anthony Falls Historic District Guidelines also provide a framework under which the HPC would evaluate proposals for new construction and the rehabilitation of existing buildings and structures within the historic district. The district was divided into 11 areas, and guidelines were tailored to the various types of historic resources. The guidelines mandate that infill construction be visually compatible with historic structures in the sub-area with regard to a number of design elements.

1.2 PROJECT ZONING OVERLAY DESIGNATIONS

1.2.1 The Mississippi River Critical Area and Minneapolis Shoreland Overlay District

The Mississippi River Critical Area is a 72-mile-long corridor, a management zone established by the Critical Area Act in 1973 (Minnesota Statutes, Chapter 116G). The

goals of the act are implemented through the designation of four types of districts along the river and a set of rules and guidelines for each district, detailed in State Executive Order 79-19, that each community must incorporate into its Critical Area plan. The Pillsbury "A" Mill Complex project is located in the Urban Diversified District. Within urban diversified districts the lands are to be used and developed to maintain the present diversity of commercial, industrial, residential and public uses. As lands are used and developed, historic sites and areas, as well as natural, scenic, and environmental resources are to be protected and public access to the riverfront is to be expanded. New commercial, industrial, residential, and other uses may be permitted if they are compatible with these goals (Mississippi National River and Recreation Area 2004a).

The City of Minneapolis Zoning Code includes a Shoreland Overlay District (Shoreland), which was established to preserve and enhance the environmental qualities of surface waters and the natural and economic values of shore areas within the City adjacent to protected waters, including the Mississippi River (Minneapolis 2004b). The Shoreland boundaries extend 300 feet from the Mississippi River, or the landward extent of its floodplain, whichever is greater. A small portion of the Pillsbury "A" Mill Complex project is within this overlay district. The 300-foot river set back line curves across the block between 3rd and 5th Avenues SE and includes the portion of the historic complex of buildings from the "A" Mill to the Red Tile Elevator. The line angles to Main Street SE somewhat west of 5th Avenue SE. This overlay district limits the height of all structures to 2.5 stories or 35 feet in the project area. The height limitations of principal structures may be increased by conditional use permit. When a conditional use permit is requested, the following factors are to be considered:

1) Access to light and air of surrounding properties;
2) Shadowing of residential properties or significant public spaces;
3) The scale and character of surrounding uses; and
4) Preservation of views of landmark buildings, significant open spaces or water bodies.

In addition, the City of Minneapolis Zoning Ordinance includes a Mississippi River Critical Area Overlay Zoning district that corresponds to the Mississippi River Critical Area Corridor (Minneapolis 2004b). The entire Pillsbury "A" Mill Complex project site is located in this zoning overlay. Within this overlay district, the Shoreland Overlay District regulations apply and the same factors are to be considered when a conditional use permit is under consideration.

1.2.2 Mississippi National River and Recreation Area

The Mississippi National River and Recreation Area (MNRRA), a 72-mile long corridor with boundaries equivalent to the Mississippi River Critical Area, was established in 1988. One of the goals in the establishment of this NPS unit was to encourage coordinated management of the river. MNRRA was mandated: 1) to protect, preserve and enhance nationally significant resources in the Mississippi River corridor through the

Twin Cities metropolitan area; 2) to coordinate government programs in the corridor; and 3) to provide a management framework to assist the state of Minnesota and units of local government in the development and implementation of integrated resource management plans (MNRRA 2004b).

The comprehensive management plan adopted by MNRRA in 1995 (MNRRA 2004b), includes a cultural resources management section. MNRRA supports the efforts of state and local governments to oversee the preservation of historic structures and cultural landscapes in their present condition, if possible, or the rehabilitation of those resources for contemporary uses if they cannot adequately serve in their current condition, and if rehabilitation will not alter integrity or character. The management plan also encourages economic activities that preserve and rehabilitate historic resources in the corridor consistent with other policies. The land and water use section of the MNRRA comprehensive management plan notes that residential land use is a legitimate use in the river corridor. Such use should remain predominant where it already is and be developed in other areas.

Through these broad policy goals, MNRRA supports the more specific zoning overlay and cultural resource management programs of state and local governments, including the Mississippi River Critical Area Corridor.

The cultural resources issues related to the Mississippi River Critical Area and the management tools implemented to enact that designation are the following:

- the preservation, rehabilitation, and appropriate use of historic properties;
- the preservation of views of "landmark buildings" as development takes place; and
- the use of appropriate scale for new development and the maintenance of access to light and air for adjacent properties, including historic ones.

1.3 REPORT ORGANIZATION

The historic resources with potential effects from the project are described in Section 2. The Pillsbury "A" Mill Complex project is introduced in Section 3. Section 4 analyzes the project effects in terms of the *Secretary of Interior's Standards* and the Minneapolis HPC Guidelines. Visual impacts and cumulative effects and are addressed in Sections 5 and 6, respectively. Section 7 provides a summary of the analysis.

2.0 THE HISTORIC RESOURCES WITH POTENTIAL EFFECTS

The Pillsbury "A" Mill Complex project site encompasses the Pillsbury "A" Mill, one of the state's NHLs, and related historic resources of the "A" Mill complex, which occupies two city blocks. It also includes half of an adjacent block (the East Block), which was also part of the Pillsbury complex during the mid twentieth century. The project site is located within the NRHP-listed St. Anthony Falls Historic District (see Figure 1), which includes properties on both sides of the Mississippi River. The project is located in the East Bank Milling Area (EBMA), which is a counterpart to the West Bank Milling Area across the river. The noteworthy Stone Arch Bridge is within the historic district. The Twin City Rapid Transit Company Steam Power Plant, currently the University of Minnesota's Steam Plant, located close to the project area, is listed also on the NRHP, but is outside the historic district.

2.1 THE ST. ANTHONY FALLS HISTORIC DISTRICT

The St. Anthony Falls Historic District was listed on the NRHP in 1971 and was included in the Minnesota Historic District Act of 1971. The boundaries for the district seem to have been based more on the thematic concept of the history of the St. Anthony Falls area than on the location, nature, and integrity of historic and archaeological resources. The northern boundary of the district was altered in 1973. A study of the district completed in 1992 was undertaken, in part, due to the shortcomings of the original district nomination. The boundary of the district and a coherent theme and statement of significance for the district were issues addressed in that work. The 1992 study identified a single unifying theme for the district—waterpower development and use—and provided a significance statement for an area within the district identified as the St. Anthony Falls Waterpower Area (see Figure 1). The SHPO considered using the proposed boundaries of the St. Anthony Falls Waterpower Area as the new boundaries for the historic district. However, because the proposed boundary change was based on thematic appropriateness rather than the loss of integrity or resources, the boundaries of the district, as altered in 1973, were retained. The St. Anthony Falls Waterpower Area was identified as a thematic component of the larger district (Hess and Kudzia 1992:introductory statement).

A study of the St. Anthony Falls Historic District that focused on preservation planning (MacDonald and Mack 1979) and a resulting publication, *Saint Anthony Falls Rediscovered* (Minneapolis Riverfront Development Coordination Board [MRDCB] 1980), divided the historic district into five thematic neighborhoods. The EBMA[1] (see Figure 1), one of these neighborhoods, is dominated by the large Pillsbury "A" Mill complex and two early twentieth-century hydroelectric facilities: the Main Street Hydroelectric Station and the Hennepin Island Hydroelectric Plant.

[1] The terms "East Bank Milling Area" and "Left (East) Bank Milling Area" term used in the Minneapolis HPC guidelines refer to the same group of blocks on the east side of the Mississippi River. This report uses "East Bank Milling Area," abbreviated to EBMA.

Most of the archaeological, historical, and architectural resources in the vicinity of the Pillsbury "A" Mill Complex project are within the EBMA, the portion of the St. Anthony Falls Historic District that is the geographical and historical context for the project area. The St. Anthony Falls Waterpower Area provides a somewhat broader context for the Pillsbury "A" Mill Complex project location. The 1992 study of the area identified contributing resources related to the waterpower theme (Hess and Kudzia 1992).

The updated documentation for the St. Anthony Falls Historic District NRHP nomination prepared in 1992 summarizes the significance of the St. Anthony Falls Waterpower Area in the historic district as its ability to represent the culmination of nineteenth-century American direct-drive waterpower development. Its areas of significance are engineering and industrialization. The summary suggests that the most significant resources in the historic district are those relating to the area's identity as a great waterpower distribution system and flour-milling district (Hess and Kudzia 1992). The flour milling industry that developed in the waterpower district presented the convergence of a number of factors that supported the concentration of the industry, including a cheap source of power, a favorable railroad transportation system, and the adoption of inventions and technical superior milling techniques as they became available by mill managers (Kuhlmann 1929:321). The flour-milling component of the St. Anthony Falls Waterpower Area represented a concentration of an important industry during the late nineteenth and early twentieth centuries before various forces caused it to decentralize.

Neither the original NRHP nomination, nor the 1992-updated documentation for the nomination, highlights the historical significance of the industrial operations—the furniture factories, iron works, and other businesses—that were located at the perimeter of the Saint Anthony Falls Historic District and that did not utilize waterpower. However, the commercial and industrial buildings that housed these enterprises have historic significance related to the broader industrial and commercial growth of Minneapolis during its flour-milling era. Neither the NRHP nomination nor the 1992 updated documentation for the nomination addressed architectural significance or made the argument explicitly or identified properties with significance under Criterion C. However, it is evident that a few buildings, including the Pillsbury "A" Mill and the Pracna Building, have architectural significance in addition to historic significance.

Though it had the same waterpower development advantages as the west side, the EBMA has a history quite different than the West Bank Milling Area. This disparity is due primarily to the weak role of the old St. Anthony Falls Water Power Company and its lack of a coherent development and management plan for waterpower. After James J. Hill acquired control of the waterpower system under development in 1880, a waterpower canal was built under St. Anthony's Main Street on the East Side to serve the Pillsbury "A" Mill, then under construction, and the adjacent smaller Phoenix Flour Mill. While several milling enterprises developed and flourished in the West Bank Milling Area across the river, the Pillsbury "A" property became a mill district in itself, especially after it took over the Phoenix Mill property. The other prominent industry on the east bank, a group of sawmills that was positioned on a platform on the St. Anthony

Falls Dam's east wing, was important from the late 1850s through the late 1880s, when a fire destroyed the mills and only one was rebuilt. The hydroelectric industry replaced saw milling and represents an important sub-theme for the historic district (Hess and Kudzia 1992).

2.2 THE PILLSBURY "A" MILL COMPLEX

The most significant resource in the EBMA of the St. Anthony Falls Historic District is the Pillsbury "A" Mill building. The historic significance of the property was recognized as early as 1934 when it was recorded by the Historic American Building Survey (HABS) (HABS 1934). The Pillsbury "A" Mill was designated as a NHL in 1966 and listed individually on the NRHP that same year. The boundaries for both the NHL and NRHP individual nomination were drawn to include the "A" Mill and the Bran House (no longer standing); these two buildings erected in 1881 were the first components of the Pillsbury Mill complex. The NHL boundary area is a 200-foot by 150-foot parcel at the corner of Main Street SE and 3rd Avenue SE (see Figure 2).

The other attached buildings that comprise the larger Pillsbury "A" Mill complex are contributing properties in the St. Anthony Falls Historic District (Hess and Kudzia 1992:7.25-7.28). The contributing resources in the complex are eight buildings and a railroad spur; two non-contributing buildings also stand on the property.

2.2.1 The Pillsbury "A" Mill

The Pillsbury "A" Mill was constructed in 1881 to be the flagship flour mill of C. A. Pillsbury and Company. Charles Pillsbury planned the mill to be larger and more technologically advanced than any other mill in the country and also to have a pleasing aesthetic. In a move unprecedented by mill owners in Minneapolis, Pillsbury hired architect Leroy S. Buffington to design the mill building. The engineering firm of Gunn & Cross, acting as mill engineers, selected and installed equipment in the facility. The completed mill met all of Pillsbury's expectations. An operation capable of producing a record capacity of 4,000 barrels of flour per day was housed in a building with a carefully designed limestone exterior. The capacity of the mill eventually reached 17,500 barrels per day. The Pillsbury "A" Mill was a world leader in flour production from the early 1880s to circa 1920. Though sold to Archer Daniels Midland, the mill continued to be used for flour production until 2003 (Ferrell 1981a; HABS 1987 No. MN-29-5A; Hess and Kudzia 1992; Lissandrello 1975).

The NRHP nomination form prepared for the Pillsbury "A" Mill in 1975 has a brief statement of significance for the property, as was common practice at the time. The period of significance was indicated to be 1800-1899 and "industry" was noted as the area of significance. The statement of significance notes that the property was one of the "giant flour mills that made Minneapolis the milling capital of the nation from 1880 to 1930 [that] still stands" (Lissandrello 1975:4). The size and advanced design of the mill were noted. The summarizing statement asserts, "the 'A' Mill was a masterpiece of

industrial design, a standard from which all other mills of its time were measured" (Lissandrello 1975:4). The status of the building was not diminished by the structural failure that required a reconstructed internal framing system and exterior concrete buttresses, work undertaken in 1913 (Ferrell 1981b:14, 18).

The study of the St. Anthony Falls Historic District completed in 1992 (Hess and Kudzia) did not address the significance of individual properties. This document identifies a St. Anthony Falls Waterpower Area within the historic district and states that it has national and state significance under Criterion A as an exceptional example of waterpower development and under Criterion C for engineering significance as a technological system (Hess and Kudzia 1992:8.9). Since the Pillsbury "A" Mill complex utilized the waterpower of St. Anthony Falls and related technology, it is directly associated with the significance of the historic district under Criteria A and C and has similar individual significance. The early documentation of the Pillsbury "A" Mill does not, however, state its significance in relationship to the NRHP Criteria. If the property were being evaluated for the first time in 2004, it is likely that the significance of the Pillsbury "A" Mill building would be discussed in terms of Criteria A for historical significance and C for both engineering and architectural significance.

2.2.1.1 Engineering Significance

The Pillsbury "A" Mill has engineering significance related to the design of the mill and other components of the property that harnessed the waterpower of the Falls of St. Anthony to operate the facility. The equipment installed in the building, replaced and updated over the years in response to improvements in flour milling technology, contributed to the significance of this resource as well. Criterion C arguments related to waterpower and milling technology, framed by Hess and Kudzia (1992), note the importance of the Pillsbury "A" Mill complex as part of the technological system.

2.2.1.2 Architectural Significance

The significance of the Pillsbury "A" Mill under Criterion C has not been fully explored. Donald R. Torbert, in his pioneering study of Minneapolis architects and architecture, found the "A" Mill to be an interesting and important structure relative to other flour mills and masonry buildings in Minneapolis, but not to have "extraordinary architectural significance." He identified the origins of Buffington's design as the "classicized vernacular brick architecture of eighteenth century England" (Frame 1980:114). Murial Christison had argued earlier, in 1942, that the Pillsbury "A" Mill was significant because it introduced the Romanesque Revival forms to the city and influenced local architectural taste (Frame 1980:118). James Roe has written about the visual prominence of the building and its expression of Pillsbury's aspirations and a progressive vision for the city of Minneapolis (Roe 1988).

The Pillsbury "A" Mill was the first mill building in Minneapolis to be designed by an architect. Minneapolis architect Leroy S. Buffington adapted a type of industrial

architecture commonly used during the 1870s and 1880s in the United States for the flour mill building and used local limestone for its exterior walls. Brick was the material most often used for American industrial buildings, though there are stone textile mills in New England that have a presence similar to that of the Pillsbury "A" Mill. Buffington employed a tri-partite façade organization commonly used for multi-story industrial and commercial buildings. This type of building provided large unobstructed floors—lofts—that accommodated a variety of commercial and industrial operations. The lower stories of industrial lofts incorporated openings for the transfer of freight at loading docks and loading bays, pedestrian doors, and sometimes even storefronts. The upper stories of the street walls of industrial lofts were often organized as multi-story arcades with arched forms at the top story. The arcades have both a functional and aesthetic quality. The piers that form the arcades flank thinner wall sections where windows are placed. The terminating level of an industrial loft is often treated as an attic story, set off by cornice elements, and well lighted with many windows. Cornices of the same material as the wall, rather than ornate sheet metal ones, and low parapets that edge flat or slightly sloping roofs, cap the upper walls of most industrial lofts (Bradley 1999:29-35, 230).

The Pillsbury "A" Mill is a typical industrial loft building in many ways, though its walls of local limestone and intended use as a flour mill distinguish it from both other mill buildings and industrial lofts of the early 1880s. The similarity of its exterior to other industrial lofts explains Buffington's design intentions, but does not diminish the significance of the building. The Pillsbury "A" Mill is an outstanding example of an industrial loft as a flour mill building and is constructed of local materials. It represents the aesthetic considered appropriate for industrial buildings circa 1880. The Pillsbury "A" Mill was built to be substantial and commodious, two key attributes that spoke to its design for a particular industrial function, as well as its strength and permanence. The façades were organized as a pleasing composition with appropriate proportions and features of interest, such as the arched windows and attic story. Doors placed at loading platform height on the Main Street SE façade, rather than at street level, blend into the regular pattern of fenestration. Buffington made it clear that there was no place for high-style ornamentation in a building such as this. Though the "A" Mill has been referred to as Richardsonian Romanesque in style, it was erected before architects began to adapt the Romanesque forms used by Henry Hobson Richardson. The heyday of the Richardson Romanesque style was the late 1880s (Whiffen 1992:137).

The Pillsbury "A" Mill has significance under Criterion C for its industrial architectural distinction as a pivotal example of flour mill design. It is also a demonstration of how bold architecture was used to make a statement about the vision for an industrial firm. Architect Leroy Buffington combined trends in industrial loft design, local limestone, and white marble lettering to create a symbol for a milling firm and the Minneapolis milling industry. The "A" Mill was considered a significant building project at the time of its construction and was a notable building through the 1920s. It was known both as a visual symbol and as the largest, most productive flour mill in the Minnesota flour industry, perhaps the quintessential blending of beauty and utility.

2.2.1.3 Period of Significance

The argument for the significance of historic properties involves identification of a period of significance. This period for the St. Anthony Falls Waterpower Area portion of the St. Anthony Falls Historic District has been determined to be from 1858 to 1941. This period begins when the first dam was built at the falls, the structure that established the basic headworks engineering that was used by subsequent developments. The date of 1941 marks the beginning of the development of the St. Anthony Falls Upper Harbor Project, which included the construction of the Upper St. Anthony Falls Lock and the Lower St. Anthony Falls Lock and Dam (Anfinson et al 2003:110-111; Hess and Kudzia 1992:8.1).

There are definite eras in the history of the Pillsbury "A" Mill complex that relate to its period of significance. These eras, based on the physical changes made to the property, dovetail with the periods described in Powell's history of the Pillsbury Company (Powell 1985).

The Developmental and Early Operational Years: 1880-1908
The "A" Mill and Bran House were completed in 1881. Within a few years, a steam engine was installed, an elevator was built and other site improvements were completed. The 1880s were boom years in the flour industry, a time when mills set production records and installed new equipment. The installation of "Plansifters" in 1892 in the "A" Mill was an important technological advance. The packaging department was moved out of the "A" Mill in 1893 into a reconstructed Bran House after a fire damaged the smaller building. During this period, the Pillsbury "A" Mill was one of the most important flour mills in Minneapolis. It set production records and established a dominant role in the local industry (Ferrell 1981a:5-11).

The Modernization Era: 1909-1919
This period began with the reorganization and incorporation of the firm as the Pillsbury Flour Mills Company and a new management structure. Changes made to the physical plant at the "A" Mill were part of a strategy to compete successfully in the Minneapolis flour milling industry and increase flour milling capacity. The "A" Mill building was stabilized and improved. New construction included two grain elevator facilities, the Red Tile Elevator and the Concrete Elevator and Annex (referred to in this report as the Concrete Elevator), as well as the Cleaning House, which also had a block of storage bins within its walls. The South "A" Mill building and related grain warehousing facility was part of this project. The Pillsbury powerhouse, which stood on the river side of Main Street SE, was improved during this time. The company's product line expanded to include "Health Bran" and pancake flour, in addition to the flour and wheat cereal already offered to consumers (Ferrell 1981b: 9-19).

The Final Years of Flour Milling: 1920-1937
A change in the "milling-in-transit" rail shipping rates in 1920 led to the decentralization of the milling industry. As Pillsbury developed mills in other locations, the importance

of the "A" Mill decreased. The milling units in the "A" Mill were dismantled in 1932 and 1937, though equipment in the South "A" Mill was left in place. Machinery from other Pillsbury facilities was installed in the "A" Mill complex and several types of flour, as well as oat flakes, dehydrated soup, and cake flour were produced there during the mid twentieth century. The waterpower equipment was removed in 1955 and the boiler plant for the complex, located on the west side of Main Street SE, was demolished in 1964 (Ferrell 1981b:20; Powell 1985:95-97).

Powell's history of the Pillsbury firm makes it clear that the nation-wide changes in wheat production and the flour milling industry, which began during the 1910s and were felt more strongly by the early 1920s, had a significant impact on the Pillsbury "A" Mill property. The decentralization of Pillsbury's flour milling operations was initiated in 1922 with the opening of a new mill in Buffalo. This mill was part of the migration of the Minneapolis flour milling industry to Buffalo. The mill purchased by Pillsbury in Atchison, Kansas the same year represented the pull of the industry towards the western wheat producing areas (Kuhlmann 1929: 175). By 1930, the importance of the "A" Mill and Minneapolis as the center of flour milling for the Pillsbury company had diminished. The former "flagship" mill was dismantled and then retrofitted to produce several sideline products. As Pillsbury fought to maintain a significant share of the flour milling industry, it did so mainly with other facilities. The decentralization of the industry reduced the significance of the "A" Mill complex during the 1920s (Powell 1985:101-116).

The period of significance for the Pillsbury "A" Mill complex extends from 1880 to 1930 even though milling equipment remained in the "A" Mill until 1937. The close of the period of significance for the St. Anthony Falls Waterpower Area, 1941, includes the winding-down period of the 1930s and encompasses the period of significance of the Pillsbury "A" Mill building and complex.

2.2.1.4 Character-Defining Features

The architectural character-defining features of the Pillsbury "A" Mill include its overall form and massing; façades of Platteville limestone; reinforced-concrete buttresses on the northeast wall; fenestration pattern and multi-light wood and industrial steel sash; doors at loading-platform height on Main Street SE; a visible partial attic story; and marble lettering incorporated into the façade. The engineering character-defining features of the property are the two turbine pits; the single headrace channel that links the headrace canal to the "A" Mill turbines; and the two tailrace tunnels that extend at an angle from the turbine chambers, below the limestone ledge, to exit the face of the Mississippi River bluff. The St. Anthony Falls Water Power Company Canal (Pillsbury Canal) is located adjacent to the property under Main Street (outside the project area). Any components of equipment used to mill flour, control dust, move grain or flour, or provide vertical circulation that remain in the building could be a character-defining feature.

2.2.2 Additional Components of the Pillsbury "A" Mill Complex

The extent to which the industrial complex surrounding the Pillsbury "A" Mill is also significant has not been clearly stated in NRHP documents. Most of the buildings discussed below are considered to be contributing resources in the St. Anthony Falls Historic District (Hess and Kudzia 1992). The following section discusses their individual and relative significance as part of the Pillsbury "A" Mill complex.

2.2.2.1 The Red Tile Elevator

The Red Tile Elevator, initially known as the Pillsbury Mill "A" Elevator, was built circa 1910. The nearly 190-foot-tall structure consists of two parts. The lower portion is a block of 25 circular bins constructed of red hollow and solid radial clay tile that stand 100-feet in height. The 16 interstices between the bins were also used for grain storage. A five-story steel-framed head house positioned above the bins is clad also with clay tile (HABS 1987 No. MN-29-5E).

The construction of this "fireproof" elevator that handled 400,000 bushels of grain circa 1910 initiated a period of expansion and improvement of the Pillsbury "A" Mill property after reorganization and incorporation of the company. The facility replaced an elevator completed in 1884 on the property and significantly increased the storage capacity on site. The elevator is associated with the successful 1910 to 1920 period for the Pillsbury Flour Mills Company, a time when it expanded its product line to a "Family of Foods" and began to advertise more aggressively.

Significance
The Red Tile Elevator at the Pillsbury "A" Mill complex is a receiving elevator, the type of facility that received and stored grain at a processing facility. The use of clay tile for grain elevators was an important step forward from wood and steel construction because it was fireproof and rigid. This method of grain elevator construction was developed and patented by Ernest V. Johnson and James L. Record of the firm of Barnett & Record (builders of many of the Pillsbury "A" Mill complex buildings). The Barnett & Record Company of Minneapolis began to construct tile elevators in 1900 after the new method was sufficiently tested (Frame 1989a:E.25). Robert Frame asserts that tile elevators advanced the development of a fireproof grain elevator and are rare enough that almost any example is significant. The Pillsbury "A" Mill Red Tile Elevator, which has good integrity, is a significant example of this elevator type under Criterion C. The Red Tile Elevator was an important first component of the modernization project initiated in 1910 at the Pillsbury "A" Mill complex. The elevator is a significant resource in the Pillsbury "A" Mill complex for its association with the modernization project and should be considered an important component of the Pillsbury "A" Mill complex.

Character-Defining Features
The character-defining features of the Red Tile Elevator include its overall form and massing that display the two components of the structure: the block of bins and head

house. Other defining features are the exterior walls of red clay tile; the "Pillsbury's Best Flour" sign located on the roof of the head house; and the grain conveyors that connect the head house to other buildings in the Pillsbury "A" Mill complex. The door and window openings in the head house of the elevator have been altered over time and are characterized by the irregular placement of the openings and the steel sash used in the windows.

2.2.2.2 Concrete Elevator

The eastern portion of this structure, known historically as the Concrete Elevator, was erected in 1914. Its 40 storage bins had the capacity of 1.8 million bushels of grain. The western section, the Concrete Elevator Annex, was completed by 1916. Its 24 storage bins added the capacity of 1.1 million bushels of grain storage (HABS 1987 No. MN-29-5D).

The 1914 portion of the Concrete Elevator has overall dimensions of 104 feet by 260 feet and consists of a block of 40 bins 26 feet in diameter and 100 feet in height. A head house is located above the western end of the structure and a conveyor monitor surmounts the remainder of the structure. Two conveyor bridges connect the head house with the Red Tile Elevator. The 1916 portion of the Concrete Elevator has dimensions of 104 feet by 156 feet and consists of storage bins of the same height. Two of the bins are 20 feet in diameter; the rest are the 26-foot-diameter bins of the first-built portion of the structure. A conveyor monitor or gallery tops this block of bins. The walls of the storage bins are 5-inch-thick monolithic reinforced concrete. The head house and conveyor monitors are framed with reinforced-concrete columns and beams that support reinforced-concrete floor and roof slabs (HABS 1987 No. MN-29-5D).

Significance
Pioneering work on reinforced-concrete construction was undertaken in Minnesota and is represented by the seminal Peavy-Haglin Experimental Concrete Elevator erected in St. Louis Park in 1899 (a NHL). The first commercial-scale terminal elevators built in reinforced concrete in Minnesota were completed in 1908. The Pillsbury "A" Mill appears to have been part of a group of such facilities that confirmed that the new building material would come to dominate elevator construction (Frame 1989a:E.29-E.31). Frame argues that all reinforced-concrete terminal elevators, a similar property type, built before 1920 should be considered eligible "because they likely will represent a total engineering approach to the problem of building in concrete" (Frame 1989a:F.7).

The Pillsbury "A" Mill Concrete Elevator Complex is an excellent example of a reinforced-concrete receiving elevator. It should be considered an important component of the Pillsbury "A" Mill complex associated with the modernization period and to have significance under Criterion A.

Character-Defining Features
The character-defining features of the Concrete Elevator Complex include its overall form and massing with the block of storage bins and the conveyor monitors and head house positioned above the bins. Additional defining features are the two conveyor bridges connecting to the Red Tile Elevator; uniform monolithic reinforced concrete tank walls; and framework elements at the perimeter of the blocks of bins.

2.2.2.3 The South "A" Mill and Warehouse No. 1

This component of the Pillsbury complex consists of a nine-story mill building and a long, narrow, three-story warehouse that edges Main Street SE, buildings erected between 1914 and 1917. Both buildings are of reinforced concrete, column-and-beam construction. The taller portion, the mill, has exterior walls of gray brick, while a lighter-colored buff brick clads the lower warehouse wing. Piers rise through the walls of both wings and pier-to-pier openings were originally filled with industrial steel sash. A loading platform, sheltered by a sheet-metal canopy, was added to the Main Street SE façade at an early date four-feet above grade to serve rail cars (HABS 1987 No. MN-29-5G).

Significance
The South "A" Mill and Warehouse No. 1, erected during Pillsbury's Modernization Era, and added milling and storage capacity to the complex. The mill and warehouse represent industrial buildings of their type and era, but do not appear to have outstanding features that confer significance beyond their association with the Pillsbury complex. These buildings represent the modernization period and as part of the complex have significance under Criterion A.

Character-Defining Features
The character-defining features of the South "A" Mill and Warehouse No. 1 include its overall form and massing; reinforced-concrete and brick exterior; regular fenestration pattern; and loading platform and canopy along the Main Street SE façade of Warehouse No. 1.

2.2.2.4 The Cleaning House

This nine-story brick and concrete structure, connected both to the "A" Mill and to the South "A" Mill, is set back from Main Street SE. A block of concrete bins and a shaft that accommodated the rope drive system occupy the lower 65 feet of the building. The reinforced-concrete columns of the building's framing rise through the exterior of the building, dividing it into bays on the upper stories. Curtain walls of brick are terminated with corbel tables at the top of the bays and hold pairs of window openings, many of which are now blocked. A 50,000-gallon water tank, set on a steel frame, is positioned on the roof (HABS 1987 No. MN-29-5F).

Significance
The Cleaning House was erected between 1914 and 1917 during Pillsbury's Modernization Era. Grain stored in the adjacent elevators entered the Cleaning House on a system of elevators and belts. Foreign materials were removed and wheat kernels were scoured, washed, dried, and tempered before being sent on to the mill. The operations located in the Cleaning House freed space in the "A" Mill building for the milling process. This building represents industrial structures of its type and era, and does not appear to have outstanding features that confer significance beyond its association with the Pillsbury complex. The Cleaning House represents the modernization period and as part of the complex has significance under Criterion A.

Character-Defining Features
The character-defining features of the Cleaning House include its overall form and massing; reinforced-concrete and brick exterior; regular fenestration pattern; and the water tank on its roof.

2.2.2.5 Pillsbury Warehouse No. 2

Warehouse No. 2 is a four-story building, a standard warehouse facility of the time with heavy timber construction and cream brick exterior walls. A one-story brick loading facility on the south side of the warehouse has an adjacent covered loading dock on its 5th Avenue SE side. A loading platform extends from a portion of the 2nd Street SE wall; its canopy has been removed. The building has several wide loading dock doors. The regularly spaced windows have industrial steel sash (HABS 1987 No. MN-29-5H).

Significance
Warehouse No. 2 was erected and expanded during Pillsbury's Modernization Era (HABS 1987 No. MN-29-5F). Warehouse No. 2 is considered to be a separate, contributing building in the St. Anthony Falls Historic District. This building represents industrial buildings of its type and era, but does not appear to have outstanding features that confer significance beyond its association with the Pillsbury complex. Warehouse No. 2 represents the modernization period of the complex and as part of the complex has significance under Criterion A.

Character-Defining Features
The character-defining features of the Warehouse No. 2 include its overall form and massing; cream brick exterior walls; cornice; hoist beam on the 5th Avenue SE end wall; regular fenestration pattern and industrial steel sash; loading platforms and doorways; and loading dock wood doors.

2.2.2.6 Pillsbury Machine Shop

The Pillsbury Machine Shop was built in 1916 adjacent to the Bran House (demolished) and "A" Mill. This two-story brick industrial building has the form and typical appearance of an early twentieth-century shop building. Exterior walls of tan brick on

three sides enclose a steel frame. The lower portion of the southwestern wall is the rubble limestone wall of the Bran House built in 1881 (no longer standing) that served as a party wall for the two buildings; the upper wall is covered with modern ribbed steel siding. A freight door with an exterior hoist beam near the north end of the 2nd Street SE façade breaks the regular fenestration pattern. Two bays of the ground story have wide vehicular doors (HABS 1987 No. MN-29-5C).

Significance
The Pillsbury Machine Shop was built as part of Pillsbury's Modernization Era work on the Pillsbury "A" Mill property because the former machine shop was demolished. The machine shop is considered to be a separate, contributing building in the St. Anthony Falls Historic District. The building is unremarkable in design and construction. The machine shop represents the modernization era of the complex and as part of the Pillsbury complex has significance under Criterion A.

Character-Defining Features
The character-defining features of the Machine Shop are its two-story form; the exposure of the rubble limestone wall erected as part of the 1881 Bran House; pier-to-pier window openings filled with three sets of double-hung wood sash; vehicular doors; second-story freight door and exterior hoist beam; and low-pitched roof edged with partial parapet walls on the north and south facades.

2.2.2.7 St. Paul, Minneapolis & Manitoba Railroad/Great Northern Railway Spur

The rail spur that served the Pillsbury "A" Mill complex connected to the St. Paul, Minneapolis & Manitoba (StPM&M) Railroad Company line, which extended from St. Paul to Minneapolis across the Mississippi River on the Stone Arch Bridge. The StPM&M's lines were leased to the Great Northern Railway in 1890 and sold to that Railway in 1907, as all of the properties controlled by James J. Hill's were consolidated into the Great Northern Railway. A main spur* that served the Main Street-2nd Street SE industrial area spilt from the StPM&M line near the foot of 9th Avenue SE, and angled to the point where it became aligned with a mid-block alley extending through the block between Main and 2nd Streets SE. This spur ended at 3rd Avenue SE on the Pillsbury "A" Mill property. By 1890 this spur had expanded to have two additional lines and a series of sidings located between 4th and 6th Avenues SE. The number of spur lines was increased, probably in conjunction with the construction of the Red Tile and Concrete elevators by 1916. Another group of spur lines flanked Main Street SE; a line on the north side of the street extended as far northwest as the Salisbury & Satterlee Company property. A spur on the south side of Main Street SE had sidings that served lumberyards along the Mississippi River (Sanborn Map Company 1890, 1912, 1941, 1966).

* A spur links several properties to and extends for some distance from a nearby through rail line before it terminates; a siding is a shorter line built to serve a limited number of properties.

Three parallel spurs ran on the right-of-way through the block occupied by the Pillsbury "A" Mill complex prior to the modernization era expansion of the complex. The number of spur lines was doubled as additional rail lines and sidings were built to the north of the original spurs, probably by 1916, and this number of lines remained in place through the 1980s. By 1912 a spur on the north side of Main Street SE provided a siding in front of the Pillsbury "A" Mill facility. The configuration of the spur and siding along Main Street SE remained the same.

Significance
The StPM&M, later Great Northern Railway, spur that served the Pillsbury "A" Mill complex was an essential transportation link that delivered grain to and transported flour from the facility. The rail spur is a contributing element of the complex and its significance is tied to that of the Pillsbury "A" Mill property. It was present throughout the period of significance. The spur along Main Street SE was in place by 1912 and also has a long association with the property. The StPM&M/Great Northern Railway spur has significance under Criterion A tied to the Pillsbury "A" Mill complex.

Character-Defining Features
One of the three main spur lines that terminated at 3rd Avenue SE, the one closest to Main Street SE, remains in situ on the former Pillsbury property. The character-defining features of this rail spur are its location at the center of the block, straight alignment, and termination at 3rd Avenue SE. The character-defining features of the spur along Main Street SE are the termination of the spur and siding at 3rd Avenue SE and location of the siding on the north side of the spur, on the sidewalk.

2.2.2.8 Non-Contributing Properties

Warehouse No. 3, erected in 1925, at the 5th Avenue SE and Main Street SE corner of the property, is considered a non-contributing resource in the St. Anthony Falls Historic District due to its poor integrity. A hydro processing plant added to the complex in 1974 is also a non-contributing property (Hess and Kudzia 1992). The southwest half of the East Block of the project area (bounded by Main Street SE, 2nd Street SE, 5th and 6th Avenues SE) historically was a storage yard and the site of the Pillsbury Warehouse No. 4 (demolished circa 1970); it is also a non-contributing property. These properties do not have the significance and integrity to contribute to the Pillsbury "A" Mill property or the St. Anthony Falls Historic District.

2.2.2.9 Character-Defining Features of the Pillsbury "A" Mill Complex

The character-defining features of the Pillsbury "A" Mill complex are the arrangement of buildings on both sides of the Great Northern Railway spur that bisects the property; the location of a second rail spur along Main Street SE; and the arrangement of buildings that demonstrates how grain was brought to the property via rail cars, stored in the grain elevators, entered the milling process through the Cleaning House and continued into the "A" Mill or South "A" Mill, and then was stored as flour in one of the warehouses

Features related to how the complex functioned include the presence of the train shed and other covered loading and unloading facilities, and the presence of grain unloading and conveying apparatus. Another group of features is related to the function of individual buildings and include the presence of loading platforms, loading bay doors, and exterior hoists for the handling of bagged flour. The water tank on the Cleaning House and the "Pillsbury's Best Flour" sign on the Red Tile Elevator are also character-defining features of the complex.

2.3 OTHER PROPERTIES IN THE SAINT ANTHONY FALLS HISTORIC DISTRICT

The EBMA of the St. Anthony Falls Historic District includes contributing buildings, structures, and sites in an area bounded by Central Avenue, University Avenue and 6th Avenue SE, excluding the block bounded by University Avenue, 6th Avenue SE, 2nd Street SE and 5th Avenue SE. The HPC guidelines do not state a southwest boundary for the area; for this analysis, Main Street SE is considered the boundary, since most of the historic milling resources are northeast of Main Street and the project would affect that portion more than the riverbank area.

The historic resources in the Saint Anthony Falls Historic District in addition to the Pillsbury "A" Mill complex comprise two thematically defined groups of other commercial and industrial buildings.

2.3.1 The Main Street SE Commercial/Industrial Corridor

The NRHP nomination for the St. Anthony Falls Historic District notes that Old Main Street was a well-traveled route beginning in the Red River oxcart era, during the 1840s and 1850s, and became a major thoroughfare in old St. Anthony. The contributing buildings on Main Street SE are commercial and industrial buildings that document the industrial development of the area that did not utilize waterpower, but were contemporary with the important flour milling period. The contributing industrial buildings include the Salisbury & Satterlee Company complex (now St. Anthony Main), developed over a period of time between 1885 and 1909, and the Upton Block (1855). Contributing commercial buildings on Main Street SE include the Martin and Morrison Block (1858) and the Queen Anne commercial style Pracna Building (1890) (Hess and Kudzia 1992). The Main Street Hydroelectric Station, a facility erected in 1911 after a fire destroyed an earlier building on the site, is a contributing building located across the street from the Salisbury & Satterlee Company property. These buildings represent industrial and commercial development and architecture over a span of 60 years. The Pracna Building has architectural significance though none of these buildings are identified as having significance under Criterion C in the NRHP nomination or the 1992 updated documentation for the nomination. Several modern buildings have been built on Main Street SE between 3rd Avenue SE and Central Avenue, and consequently the block has an interesting and lively urban quality, but not a high concentration of especially significant resources.

2.3.2 The 2nd Street SE Industrial Area

The HPC includes all of the properties on the northeast half of the block bounded by 5th and 6th Avenues SE and Main Street and 2nd Street SE to be contributing (Minneapolis HPC 2004:1-2). The portion of the block northeast of the rail line and bounded by 5th Avenue SE and 2nd Street SE was developed with warehouses by the Union Railway Storage Company. The company's building projects took place in 1883-1884 and 1892. A three-story brick building at 110 5th Avenue is the oldest portion of this complex. The National Soap Chemical Company occupied this property from circa 1925 through the 1950s and added buildings to the complex through the 1940s. The Shepard Manufacturing Company erected a two-story brick building at the corner of 2nd Street SE and 6th Avenue SE circa 1885 (MRDCB 1980:119-120).

2.4 OTHER COMPONENTS OF THE ST. ANTHONY FALLS HISTORIC DISTRICT

2.4.1 The East Mississippi River Bank Area in the St. Anthony Falls Waterpower Area

Resources related to the hydroelectric industry are located on the Mississippi River (west) side of Main Street SE. The Hennepin Island Hydroelectric Plant is south of the Main Street facility and less visible from Main Street SE. The log sluice and the 2nd Avenue East Side Sawmills Platform adjacent to the Main Street Hydroelectric Station are additional contributing resources. The use of the hydroelectric sites as a Northern States Power Company facility has introduced several modern elements of a power generating station into the district, including a transformer yard. The recent completion of a heritage trail along the bank of the river has introduced paving and signage, as well as additional landscape features, into the district.

2.4.2 Contributing Archaeological Sites

During the 1980s, Dr. Scott Anfinson conducted a study for the Minnesota Historical Society (MHS) of the history and archaeology of the Central Minneapolis Riverfront (Riverfront) as part of the West River Parkway project. His initial study of the history and archaeological potentials of the Riverfront covered much, but not all, of the St. Anthony Falls Historic District. During this extensive study, Anfinson (1989) used archival research and visual reconnaissance to assess the potential for post-contact archaeological resources along the Riverfront. Thirty-three of these potential sites were subsequently identified as contributing to the St. Anthony Falls Historic District (Hess and Kudzia 1992), but a thorough evaluation of these sites has not been completed to date. An analysis of the potential for archaeological sites in the areas of the historic district not studied by Anfinson has not been completed.

2.4.3 The Stone Arch Bridge

The Stone Arch Bridge that crosses the Mississippi River connects with the east bank of the river slightly southeast of the Pillsbury "A" Mill complex. The bridge, built in 1883, was the result of James J. Hill's efforts to establish a railway from St. Paul across the Mississippi River and into downtown Minneapolis. Hill hired West Point-trained engineer Charles C. Smith to design the bridge, which, due to its crossing of the river in a sweeping curve, was a *tour de force* of masonry engineering. Since the time it was completed, the Stone Arch Bridge has been an important visual symbol for Minneapolis (Hess and Kudzia 1992). It also demonstrates James J. Hill's important leadership role in the transportation facilities of the Twin Cities area and beyond. The American Society of Civil Engineers designated the Stone Arch Bridge as a National Historic Civic Engineering Landmark in 1975. This honorific designation conferred by the American Society of Civil Engineers is not the same as a NHL designation granted by the NPS. The bridge is used for pedestrian and bicycle traffic and is frequently traveled by both residents and visitors. The Stone Arch Bridge is a "significant identifying feature of the Minneapolis urbanscape" (Berg 1982). It is one of the most important resources in the St. Anthony Falls Historic District due to its engineering and historical significance.

2.4.4 The West Bank Milling Area

The West Bank Milling Area was located in an area controlled by the Minneapolis Milling Company, which cooperated with the St. Anthony Falls Water Power Company to build the Falls of St. Anthony Dam between 1856 and 1858. This project established the basic head works engineering utilized by subsequent waterpower developments. The Minneapolis Milling Company initiated a comprehensive plan for waterpower use based on the Lowell, Massachusetts model. An engineer experienced in waterpower development designed a system with mill sites on both sides of the power canal. This intensive development of the area was made possible by the bedrock formation adjacent to the Mississippi River. By the mid-1860s the Minneapolis Milling Company had completed a short but effective canal to distribute waterpower on the west bank of the river. A large and compact milling district developed on both sides of the canal, as projected. The mills benefited from improvements in the milling process during the late nineteenth century and the mill properties along the waterpower canal and their equipment were updated as the industry evolved. From 1880 to 1930, the west side mills were largely responsible for establishing Minneapolis as the nation's most important center of flour milling. The numerous contributing properties in the West Bank Milling Area include mill buildings and the remains of the waterpower system and mills that stood along it. The significance of most of these properties is derived from the waterpower system and milling industry (Hess and Kudzia 1992).

2.5 THE TWIN CITY RAPID TRANSIT COMPANY STEAM POWER PLANT

The Twin City Rapid Transit Company Steam Power Plant, located southeast of the southeast end of the Stone Arch Bridge, is a property listed on the NRHP in 1994 for its

historic significance under Criterion A. This power plant was built in 1903 to supply power to the combined streetcar system of Minneapolis and St. Paul, the Twin City Rapid Transit Company.

3.0 THE PILLSBURY "A" MILL COMPLEX PROJECT

3.1 THE PROPOSED PILLSBURY "A" MILL PROJECT

3.1.1 Project Alternatives

The EIS considers six alternatives developed at the conceptual stage. Alternatives 1 through 4 would utilize the same conceptual site plan and building footprints and differ primarily in the massing and height of the components. Alternatives 1 through 3 would offer the same number of residential units, commercial space, and internal parking space; Alternative 4 would have significantly fewer housing units. Alternative 5 is the no-build comparison. An Alternative 6 is discussed in this report in order to provide a consideration of the effects that retaining the Concrete Elevator would have on the project. The following descriptions are based on the project EAW (David Braslau 2004), the EIS Scoping Document (Minneapolis 2004a), and additional information provided by the proposer. Figure 3 is a project site plan.

3.1.1.1 Alternative 1: The Project as Described in EAW

This alternative proposes the rehabilitation of the Pillsbury "A" Mill and seven additional historic resources on the Pillsbury "A" Mill Complex Project property. This alternative proposes the construction of six new buildings, four on Main Street SE and two on 2nd Street SE. This alternative proposes 1,095 residential units, 105,000 square feet of commercial space, and 1,832 parking stalls, most of which are below grade and internal. The buildings on Main Street SE would be a combination of tower and mid-rise residential buildings wrapped by townhouses along the street fronts and would have elevated landscaped plazas. The tallest towers, at 24 and 27 stories, would flank 5th Avenue SE. A 14-story mid-rise tower would stand near the Red Tile Elevator and be slightly lower than the historic structure. A 20-story tower would stand at the corner of Main Street SE and 6th Avenue SE. The Concrete Elevator would be demolished and two mid-rise residential buildings wrapped with townhouses, would be erected on the site, and would provide underground parking for the entire Pillsbury "A" Mill Complex project.

3.1.1.2 Alternative 2: The Project with Height Limited to that of the Red Tile Elevator

This alternative proposes the rehabilitation of the Pillsbury "A" Mill and seven additional historic resources on the Pillsbury "A" Mill Complex project property. In this alternative the height of the new residential buildings is limited to that of the Red Tile Elevator, as recommended by the Minneapolis HPC EBMA Guidelines. This alternative proposes the construction of six new buildings, four on Main Street SE and two on 2nd Street SE. This alternative proposes 1,095 residential units, 105,000 square feet of commercial space, and 1,832 parking stalls, most of which are below grade and internal. The buildings on Main Street SE would rise to a height of 18 stories and would appear to be clustered mid-rise

Source: Schafer Richardson, Dec. 2003

Pillsbury "A" Mill Complex Project
Analysis of Effects
Minneapolis, Hennepin County, Minnesota

Proposed Site Plan

N
W E
S

Figure 3

residential towers. They would be wrapped by townhouses along the street fronts and would have elevated landscaped plazas. The Concrete Elevator would be demolished and two mid-rise residential buildings wrapped with townhouses would be erected on the site, and would provide underground parking for the entire Pillsbury “A” Mill Complex project.

3.1.1.3 Alternative 3: The Project with Reduced Heights

This alternative proposes the rehabilitation of the Pillsbury “A” Mill and seven additional historic resources on the Pillsbury “A” Mill Complex project property. This alternative proposes the construction of six new buildings, four on Main Street SE and two on 2nd Street SE. This alternative proposes 1,095 residential units, 105,000 square feet of commercial space, and 1,832 parking stalls, most of which are below grade and internal. It utilizes the contrasting forms of townhouses and residential towers for the four new buildings to be erected along Main Street SE. Townhouse-height forms would comprise the lower portions of two buildings and their roofs would serve as elevated landscaped plazas; the townhouses would serve as a link between four towers, which would range from 15 to 27 stories in height. Three towers placed adjacent to 5th Avenue SE and on the East Block would exceed the height of the Red Tile Elevator; a mid-rise residential tower, slightly lower than the Red Tile Elevator, would stand near to the historic structure. The Concrete Elevator would be demolished and two mid-rise residential buildings wrapped with townhouses, would be erected on the site, and would provide underground parking for the entire Pillsbury “A” Mill Complex project.

3.1.1.4 Alternative 4. The Project as Mandated by Current Zoning

The rationale driving this alternative is a reduction of the program for the project to stay within the density permitted by the Industrial Living Overlay District.

This alternative proposes the rehabilitation of the Pillsbury “A” Mill and seven additional historic resources on the Pillsbury “A” Mill Complex project property. This alternative proposes the construction of six new buildings, four on Main Street SE and two on 2nd Street SE. This alternative proposes 746 residential units, 105,000 square feet of commercial space, and 1,434 parking stalls, most of which are internal. It utilizes the contrasting forms of townhouses and residential towers for the four new buildings to be erected along Main Street SE. Townhouse-height forms would comprise the lower portions of two buildings and their roofs would serve as elevated landscaped plazas; the townhouses would serve as a link between four towers, 14- to 18-story buildings, the heights of which would not exceed that of the Red Tile Elevator. The Concrete Elevator would be demolished and two four-story residential buildings—townhouses with flats above—would be erected on the site and would provide underground parking for the entire Pillsbury “A” Mill Complex project.

3.1.1.5 Alternative 5: No Build

This alternative assesses what might happen with the property if the project does not go forward. It assumes that the historic properties would not be rehabilitated and reused and the portion of the project property where no buildings stand would remain as vacant in the immediate future.

3.1.1.6 Alternative 6: Retain Concrete Elevator

This alternative considers the impacts of not demolishing the Concrete Elevator. Since, theoretically, this action could be part of Alternatives 1 through 4, the analysis of this alternative focuses on the one historic structure and the effects of rehabilitating it for a new use or retaining it as an artifact on the project property.

3.1.2 Historic Preservation Components and Concerns

Alternatives 1 through 4 propose to retain and rehabilitate the following historic resources on the project property:

- The Pillsbury "A" Mill NHL;
- South "A" Mill;
- Cleaning House;
- Warehouse No.1;
- Red Tile Elevator;
- Machine Shop;
- Warehouse No. 2;
- Great Northern Railway spur and train shed, to be removed and reconstructed, as well as the railroad spur along Main Street SE;

In addition, the following historic components of the Pillsbury "A" Mill complex will be retained:

- "Pillsbury's Best Flour" sign on the Red Tile Elevator;
- Industrial elements on the exterior of buildings, such as the loading platform and canopy fronting Warehouse No. 1, the water tank on the South "A" Mill; and
- Interior bulkheads, water raceways, gates and controls (where they exist) and access ways to the water wheels and turbines in the basement of the "A" Mill;
- Interior traveling cranes, bins and "Humphrey Manlifts" in the "A" Mill building, drive wheels and shafts, and other features, including the Pillsbury test ovens.

The waterpower canal under Main Street SE will not be impacted by project construction activities. If feasible, the canal, where it passes onto the proposer's property, may be partially exposed and interpreted. Some of the milling equipment in the Pillsbury "A" Mill not already collected by the Mill City Museum will be displayed in the former engine house, which will act as the central entry hall and exhibit space for the project,

and throughout the complex. A tape recording made of the entire milling process while the mill was in operation will be running in the exhibit space.

Alternatives 1 through 4 propose the demolition of the following historic resources:

- The Concrete Elevator;
- Conveyor bridges that extend from the Concrete Elevator to the Red Tile Elevator; and
- Some secondary rail spurs and sidings.

Alternatives 1 through 4 propose the demolition of the following buildings that are not historic and considered to be non-contributing resources in the St. Anthony Falls Historic District:

- Warehouse No. 3;
- Hydro-processing facility;
- Small modern additions to the Pillsbury "A" Mill, such as loading facilities, and
- A shed attached to Warehouse No. 2

Alternative 5, the No Build one, would leave the long-term preservation of the Pillsbury "A" Mill and related complex undetermined. Alternative 6, which retains the Concrete Elevator, presupposes the same plan for the rehabilitation of historic buildings as outlined for Alternatives 1 through 4.

3.1.2.1 The St. Anthony Falls Historic District

The character of the historic district, particularly the EBMA where the project is located, provides the physical and conceptual framework for evaluating the impact of the Pillsbury "A" Mill Complex project. As noted in Section 2.1 of this report, the St. Anthony Falls Historic District was designated early in the history of the NRHP program. As note above, the boundaries for the district seem to have been based more on the thematic concept of the history of the St. Anthony Falls area than on the location, nature, and integrity of historic and archaeological resources. Personal communication from the SHPO indicates that the boundaries of the Waterpower Area would be a more appropriate area for the consideration of the effects of the Pillsbury "A" Mill Complex Project on the St. Anthony Falls Historic District (Britta Bloomberg and Dennis Gimmestad, Personal Communication, January 26, 2005). Consequently, in this report, the St. Anthony Falls Historic District is considered to be the Waterpower Area shown in Figure 1.

The "East Block." The East Block of the Pillsbury "A" Mill Complex project—bounded by Main and 2nd Streets SE and 5th and 6th Avenues SE—is *not* included in but is adjacent to the St. Anthony Falls Waterpower Area. When the Minneapolis HPC adopted boundaries for the East Side Milling Area, it included the East Block, but excluded the adjacent block between 2nd Street SE and University Avenue, which is included in the NRHP historic district (see Figure 1).

Historically, the portion of the East Block between the StPM&M/Great Northern Railway spur line and Main Street SE was used in several ways. It served as a storage yard adjacent to the railway during the late nineteenth and early twentieth centuries; the Pillsbury Company erected its Warehouse No. 4 (demolished circa 1970) on the site. The other half of the block was dominated by the facilities of the Union Railway Storage Company, another use related to the Great Northern Railway spur. The Shepherd Manufacturing Company erected premises at the corner of 2nd Street SE and 6th Avenue SE. Development of this area was related to the StPM&M/Great Northern Railway spur, not the waterpower of the Falls area, and it is appropriate that this block is not included in the St. Anthony Falls Waterpower Area. Only two of the properties on the block have been identified as contributing properties in the St. Anthony Falls Historic District, the Union Railway Storage Company building at 110 5th Avenue SE and the Shepard Manufacturing Company building at the corner of 2nd Street SE and 6th Avenue SE (MRDCB 1980:119-120).

In short, the properties on the East Block had a limited association with St. Anthony Falls and the use of waterpower. The portion of the block in the Pillsbury "A" Mill Complex project area has poor integrity and includes only one contributing resource, the StPM&M/Great Northern Railway spur. However, since the project area includes half of this block, and the 520 and 521 2nd Street SE project to be evaluated for visual and cumulative effects is located on the block, the East Block is included in the area of potential effects.

The District Setting. The analysis of the effect of both the rehabilitation of historic buildings and new construction on the St. Anthony Falls Historic District must take into account the physical nature of the historic district setting. The project site includes both contributing and non-contributing properties. It is surrounded by non-contributing properties and an area of open space, except for two small properties on 5th and 6th Avenues SE. This setting indicates that the project is *not* typical infill construction in a historic district, a project surrounded by contributing historic properties.

3.1.2.2 The Secretary of Interior's Standards as an Analytical Tool

The *Secretary of Interior's Standards* address the common situation of proposed new construction within a historic district. Although new buildings are frequently erected in historic districts, the evaluation of their appropriateness is not always straightforward. Often the guidance provided by the *Secretary of Interior's Standards* must be reconciled with other planning factors. The Standards are intended to direct—but not exclude all—change in historic districts.

The evaluation of new construction proposed for sites in historic districts, as surmised and discussed in the *Secretary of Interior's Standards*, is based on the belief that the setting of a historical property matters and constitutes part of a property's integrity, as well as that of a historic district. The setting can enhance or limit a property's ability to express its historic significance. Typically, buildings in a historic district form ensembles

that convey a place and time and have relatively high integrity in setting. Most new construction projects in historic districts are infill projects that do not differ significantly in scale from the buildings in the district because they occupy properties similar in size to those of the surrounding historic properties. Contributing properties in historic districts, which establish the historic scale, siting, and massing characteristics that are used as the basis for assessing compatibility of the new construction, often surround redevelopment project sites. Many of the new infill buildings that have been erected in the Saint Anthony Falls Historic District occupy sites flanked by historic buildings and are compatible in scale and materials with those properties.

When the scale of a redevelopment project in a historic district is very large, the evaluation of its appropriateness becomes much more difficult. The *Secretary of Interior's Standards* assume that the historic district in which a project is proposed has a relatively high number of contributing properties and boundaries defined by the character of historic properties. Large-scale projects within historic districts are possible when there are gaps in the historic fabric due to the presence of extensive non-contributing properties or land not occupied by historic resources. The ability of a historic district to convey a historic condition becomes problematic when historic properties are lost and the number of non-contributing properties increases. The larger the redevelopment site, the harder it becomes to erect new buildings that are both compatible in scale and massing with historic ones and economically viable projects.

The *Secretary of Interior's Standards* provide a general framework for the consideration of new construction in historic districts. The document addresses the physical aspects of proposed work on historic properties, as well as visual impacts of alterations and material integrity of resources. The Standards use physical and visual characteristics (massing, size, and scale), rather than use, as the main standard for compatibility. The standards and accompanying guidelines acknowledge that a new use for a historic property is often necessary and do not identify a new use as an inherently incompatible aspect of a historic property or of new construction. Instead, the design of such a property and the physical changes to a historic property associated with a new use, are the attributes that determine whether a project is compatible or incompatible. The emphasis is clearly on the physical characteristics of a property, especially its scale and massing, as a test of compatibility. The standards also make it very clear that new buildings should not look old and should, by design, be differentiated from historic buildings.

The application of the philosophy inherent in the Standards requires subjective interpretation on a case-by-case basis. The NPS recommends applying the Standards to projects "in a reasonable manner, taking into consideration economic and technical feasibility," and thereby acknowledges both the importance of the philosophy represented by the Standards and the sometimes conflicting limitations present in preservation-related projects. Even the mandate that the design of compatible new construction in historic districts be both comparable in scale with historic buildings and obviously new can elicit different responses to a specific design.

The Pillsbury "A" Mill Complex Project. The evaluation of the Pillsbury "A" Mill Complex project incorporates many of the difficulties described above. In some cases, the size of a redevelopment parcel in a historic district makes it nearly impossible to propose new construction that is economically feasible and compatible in scale with nearby historic properties. This may be the case for the Pillsbury "A" Mill Complex project. The current proposal for large-scale residential buildings and density in new construction makes use of parcels that are available for redevelopment because they are non-contributing resources in a historic district. This work is linked to a challenging and large-scale rehabilitation project of industrial buildings and a NHL, the Pillsbury "A" Mill. Some of the complex questions that must be asked and answered in the review of this project cannot be addressed only through the application of the *Secretary of the Interior's Standards.*

The rehabilitation of the Pillsbury "A" Mill and the other historic resources, as proposed by the current project, would be accompanied by some trade-offs related to the issue of economic feasibility, a factor recognized in the *Secretary of the Interior's Standards*. The exceptional expense of the rehabilitation of the "A" Mill, as well as the Red Tile Elevator and Cleaning House (both of which have large amounts of space that cannot be adapted to new uses), would be offset by the use of profits realized by the development of a large number of residential units. The rehabilitation of two small buildings in the complex, the Machine Shop and Warehouse No. 2 precludes development of the two parcels with mid-rise buildings with underground parking and density that must be accommodated elsewhere on the property. In short, the density and height of the proposed buildings are related to the costs of rehabilitating historic buildings. The demolition of the Concrete Elevator, which is nearly impossible to economically rehabilitate for new uses, provides a site for the construction of two new buildings that would incorporate underground parking for the rehabilitated historic buildings. Without this underground parking, the project would require more above-grade parking and would not be as pedestrian oriented. The Concrete Elevator is discussed further in Section 3.1.2.3. As in many large redevelopment projects with historic preservation components, some critical choices will have to be made.

The evaluation of effects on historic properties that the Pillsbury "A" Mill Complex project would have cannot be disassociated from the many planning and preservation issues and cannot address only specific buildings. It must take into account the desired density in an area, the economic realities of historic building rehabilitation and reuse, and the expectation for waterfront enhancement and development. Experience has shown that historic preservation goals are most often realized when they are aligned with those of economic revitalization, and urban development. Land use planners, members of HPCs, and other project reviewers recognize that urban planning goals and historic preservation objectives sometimes have an uneasy alliance. In this case, the characteristics of the Pillsbury "A" Mill Complex project's setting suggest that the analysis of the proposed project with regards to the *Secretary of Interior's Standards* for new construction within a historic district should be but one of several tests of its appropriateness. Excellence in

urban planning and design should be an important goal for the project, particularly in light of its visible location.

The proposed Pillsbury "A" Mill Complex project was evaluated in terms of the *Secretary of Interior's Standards* in the following sections of this report. As with many large projects with historic preservation and new construction components, the project was found to meet some of the standards and related guidelines to the letter. The project acknowledges the goals of some standards and related guidelines and meets them in part. In this case, both the ways the project meets and does not meet the Standards area discussed in order to provide a more complete understanding of the project impacts.

3.1.2.3 The Concrete Elevator

As noted in Section 2.2.2.2, the Pillsbury "A" Mill Concrete Elevator is an excellent example of a reinforced-concrete receiving elevator. It is a significant and essential component of the Pillsbury "A" Mill complex associated with the modernization period and has significance under Criterion A.

The two sections of the Concrete Elevator, erected in 1914 and 1916, form a block of 64 bins. The series of cylindrical bins are windowless compartments, most of which are 26 feet in diameter. The bins are 100 feet tall and do not have floor levels. Although some elevators have associated head houses and sack houses that are adaptable for other uses, the Pillsbury Concrete Elevator does not have a large head house above the bins; instead, it has a single level gallery, which housed conveying machinery. A small head house rises above the gallery opposite the Red Tile Elevator and two conveyor bridges connect the two elevators. The Concrete Elevator has one stairway and one Humphrey Manlift that provide access to the head house.

Previous Reuse Studies. The changes that occurred in grain shipping and storage patterns in the United States left a large number of grain elevators functionally obsolete by the late twentieth century. Once they were no longer used for their intended purpose, many of these elevators have stood empty. Grain elevators function as large grain-handling machines; as with any type of special-purpose machine or structure, they are difficult to adapt for other purposes. By the time that widespread changes were occurring in the grain industry, the historic preservation movement had widened its interests to include industrial buildings and structures. These types of resources have come to be regarded as important components in urban and industrial landscapes and are considered to include examples eligible for listing on the NRHP.

This combination of factors led to the desire to find ways to reuse grain elevators and thereby avoid their demolition. A study that addressed this issue was completed in Minneapolis in conjunction with the proposed demolition of the WCCO Elevator Houses No. 2 and No. 3 during the late 1980s. Robert M. Frame III undertook a survey of reuse projects and identified factors that affect the feasibility of the reuse of the grain elevators (Frame 1989b). In 2003, Hennepin County Department of Housing, Community Works

& Transit studied the feasibility of the reuse of the Stewart-Cepro Grain Elevator located adjacent to the Midtown Greenway in Minneapolis (Hennepin County 2003). Thomas Yots surveyed reuse projects as part of the recent *Rediscovering the Concrete Atlantis: Buffalo Grain Elevators* project of the University of Buffalo's Urban Design Project (Yots 2004).

Frame's study of reuse possibilities for reinforced-concrete grain elevators identified the following critical issues.

- Reinforced-concrete grain elevators are difficult and expensive to demolish due to their unusually strong, monolithic concrete forms.
- The bin space of elevators is not readily adaptable for the bulk storage of other commodities.
- The non-bin space of elevators, sheds at ground level and head-houses, have been adapted successfully for other uses.
- The vertical orientation of the interior spaces and lack of windows make the bins difficult to adapt for other uses.
- The insertion of windows into bin walls for the accommodation of uses that require human occupancy adversely affects the character-defining qualities of the structures.
- The removal of bin walls to create larger areas, an expensive proposition, also impacts the character of the building type, but in a way less evident on the exterior of the structure.
- There are costs and liabilities for elevator owners when they are left standing and are not in use (Frame 1989b).

Frame featured six elevator reuse projects in his study. A review of these projects indicates that the shape of the elevator bins affects somewhat the feasibility of re-use and the ability of a rehabilitation project to meet the *Secretary of Interior's Standards for Rehabilitation*. Adapting elevators for residential use is the most common type of project, although examples of this use are limited. The best known grain elevator project of this type is the Quaker Square Hilton in Akron, Ohio. This project, completed in 1979, adapted a reinforced-concrete circular bin elevator for use as hotel rooms. The insertion of windows and other openings into the bin walls included in that project is the type of alteration that would now be considered to adversely affect the historic property and would not be considered to be consistent with the *Secretary of Interior's Standards*. The Cereal Grading Company elevator complex in Minneapolis, adapted in 1983 for a residential complex, includes a reinforced-concrete circular bin elevator. The residential complex, known as Calhoun Isles, is considered a successful reuse project, though it was not intended to meet the *Secretary of Interior's Standards*. The Old Town Granary Motel in Irvine, California, a 1986 project, utilizes an elevator with hexagonal bins. Windows were inserted in the angled walls of the bins instead of the walls more visible from the street. This project was considered to meet the *Secretary of Interior's Standards* (Frame 1989b:19-20, 22, 24; Yots 2004: 47).

Grain elevator conversion projects outside the United States have transformed the structures, rather than rehabilitated them in the American sense of the term. These projects include the Taller de Arquitectura Project near Barcelona, Spain and a project in Buenos Aires, Argentina (Frame 1989b:23; Yots 2004:48). The Waratah Mills project in Sydney, Australia (Figure 4) converted a concrete grain elevator into a distinctive residential tower (Yots 2004:48). Its new balconies and window openings open up the spaces and provide residential amenities.

The Granary at Logan Square, now known as just The Granary, in Philadelphia is featured in both studies. In what Yots has named "the pedestal approach," two portions of the elevator, were rehabilitated for new use: space at the base of the elevator and the head house at the top of the structure. Except those used for vertical circulation and as utility runs, the square bins in the 14-story structure remain unused (Frame 1989b:24; Yots 2004:47). This approach to rehabilitation will be used to adapt the Red Tile Elevator and the Cleaning House, which also has a section of tall bins, for new uses in the Pillsbury "A" Mill Complex project.

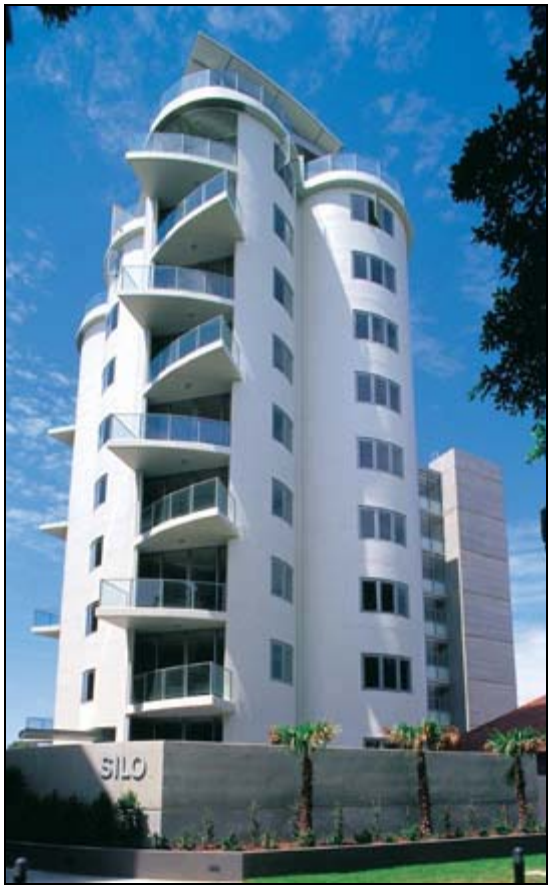


FIGURE 4. WARATAH MILLS PROJECT

A grain elevator in Montreal has been used recently for an artistic installation. The concrete elevator was converted into a musical instrument known as the "Silophone."

This project took advantage of the shape, size, and materials of the bins. Although certainly a unique use for the structure type, the Silophone is, nevertheless, an example of how industrial properties are being imaginatively appropriated for new uses (Yots 2004: 48).

This feasibility study for the reuse of the Stewart-Cepro Grain Elevator considered two ideas in detail: converting the elevator into housing and into a sculpture garden/activity center that incorporated a climbing wall. While neither of these concepts proved to be possible for the Stewart-Cepro Grain Elevator, exploration of the climbing wall idea revealed successful examples of such projects. Reinforced concrete elevators in Bloomington, Illinois and Carrolton, Texas have been converted successfully into climbing facilities (Zschomler 2003). As in any type of business, a rock climbing gym requires parking and space in addition to the bins. While it might be possible that one of the grain elevators in the Twin Cities area could be converted into a climbing gym, the concept is not feasible for many such structures.

A current development proposal for the Silo Point mixed-use development in Baltimore includes the Baltimore & Ohio Locust Point Grain Terminal Elevator. The initial plans for the project included converting the tower to luxury condominiums and hollowing out the block of 110 grain bins for use as a parking garage (Gunts 2004).

Thomas Yots makes an elegant argument for rehabilitation of concrete elevators as the natural extension of a popular idea. He states that the elevators invented during the nineteenth century and perfected to become the "workhorses" of the twentieth century, should become redevelopment venues of the current century (Yots 2004:49). However, the three main types of adaptive reuse that have occurred so for—conversion for residential/hotel use, rehabilitation of the easily inhabitable portions as in the pedestal approach, and use as a structure for an artistic installation—may not be widely feasible. The issues that Frame identified fifteen years ago that make the rehabilitation of concrete elevators difficult have not been resolved.

A Summary of Options. As noted above, the possibilities for adaptive reuse exist, but are limited. If the Pillsbury Concrete Elevator was converted for residential use, the changes to the physical fabric would undoubtedly impact its character-defining features and make it a non-contributing property within the Saint Anthony Falls Historic District. It is not clear that this approach would be significantly better than demolition. The Pillsbury Concrete Elevator is not a good candidate for the pedestal approach because the circular bins comprise nearly all of the structure; the gallery and small head house do not offer much usable space. It is unlikely that the Pillsbury Concrete Elevator would accommodate an artistic installation often enough to justify the structure's maintenance for the same reasons that it would not be used for other purposes, the limitations of the bins and the expense and difficulty of altering those spaces. Since the Silo Point project is Baltimore is still in the planning stage, the conversion to a parking garage option is as yet untested.

Table 1 summarizes the several options for treating the Concrete Elevators as part of the Pillsbury "A" Mill Complex project property and the impacts of each approach. The economic ramifications of retaining the structure and the review of the issue by the Minneapolis HPC are discussed in the Pillsbury "A" Mill Complex project EIS.

TABLE 1. PILLSBURY CONCRETE ELEVATOR OPTIONS

Option	Retain and reuse	Retain and leave vacant	Partial demolition	Total demolition
Rationale	A historic rehabilitation project	Structure would function as an artifact	Retention of the most distinctive portions of the structure	No feasible reuse
Historic Preservation Result	Historic property saved, but its integrity compromised by necessary alterations	Historic property saved, but would remain unused	Mitigation for the loss of part of the structure would be the retention and maintenance of the portion kept	Adverse effect on Pillsbury "A" Mill complex property; mitigation necessary
Site Development Implications	Might not be economically feasible; would likely lose contributing historic property status	Would become a maintenance burden for residential condominium owners	Site development complications introduced; maintenance of retained portion required	More site development options possible and rehabilitation of "A" Mill Complex made feasible

Project Related Actions. The retention of the Concrete Elevator was studied in the early stages of conceptual planning for the project. On November 18, 2003, the Minneapolis HPC voted to approve the demolition of the Concrete Elevator on the Pillsbury "A" Mill complex property with two conditions: 1) the demolition permit will not be signed until the City has approved the new construction for the site and 2) HABS/HAER level photographs must be submitted to the HPC before demolition occurs.

Alternative 6. In order to provide a complete discussion of possible impacts on historic properties, the possible, yet unlikely, prospect of keeping the Concrete Elevator as a component of the Pillsbury Complex property will be addressed in sections that follow as Alternative 6.

4.0 DIRECT PROJECT EFFECTS

The impacts of the proposed project are discussed below in relationship to the philosophy and approaches suggested in the *Secretary of Interior's Standards for Rehabilitation* and the more specific *Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Buildings* (Weeks and Grimmer 1995) and the Minneapolis HPC Design Guidelines for the Left (East) Bank Milling Area, referred to as the EBMA in this report. The term "proposed Pillsbury 'A' Mill Complex project" (the project) refers to the similar Alternatives 1 through 4. The "No Build" and "Retain Concrete Elevator" alternatives are discussed where appropriate.

The issues of visual impacts and views of, within, and from the St. Anthony Falls Historic District for this and the other alternatives, as well as cumulative effects, are discussed in Sections 5 and 6.

4.1 THE SECRETARY OF INTERIOR'S STANDARDS AND GUIDELINES FOR REHABILITATION

The *Secretary of Interior's Standards for Rehabilitation* consists of ten broad principles that have provided direction for work on historic resources for many years. Only some of these principles are pertinent for projects being assessed at the conceptual stage, as is usual for an EIS. The more specific *Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Buildings* (Weeks and Grimmer 1995) include a section on "Setting" that pertains to historic districts and neighborhoods and is pertinent to this project located in a NRHP historic district. The following standards and guidelines were selected for discussion due to their relevance to the project.

4.1.1 Introducing New Use

Standard:
A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.

Existing Use: Archer Daniels Midland terminated its milling operations in the Pillsbury "A" Mill complex in 2003 and since that time has been in the process of vacating the property.

Proposed Action: This project proposes new uses for the project property—residential occupancy and some related commercial and retail functions.

Analysis: Many former industrial properties have been rehabilitated for residential use. Those that retain the character-defining features of buildings and historic districts in which they are located meet this standard regarding a new use. The conceptual plan for

the project combines residential and commercial uses within the historic industrial buildings and new residential construction.

The proposed new use of the rehabilitated historic buildings *per se* would not alter significantly the defining characteristics of those buildings and would meet this standard.

The introduction of a new use for the Concrete Elevator would likely require alterations that would alter the character-defining aspects of the property, such as the introduction of door and window openings and/or removal of some of the internal concrete bin walls that would be necessary for human occupancy or other use. If this were the case, the adaptation of this structure for a new use would not meet this standard.

4.1.2 Identifying, Retaining, and Preserving Character-Defining Elements of a Historic District

Guideline:
The Guidelines recommend identifying, retaining, and preserving building and landscape features that are important in defining the overall historic character of the district or neighborhood. Such features can include roads and streets, furnishings such as lights or benches, vegetation, gardens and yards, adjacent open space such as fields, parks, commons, or woodlands, and important views or visual relationships. Removing or radically changing these features of the setting that define historic character should be avoided.

***Guideline**:*
The Guidelines recommend retaining the historic relationship between buildings, and streetscape and landscape features such as a town square comprised of row houses and stores surrounding a communal park or open space. Destroying or significantly altering such relationships through widening existing streets, changing landscape materials, or constructing inappropriately located new streets or parking should be avoided.

Existing Condition: The EBMA of the St. Anthony Falls Historic District is the contextual setting for this project. The location and characteristics of Main Street SE and the pattern of streets contribute to the character of the area. The narrow width of the street positions both occupants of vehicles and pedestrians close to the lower portion of buildings lining the street and provides foreshortened views of the historic buildings that line it. The historic pattern of streets was altered during the 1910s when 4th Avenue SE was vacated to accommodate the expansion of the Pillsbury "A" Mill property with the construction of the Red Tile Elevator. After designation of the historic district, 2nd Avenue SE and Prince Street were vacated. 5th Street SE was vacated and is now entirely private property. The remaining streets, and particularly the spine of Main Street SE, continue to define the character of this portion of the historic district. The recent repaving of Main Street SE and the placement of street furniture in the area is modern; these features relate to the heritage trail and modern entertainment district uses instead of historic uses.

The EBMA is a group of industrial buildings that are closely related to the historic and modern facilities located on the Mississippi River bank and on Hennepin Island. The development of park areas and a heritage trail along the riverbank provides a modern, pastoral overlay that has a strong visual component. The Main Street Hydroelectric Station contributes to the industrial nature of the historic district, but also has adjacent modern equipment that is a visible component of the historic district.

The two long blocks between Central and 5th Avenues along Main Street SE, which are the result of the vacating of 2nd and 4th Avenues SE, and the shorter block between 5th and 6th Avenues vary considerably in architectural character and visual cohesiveness. The long block between Central and 3rd Avenues has relatively low buildings on Main Street SE, the tallest of which is the six-story Salisbury & Satterlee Company building in the St. Anthony Main complex. The street wall of historic buildings along the northeast side of Main Street SE has a scale, massing, and character that is a character-defining feature for this portion of the historic district. New elements in the streetscape include a skyway, buildings at the northwest end of the block, and courtyards and outdoor entertainment spaces. The Winslow House residential tower at 100 2nd Street (erected in 1980) rises 178 feet above Main Street SE and the historic buildings along it but does not exceed the height of the Red Tile Elevator. This building, and an even taller Riverplace residential tower (built in 1983) located northwest of Central Avenue in the "East Hennepin-Central Avenue Area" of the St. Anthony Falls Historic District, is set back from Main Street SE. These modern buildings establish a precedent for locating new residential towers within the historic district.

The block between 3rd and 5th Avenues SE is dominated by the historic Pillsbury "A" Mill complex. Though the buildings that comprise this complex vary considerably in size, height, function, and materials, their close proximity and physical connections indicate that they worked together to accomplish an industrial purpose. The variety and complexity of the industrial complex also establishes the character of the EBMA. The Great Northern Railway spur, which extends through the Pillsbury "A" Mill Complex project site and the block to the southeast, contributes to the character of the area. The block between 5th and 6th Avenues SE has buildings that contribute to the historic district on the 2nd Street SE side of the block; the historic use of the Main Street SE portion of this block was a storage yard adjacent to the railroad spur and the location of Pillsbury Warehouse No. 4. Few historic buildings stand on 2nd Street SE other than the Concrete Elevator and, consequently, that street corridor does not have a strong historic character.

4.1.2.1 Retaining the Character of the Historic District

Proposed Action: The project does not propose to alter the historic street pattern, include buildings that would be erected on the river side of Main Street SE, or impact the "riverfront" quality of the area between the Mississippi River and Main Street SE in the Saint Anthony Falls Historic District. The vacated portion of 5th Avenue SE between Main Street SE and 2nd Street SE, which became part of the Pillsbury "A" Mill complex, would be restored as a street—either a private street with public access or returned to the

city as a public street. Two other aspects of the project would alter the character of the historic district: the demolition of the Concrete Elevator and the new construction proposed as part of the project.

Analysis: The project would not alter significant character-defining aspects of the Saint Anthony Falls Historic District, such as the established pattern of development in relationship to Main Street SE and the Mississippi River bank. It would restore a segment of the historic street pattern. The new construction component of the project, though, would alter the historic district; the impact of the proposed new construction is discussed further in Section 4.1.4. The retention of the Concrete Elevator would be less of an impact on the historic district *only if* the elevator was not altered to the extent that its character-defining qualities would be compromised. An extensively altered elevator with poor integrity would alter the character of 2nd Street SE in the historic district.

It is difficult to assess the impact that the "No Build" alternative would have on the character of the historic district. It would be erroneous to assume that there would be no change in the project area during the next few years since the project parcel is large, is located in a portion of the city experiencing other development, and is likely to be included in another project, if this one does not go forward. Any project in this area would have effects on the character of the historic district. The issue of cumulative effects is addressed in Section 6.

4.1.2.2 Accommodating Parking

***Guideline**:*
The Guidelines recommend designing required new parking so that it is as unobtrusive as possible, i.e., on side streets or at the rear of buildings. "Shared" parking should also be planned so that several businesses can utilize one parking area as opposed to introducing random, multiple lots. Parking should not be placed directly adjacent to historic buildings in locations that would affect historic landscape features.

Existing Condition: There is a small amount of off-street parking on the Pillsbury "A" Mill complex property. Parking is permitted on both sides of 2nd Street SE and Main Street SE, as well as on 3rd, 5th, and 6th Avenues SE.

Proposed Action: The Pillsbury "A" Mill Project would provide 1,798 internal and 34 surface parking spaces for residents and visitors in Alternatives 1 through 3. Alternative 4 would provide 1,434 parking stalls, most of which would be internal. A small surface parking lot would be retained adjacent to the Machine Shop, with access provided from 2nd Street SE. Twenty or more surface parking spaces would be located on the Pillsbury "A" Mill parcel. All other parking would be located in enclosed parking decks, most of which will be below grade. The site plan and parking were designed to provide an internal, linked circulation pattern that would reuse the historic rail spur corridor and would reduce the impact of the cars on the streets within the historic district**.** Vehicular entrances to the property would be limited to the two ends of the former railroad corridor

that bisects the large block (mid-block locations on 3rd and 5th Avenues SE) and an entrance to the surface parking area off 2nd Street SE. Access to the internal parking provided for the buildings on the East Block would be at points mid-block on 5th and 6th Avenues, using the rail spur corridor shared with the properties to the northeast.

Analysis: The conceptual plans for Alternatives 1 through 4 meets this guideline since the project would provide shared parking in as unobtrusive manner as possible. If the Concrete Elevator was retained, there would be no location that provided close, sufficient off-street parking for the rehabilitated historic building. Parking for the historic buildings would have to be provided elsewhere on the project site. The parking situation for the No Build alternative cannot be projected.

*4.1.3 **Protecting and Maintaining Historic Buildings***

Standard:
The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.

***Guideline**:*
The Guidelines recommend protecting and maintaining historic building materials and plant features through appropriate treatments. The Guidelines recommend repairing features of the building and landscape by reinforcing historic materials and replacement in kind deteriorated or missing parts of features when there are surviving prototypes. The Guidelines also recommend replacing in kind an entire feature of the building or landscape that is too deteriorated to repair—when the overall form and detailing are still evident—using the physical evidence as a model to guide the new work. If using the same kind of material is not technically or economically feasible, then a compatible substitute material may be considered.

Existing Condition: There are nine exterior historic resources, including a Great Northern Railway spur, on the Pillsbury "A" Mill complex property.

Proposed Action: The retention and rehabilitation of all except one of the historic buildings on the site and the railroad corridor are components of Alternatives 1 through 4. As is common for an EIS, conceptual plans are the used for review. At this stage of the project it is not possible to come to the level of detail address in the *Secretary of Interior's Standards* for the rehabilitation of properties.

The following resources would be retained and rehabilitated:

- The Pillsbury "A" Mill, a NHL, would be rehabilitated for residential and commercial use.
- The Red Tile Elevator would be retained; the head house would be rehabilitated for residential units, though no use has been developed for the block of storage bins. The "Pillsbury's Best Flour" sign on top of the Red Tile Elevator would be preserved.
- The South "A" Mill, Cleaning House, and Warehouse No. 1 complex of buildings would be retained and rehabilitated.
- The Machine Shop would be retained and rehabilitated for retail and commercial uses.
- Warehouse No. 2 would be retained and rehabilitated for residential use.
- The Great Northern Railway spur would be reinstalled after construction is complete and the associated train shed would be reconstructed.
- Many smaller historical components of the property, including the loading platform that fronts Warehouse No. 1, the water tank on the South "A" Mill, and traveling cranes would be retained and rehabilitated.

Alternatives 1 through 4 call for the demolition of the Concrete Elevator and the two conveyor bridges that connect it to the Red Tile Elevator.

This project proposes rehabilitation of the Pillsbury "A" Mill to house residential and commercial uses; this rehabilitation project is intended to meet the *Secretary of Interior's Standards*. All other historic buildings, except the one proposed for demolition, would also be rehabilitated and incorporated into the project.

Analysis: The project proposes the retention of eight of the nine historic resources on the Pillsbury "A" Mill complex property, seven buildings and the one main railroad spur into the train shed. The protection of the historical resources of the Pillsbury "A" Mill complex has been included in the conceptual development of the project. However, one large contributing structure, the Concrete Elevator, would be demolished.

Overall, though, the project incorporates a strong historic preservation component, will rehabilitate a NHL, and will ensure the long-term life of several buildings which will be difficult to adapt for new uses. The proposed retention of the historic railroad corridor through the center of the large block and restoration of some of its features maintains that important functional and character-defining component of the site plan.

At the conceptual stage of project design it is impossible to assess whether the rehabilitation projects would preserve the historic character of the buildings as changes are made for new uses. Yet because the Minneapolis HPC will review the design proposals for plans for the rehabilitation of the buildings, there is reason to expect that the projects will reflect good historic preservation practice.

The retention of the Concrete Elevator would enable the project to meet this Standard *only if* the elevator is not altered to the extent that its character-defining qualities are compromised.

The impact of Alternative 5, the "No Build" Alternative, on the historic resources of the project property is impossible to project. The timeframe for the eventual rehabilitation of the historic buildings as part of another project cannot be predicted.

4.1.4 Adding Features and Buildings: The Issue of Compatibility

Standard:
New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.

Comment: As noted above, the Minneapolis HPC Design Guidelines for the EBMA (see Section 4.2) address how the design of new buildings can be compatible with other resources in a historic district in terms of siting, materials, colors and textures. This section will address the matters of massing, size, and scale.

Existing Condition: The historic buildings in the Pillsbury "A" Mill complex provide the context for compatibility for the new components of the project.

Proposed Action: Alternatives 1 through 4 propose several types of new buildings. Building B (at 12 stories) and Building C (at 10 stories), which would be the same for Alternatives 1 through 3, have heights that are somewhat above that of the Pillsbury "A" Mill and below that of the Red Tile Elevator. These buildings would be four stories in height in Alternative 4 and would be lower than the Pillsbury "A" Mill. The footprints of the B and C buildings would be slightly larger than that of the Pillsbury "A" Mill, the largest historic building that would remain on the property.

Alternatives 1 through 4 propose a series of adjacent buildings that would line Main Street SE. While technically four buildings, this new construction would read in the streetscape as two large complexes (see Figure 3). Each of these complexes (Buildings D-E on the north side of 5th Avenue SE and Buildings F-G on the south side of that street) would have street fronts of 354 feet and 325 feet, respectively. The buildings that rise from these large footprints include townhouses along the street fronts, mid-rise buildings at the center of the complexes, and 15- to 27-story towers. The main differences in the alternatives are in the height of the components of these complexes.

Analysis: This standard identifies three points for consideration:

- **The avoidance of the loss of historic character-defining features.**
  The proposed demolition of the Concrete Elevator and construction of two new buildings on its site does not meet this portion of the standard.
- **The differentiation of new construction from historical buildings.**
  The conceptual plans for Alternatives 1 through 4 do not indicate that there is any attempt to replicate historic buildings or in any other way indicate that the new buildings would not clearly appear to be modern construction. The project meets this portion of the standard.
- **The compatibility of the new construction in massing, size, scale, and architectural features.**
  The massing, size, and scale of Buildings B and C are compatible with the historic buildings in the Pillsbury "A" Mill complex.

The proposed new construction along Main Street SE is more problematic. This new construction will be read in the landscape as two clusters of buildings and consequently should be compared to the clustered buildings in the Pillsbury "A" Mill complex, as well as to individual buildings. The new construction introduces new building types into the this area of the historic district: townhouses, mid-rise residential blocks, and residential towers, which *per se* would not be incompatible with the historic industrial buildings, according to the *Secretary of Interior's Standards*.

The Issue of Massing. The historic precedent for massing of buildings in the historic district is a simple rectangular block, rising without setbacks to a flat or low-pitched roof. Most of the buildings have a relatively simple form; only the grain elevators, with a combination of storage bins and head house or conveyor monitor, present a complex form based on function. Two patterns of building placement and massing appear in the vicinity of the project. Buildings placed side-by-side along Main Street SE appear to be separate buildings because of their individual design and materials. This pattern is dominant northwest of 3rd Avenue SE. A second pattern has buildings and structures positioned in the industrial complex, close to each other in a function-driven arrangement. The Pillsbury "A" Mill industrial complex has this quality, with buildings of various heights placed side-by-side and open to each other, as well as additional buildings placed in close proximity. In some areas, such as where the much taller South "A" Mill and Cleaning House rise adjacent to the low, three-story Warehouse No. 1, the complex appears to have complex, stepped massing.

The proposed new construction along Main Street SE would read in the streetscape as two large complexes that combine townhouses along the street fronts, elevated landscaped plazas, mid-rise blocks, and high-rise towers. While this new construction would be different from the buildings and irregular massing evident in the Pillsbury "A" Mill complex, the combination of low townhouses and taller towers would have a complementary relationship with the massing of the historic industrial complex. The

pattern of massing for the new construction is similar enough to that of the historic buildings to be considered incompatible.

The Issues of Size and Scale. Some of the proposed new construction on Main Street SE would introduce an increase in size and scale of buildings, both in footprint and height. The site plan in Figure 3 indicates the relative size of the historic buildings and new construction. The compatibility of the size of the new buildings can be considered both individually and grouped in complexes. In Alternatives 1 through 4, the complexes of paired buildings, D-E, and F-G, would have combined footprints and frontage on Main Street SE comparable to that of the "A" Mill, Cleaning House, South "A" Mill, Warehouse No. 1 and Red Tile Elevator complex of joined buildings. However, when considered individually, the new buildings would be perceived as larger than the historic buildings. The larger portion of both the D-E and F-G complexes would be considerably larger than any of the historic buildings, except for the Concrete Elevator, which is proposed for demolition. While the footprints of Buildings B and C are somewhat larger than the historic buildings, they can be considered compatible. The even larger footprints of the Buildings E and G move out of the range of compatibility and introduce a new, incompatible size.

The height of the proposed new construction is also a component of its size, though this standard does not make specific comments about the height of new buildings with regards to nearby historic resources. The only specific direction about the height of new buildings in the EBMA is included in the Minneapolis HPC Design Guidelines. The HPC guidelines establish the height of the Red Tile Elevator as the cap for new construction. The issue of height is discussed further in Section 4.2.

The statement in the HPC guidelines "New buildings to be no higher than that of existing silo-mills in the area" implies that the Red Tile Elevator, which is slightly taller than the Concrete Elevator, sets a height cap and establishes a frame of reference for assessing compatibility in height in the EBMA. Although this statement does not mention head houses, it seems that they would be included since they have always been components of the grain elevators. The Red Tile Elevator, including its head house, is considered to be the reference point "silo-mill" for the HPC guideline. Alternative 1 calls for three of four towers to rise above the Red Tile Elevator. Alternative 2 proposes two groups of massed mid-rise towers that would rise to a height slightly below that of the Red Tile Elevator. Alternative 3 calls for towers the same height as those in Alternative 1, but with shorter connections between the two sets of towers. Alternative 4 proposes a combination of towers and lower buildings, none of which would be taller than the Red Tile Elevator. The tallest towers in Alternatives 1 and 3 would rise above the Red Tile Elevator and be incompatible in size with the historic buildings in the Pillsbury "A" Mill complex.

The evaluation of the size of the new construction for the project, as represented by building complexes D-E and F-G in Alternatives 1 through 4, must also consider the amount of new construction along Main Street SE in comparison to the historic Pillsbury "A" Mill complex (see Figure 3). The Main Street SE frontage would consist of three

complexes of buildings, two of which will be new construction. The Main Street SE frontage of the Pillsbury "A" Mill complex is 412 feet. The D-E complex Main Street SE frontage would be 354 feet and that of the F-G complex would be 325 feet. As perceived in views of the project area, approximately two-thirds of the Main Street frontage will be new construction. The project's new construction on Main Street SE would have an overall size and scale incompatible with the historic Pillsbury "A" Mill industrial complex and would be an intrusive presence for that resource and the St. Anthony Falls Historic District.

The Issue of Compatibility in Architectural Design. The compatibility of architectural features cannot be addressed in an EIS when the project alternatives are presented in conceptual form. The Minneapolis HPC Design Guidelines for the EBMA (see Section 4.2) address how the design of new buildings can be compatible with the historic character of the historic district.

Assessing the Effects of the Proposed New Construction
The proposed new construction in Alternatives 1 through 4 would have varied effects on the Pillsbury "A" Mill NHL, the Pillsbury "A" Mill complex, and the St. Anthony Falls Historic District. The differences in these affects are highlighted in Section 4.3.

Guideline
The Guidelines recommend removing non-significant buildings, additions, or streetscape and landscape features, which detract from the historic character of the district or the neighborhood.

Proposed Action: Alternatives 1 through 4 for the project incorporate the demolition of two buildings determined to be non-contributing to the historic district, Pillsbury Warehouse No. 3 and a hydro-processing building, both located on Main Street SE. Plans also call for the demolition of small modern additions, such as loading bays, which extend from the buildings in the "A" Mill-to-Red Tile Elevator cluster. A non-contributing shed may be removed from the side of Warehouse No. 2.

Analysis: The demolition of non-contributing buildings and modern additions to historic buildings, as proposed in Alternatives 1 through 4 would meet the intention of this Guideline. However, neither of the buildings slated for demolition detracts from the historic character of the Pillsbury "A" Mill complex or the historic district. The removal of these buildings would be followed by the construction of two large buildings where Warehouse No. 3 and the hydro-processing building stand. The No Build alternative assumes that the non-contributing buildings would remain standing.

4.1.5 Protecting and Preserving Archaeological Resources

Standard*:*
Significant archeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.

Existing Condition: A recent archaeological assessment of the Pillsbury "A" Mill complex project site identified one area with the potential for containing significant and intact post-contact archaeological resources, the location of a former commercial complex known as Spooner's Row.

Proposed Action: An archaeological investigation and mitigation of post-contact archaeological resources associated with Spooner's Row has been recommended.

Analysis: The implementation of the recommended investigation and mitigation of post-contact archaeological resources would meet this standard.

4.1.6 The Secretary of Interior's Standards and Guidelines: A Summary

The conceptual design of the Pillsbury "A" Mill complex project, as presented in Alternatives 1 through 4, has components that meet the intent of several of the *Secretary of Interior's Standards for Rehabilitation* and guidelines for work within a NRHP historic district, as well as elements that do not meet the standards.

The intended rehabilitation of the Pillsbury "A" Mill and the retention and rehabilitation of one of the two grain elevators on the property, the Red Tile Elevator, are aspects of the project that meet the standards and also mitigate to some extent some of the other aspects of the project. The rehabilitation of five other buildings and the main railroad spur are additional components of the project that meet the Standards. The project handles the parking issue well and meets the guideline for additional parking in a historic district. Buildings B and C are compatible in scale and massing with the historic buildings in the project area. Two non-contributing buildings would be demolished. Most of the new construction would replace non-contributing buildings and would be placed where no historic buildings stand, and therefore would require the loss of only one contributing historic building, the Concrete Elevator. The project would not impact the historic relationships between buildings and streetscapes in the historic district, except in the area of new construction. Archaeological resources would be properly addressed.

The demolition of the Concrete Elevator, a contributing property in the historic district and a component of the significant Pillsbury "A" Mill complex, is a proposed action that would not meet the standards. Also, the project's new construction would introduce increased building size and scale. These attributes and the extent of the new construction would combine to make the new buildings intrusive. None of the project alternatives would meet the standards for compatibility in new construction, in part because of the extent of area occupied now by non-contributing properties. The addition of two block fronts of new construction on Main Street SE would affect the character of an important streetscape within the historic district. The new construction would reduce the visual prominence of the Pillsbury "A" Mill complex but the rehabilitation of the buildings would insure the long-term preservation of the significant historic resources.

Mitigating aspects of the project affect both the Pillsbury "A" Mill complex and the historic district. Buildings are sited to preserve sight lines down 5th and 6th Avenues SE towards the Mississippi River. 5th Avenue SE would be kept open as a private street accessible to the public or turned back to the city as a public street. Although the Pillsbury "A" Mill Complex project does not meet all of the *Secretary of Interior's Standards* and guidelines, in many ways its conceptual plan meets the spirit and intent of the document.

The retention of the Concrete Elevator would enhance the historic preservation component of the project and enable the project to meet an additional standard. However, as noted in Section 4.1.1, the rehabilitation of the Concrete Elevator for a new use might require extensive changes to its character-defining appearance and convert it into a non-contributing resource. If no use was found for the elevator, it would be a large artifact on the project property. The ultimate impact of avoiding demolition of the Concrete Elevator is not clear at the conceptual stage of the project.

The No Build alternative would involve no demolition of historic buildings and no new construction that would be incompatible with the historic industrial buildings on the property. However, that alternative does not insure the long-term preservation of the Pillsbury "A" Mill and its adaptive reuse. It should not be considered a more commendable alternative.

It is important to note that the Pillsbury "A" Mill Complex project would *not* have an adverse effect on the Pillsbury "A" Mill NHL property. Moreover, it would stabilize and rehabilitate that important historic resource.

4.2 MINNEAPOLIS HPC ST. ANTHONY FALLS HISTORIC DISTRICT GUIDELINES

A section of the guidelines for the St. Anthony Falls Historic District covers the EBMA, an area bounded by the Mississippi River, Central Avenue, University Avenue and 6th Avenue SE, excluding the block bounded by University Avenue, 6th Avenue SE, 2nd Street SE, and 5th Avenue SE (see Figure 1). The guidelines apply to all new construction and rehabilitation projects in the area. Most of the guidelines address specific design elements that have not been developed in the conceptual planning level, such as materials, directional emphasis, openings and projections, roof shapes, and details. Only two of the guidelines, those pertaining to siting and height, can be discussed at this stage of the project.

HPC Guideline:
Siting: New buildings will be constructed with principal elevations in line with the façades of existing buildings. New construction shall continue to form a visual wall along the street.

Proposed Action: The conceptual plans for Alternatives 1 through 4 call for the introduction of six new buildings.

In Alternatives 1 through 4, all of the new buildings, except for Buildings B and C, hold the street line. Buildings B and C would be set back just enough to accommodate terraces and stoops for the townhouses that would wrap the lower stories of the structures. Buildings D-E and F-G are positioned so that the townhouses hold the street wall. The residential towers of those buildings are set back 20 to 30 feet from Main Street SE and less than that distance from 5th and 6th Avenues SE. They would appear to rise from elevated plazas.

If the Concrete Elevator was retained, Buildings B and C would not be erected and the elevator would continue to dominate the 2nd Street SE street wall.

Analysis: Most of the buildings proposed for the Pillsbury "A" Mill Complex project provide an extension of the street wall at their lower levels. Buildings B and C, which are wrapped with townhouses, would be set back slightly from the building line and consequently do not meet this guideline. However, the slight set-back to accommodate functional aspects of the residential building would come closer to meeting the guideline than a set-back intended to accommodate parking.

HPC Guideline:
Height. New Buildings to be no higher than that of existing silo-mills in the area.

The Red Tile Elevator is slightly taller than the Concrete Elevator head house and establishes the height cap for this guideline for the EBMA. The Red Tile Elevator rises approximately 189 feet above Main Street SE.

Proposed Action: Alternatives 1 through 4 vary primarily in the height of the proposed new buildings on Main Street SE. The height of Buildings B and C, proposed for the 2nd Street SE location of the Concrete Elevator, would be the same height, slightly lower than the Red Tile Elevator, in Alternatives 1 through 3; the buildings would be four stories in height in Alternative 4.

Alternative 1
Alternative 1 proposes new buildings on Main Street SE that would be both lower and taller than the Red Tile Elevator. The mid-rise residential tower that would stand adjacent to the Red Tile Elevator, Building D, would be slightly lower than the historic structure. The town house and mid-rise portions of Buildings D-E and F-G would be significantly lower than the Red Tile Elevator. Three residential towers of Buildings D-E and F-G placed near 5th and 6th Avenues SE would stand taller than the Red Tile Elevator.

Analysis: The tallest components in Alternative 1 would be positioned over 280 feet from the Red Tile Elevator and the new construction that would be closest to the historic structure would be lower than it. In this way Alternative 1 acknowledges the intent of the HPC Guideline to acknowledge the Red Tile Elevator as historically the tallest structure in the EBMA. The Red Tile Elevator would still rise above the buildings northwest of it on Main Street SE within the EBMA. But southeast of the Red Tile Elevator, the high-

rise residential towers would stand taller than the elevator and not be in compliance with the HPC guideline. Alternative 1 challenges the height restrictions of the HPC guidelines but positions the taller buildings away from the Red Tile Elevator. Since Alternative 1 includes three residential towers that are taller than the Red Tile Elevator, it does not meet this guideline.

Alternative 2
Alternative 2 presents the project with the height of the new construction limited to that of the Red Tile Elevator. The four buildings proposed on Main Street SE would vary in height from 8 to 15 stories and be designed to appear as clustered mid-rise residential towers. Some varied pent house forms that would terminate the towers and the tallest of these would rise to just below the height of the Red Tile Elevator.

Analysis: The massing of the new construction in Alternative 2 takes the form of clustered mid-rise towers in order to keep below the height cap of the Red Tile Elevator. While the massing study indicates how the two blocks of new buildings could have varied forms and penthouse configurations, the new buildings would nevertheless have a more solid wall-like appearance. Alternative 2 meets the HPC Guideline for height in the EBMA.

Alternative 3
Alternative 3 utilizes the contrasting forms of townhouses and residential towers for the four new buildings to be erected along Main Street SE, the D-E and F-G complexes. Townhouse-height forms would comprise the lower portions of buildings and link the four towers, which would range from 15 to 27 stories in height. Three towers placed adjacent to 5th Avenue SE and on the East Block would exceed the height of the Red Tile Elevator; a mid-rise residential tower, slightly lower than the Red Tile Elevator, would stand near to the historic structure.

Analysis: The tallest components in Alternative 3 would be positioned over 280 feet from the Red Tile Elevator and the new construction that would be closest to the historic structure would be lower than it. In this way Alternative 1 meets the intent of the HPC Guideline to acknowledge the Red Tile Elevator as historically the tallest structure in the EBMA. The Red Tile Elevator would still rise above the buildings northwest of it on Main Street SE within the EBMA. But southeast of the Red Tile Elevator, the high-rise residential towers would stand taller than the elevator and not be in compliance with the HPC guideline. Alternative 3 challenges the height restrictions of the HPC guidelines but positions the taller buildings away from the Red Tile Elevator. Since Alternative 3 includes three residential towers that are taller than the Red Tile Elevator, it does not meet this guideline.

Alternative 4
Alternative 4 also utilizes the contrasting forms of townhouses and residential towers for the four new buildings to be erected along Main Street SE, the D-E and F-G complexes. Townhouse-height forms would comprise the lower portions of buildings and link the

four towers, which would range from 12 to 18 stories in height. These towers would not exceed the height of the Red Tile Elevator.

Analysis: Alternative 4 meets the HPC Guideline for height in the EBMA.

Alternatives 5 and 6
Neither the "No Build" Alternative 5, nor the retention of the Concrete Elevator, as addressed by Alterative 6, specifically address the height of new construction.

4.2.1 HPC Guidelines: A Summary

The conceptual design for the Pillsbury "A" Mill Complex project is responsive to the HPC guidelines concerning siting and height, but does not fully meet the guidelines. In all of the alternatives, new buildings are positioned at the edge of the street and would extend, rather than disrupt, the street wall along Main Street SE. Buildings B and C would be set back slightly from the building line on 2nd Street SE.

Alternatives 1 and 3 propose buildings taller than the height cap set by the HPC Guidelines. The conceptual massing plans for these alternatives acknowledge the intent to keep the Red Tile Elevator as an important element in the skyline, and position the tallest buildings along 5th Avenue SE over 280 feet from the historic structure. Alternative 2 indicates how the same number of residential units could be accommodated in buildings that do not exceed the height of the Red Tile Elevator; in this alterative height and variety in massing are exchanged for a more solid wall-like form of buildings. Alternative 4, in order to meet the permitted density of the Industrial Living Overlay District, reduces both the height of the residential towers and the number of units. Alternatives 2 and 4 meet the HPC Guideline for height in the EMBA. Alternatives 1 and 3 challenge that limitation, but position the buildings taller than the Red Tile Elevator at some distance from that structure in order to keep the elevator and the "Pillsbury's Best Flour" sign on top of it a prominent element of the EBMA skyline.

4.3 ANALYSIS OF PROJECT EFFECTS: SUMMARY AND CONCLUSION

The Pillsbury "A" Mill Complex Conceptual Plan, as presented in Alternatives 1 through 4 would have somewhat different effects on the Pillsbury "A" Mill NHL property, the entire historical Pillsbury "A" Mill complex, and the St. Anthony Falls Historic District. These effects are summarized below.

4.3.1 Effects on the Pillsbury "A" Mill NHL

The Pillsbury "A" Mill Complex project includes the stabilization of the "A" Mill and the rehabilitation of the building for non-industrial uses. The project would introduce new construction into the vicinity of the NHL property. The Building B of the Pillsbury "A" Mill Complex project would stand on a site that abuts the eastern corner of the NHL

property. This new building would have a footprint just slightly larger than that of the "A" Mill, and would be somewhat taller.

The project, as defined by Alternatives 1 through 4, poses no direct impacts on the NHL property and provides for its rehabilitation. The new construction in the vicinity of the "A" Mill meets the *Secretary of Interior's Standards* for compatible new construction and would not have an adverse affect on the NHL due to its location, size, height, or scale. The project would not impact the character-defining properties of the NHL or its immediate setting. The retention of the Concrete Elevator would eliminate any effects of the project on the setting of the "A" Mill. The No-Build alternative would leave the future stabilization and rehabilitation of this resource unresolved.

4.3.2 Effects on the Pillsbury "A" Mill Complex

The Pillsbury "A" Mill Complex project, as presented in Alternatives 1 through 4, would include the rehabilitation of the "A" Mill, as well as the rehabilitation of seven additional resources that comprise the complex.

Alternatives 1 through 4 propose the demolition of the Concrete Elevator. This structure is an important component of the Pillsbury "A" Mill complex and represents the modernization of the facility during the early twentieth century; it is a contributing resource in the St. Anthony Falls Historic District. However, the Red Tile Elevator had the same function as the Concrete Elevator as a receiving elevator, and because the Red Tile Elevator will be rehabilitated, the buildings that represent the complete milling process—rail transport of wheat and flour; receipt of wheat in elevators; cleaning and milling of wheat; and the bagging and storage of flour—will remain as part of the historic milling process. The reconstruction of the main rail spur through the historic milling property in the street bed of an internal street will retain a character-defining aspect of the industrial complex. The new construction proposed for the site of the Concrete Elevator meets the *Secretary of Interior's Standards* for compatible new construction within a historic district. However, the presence of the two new buildings would sever the physical proximity and visual relationship of Warehouse No. 2 with the other historic buildings. This proposed demolition and new construction would have an adverse effect on the Pillsbury "A" Mill complex.

The new construction proposed for the site of the Concrete Elevator in Alternatives 1 through 4 meets the *Secretary of Interior's Standards* for compatible new construction. However, the presence of these buildings would sever the visual relationship of Warehouse No. 2 with the other historic buildings. The new construction proposed for the southeastern corner of the block on which the complex is located in Alternatives 1 through 4 would alter significantly the immediate setting of the Pillsbury "A" Mill complex. This new construction, as presented in all of the alternatives, would introduce a new size and scale of building and because of its extent would be intrusive. The extent of the new construction would alter the perception of the size and scale of the Pillsbury "A"

Mill operation and the prominence that the structure has had in the Main Street SE streetscape.

As the Concrete Elevator is a prominent and historically significant building, the retention of it would reduce the impacts of the project on the Pillsbury "A" Mill complex property. However, if the Concrete Elevator was altered significantly to accommodate a new use, it would not meet the *Secretary of Interior's Standards* and it would become a non-contributing building. If the structure was not rehabilitated for reuse, it would become a large artifact on the project property and maintenance burden. Moreover, the retention of the Concrete Elevator would not reduce the impact of the proposed new intrusive construction located on Main Street SE. Preserving the Concrete Elevator would not enable the project to meet the *Secretary of Interior's Standards* completely and, because of the improbability of adapting the structure appropriately for a new use, the assumption cannot be made that the continued presence of the Concrete Elevator would alter significantly the effects of the project to sufficiently allow it to meet the *Secretary of the Interior's Standards*.

The Pillsbury "A" Mill Complex project, as presented in Alternatives 1 through 4, has a strong historic preservation component, but would introduce some adverse effects through the demolition of the Concrete Elevator and the large extent of new construction. The extent and scale of the new construction would alter the immediate setting of the Pillsbury "A" Mill complex considerably. For the complex, the project would have both positive and adverse effects.

4.3.3 Effects on the St. Anthony Falls Historic District

The Pillsbury "A" Mill Complex project, as defined in Alternatives 1 through 4, proposes the retention and rehabilitation of eight of the nine historic resources on the Pillsbury "A" Mill complex within the historic district. The project proposes the demolition of the Concrete Elevator. The extensive new construction proposed for the Pillsbury "A" Mill Complex project would introduce a new size and scale of buildings that would have the effect of being intrusive in the St. Anthony Falls Historic District. The new construction proposed in Alternatives 1 and 3, with three residential towers that would rise above the height of the Red Tile Elevator, would be intrusive in the EBMA, though the towers are positioned to minimize the impact on the historic structure. The new construction proposed in Alternatives 2 and 4, would be somewhat less so, but nevertheless intrusive mainly because of its presence on two block fronts along Main Street SE. Buildings B and C, as proposed in Alternatives 1 through 4, would meet the *Secretary of Interior's Standards* and the HPC guidelines for compatibility in new construction in regards to size, scale, massing form, and height. The presence of the new construction on Main Street SE would alter the perception of the scale and significance of the Pillsbury "A" Mill complex and other historic properties in the historic district.

The retention of the Concrete Elevator would minimize, but by no means neutralize the impacts of the project on the St. Anthony Falls Historic District. The Concrete Elevator

is a contributing building and a prominent visual element. The retention of the elevator would not reduce significantly the impact of the proposed new construction, for even with the Concrete Elevator standing on 2nd Street SE, the extent and scale of the new construction would have an impact on Main Street SE area of the St. Anthony Falls Historic District.

The Pillsbury "A" Mill Complex project, as presented in Alternatives 1 through 4, has a strong historic preservation component, but would introduce some adverse effects on the St. Anthony Falls Historic District through the demolition of the Concrete Elevator and the large extent of new construction. The breadth and scale of the new construction would alter the project area of the historic district considerably. As stated previously, the project would have both positive and adverse effects on the EBMA portion of the St. Anthony Falls Historic District.

4.3.4 Conclusion

The implementation of Alternatives 1 through 4 of the Pillsbury "A" Mill Complex project would have both positive and adverse effects. The Pillsbury "A" Mill Complex project would not pose an adverse effect on the Pillsbury "A" Mill NHL property.

All "build" alternatives have historic preservation components, the positive effects of the proposed project, which include:

- The stabilization and rehabilitation of the Pillsbury "A" Mill, a NHL;
- The rehabilitation of seven additional buildings and the main railroad spur;
- The retention and rehabilitation of all major building types erected in the Pillsbury milling complex, including a grain elevator; and
- The retention of many of the small elements that evoke the industrial past of the property, including the "Pillsbury's Best Flour" sign on the Red Tile Elevator, the water tank of the South "A" Mill building, and various industrial elements such as cranes, bins, and equipment integral to the buildings.

All "build" alternatives would have adverse effects, which include:

- The demolition of one historic structure, the Concrete Elevator;
- Changes to a historic property, the Pillsbury "A" Mill complex, in a way that does not meet entirely the *Secretary of Interior's Standards for Rehabilitation* and Guidelines through the loss of a historic resource, introduction of intrusive new construction, and alterations to the immediate setting; and
- Introduction of new construction of a size, height, and scale that would be intrusive, and consequently would diminish the integrity of the St. Anthony Falls Historic District's character-defining features.

Alternatives 1 and 3 would have the following effects:

- Introduce new construction that exceeds the maximum height cap set by the HPC guidelines.
- Position the tallest towers over 280 feet from the Red Tile Elevator, and in that way help to maintain the presence of the Red Tile Elevator as the tallest of the historic resources.

The retention of the Concrete Elevator would have the following impacts:

- The demolition of a prominent historic structure would be avoided.
- The setting of the Pillsbury “A” Mill NHL would not be altered.
- Both the Pillsbury “A” Mill Complex property and the historic district would have better integrity *if* the Concrete Elevator did not lose its integrity through adaptation for a new use.
- The presence of the Concrete Elevator would not significantly reduce the impact of the proposed intrusive new construction on Main Street SE on either the Pillsbury “A” Mill complex or the historic district.
- Two compatible new buildings proposed for the Concrete Elevator site would not be erected.

The No Build Alternative (Alternative 5) would have the following impacts:

- The long-term preservation of the NHL Pillsbury “A” Mill would be uncertain.
- The future of the historic buildings that comprise the Pillsbury “A” Mill complex property would be uncertain.
- The “No Build” condition is likely to be temporary due to the presence of large parcels that are non-contributing to the St. Anthony Falls Historic District and the proximity of the property to the Mississippi River.

5.0 VISUAL IMPACT ANALYSIS

There are several reasons to evaluate the impact of the proposed project on the views in the project area. Recent studies of the impact of new elements in a landscape on historic resources have concluded that adverse visual effects can be caused by a change in aesthetic values or by obstruction of views. An adverse visual effect that diminishes a property's integrity adversely affects that property's ability to convey its historic significance. When the adverse effect is significant, a property's eligibility for listing in the NRHP can be affected as well. An adverse aesthetic or scenic effect occurs when the character or quality of a historic property is impacted significantly. An adverse obstructive effect is an action that obscures the view of a significant component of, or the entirety of, a property and hence diminishes the property's historic character and visibility. A project may have a visual effect—introduce new components into a view—without being an adverse visual effect (Delaware SHPO 2003). The preservation of important views of cultural resources is a goal of the Mississippi River Critical Area legislation and implementation, as well as the Minneapolis City Zoning Code Shoreland Zoning Overlay.

5.1 SCOPING FOR VISUAL EFFECTS

The Scoping Decision Document for the Pillsbury "A" Mill Complex project EIS states:

> *The Pillsbury "A" Mill Complex Project EIS will evaluate the cumulative visual and functional impacts of all phases of the project (including demolition and new construction) on all of the historic resources on the site and proximate to it…*(Minneapolis 2004a)

Concerning the analysis of impacts on views, the Scoping Decision document states that the EIS will describe the project's impacts on views:

- *To, from, and of the River within the St. Anthony Falls Historic District;*
- *To, from, and of both the east and west banks of the District; and*
- *On the east and west banks of the River contained within the Mississippi National River and Recreation Area (MNRRA), the Mississippi River Critical Area and the City's Shoreland Overlay District on resources across the river and historic elements such as tunnels and raceways* (Minneapolis 2004a).

These broad scoping mandates have guided the establishment of a PIZ and the development of critical cumulative effects issues.

The St. Anthony Falls Waterpower Area of the larger historic district was identified as the appropriate PIZ for visual effects. This PIZ will be used for the consideration of cumulative effects of the proposed projects on views. The St. Anthony Falls Waterpower Area includes the affected portion of the Mississippi River Critical Area Corridor, the

boundaries of which are the same for MNRRA, and includes the Minneapolis Shoreland Zoning Overlay District. The PIZ is shown on Figure 5.

The critical visual effects issues are:

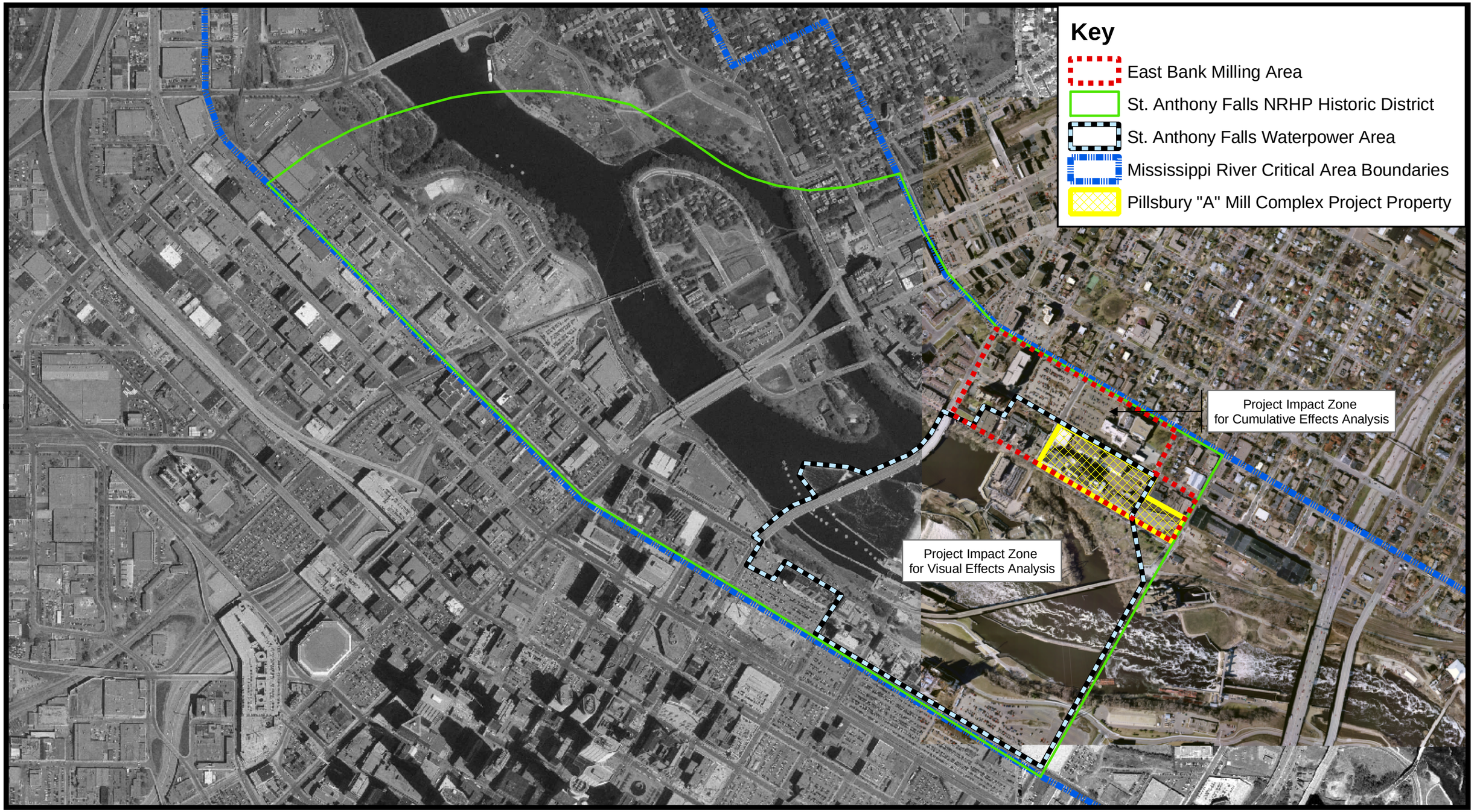
- Would views of historic buildings be obstructed?
- Would the cumulative effects of significantly altering the prominence of historic buildings in the view, the scale of components in the view, and the perception of change over time be sufficient to result in an adverse effect on views?
- Would viewers of the EBMA be able to perceive that it is a historic district with relationships to other historic resources in the area once the new construction is complete?
- Would views of the St. Anthony Falls portion of the Mississippi River Critical Area be altered in a significant and adverse way, particularly with regards to perceived accessibility of the river corridor?

The PIZ for the analysis of cumulative visual effects has a baseline condition established in 1971. The historic properties in the West Bank Milling Area and in the EBMA were important visual components of the view sheds at that time. However, by 1971, milling no longer dominated the St. Anthony Falls area and the changes associated with its subsequent evolution had been introduced, including the demolition of some of the small mills in the West Bank Milling Area, and the construction of the Upper St. Anthony Falls Lock and the Lower St. Anthony Falls Lock and Dam. The baseline condition for view analysis is a mostly abandoned former industrial area, which had already begun to experience changes.

Two views of the East Bank and West Bank Milling Areas indicate how the districts looked during the late 1940s and provide a longer context for the consideration of visual changes (Figures 6 and 7). At that time, flour-milling facilities still dominated the buildings standing along the Mississippi River banks, even though the industry had peaked two decades earlier. The buildings that form the cores of historic buildings in each milling area had a very similar relationship to the Mississippi River corridor and St. Anthony Falls area as they have today.

5.2 URBAN VIEW SHEDS

Visual effects are often considered through the analysis of view sheds in a PIZ. The term view shed refers to everything visible from a particular vantage point. The concept of a view shed has been used in environmental assessment analysis to encompass natural and cultural elements, viewed from one or more vantage points, that together have scenic, historic, and aesthetic value. The view sheds in the PIZ have varied elements and definitely have an urban quality. They present a diverse mix of historic and modern, natural and built components of the urban environment. The view sheds also provide a sense of the past, present, and evolving uses of the area.



SOURCE: AERIAL PHOTOGRAPH PROVIDED BY BENSHOOF & ASSOCIATES, INC.

Pillsbury "A" Mill Complex Project
Analysis of Effects
Minneapolis, Hennepin County, Minnesota

Project Impact Zones for Effects Analysis

N
W E
S

Figure 5

Source: Minnesota Historical Society. Location NO. MH5.9MP1k p18

FIGURE 6. VIEW OF EBMA, 1948, FACING NORTH

Source: Minnesota Historical Society. Location NO. MH5.9MP1k p45

FIGURE 7. WEST BANK MILLING AREA, 1949, FACING SOUTHWEST

There are several significant components of the view sheds that encompass the East and West Bank Milling Areas, including the Mississippi River. The river's East Channel limestone escarpment and the Falls of St. Anthony dam and its associated apron and dike are visible shapers of the flow of water through the area. The historic Stone Arch Bridge and modern Upper St. Anthony Falls Lock are positioned also between the two milling areas and are visible.

It is difficult to view both the East and West Bank Milling Areas at the same time due to the width of the river. The visibility of elements in the view sheds fluctuates throughout the seasons. The accessibility of the view sheds changes as buildings are erected on both sides of the river. The bridges that cross the river—the Stone Arch Bridge, the Central Avenue Bridge, and even the I-35W Bridge south of the milling areas—afford views of the St. Anthony Falls area. The Central Avenue Bridge, erected in 1918 and a contributing resource in the St. Anthony Falls Historic District, is generally not very prominent in views of the Milling Areas from ground level due to its location at the northwestern edge of the Waterpower Area. Additional vantage points are located on the riverbanks, nearby streets, and within buildings that line the river.

The various Waterpower Area view sheds present elements in the foreground, middle ground, and in the distance. The transmission line structures installed by Northern States Power during the 1970s appear in almost every view, often in the middle ground. The power plants in the view sheds remind viewers of the historic and modern power-generation use of the St. Anthony Falls area and are also often in the middle ground. The Stone Arch Bridge dominates the Mississippi River in the view sheds in the PIZ and, as it crosses the river diagonally, leads the eye to the opposite bank from both sides of the river. This iconic historic resource is seen side-by-side with the modern spillway, lock, and control building of the Upper St. Anthony Falls Lock and Dam. The Main Street substation and the University of Minnesota Hydrology laboratory are also in the immediate vicinity and visible. This type of juxtaposition of the new and the old is a component of the view sheds that provides a sense that organic change has occurred over time.

The Waterpower Area view sheds include pastoral elements that most viewers do not identify as the modern elements that they are. Much of Hennepin Island and the adjacent riverbank had a park-like appearance by the mid twentieth century (see Figure 6). This area was developed as a municipal park, the Father Hennepin Bluff Park, during the late 1970s. The demolition of the several small flour mills that stood between the water power canal and the river in the West Bank Milling Area during the 1930s altered the character of the river bank from the heyday of the flour milling period and opened up the views of the river bank and the mills on the west side of the water power canal. The more recent development of the Mill Ruins Park in the West Bank Milling Area and a heritage trail that links the East and West Bank Milling Areas reinforces the pastoral and recreational overlay to an area that was for a long time the most important place of work in Minneapolis. Street trees, planted in recent years as residential and entertainment uses

have been introduced into the former industrial area, add to the modern pastoral components of views of the East and West Bank Milling Areas.

5.3 THE CRITICAL VIEW SHEDS

The critical view sheds in the PIZ are those of the East and West Bank Milling Areas, which face each other across the river. Both view sheds are visible from the opposite riverbank and the Stone Arch Bridge. The characteristics of these view sheds as they appear today are described below.

5.3.1 The EBMA View Shed

The EBMA is visible from across the river, rising above the trees and buildings on Hennepin Island and the park-like bank of the Mississippi River. By far the most prominent component of this area is the Pillsbury "A" Mill complex. Both the "A" Mill and the adjacent Red Tile Elevator stand against the skyline. A significant portion of the Concrete Elevator is also visible from points directly across the river and to the south and southeast. The block along Main Street SE to the northwest of the Pillsbury "A" Mill complex is less visible for several reasons: the height of the buildings, the presence of Hennepin Island and its vegetation, and the Main Street Hydroelectric Station and its associated modern equipment. However, this block, with its smaller buildings and more varied appearance provides an important historic and visual context for the size and significance of the adjacent Pillsbury "A" Mill complex.

View Shed Characteristics
Views of the EBMA are framed by the Winslow House residential tower rising adjacent to Central Avenue on the northwest end; the Red Tile Elevator and a portion of the Concrete Elevator, visible behind the Red Tile Elevator, signal the southeastern end of the industrial zone. Southeast of the Pillsbury "A" Mill complex Concrete Elevator, the view lacks points of interest and trees obscure the new low-rise residential development adjacent to the EBMA. From across the river, the view of the EBMA has two strong visible components: the new construction of the Winslow House and the City of Minneapolis parking ramp adjacent to it, and the Pillsbury "A" Mill complex at the other end. These two prominent groups of properties balance the view.

From several vantage points on the Stone Arch Bridge, the historic and modern hydroelectric power resources on Hennepin Island are prominent foreground elements. The buildings of the EBMA enclose the view shed beyond. Due to the level topography just beyond the EBMA, the buildings and activity along the University Avenue corridor are not visible as a component of the view shed. The points of accessibility—through streets—are obscured from some vantage points. The view appears to have an organic quality and to represent change over time due to the visibility of both historic and modern buildings. Several types of uses for buildings in the EBMA can be perceived, a factor that adds to the complexity and dynamic quality of the views.

Although the former Twin City Rapid Transit Company Power House is located adjacent to the southeastern end of the Stone Arch Bridge, it is generally not visible in views of or from the EBMA at ground level.

5.3.2 The West Bank Milling Area View Shed

The West Bank Milling Area has a size and visual identity similar to that of the EBMA. An area defined by 5th Avenue on the northwest and Chicago Avenue on the southwest retains several resources from the flour-milling era and has the visual cohesiveness to be a significant historic component of the view shed. The adaptive reuse of the Crown Roller Mill for offices and Standard Flour Mill complex for a hotel has not diminished the visual impact of that important group of contributing historic buildings. The row of buildings southeast of Portland Avenue includes the Washburn, Crosby and Company "A" Flour Mill, now the redeveloped Mill City Museum and Elevator No. 1, a group of concrete bin forms readily identified with the milling industry. This group of historic and mostly compatible new infill buildings creates a strong block front and suggests how the area once appeared densely developed with mills.

View Shed Characteristics
The historic core area is framed by the Guthrie Theater Building under construction on a site within the Saint Anthony Falls Historic District but not in the West Bank Milling Area on the southeast. The Upper St. Anthony Falls Lock and Dam, a row of trees, and the Riverwest residential tower on First Street South frame the view on the northwest end. The view is layered with the Stone Arch Bridge, modern lock, and Mill Ruins Park in the foreground and row of historic mill buildings in the middle ground. The view of re-used mills and the concrete grain elevator with its Gold Medal flour signs is interesting; the scene has variety within consistency established by comparable building heights and sizes. Change over time is apparent and signs, residential balconies, and other features signal new uses for buildings. The points of accessibility—a street parallel to the river and Portland Avenue, as well as the parkland—are visible from several of the vantage points.

5.3.3 A Complementary Set of View Sheds

The separate, but historically and thematically interconnected, view sheds of the East and West Bank Milling Areas are approximately balanced in terms of the dominance of historic resources and the sense of the modern city that surrounds them. Each Milling Area has a core historic component; that of the West Bank Milling Area that extends for approximately three blocks along the Mississippi River, while the Pillsbury "A" Mill complex is the corresponding core area on the East Side. These view sheds have an unusually close relationship and complete each other in the sense that from one milling area, the views across the river present virtually the rest of the St. Anthony Falls Milling District. A significant loss of historic properties in either Milling Area, or blocking of the historic milling resources in one of the view sheds, would constitute an adverse effect on that view shed, as well as on the entire Waterpower Area view shed.

5.3.4 The Broader Mississippi River View Shed

The area of the Mississippi River under consideration has been part of the industrial development of Minneapolis since the late 1850s, when the first waterpower dam was constructed. The overlay of the Mississippi Critical Area designation and planning goals associated with that program, as well as MNRRA, point to the importance of the Mississippi River and related resources for the Twin Cities metropolitan region. The project area is within the "Urban Diversified District" defined as an area with a diversity of commercial, industrial, residential, and public land uses. New commercial, industrial, residential, and other uses are permitted in this area if they are compatible with the goals of protecting cultural and natural resources and expanding public access and enjoyment of the river.

The St. Anthony Falls area of the Mississippi River consists of a waterway broadened at the point of a reconstructed natural waterfall. Hennepin Island and Nicollet Island to the north are prominent features in the Waterpower Area. The banks of the river have been developed for water-powered industries, and this development extends up onto the low bluffs that flank the river. As noted above, the City of Minneapolis' Mill Ruins Park emphasizes the modern recreational use of the riverfront in the Milling Areas, as well as its historic legacy. The riverfront is "greener" now than it was during the long period when industry flourished along its banks. The Mississippi River as an urban amenity and a place to live has replaced the Mississippi River as the site of transportation and industry. The challenge now is to blend components of the two conceptions and uses of the Mississippi River as it passes through Minneapolis.

5.4 VIEW SHED ANALYSIS

5.4.1 Types of Views

The viewing of areas within the St. Anthony Falls Historic District is a subjective and interactive exercise. Views are framed and interpreted in various ways as individuals focus on various components in a view shed and edit out portions of the view that seem to be insignificant. Both viewing and view shed identification are dynamic activities, not static once-defined actions. Despite such subjective and changing perspectives, view sheds have certain characteristics that serve as a baseline condition when considering the impacts of a proposed project. These significant qualities are defined by a view shed's complexity, the dominance of various components, inherent qualities, and perceived accessibility of the area viewed.

Complexity

- View sheds can be simple or complex.
- View sheds can be open-ended to the distance, and/or on the sides, or be circumscribed by framing elements.
- View sheds can have a strong point of focus or have several points of interest.

Dominance

- A single feature can dominate view sheds.
- A certain type of building or structures can dominate view sheds.
- The quality of consistency—in a type of activity or pattern of development—can dominate view sheds.
- A sense of temporal emphasis can dominate view sheds.

Inherent Qualities

- View sheds can have an organic quality resulting from change over time.
- View sheds can have an ordered quality resulting from a street grid or other regulating feature.
- View sheds can have a disordered, chaotic quality resulting from what appears to be unplanned juxtapositions.
- View sheds can have dynamic or static qualities due to the amount of variety and age of its components.
- View sheds can be notable for their aesthetic or scenic qualities that can be derived from various attributes.

Accessibility

- View sheds can appear to be open and permeable.
- View sheds can appear to be closed off and to have limited access.

5.4.2 Critical Types of Change

View sheds are altered in various ways, some of which seem to be organic changes that occur incrementally, or "naturally," over time as a building is torn down or replaced, or a change in use is accompanied by alterations. Other types of modifications change the critical components and qualities of a view shed. If focal points are blocked or reduced significantly in importance, the view shed is altered in a manner that seems transforming and perhaps "unnatural."

The consideration of change in an urban view shed must also take into account the expectation for and acceptability of change in urban areas. The types of changes introduced by the new construction of projects in the EBMA might seem prominent and to be an adverse visual effect in the short term. Gradually new features become a part of the evolution of the city. This acceptance of new elements and shifts in prominence was demonstrated when the IDS building replaced the Foshay Tower as the tallest building in Minneapolis.

The fact that properties in historic districts and significant view sheds are impacted by change in various ways leads to the conclusion that certain types of impacts are more critical than others. The types of alterations that are most likely to have an adverse effect on a view shed are noted above in Section 5.1 and discussed below

Obstruction
The blocking of a significant historical resource, or a significant feature of such a property, from view from important vantage points would constitute an adverse effect on a view shed.

Change in the visibility of historic buildings in the view is the critical issue.

Change in Emphasis
A significant shift in emphasis in a view shed might be found to be an adverse effect on a significant historic resource if it altered the aesthetic or scenic quality of views. Visible new elements *per se* would not constitute an adverse effect. However, the number of and/or scale of new elements introduced into a view shed can shift the emphasis and the new components can assume prominence to the point that historic resources no longer seem to be important visual reference points and/or to have significance in the view. When this occurs and when new construction limits the perception of a historic district there might well be an adverse effect on the view.

The addition of a second focal point in a view shed would not necessarily be an adverse effect. It would depend on the relative prominence of the old and new points of interest as well as the possibility of the new element to become a "natural" component of the view. The insertion of an anomaly or incompatible elements that becomes an unintended focal point or a distraction from long-standing significant components of a view shed would have a greater potential for constituting an adverse effect.

Changes to views in urban areas occur rather frequently and would not constitute an adverse effect *per se* on a view shed with historic resources. If the scope of the change was significant, or if the combined additive effect of changes of these types became a dominant characteristic of the view shed, adverse effects might result.

Critical types of changes in emphasis include:

- A change in prominence of historic buildings;
- A change in the scale of the most visible elements;
- A change in the perception of change over time; and
- A change in the perception of a historic district.

Change in Accessibility of the Mississippi River Bank
Ordinarily, changes in a view shed that alter the perceived accessibility of significant historic resources would not be construed to constitute an adverse effect. However, the mandate for public accessibility of the Mississippi River banks requires that this characteristic of a view shed be addressed in this analysis. A perceived reduction of the accessibility of Main Street SE and the riverbank area between that street and the river in the PIZ could constitute an adverse effect.

5.4.3 Views of the EBMA from the West Bank Milling Area

Three critical views of the project area were selected by the City of Minneapolis for use in the analysis of impacts on the EBMA. These views are:

1. View of the EBMA view shed from the West River Parkway between 9th and 11th Avenues.
2. View of the EBMA view shed from the Stone Arch Bridge
3. View of the EBMA view shed from Mill City Museum Observation Deck

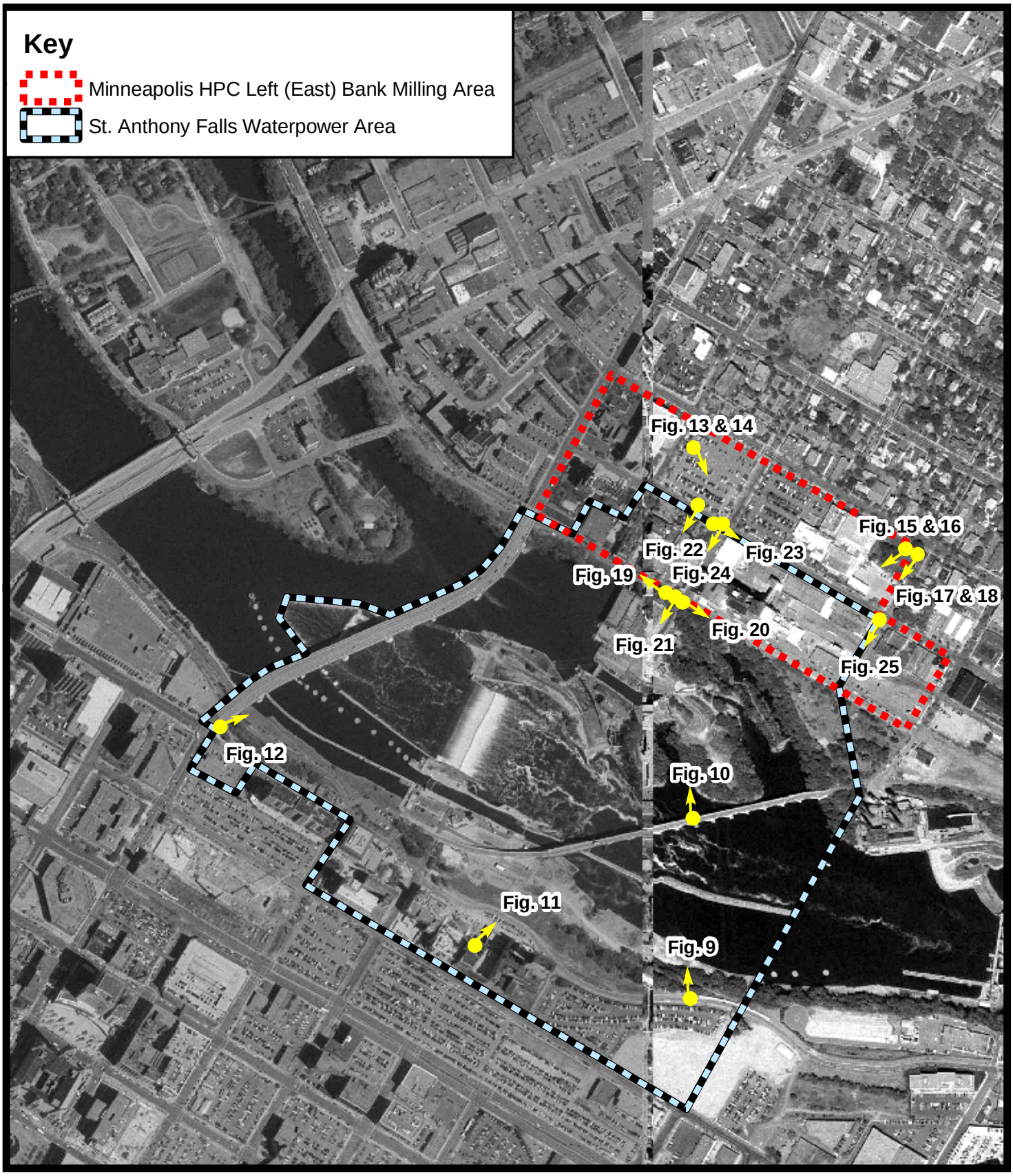
Photographs of these views have been altered with renderings of the four main alternatives under consideration. These views and the renderings are presented in Figures 9, 10, and 11. The locations of all views presented and discussed in the following sections are shown on Figure 8.

A fourth view, one from the west end of the Central Avenue Bridge, was also considered in order to assess the effects of the changes from the northwest corner of the PIZ. This view was not studied with the aid of renderings; instead, the changes to this view were extrapolated from the other renderings. This view appears as Figure 12.

The analysis of the visual impacts of the project assumed that the unavoidable visibility of the new buildings would be an affect on the EBMA and the Waterpower Area view shed. In an urban area the presence of new buildings *per se* would not be an adverse effect; only certain types of changes, those identified above, would have adverse impacts on the views.

Tables 2 through 5 summarize the analysis of these images. The qualities of the current view were described. The study of the renderings for each view revealed that the "build" alternatives posed very similar impacts on each view. These common impacts were summarized for each view. The ways that the individual alternatives would impact the view differently were highlighted, as appropriate. The "no build" view was not included in the table summary because it would propose no changes to the views in the near future.

The visual impacts summarized in Tables 2 through 5 indicate that three issues are of concern for this view analysis: historic building visibility, change in emphasis, and change in perceived accessibility.



Source: Byllesby Engineering and Management Corporation 1925.

Pillsbury "A" Mill Complex Project
Analysis of Effects
Minneapolis, Hennepin County, Minnesota

Location of Visual Effects Analysis Images

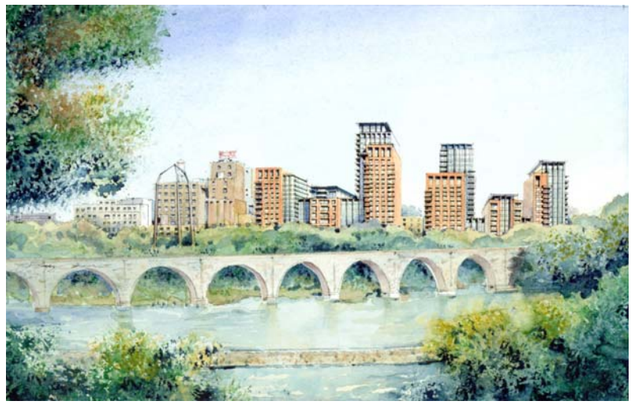
N
W E
S

0 0.1 0.2 0.3 0.4 0.5 Miles

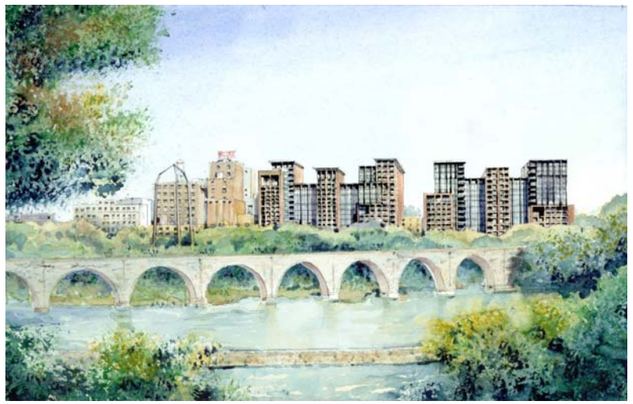
Figure 8

View From West River Parkway

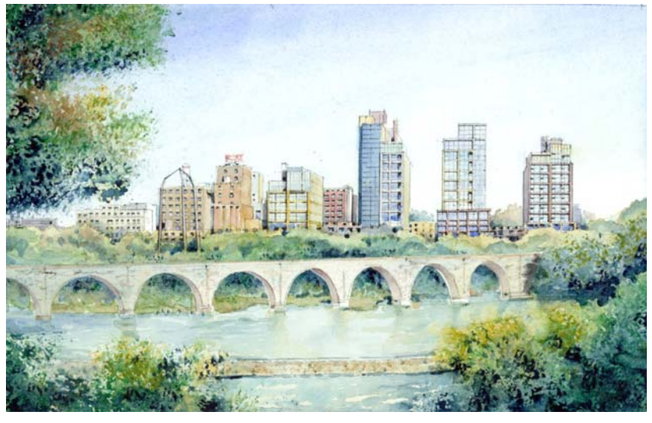
Current View



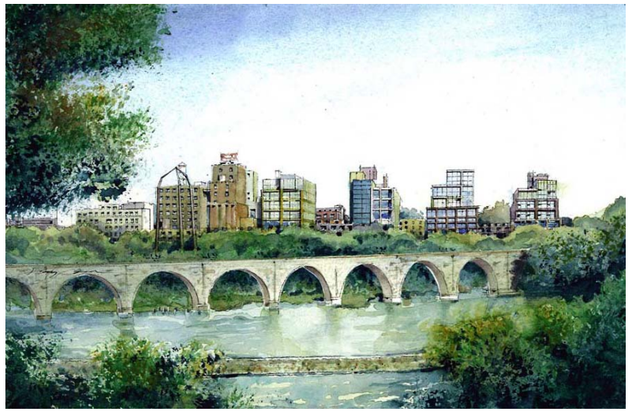
Alternative 1



Alternative 2



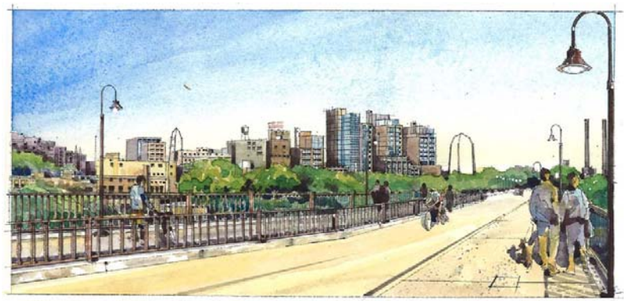
Alternative 3



Alternative 4

View From The Stone Arch Bridge

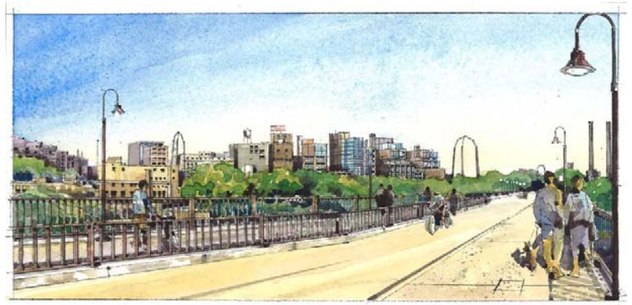
Current View



Alternative 1

Alternative 2

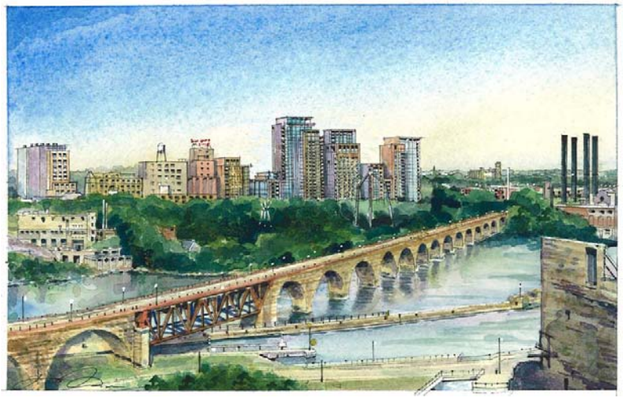
Alternative 3



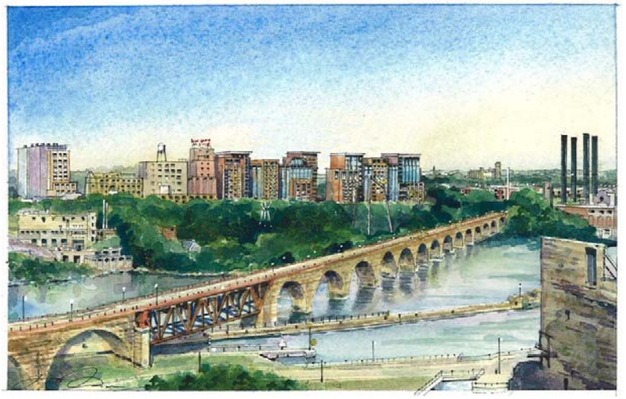
Alternative 4

View From The Mill City Museum

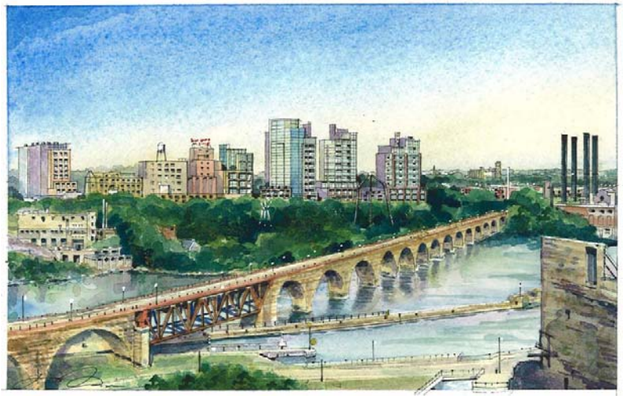
Current View



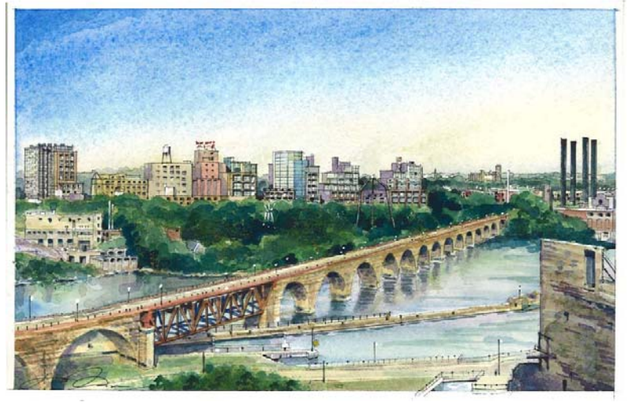
Alternative 1



Alternative 2



Alternative 3



Alternative 4

FIGURE 12. VIEW OF EBMA FROM WEST END, CENTRAL AVENUE BRIDGE, FACING EAST

TABLE 2. VIEW FROM WEST RIVER PARKWAY ANALYSIS SUMMARY

	Historic Building Visibility	**Emphasis**	**Scale**	**Perception of Change over Time**	**Perception of a Historic District**	**Perception of Accessibility**
Current View	Pillsbury complex buildings vary in visibility	Pillsbury complex conspicuous in the skyline; four prominent buildings	Pillsbury complex buildings stand out as the largest ones visible	Organic view with old and new elements; historic component pronounced	Appears as old industrial area and riverfront park – perhaps a historic district	Questionable: it is not clear how to move through the Pillsbury complex or beyond
	Change through Obstruction	**Change in Emphasis**	**Change in Scale**	**Perception of Change over Time**	**Change in Perception of a Historic District**	**Change in Perception of Accessibility**
All "Build" Alternatives	Warehouse No. 2 no longer visible	Pillsbury complex not as prominent; new construction competes as next component in the landscape	Change of scale evident in large footprints and taller buildings	More new construction than old visible; early twenty-first century buildings dominate	Fewer historic buildings are visible; those visible not as prominent	Points of accessibility not obvious; neighborhood beyond not very visible
Alternative 2			Linked buildings have wall-like block fronts			Wall-like block fronts obscure accessibility
Alternative 4		New buildings visible but do not compete for emphasis	New buildings do not appear to have a larger scale	Early twenty-first century buildings do not dominate		
Alternative 6	Concrete Elevator obstructed					

TABLE 3. VIEW FROM THE STONE ARCH BRIDGE ANALYSIS SUMMARY

	Historic Building Visibility	**Emphasis**	**Scale**	**Perception of Change over Time**	**Perception of a Historic District**	**Perception of Accessibility**
Current View	Pillsbury complex buildings vary in visibility; a layered view	Pillsbury complex conspicuous in the skyline; four prominent buildings	Pillsbury complex buildings stand out as the largest ones visible	Organic view with old and new elements; historic component pronounced	Appears as an old industrial area and riverfront park – perhaps a historic district	Questionable: it is not clear what is in the center of the Pillsbury complex or beyond
	Change through Obstruction	**Change in Emphasis**	**Change in Scale**	**Perception of Change over Time**	**Change in Perception of a Historic District**	**Change in Perception of Accessibility**
All "Build" Alternatives	Warehouse No. 2 no longer visible	Pillsbury complex not as prominent; new construction competes as next component in the landscape	Change of scale evident in both large footprints and height of new buildings	More new construction than old visible; early twenty-first century buildings dominate	Fewer historic buildings are visible; those visible not as prominent	Points of accessibility not obvious; neighborhood barely visible through oblique view
Alternative 2			Linked buildings have wall-like block fronts			Wall-like block fronts obscure accessibility
Alternative 4		New construction visible but does not compete for emphasis	New buildings do not appear to have a larger scale	Early twenty-first century buildings do not dominate		
Alternative 6	Concrete Elevator obstructed					

TABLE 4. VIEW FROM THE MILL CITY MUSEUM ANALYSIS SUMMARY

	Historic Building Visibility	**Emphasis**	**Scale**	**Perception of Change over Time**	**Perception of a Historic District**	**Perception of Accessibility**
Current View	Pillsbury complex buildings vary in visibility	Pillsbury complex conspicuous in the skyline; five prominent buildings visible	Pillsbury complex buildings stand out as the largest ones visible	Organic view with old and new elements; historic component pronounced	Appears as an old industrial area and riverfront park – perhaps a historic district	Questionable: it is not clear what is in the center of the Pillsbury complex or how to get there
	Change through Obstruction	**Change in Emphasis**	**Change in Scale**	**Perception of Change over Time**	**Change in Perception of a Historic District**	**Change in Perception of Accessibility**
All "Build" Alternatives	Warehouse No. 2 no longer visible	Pillsbury complex not as prominent; new construction competes as next component in the landscape	Change of scale evident in both large footprints and height of new buildings	More new construction than old visible; early twenty-first century buildings dominate	Fewer historic buildings are visible; those visible not as prominent	Points of accessibility not obvious;
Alternative 2			Linked buildings have wall-like block fronts			Wall-like block fronts obscure accessibility
Alternative 3			Change of scale most evident in height of the tallest buildings.			
Alternative 4			New buildings do not appear to have a larger scale	Early twenty-first century buildings do not dominate		
Alternative 6	Concrete Elevator obstructed					

TABLE 5. VIEW FROM THE CENTRAL AVENUE BRIDGE ANALYSIS SUMMARY

	Historic Building Visibility	**Emphasis**	**Scale**	**Perception of Change over Time**	**Perception of a Historic District**	**Perception of Accessibility**
Current View	Pillsbury complex buildings vary in visibility	Pillsbury complex conspicuous in the skyline; Concrete Elevator not visible	Pillsbury complex buildings stand out as the largest ones visible	Organic view with old and new elements; historic component pronounced	Appears as an old industrial area and riverfront park – perhaps a historic district	Questionable: it is not clear what is in the center of the Pillsbury complex or beyond
	Change through Obstruction	**Change in Emphasis**	**Change in Scale**	**Perception of Change over Time**	**Change in Perception of a Historic District**	**Change in Perception of Accessibility**
All "Build" Alternatives	Warehouse No. 2 no longer visible	Pillsbury complex not as prominent; new construction competes as next component in the landscape	Change of scale evident in large footprints and height of new buildings; oblique view reveals depth and massing	More new construction than old visible; early twenty-first century buildings dominate	Fewer historic buildings are visible; those visible not as prominent	Points of accessibility not obvious; neighborhood beyond not very visible through oblique view
Alternative 2			Linked buildings and wall-like block fronts not as obvious in oblique view			
Alternative 4			Oblique view emphasizes scale of new buildings	Early twenty-first century buildings do not dominate		
Alternative6	Concrete Elevator is obstructed					

5.4.3.1 The Issue of Historic Building Visibility.

Neither The Phoenix project nor the 520 and 521 2nd Street SE project would block the visibility of any historic buildings in the views studied. All of the Pillsbury "A" Mill Complex project "build" alternatives would have the same impact on the visibility of historic buildings in the Pillsbury "A" Mill complex. The location of the new construction in relation to the historic buildings is a critical component of the project. The Pillsbury "A" Mill and other buildings in the complex that are currently visible from across the Mississippi River would remain so, except for the Concrete Elevator. All of the alternatives would obstruct the view of the Warehouse No. 2, which due to its low height is not a prominent building in current views. The presence or absence of the Concrete Elevator would not be very apparent in the views of the EBMA studied. The proposed new construction of any of the alternatives would obstruct the view of the Concrete Elevator if it were to be retained.

Summary of Analysis. The Pillsbury "A" Mill and adjacent historic buildings would not be obstructed by the new construction and would remain visible once the proposed projects were completed. All the alternatives of the Pillsbury "A" Mill Complex project would block the view of the Pillsbury Warehouse No. 2, which is not a prominent component of the current view. All the "build" alternatives of the project would obstruct the view of the Concrete Elevator, if it were to be left standing.

5.4.3.2 The Issue of Change in Emphasis

The Phoenix project and all of the "build" alternatives of the Pillsbury "A" Mill Complex project would introduce a similar change in emphasis on the views studied. As noted above, most of the Pillsbury "A" Mill complex would remain visible, but it would not be as prominent a component of the views as it currently is. The two block fronts of new construction along Main Street SE would comprise a somewhat larger feature in the views than the historic buildings. But because the new construction is adjacent to, and not placed between historic buildings on the Main Street SE block front, it would appear to be the next component in the landscape, rather than to be part of the EBMA. The change in emphasis is not accompanied by an anomaly or unintended focal point that would be a visual distraction. The effect would be more the intended introduction of a second focal point than a total shift in emphasis. The scale of the most visible elements in the view (the new construction) would be greater than that of the historic buildings and add to the shift of emphasis.

More subtle, but also discernible, changes to the views would be the perception of the EBMA as part of a historic district and how change has occurred over time. Fewer historic buildings would be visible (with the Concrete Elevator demolished or blocked from view and the Warehouse No. 2 obstructed) and the presence of new construction would reduce somewhat the distinctiveness and prominence of the historic buildings in the EBMA. The current view of the EBMA has an organic quality provided by gradual

change over time. The project would reduce that quality somewhat once the early twenty-first century buildings would predominate in the view. These types of changes can be described but are difficult to categorize as effects or adverse effects. In this case, the visibility of such a large percentage of the historic buildings in the Pillsbury "A" Mill complex probably indicates that the changes the project would introduce are not sufficient in intensity to be considered an adverse effect.

Summary of Analysis. The proposed projects would very noticeably change the emphasis in all studied views of the EMBA. It would introduce less significant changes related to perception of the EBMA as part of a historic district. The project would also have subtle effects on the perception of the EBMA as a part of a historic district and the perception of change over time.

There are two conclusions that might be reached concerning the overall impact of the change in emphasis in the views of the EBMA:

- The change of emphasis in the views would be very obvious. Yet this shift would constitute an adverse effect *only if* the historic buildings no longer appeared to be part of a historic district or to have relationships with other historic resources in the area. Since that condition is only somewhat affected, the change in emphasis would not be considered an adverse effect.

- Alternatively, one could conclude that the change of emphasis in the views through the reduction of the prominence of the historic buildings and the less obvious perception of the historic buildings as part of a historic district would be sufficient to constitute an adverse effect.

5.4.3.3 The Issue of Change in Perceived Accessibility

The presence of the completed projects, including all of the "build" alternatives for the Pillsbury "A" Mill Complex project, would introduce a minor change in the perception of the public accessibility of the Mississippi River bank from northeast of Main Street SE. The large size of the Pillsbury "A" Mill complex and the close placement of buildings within that property have the effect of making the routes of accessibility to the riverbank unclear at the current time. In views of the area from across the river, it is not evident how to move through the Pillsbury complex or into the neighborhood beyond. The proposed new construction would not alter significantly that situation. The points of accessibility would remain unidentified; the neighborhood beyond would be somewhat less visible. Alternative 2 of the Pillsbury 'A" Mill Complex project, with wall-like block fronts, would affect the perception of accessibility more than the other alternatives.

Summary of Analysis: The proposed projects would not alter significantly the perceived accessibility of the Mississippi River banks in the EBMA.

5.4.4 Views of the EBMA from the University Avenue Area

The iconic view sheds within the Waterpower Area are those from near the banks of the Mississippi River towards the Milling Areas on the opposite bank. However, the view through the EBMA towards the river and the West Bank Milling Area beyond is also of concern. Several Views of the Pillsbury "A" Mill Complex project area were selected for analysis by the Marcy-Holmes Neighborhood Association in early 2004. The project as defined in the EAW was inserted into the views to demonstrate the effects of the project. Three of the views, which are within the PIZ for view analysis, are presented here with current views to demonstrate the projected change (Figures 13 to 18).

Ground level views from the University Avenue area towards the river are affected by the location of the viewer, positioned back from the edge of the Mississippi River bluff. There is a change in grade southwest of 2nd Street SE of approximately 25 feet, as the grade drops off to the level of Main Street SE. There is an additional drop between Main Street SE and the river. In many places the viewer is distanced significantly by grade change from the river corridor.

Figures 13 and 14 present a view of the Pillsbury "A" Mill complex as seen across the parking lot near the corner of University Avenue and 2nd Avenue SE. The complex of historic buildings blocks the view beyond and the Mississippi River corridor is not evident in the view. The proposed new construction would have a similar enclosing effect on the view. The Pillsbury "A" Mill, the South "A" Mill and Cleaning House complex, and the Red Tile Elevator and its sign would remain visible from the University Avenue area east of 3rd Avenue SE. The height and massing of the new buildings would increase incrementally from the historic "A" Mill complex southeast to the tallest buildings. The visibility through the EBMA would not significantly change if the Concrete Elevator was retained, though the complement of historic resources in the view would be larger.

Figures 15 and 16 present the view of Pillsbury "A" Mill complex from the corner of University Avenue and 5th Avenue SE, across the lawn of the Pillsbury Research and Development Center property. Once again, the Mississippi River corridor is not a visible component of this view. Currently Warehouse No. 2 and the Concrete Grain elevator block the view to the west and across the river. The proposed new construction would have a similar effect on the view; it would not block any component of the view now visible. The Pillsbury Warehouse No. 2 and the "Pillsbury's Best Flour" sign would be discernible in views of the project area from this location. Like the pair of views above, the elements of the view would be altered, but the view through the EBMA would not be considerably different if the Concrete Elevator was retained.

FIGURE 13. CURRENT VIEW FROM 2ND AVENUE AND UNIVERSITY AVENUE, FACING SOUTHEAST

FIGURE 14. PROJECTED VIEW FROM 2ND AVENUE AND UNIVERSITY AVENUE, FACING SOUTHEAST

FIGURE 15. CURRENT VIEW FROM 5TH AVENUE AND UNIVERSITY AVENUE, FACING WEST

FIGURE 16. PROJECTED VIEW FROM 5TH AVENUE AND UNIVERSITY AVENUE, FACING WEST

Figures 17 and 18 present the view from near University Avenue along 5th Avenue SE towards the river. Warehouse No. 2 is the only historic building in the project area that is visible and it would remain so. From this position on top of the bluff, the corridor of the river, but not the Mississippi River itself, is perceptible. The roof of the Metrodome across the river occupies the background of the view. The proposed new construction would have little effect on this view, which is currently framed by street trees and buildings.

FIGURE 17. CURRENT VIEW DOWN 5TH AVENUE SE FROM UNIVERSITY AVENUE, FACING SOUTHWEST

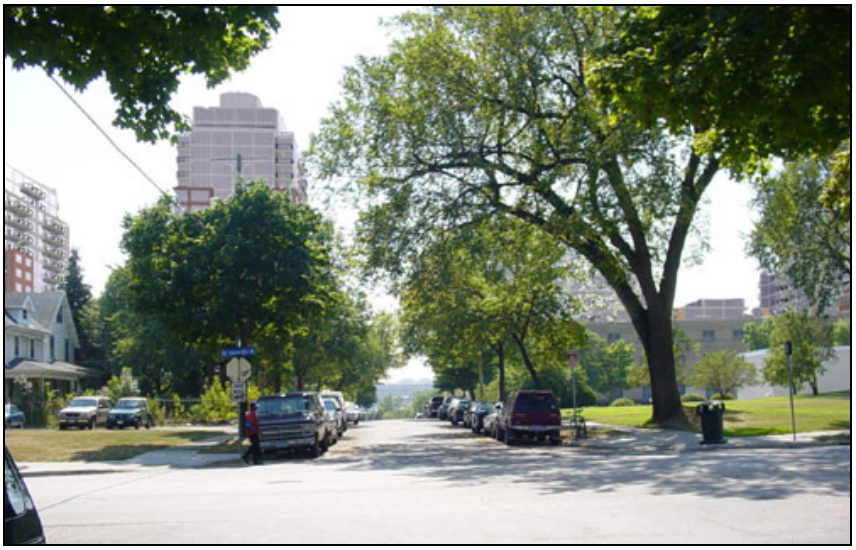


FIGURE 18. PROJECTED VIEW DOWN 5TH AVENUE SE FROM UNIVERSITY AVENUE, FACING SOUTHWEST

Summary of Analysis. The proposed new construction would add a prominent new component to the views of the EBMA from the University Avenue corridor. It would alter the views of the EMBA, but would not block the view of the historic components of the Pillsbury "A" Mill complex, or change the perception of the accessibility of the Mississippi River corridor. The project would reduce the prominence of the historic milling complex in the views due to the scale of the new construction.

5.4.5 Views within the EBMA

Views from ground level within the EBMA are varied and, because of the topography, not all of them make a strong connection to the Mississippi River corridor and/or the West Bank Milling Area. The main vantage point for views within the EBMA is the Main Street SE corridor and the adjacent Father Hennepin Bluff Park. The views along Main Street SE, a narrow two-lane street, are foreshortened. When in front of the Pillsbury "A" Mill complex, the viewer on Main Street SE is aware of the somewhat uniform street wall on the northeast side of the street with modern buildings visible in the distance (Figure 19) and the parkland on the river side. The view of the Pillsbury "A" Mill complex and beyond to the southeast (Figure 20) affords a similar type of view, one dominated by the buildings in the foreground. There is nothing of interest in the view in the area beyond Warehouse No. 1, where the buildings become intermittent and do not appear to be historic. The views along Main Street SE near 5th and 6th Avenues SE, still within the EBMA, do not strongly suggest that the area is within a historic district. The views of the project area southeast of the Pillsbury "A" Mill complex would be altered significantly by the proposed projects.

FIGURE 19. VIEW ALONG MAIN STREET SE, FACING NORTHWEST

FIGURE 20. VIEW ALONG MAIN STREET SE, FACING SOUTHEAST

From Main Street near the Pillsbury "A" Mill there are no unobstructed views across the river to the West Bank Milling Area. Power generation buildings and equipment, as well as the modern University of Minnesota St. Anthony Falls Laboratory at the foot of 3rd Avenue SE, block such views (Figure 21). However, from both Main and Second Street SE, the tops of the buildings in the West Bank Milling Area are visible. These glimpses of the other milling buildings and their rooftop signs and equipment provide a link between the two portions of the milling district (Figure 22) and would not be altered by the proposed project.

Views along 2nd Street SE within the EBMA have historic buildings only on the southwest side of the street (Figure 23). The central portion of the EBMA is dominated by the long façade of the Concrete Elevator on the Pillsbury "A" Mill complex property. The views along the street are open-ended due to the falling away of the grade both to the southeast and northwest. This view would be altered significantly by the proposed project due to the planned demolition of the Concrete Elevator and new construction proposed for its site. Conversely, if the Concrete Elevator was retained, this view would remain very similar to the current view.

FIGURE 21. VIEW TOWARDS RIVER FROM MAIN STREET SE AND 3RD AVENUE SE, FACING SOUTHWEST

FIGURE 22. VIEW FROM PARKING LOT ADJACENT TO 2ND STREET SE, FACING SOUTHWEST

FIGURE 23. VIEW ALONG 2ND STREET SE, FACING SOUTHEAST

The position of 2nd Street SE, 24 feet above Main Street, provides a vantage point for views down the intersecting avenues and beyond to the opposite river bank. Due to the vacating of 2nd and 4th Avenues in the EBMA, the view of the West Bank Milling Area is from the intersection of 2nd Street SE with 3rd Avenue SE (Figure 24). This view encompasses the Washburn "A" Mill Complex, now the Mill City Museum property, and its adjacent receiving elevator with the Gold Medal Flour signs. This important view within the EBMA would not be blocked or be altered with a change of emphasis by the proposed projects.

In contrast to the view near 3rd Avenue SE, the view down 5th Avenue SE terminates on the site of the Guthrie Theater under construction; the Metrodome dominates the background (Figure 25). During the summer and fall, the Stone Arch Bridge is not visible in this view due to the trees in Father Hennepin Bluff Park. This view across the Mississippi River corridor would not be blocked or be altered with a change of emphasis by the proposed project.

FIGURE 24. VIEW FROM INTERSECTION OF 2ND STREET SE AND 3RD AVENUE SE, FACING SOUTHWEST

FIGURE 25. VIEW FROM INTERSECTION OF 2ND STREET SE AND 5TH AVENUE SE, FACING SOUTHWEST

Additional views. There may be additional views within the EBMA that should be considered as redevelopment projects are considered. The City Council has recently identified the view through the rail spur corridor that extends between Main and 2nd Streets SE as an important view shed (Amy Lucas, personal communication, January 26, 2005). Since the spur is a contributing property in the historic district, the protection of it as a view corridor is appropriate and presumably the HPC will assume that responsibility through its permit application and review process.

Summary of Analysis: The views in the EBMA vary considerably in the extent to which they are dominated by historic buildings and afford views of the complementary West Bank Milling Area. The views from 2nd Street SE, offer the broadest view sheds across the river to the west bank. These views are layered with objects of interest in the foreground, middle ground, and backgrounds. They are definitely urban due to the lively mix of historic and modern elements. These views would not be altered significantly by the proposed projects. The main impact on the views within the EBMA would occur southeast of the Pillsbury "A" Mill complex, where there are currently few historic buildings and most of the new construction would be located.

5.5 VIEW ANALYSIS SUMMARY

The three projects currently proposed for the EBMA would have an impact on the views of, from, and within the area. While the heights of the residential towers vary somewhat, *all* of the "build" alternatives of the Pillsbury "A" Mill Complex project would have a similar effect on the views. The "No Build" alternative would not have any short-term impacts on the view shed.

The visual effects of the project include:

- The projects would not obstruct views of the NHL Pillsbury "A" Mill, the South "A" Mill, or the Red Tile Elevator, or three of the four other buildings in the Pillsbury "A" Mill complex that are currently prominent in views of the property.
- The Concrete Elevator would be obstructed by new construction in views of the EBMA from the West Bank Milling Area and consequently its presence or absence could not be determined in those views
- The projects would not alter significantly the perceived accessibility of the Mississippi River banks in the vicinity of the project.
- The projects would not alter significantly views of the Mississippi River Corridor at ground level from the University Avenue area.

The following visual effects have more of an impact on historic resources and the issues raised in the scoping for visual effects:

- The projects would block the view of the Pillsbury Warehouse No. 2, which is a less prominent component of the current view.

- The projects would introduce a very noticeable change in emphasis in views of the EBMA by adding a second focal point, the new construction.
- The projects would affect somewhat the perception of the EBMA as a part of a historic district and the perception of change over time in views of the area from across the Mississippi River.
- The projects would alter views at ground level within the EBMA along 2nd Street SE and Main Street SE, facing southeast.

One other effect on the view sheds in the PIZ should be noted, even though it was not part of the previous analysis. The projects will offer many more vantage points that would make the view shed of the West Bank Milling Area much more visible from the EBMA across the river.

The foregoing analysis of the impact of the proposed projects on views of the EBMA could logically reach two conclusions:

- **The proposed projects would have a visual effect**. The change of emphasis in the views would constitute a major effect on views, but not an adverse effect. This conclusion considers obstruction the most important type of change. Because new construction would not obstruct views of the Pillsbury "A" Mill and most of the other historic buildings, the less important changes to emphasis and dominance, perception of organic change over time, and reduced presence of a historic district would not be sufficient to constitute an adverse effect. These types of changes to views often occur in urban areas, including those with historic resources.

- **The proposed projects would have an adverse visual effect due to the cumulative impact of changes**. The shift of emphasis in the views would be very obvious. Although the historic buildings would remain visible, their prominence would be reduced significantly, and their association with a historic district would be tenuous as twenty-first century buildings larger in scale would dominate the view.

The analytical methodology used for the visual effects analysis recognized several types of visual effects to be considered and identified obstruction of the views of the Pillsbury "A" Mill and its associated historic complex as the most significant type of visual effect. The projects would have visual effects by introducing a shift of emphasis and the creation of a residential area as a new focal point, because the. These, and the other types of changes discussed above, seem to be within the realm of expected shifts in view sheds located in urban areas. As the proposed projects would not obstruct views of the Pillsbury "A" Mill complex, the visual effects are not considered to be adverse. Moreover, it seems likely that the new construction proposed with the three projects would gradually become accepted as a new area on the east bank of the Mississippi River.

6.0 CUMULATIVE EFFECTS ANALYSIS

This analysis of cumulative effects is based on the principles and methodology presented in a National Environmental Policy Act (NEPA) publication, *Considering Cumulative Effects under the National Environmental Policy Act* (Council on Environmental Quality [CEQ] 1997). A Federal Highways Administration document, *Questions and Answers Regarding the Consideration of Indirect and Cumulative Impacts in the NEPA Process* (Federal Highway Administration [FHWA] 2003), also informed the following discussion. These documents are some of the few available that outline a methodology for this type of analysis.

6.1 PRINCIPLES AND METHODOLOGY

Cumulative effects encompass the total impact on a resource due to past, present, and future actions. Cumulative effects are resource specific. The analysis of this type of effect is analogous to the comparison of the past, present, and reasonably foreseeable condition of a resource after the implementation of a project.

The following principles have been extracted from the documents noted above as pertinent to the nature of cultural resources and the methodology available to assess effects.

- Cumulative effects should be defined in the context of a proposed action, alternatives, and impacts.
- The analysis of cumulative effects must address both direct and indirect effects on a given resource, no matter who undertakes the actions.
- The analysis of cumulative effects must focus on the specific resource being affected, and must address effects that are truly meaningful.
- Cumulative effects on cultural resources may result from the accumulation of similar effects or possibly the synergistic interaction of different types of effects. Redevelopment projects are most likely to have additive, rather than interactive, effects on cultural resources.

The methodology for assessing cumulative effects currently in use (CEQ 1997:10, FHWA 2003:7) moves through the following steps:

1) Scoping, including defining the geographic area affected by the project, establishing a Project Impact Zone (PIZ), identifying critical cumulative effects issues, and describing the resources affected;
2) Establishing a context for the analysis, including reviewing the past, present, and reasonably foreseeable actions that could impact the given resources;
3) Analyzing the environmental consequences of project actions, including identifying cause and effect relationships and impacts, and determining the environmental consequences of project actions; and

4) Assessing cumulative effects, including determining the magnitude and significance of impacts on the resource.

6.2 SCOPING FOR CUMULATIVE EFFECTS

The Scoping Decision Document for the Pillsbury "A" Mill Complex project EIS states:

> *The Pillsbury "A" Mill Complex Project EIS will evaluate the cumulative visual and functional impacts of all phases of the project (including demolition and new construction) on all of the historic resources on the site and proximate to it…*(Minneapolis 2004a)

The document also states that the EIS will:

> *Describe the cumulative impacts on historic resources of the Project in addition to the other known actions in the immediate area, including The Phoenix project and the 520 and 521 2nd Street SE project* (Minneapolis 2004a).

The proposed actions that will be analyzed for cumulative effects, then, are those under consideration during the fall and winter of 2004:

- The Pillsbury "A" Mill Complex Project: All alternatives under consideration.
- The Phoenix Project: A two-part residential development that would extend from Main to 2nd Street SE on the northwest side of 3rd Avenue SE, just east of the Pillsbury "A" Mill Complex project site.
- The 520 and 521 2nd Street SE Project: A residential development with buildings facing each other across 2nd Avenue SE between 5th and 6th Avenues SE, north of the East Block of the Pillsbury "A" Mill Complex project site.

The broad scoping mandates have guided the establishment of a PIZ and the development of critical cumulative effects issues.

The PIZ used in the analysis of cumulative effects literature is analogous to the area of potential effect (APE) found in cultural resource surveys. The EMBA is the context for change of the three projects under consideration and is the resource directly affected by those projects. Consequently, it was identified as the appropriate PIZ for the consideration of cumulative effects on the St. Anthony Falls Historic District. This area is shown on Figure 5.

The critical cumulative effects issues associated with the integrity of the St. Anthony Falls Historic District are:

- Would all of the proposed new construction have an adverse cumulative effect on the integrity of the historic district?
- Would the balance between contributing and non-contributing properties be altered significantly and affect the district's ability to convey its historic significance?
- Would the area impacted by the projects retain sufficient integrity to remain within the St. Anthony Falls Historic District?
- Would the scale of the proposed new construction make a difference in the cumulative effects that the proposed projects would have on the historic district?
- Would the cumulative effects of the projects support the Minneapolis HPC goals for the EBMA?

The consideration of cumulative effects for this project addresses historic and architectural resources, but not the archaeological resources in the historic district. The archaeological resources located between the banks of the Mississippi River have been excluded from the analysis in this report. The impact of the proposed projects on archaeological resources is addressed in separate reports (Vermeer 2003 and 2004).

6.2.1 The Baseline Condition of the Affected Environment

The EBMA is a thematic area within the St. Anthony Falls Historic District. A study of the district completed circa 1980 identified the EBMA as a distinct component of the larger area and proposed boundaries for it (MRDCB 1980). When the Minneapolis HPC adopted the St. Anthony Falls Historic District Guidelines in 1980, a slightly different area was selected to be included in the official boundaries of the EBMA.

As mandated by the NRHP, all properties within a historic district are categorized as contributing or non-contributing. Contributing properties "add to the historic associations, historic architectural qualities, or archaeological values" (NPS 1997a:16) of a district. The criteria for contributing buildings and structures are usually established by a period of significance and ability of the property to express the documented significance of the district, as well as integrity. Non-contributing properties do not express the significance of the historic district because they were not present during its period of significance, do not relate to the significant aspect of the district, or have poor integrity.

The NPS has no established guidelines for the percentage of buildings within a historic district that must be contributing. The size and scale, location, and visibility—and therefore impact—of non-contributing properties in a historic district are quite variable. There can be no formula for appropriate ratios of the two categories of properties.

The baseline condition of the EBMA for cumulative effects analysis is its character at the time the district was listed in the NRHP in 1971. At that time there was an appropriate ratio between contributing and non-contributing properties in the EBMA although these categories were not determined then. The relative amounts of contributing and non-contributing properties were assigned as part of this analysis in order to assess cumulative effects. The most accurate depiction of the baseline condition of the EBMA is demonstrated by the ratio of contributing and non-contributing properties by land area, due to the wide variance in property size. The contributing properties comprised approximately two-thirds of the land area of the EBMA in 1971. About three-fifths of the Main Street SE street front was lined with contributing properties at that time. This baseline condition, as well as current and projected conditions, is shown on Figure 26.

The careful study of a historic district reveals that there are usually four types of non-contributing properties, based on how such properties affect the integrity of a district. Many properties are non-contributing but have a *neutral* effect on the integrity of the historic district. One neutral property type is those properties built before and after the period of significance or those not related to the historical significance of the historic district. Another category of neutral, non-contributing properties are infill properties that meet the *Secretary of Interior's Standards* for new construction and/or meet specific historic district design guidelines. These properties have massing, scale, materials, fenestration, and other characteristics that make them *compatible* with the contributing properties and overall setting of the historic district. A third type of non-contributing property does not meet the *Secretary of Interior's Standards* for new construction and/or meet specific historic district design guidelines. These properties are *incompatible* in height, massing, scale, materials and siting and diminish the integrity of the historic district. The fourth type is properties that are not only incompatible, but also have a significantly different physical form than the contributing properties in the district, often due to height and size. This property type is considered to be *intrusive*.

6.3 THE CONTEXT FOR CUMULATIVE EFFECTS ANALYSIS

6.3.1 The Context for Change

The change that has taken place over time in the historic district has a national and local context related to historic preservation and waterfront redevelopment initiatives. At the time that the St. Anthony Falls Historic District was designated in 1971, most of the remaining buildings in the industrial areas along the Mississippi River were no longer in use as places of work; the Pillsbury "A" Mill complex is a notable exception. Both the EBMA and the West Bank Milling Area included many vacant land parcels. Other American cities also had abandoned and under utilized industrial zones along waterfront areas and no effective approach to their redevelopment had yet been demonstrated.

SOURCE: MINNEAPOLIS SANBORN 1952 VOL.8

Pillsbury "A" Mill Complex Project
Analysis of Effects
Minneapolis, Hennepin County, Minnesota

Baseline, Current, and Proposed Contributing Properties in the EBMA

N
W E
S

Figure 6

The national context for redevelopment projects in areas such as the St. Anthony Falls Historic District is the concept introduced by San Francisco's Ghirardelli Square project in 1964 and popularized by the Rouse Company's Faneuil Hall Marketplace, a project completed in Boston by 1976. The Faneuil Hall project demonstrated how festival marketplaces and waterfront locations could bring new life to harbor and industrial areas along oceans, lakes, and rivers in American cities. The Rouse Company followed its success in Boston with South Street Seaport marketplace in New York City and the Harborplace project in Baltimore. By 1980 the Rouse model was flourishing and widely emulated in cities throughout the United States and elsewhere with varying success. This type of project recasts former industrial waterfront areas as portions of cities where residents could dine, shop, and find entertainment. New development and revitalization of waterfront areas was coupled with historic preservation in some areas, while in others an urban renewal redevelopment approach was taken.

In many cities, a second wave of waterfront development followed projects inspired by the festival marketplace model; these slightly later efforts were more likely to include housing. This type of development encompassed both the conversion of historic buildings into residential units and new construction. Examples of this type of development include the conversion of buildings in the warehouse districts of many cities into loft apartments and the construction of new waterfront neighborhoods such as Battery Park City in New York City. New residential areas and buildings were developed in Minneapolis near the Mississippi River early in this national context. The Winslow House tower (1980) in the EBMA, the Riverplace towers (1983) further to the northwest on the east side of the river, and the Churchill Apartments (1981) on the west side of the river are local examples of introducing residential use in areas of cities long dominated by commercial and industrial functions.

6.3.2 An Overview of Change in the EBMA

The presence of industrial buildings in areas of the St. Anthony Falls Historic District, which would require adaptive reuse to be preserved, as well as the St. Anthony Falls Historic District Guidelines adopted by the Minneapolis HPC, established the anticipation for change within the historic district. As noted in Section 1.1.2, the guidelines included a set of goals:

- preserve the memory of past events,
- encourage sympathetic new development,
- encourage and enable access to the river, and
- foster along the riverfront and adjacent areas a viable community geared to the pedestrian (Minneapolis HPC 1980).

This approach to the management of change to historic resources in the St. Anthony Falls area combines historic preservation with redevelopment and new construction. The guidelines do not address the issues of building type and use within the EBMA and other sub-areas of the St. Anthony Falls Historic District. Guidelines are provided for height of

new construction, but not for the footprint of the building and therefore the issue of overall scale is not addressed by the HPC guidelines, as it is in the *Secretary of Interior's Standards*. While these guidelines do not address some of the issues identified for cumulative effects, their intent is to guide thoughtful change in an area with a complement of historic resources.

The first major redevelopment projects in the EBMA began circa 1970. The rehabilitation of the former Salisbury and Satterlee Company Complex as "St. Anthony Main" and the Pracna building, restored in 1969, demonstrated the possibilities of revitalization of the east bank riverfront. The St. Anthony Main project was initiated in 1977 with a four-phase master plan for redevelopment. The Minneapolis HPC reviewed much of this work using the Guidelines adopted in 1980. The Pracna Building was incorporated into the St. Anthony Main complex during the mid 1980s. The Winslow House condominium project was completed in 1980. The City of Minneapolis erected a parking ramp on the southeast portion of the block between Central and 2nd Avenues the same year. The Pillsbury Company erected a "data center" building at the corner of 2nd Street SE and 3rd Avenue SE in 1981. A larger Pillsbury Company Research and Development Center, now known as the General Mills Technology East property, on University Avenue between 3rd and 5th Avenues SE, was begun in 1969 (before NRHP listing) and expanded several times, most recently during the late 1980s. The properties on the adjacent block (between 2nd and 3rd Avenues SE) were demolished and a parking lot was established. The Pillsbury "A" Mill complex remained an industrial property.

After this initial round of work, few projects were undertaken in the EBMA between the mid-1980s and 2004. The large Pillsbury "A" Mill complex property remained in industrial use and was not available for redevelopment. Located just outside the EBMA, the Minneapolis Stone Arch Partners' residential development on Main Street SE, between 6th and 7th Avenues, was completed in 2002.

The EBMA is included in the area covered by the recently adopted Master Plan for the Marcy-Holmes Neighborhood (Dahlgren, Shardlow, and Urban, Inc. 2003). The plan includes the policy that the heights of buildings should increase from University Avenue to Main Street and assumes that no buildings erected in the vicinity of the Red Tile Elevator would be taller than the historic structure (Dahlgren, Shardlow, and Urban, Inc. 2003:8.6).

6.4 ANALYZING THE ENVIRONMENTAL CONSEQUENCES OF PROJECT ACTIONS

The integrity of a historic district is defined by the integrity of each property and the setting as a whole. This integrity enables a district to represent a historic condition. The evaluation of the impact of "intrusions" on a historic district's integrity depends on the "relative number, size, scale, design and location of components that do not contribute to the significance" (NPS 1997b:46). The NPS considers a potential district ineligible for the NRHP if it has so many alterations or new intrusions that it no longer conveys a sense of historic environment (NPS 1997b:46). It follows, then, that a significant change in the

number and type of non-contributing properties within a historic district can diminish or destroy the historic environment and the integrity of the district to a point where it would no longer be eligible for NRHP listing.

The key cause-and-effect relationship to be analyzed in this consideration of cumulative effects is how the additive actions of several proposed projects would affect the historic environment, or integrity, of the EBMA. Changes to contributing historic resources and non-contributing buildings, structures, and lots in a historic district can occur in various ways and have a range of outcomes. Changes that include restoration and preservation treatments can reinforce or improve the integrity of the historic district. Properties that are not occupied and maintained gradually deteriorate and lose integrity. Rehabilitation projects bring reinvestment to buildings within a historic district as they introduce changes in the material fabric, maintain the integrity of a historic district when they meet the *Secretary of Interior's Standards*. Remodeling and redevelopment projects that alter the historical characteristics of properties diminish the integrity of the historic district.

The impact of a project that is incompatible with a historic district and diminishes its integrity depends on its size, location, and visibility. However, such projects have an additive cumulative effect. If not kept in check, the impact of projects in or near a historic district could reach a tipping point, a threshold that would matter in several ways: 1) the integrity of the historic district would be significantly diminished; 2) the area would no longer be able to represent a historic condition; and 3) the historic district would no longer be eligible for NRHP listing.

6.5 ASSESSING CUMULATIVE EFFECTS ON THE EBMA

The effects of the completed major projects within the EBMA, as well as the three currently under review, were categorized and assessed in terms of how the projects altered the extent of contributing and non-contributing properties. This analysis, which also includes an overall assessment of the projects, is summarized in Table 6.

Analyzing historic districts in terms of the ratios of contributing and various types of non-contributing properties provides a tool for assessing the impact of additive cumulative change within the area.

TABLE 6. PROJECT ACTION CONSEQUENCES FOR THE EBMA

	Number of Rehabilitated Resources	Loss of Contributing Buildings	New Non-Contributing Buildings	Overall Assessment
Projects completed since 1971				
St. Anthony Main, Phases 1 through 4	6	None	3	Reinforces the integrity of the EBMA; includes compatible new construction
Winslow House Residential Tower 100 2nd Street SE	0	Levin Brothers Furniture Factory	1	Diminishes the integrity of the EBMA; incompatible due to its scale and visibility;
City of Minneapolis Parking Ramp, 128 University Avenue SE	0	Ive's Ice Cream Company complex	1	Diminishes the integrity of the EBMA due to loss of historic buildings; incompatible due to scale
Pillsbury Data Center (now General Mills Technology Building)	0	None; Phoenix Mill previously demolished	1	Diminishes the integrity of the EBMA as a non-contributing and neutral property
Pillsbury Research and Development Center (now General Mills Technology East) Expansion	0	Complex of industrial buildings, including Pillsbury properties and Eddy's Bakery	1	Diminishes the integrity of the EBMA; expanded facility occupying two entire blocks intrusive due to its scale
Parking Lot on block bounded by 2nd and 3rd Avenues SE, 2nd Street SE and University Avenue	0	Gar-Wood Industries industrial complex and other buildings	1	Diminishes the integrity of the EBMA through loss of historic properties; intrusive due to its function and scale
Projects proposed for the EBMA				
The Phoenix	0	None; would replace Pillsbury Data Center listed above	1	Assumed to be compatible due to HPC regulation
Pillsbury "A" Mill Complex	8	Concrete Elevator	6	Would rehabilitate 7 historic resources; introduce two compatible new buildings and four that would be intrusive; new construction would diminish the integrity of the EBMA
520 and 521 2nd Street SE	0	520 and 520 ½ 2nd Street SE and a portion of 110 5th Avenue SE	1 in district	Assumed to be compatible due to HPC regulation

The baseline condition of the EBMA, shown in Figure 26, is represented in the first bar graph of Figure 27. The areas occupied by four main types of properties were analyzed and assigned a percentage of the EBMA in order to depict general trends of change; these figures are approximate and indicate proportional change. The bar graph indicates that 70 percent of the resources, by land area, were contributing at the time of listing on the NRHP. The rest of the area of the EBMA consisted of 19 percent non-contributing and neutral properties and 11 percent incompatible properties. These relative amounts seem appropriate for a historic district. The non-contributing and neutral properties consisted of vacant lots, altered historic buildings, and compatible buildings erected after 1941. The Pillsbury Research and Development Center, in its initial stage, comprised the incompatible portion of the EBMA.

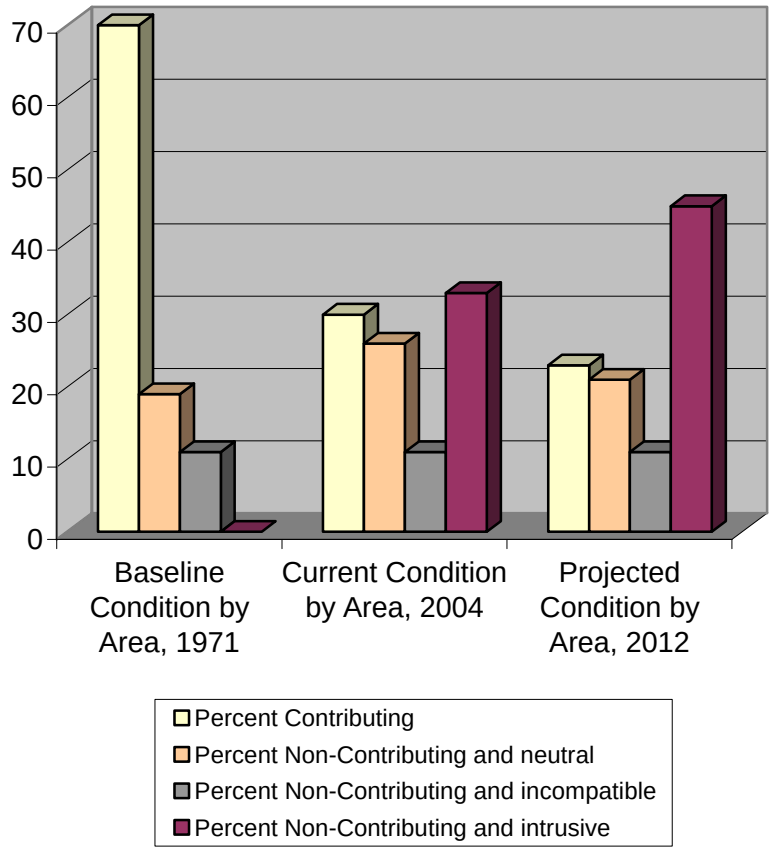


FIGURE 27. ANALYSIS OF CHANGE OVER TIME IN THE EBMA

6.5.1 The Magnitude and Significance of Change

Figure 27 also presents the ratios of property types in 2004. Between 1971 and 2004, the percentage of contributing properties has been reduced from 70 percent to 30 percent. The percentage of non-contributing and neutral properties by land area increased from 19 percent to 26 percent. The amount of non-contributing and incompatible properties remained the same though the properties of that type changed. The incompatible initial

portion of the Pillsbury Research and Development Center became part of a larger intrusive property that accounts for 33 percent of the EBMA in 2004. The Winslow House and the nearby parking ramp account for the incompatible properties present in 2004. These figures indicate that considerable change took place in the EBMA during its first 30 years as part of the St. Anthony Falls Historic District and resulted in a significant loss in contributing properties, as well as the introduction of intrusive properties. The location of the contributing properties in the EBMA in 2004 is shown on Figure 26.

The third bar graph in Figure 27 presents the projected proportions of property types within the EBMA after the completion of the three projects being analyzed for cumulative effects. The graph represents Alternatives 1 through 4 of the Pillsbury "A" Mill Complex project, all of which would have a similar effect on the integrity of the EBMA. The proposed loss of the Concrete Elevator would represent most of the seven percent loss in the reduction of contributing resources and reduce the percentage of that property type from 30 percent to 23 percent of the land area. For this analysis, it was assumed that the new construction for The Phoenix and the 520 and 521 2nd Street SE projects would be compatible due to HPC oversight. The relative amount of non-contributing and neutral properties would decrease from 26 to 21 percent. The percentage of non-contributing and incompatible properties would not change. The new residential construction proposed as part of the Pillsbury "A" Mill Complex project would increase the amount of intrusive properties from 33 to 45 percent. Most of the proposed change would be from one type of non-contributing property to another. The location of the contributing properties in the EBMA in 2012 is shown on Figure 26.

The No Build alternative would introduce no change in the immediate future, but the condition of the EBMA in 2012 would probably be different from that of 2004. If the Concrete Elevator were to be retained, the six percent of the total area that it represents would remain in the "contributing" column and be removed from the "non-contributing and neutral" column.

While considering change, it is important to note also which aspects of the historic district would remain relatively unaltered. Just as all non-contributing properties do not have the same effect on the district with regards to integrity, properties in a district vary in historic significance. The condition projected for 2012 includes the rehabilitation of a group of significant historic properties that will continue to convey the historic conditions of waterpower use and flour milling on the east bank of the Mississippi River in Minneapolis—the Pillsbury "A" Mill and associated buildings. The most significant resources in this portion of the historic district would be impacted by the proposed projects mainly through an altered immediate setting and the loss of one contributing structure. This action is an environmental consequence as important as the other proposed changes.

The conditions represented by the three bar graphs in Figure 27 indicate that the number of potential contributing properties lost through realization of the proposed project does not amount to a greater number of contributing properties lost since the area was first

designated a historic district. The other significant change is in the percentage of intrusive properties. Again, the increase in such properties to date would be more than the amount proposed by the projects under consideration. The information summarized in Figures 26 and 27 helps to answer the critical questions posed in Section 6.2:

Would the balance between contributing and non-contributing properties be altered significantly and affect the district's ability to convey its historic significance*?*

The proportions of these two broad categories of properties in the EBMA would be altered considerably and additional intrusive properties would appear. This portion of the district would continue to feature a NHL and complement of contributing resources, the Pillsbury "A" Mill and associated buildings and structures. These resources would continue to convey the historic condition of waterpower use and flour milling and have relationships with the waterpower resources southwest of Main Street SE. While the presence of these properties would temper the overall effect of the changes, the cumulative effects still seem to be adverse.

Would the scale of the proposed new construction make a difference in the cumulative effects that the proposed projects would have on the historic district?

The scale, and hence the compatibility of proposed new construction, matters in the assessment of cumulative effects. When the scale of new construction causes more of a historic district to be not only non-contributing, but also intrusive, the integrity of the historic district is affected.

Would the project area retain sufficient integrity to remain within the St. Anthony Falls Historic District? Would all of the proposed new construction have an adverse cumulative effect on the integrity of that portion of the historic district?

The answers to these two questions relate to whether a tipping point for the historic district has been reached, or would be reached, with the projects under consideration. The identification of the tipping point could be the condition beyond which the historic district could no longer convey its historic significance. At the present time, contributing properties comprise less than one-third of the area of the EBMA. Although there are many non-contributing and neutral properties in the EBMA, one-third of the properties are intrusive. Though nearly all of the contributing properties are between Main Street SE and 2nd Street SE, the Pillsbury "A" Mill complex property is almost surrounded by non-contributing properties. Yet this resource still conveys the historic use of waterpower and the flour milling industry.

The EBMA is part of a larger entity, the St. Anthony Falls Historic District, which includes the area between Main Street SE and the Mississippi River. While this area has not experienced the loss of historic and archaeological resources, it has been altered since 1971 with the creation of the Father Hennepin Bluff Park. The introduction of trails, bridges, and interpretive signage helps preserve the memory of industrial activity, but

also emphasizes the modern pastoral elements that have been present in the area since the mid twentieth century. This area adjacent to the EMBA is not likely to experience further impacts that would reduce significantly its integrity. The portion of the historic district in the project area would continue to contribute to the understanding of the historic waterpower use and flour milling that took place near St. Anthony Falls and consequently is recommended to remain within the district.

Would the cumulative effects of the projects support the Minneapolis HPC goals for the EBMA?

The current projects meet these goals in various ways. It is assumed that under HPC oversight, the smaller projects, The Phoenix and 520 and 521 2nd Street SE, will meet the goal of providing sympathetic new development and adding to a new pedestrian-oriented community along the riverfront. While the HPC approves the demolition of contributing buildings under certain circumstances, the retention of all contributing buildings in a historic district is an overall goal. Since the 520 and 521 2nd Street SE project includes the demolition of two contributing buildings and a portion of a third one, this project does not meet all of the goals of the HPC. The Pillsbury "A" Mill Complex would not only preserve the memory of past events, it would also provide for the long-term preservation of significant historic resources, including a NHL. It would also introduce new construction considered to be intrusive. All of the projects would bring more residents to the riverfront area and therefore increase access to the river corridor and nearby recreational amenities.

6.6 Assessing Cumulative Effects on a Project Study Area

A review of the above analysis by SHPO resulted in the recommendation that the Waterpower Area more accurately represents the ideal extent of the St. Anthony Falls Historic District than the boundaries established in 1971. Consequently, the assessment of cumulative effects in a project study area that is more closely aligned with those boundaries was undertaken. This project study area extends from 2nd Street SE to the southwest side of Hennepin Island in the Mississippi River, from Central Avenue to 6th Avenue SE, in order to include the East Block of the Pillsbury "A" Mill Complex project and the 520 and 521 2nd Street SE project. A similar methodology was used, the comparison of the relative amounts of contributing and four types of non-contributing properties at the time of designation, currently, and as projected in 2012. Table 7 summarizes project action consequences within this area.

TABLE 7. PROJECT ACTION CONSEQUENCES FOR THE STUDY AREA

	Number of Rehabilitated Resources	Loss of Contributing Buildings	New Non-Contributing Buildings and Structures	Overall Assessment
Projects completed in the study area since 1971				
St. Anthony Main, Phases 1 through 4	6	None	3	Reinforces the integrity of the historic district; includes compatible new construction
Winslow House Residential Tower 100 2nd Street SE	0	Levin Brothers Furniture Factory	1	Diminishes the integrity of the historic district; incompatible due to its scale and visibility;
Pillsbury Data Center (now General Mills Technology Building)	0	None; Phoenix Mill previously demolished	1	Diminishes the integrity of the historic district as a non-contributing and neutral property
Projects proposed for the study area				
The Phoenix	0	None; would replace Pillsbury Data Center listed above	1	Would diminish the integrity of the historic district through new construction may be considered incompatible by the HPC staff due to height
Pillsbury "A" Mill Complex	8	Concrete Elevator	6	Would rehabilitate 7 historic resources; introduce two compatible new buildings and four that would be intrusive; would diminish the integrity of the EBMA due to the extent and scale of new construction
520 and 521 2nd Street SE	0	520 and 520 ½ 2nd Street SE and a portion of 110 5th Avenue SE	1 in district	Would diminish the integrity of the historic district through demolition of contributing buildings new construction was considered incompatible by the HPC staff due to height

The ratios of contributing to non-contributing properties in this five-block area in 1971, 2004, and as projected for 2012 are shown on Figure 26. Figure 28 presents the analysis of change over time in the five blocks in the study area between Main and 2nd Streets SE, the area in which changes to architectural properties have taken place. The area on the Mississippi River side of Main Street SE was not included in these calculations for two reasons. The character of the area has been essentially unaltered since 1971 and little change is projected to take place in the foreseeable future. .

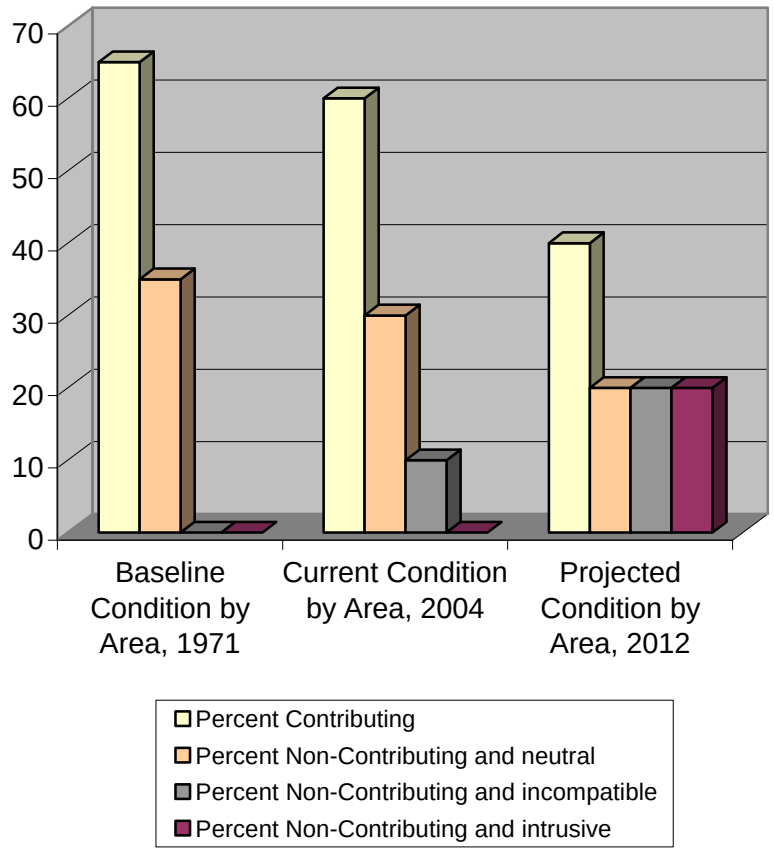


FIGURE 28. ANALYSIS OF CHANGE OF TIME IN THE STUDY AREA

When St. Anthony Falls Historic District was designated in 1971, contributing properties comprised 65 percent of the study area; the remaining 35 percent of the area consisted of non-contributing and neutral properties. By 2004, the study area experienced a 5 percent loss in both of these categories of properties due to the demolition of one historic building and the construction of the Winslow House residential tower and the demolition of the Pillsbury warehouse on the East Block. The Winslow House, considered incompatible due to its scale and visibility, represents 10 percent of the study area.

The proposed condition of 2012 represents considerable change and would bring the proportion of contributing buildings to 40 percent of the area. The three types of non-

contributing buildings would comprise very similar amounts of the study area, each estimated to be 20 percent. The increase in incompatible properties and the addition of the category of intrusive properties would have a significant impact on the study area portion of the historic district.

When a yet smaller area is considered, the portion of the study area included in the Waterpower area of the St. Anthony Falls Historic District, the projected condition is slightly different. This area excludes the East Block and non-contributing properties on the block adjacent to Central Avenue. In that area contributing properties would comprise 50 percent of the area and intrusive properties 16 percent.

While considering change, it is important to note also which aspects of the historic district would remain relatively unaltered. Just as all non-contributing properties do not have the same effect on the district with regards to integrity, properties in a district vary in historic significance. The condition projected for 2012 includes the rehabilitation of a group of significant historic properties that will continue to convey the historic conditions of waterpower use and flour milling on the east bank of the Mississippi River in Minneapolis—the Pillsbury "A" Mill and associated buildings. The most significant resources in this portion of the historic district would be impacted by the proposed projects mainly through an altered immediate setting and the loss of one contributing structure. This action is an environmental consequence as important as the other proposed changes.

The critical questions posed in Section 6.2 concerning cumulative effects summarize the analysis.

Would the balance between contributing and non-contributing properties be altered significantly and affect the district's ability to convey its historic significance?

The proportions of these two broad categories of properties in the project area of the historic district would be altered considerably and for the first time intrusive properties would appear in the study area. The portion of the district in the project area would continue to feature a NHL and complement of contributing resources, the Pillsbury "A" Mill and associated buildings and structures. These resources would continue to convey the historic condition of waterpower use and flour milling and have relationships with the waterpower resources southwest of Main Street SE. While the presence of these properties would temper the overall effect of the changes, the cumulative effects still seem to be adverse.

Would the scale of the proposed new construction make a difference in the cumulative effects that the proposed projects would have on the historic district?

The scale, and hence the compatibility of proposed new construction, matters in the assessment of cumulative effects. The HPC staff may consider the height, and hence scale, of The Phoenix and 520 and 521 2nd Street SE projects to be incompatible. If these

projects could be considered compatible, the cumulative effects would be different. The larger extent of new construction proposed by the Pillsbury "A" Mill Complex project is considered to be intrusive due to its scale. If these projects could be considered incompatible rather than intrusive, again the cumulative impact would be different. Overall, the cumulative impacts might then be considered to be an effect rather than an adverse effect. However, as currently proposed, the three projects would have an adverse cumulative effect on the study area portion of the historic district.

Would the study area retain sufficient integrity to remain within the St. Anthony Falls Historic District? Would all of the proposed new construction have an adverse cumulative effect on the integrity of that portion of the historic district?

The answers to these two questions relate to whether a tipping point for the historic district has been reached, or would be reached, with the projects under consideration. The identification of the tipping point could be the condition beyond which the historic district could no longer convey its historic significance. There is no doubt that the Pillsbury "A" Mill complex is a key property in the representation of the historic water power use and flour milling that took place on the east bank of the Mississippi River. This property would be rehabilitated, except for the Concrete Elevator; its setting would be altered with new construction on both sides.

As noted above, there is no recommended percentage of contributing properties in a historic district. The study area, with 60 percent of contributing properties at this time, could be considered to be a good condition for a historic district. The condition in 2012 would be altered, and the intrusive new construction would constitute 20 percent of that area. This condition could be considered to be fair to poor. If the district boundaries actually were adjusted to the Waterpower Area, then the condition could be considered to be fair to good. Because the study area is part of a much larger historic district with good or better integrity, the portion within the Waterpower Area boundaries would be part of a larger viable historic district and would still be able to contribute to the understanding of the historic waterpower use and flour milling that took place near St. Anthony Falls. While the cumulative effects would be adverse, they alone would not the rationale for altering the boundaries of the St. Anthony Falls Historic District on the east bank of the Mississippi River. Instead, the proposed condition would reinforce the realization that the boundaries should be altered.

Would the cumulative effects of the projects support the Minneapolis HPC goals for the EBMA?

The current projects meet some of these goals and not others. The Phoenix project would meet the goals if its final design is found to be compatible; the HPC finds the height of the taller portion of the project, as currently defined, to be incompatible. While the HPC approves the demolition of contributing buildings under certain circumstances, the retention of all contributing buildings in a historic district is an overall goal. Since the 520 and 521 2nd Street SE project includes the demolition of two contributing buildings

and a portion of a third one, and the proposed new construction of a height considered by the HPC to not be compatible for its location, this project does not meet the goals of the HPC in two ways. The Pillsbury "A" Mill Complex would not only preserve the memory of past events, it would also provide for the long-term preservation of significant historic resources, including a NHL. It would also introduce new construction considered to be intrusive. All of the projects would bring more residents to the riverfront area and therefore increase access to the river corridor and nearby recreational amenities.

6.7 THE CUMULATIVE EFFECT OF CHANGING LAND USE

As noted in Section 3.1.2.2, change in use of historic buildings is not considered to necessarily constitute an adverse effect on a property. The effect of changes made to properties to accommodate new uses is the issue. The impact of changing land use is addressed separately two reasons. *The Secretary of Interior's Standards* focuses on the physical characteristics of, rather than use of, historic properties; this distinction has been incorporated into the preview practices of many HPCs, no doubt in recognition of the need for historic properties to be used. The Minneapolis HPC Guidelines for the St. Anthony Falls Historic District encourages sympathetic new development. While the guidelines do not address residential use, there is no reason to think that it was not anticipated when the guidelines were drafted. In fact, new residential construction has been approved for the district. Historic preservation has been linked successfully to the conversion of industrial areas to other uses in many warehouse districts, including the one in Minneapolis.

Nevertheless, the introduction of additional residential properties in a former industrial area, such as the St. Anthony Falls Historic District, will have an additive cumulative effect. The Pillsbury "A" Mill Complex, The Phoenix, and the 520 and521 2nd Street SE projects, propose to transform most of the parcels that could be considered as "available" for redevelopment within the portion of the St. Anthony Falls Historic District on the east bank of the Mississippi River. Once completed, the area will have a different feeling, as well as a change in primary land use. The larger area surrounding this portion of the historic district is likely to be redeveloped with high-density housing. Consequently, the setting of the historic milling and industrial buildings on the east bank of the Mississippi River will be altered during the foreseeable future with additional housing development. The planning policies adopted by the City of Minneapolis support this change in land use.

The issue at hand is whether this type of additive change in land use would constitute an effect or an adverse effect. The proposed new construction within the St. Anthony Falls Historic District includes buildings that are considered to be compatible, incompatible, and intrusive. The large amount of non-contributing properties available for redevelopment within the district suggests that the presence of the new buildings will have an impact regardless of the height, massing, and other features of the properties, due to its overall extent. The additional conversion of properties to high-density residential use outside the boundaries of the St. Anthony Falls Historic District would increase the perception of the area as a new residential area, an effect identified in the visual effects

analysis (see Section 5.4.3.2). The boundary of an urban historic district, however, is generally considered to function as a marker for different expectations for the extent and type of changes to the physical environment. However, the presence of high-density development both within the historic district boundaries, and surrounding the district, would blur the perception of the boundaries of the historic district and affect the perception and prominence of the historic district.

The consideration of the long-term impacts of additional housing development in the project vicinity should also take into account the impacts of that change on another historic property, the Twin City Rapid Transit Company Steam Power Plant. This property listed on the NRHP is currently used as a power generation facility by the University of Minnesota, a function that provides a reason for its maintenance and, hence, preservation. If the residents of a high-density residential community pressure the University of Minnesota to discontinue use of the power plant, the long-term preservation of the property might be jeopardized. However, new housing has been constructed closer to the power plant than that under consideration for cumulative effects. In addition, power plants have been adaptively reused for other functions. Consequently, it is very unlikely that the projects currently under consideration would have the foreseeable result of the discontinued use of the Twin City Rapid Transit Company Steam Power Plant and related adverse effects.

6.8 CUMULATIVE EFFECTS SUMMARY

The methodology used for the cumulative effects analysis identified a portion of the St. Anthony Falls Historic District as the resource subjected to such effects. The environmental consequences of the proposed projects have been identified as a significant shift in the proportion of contributing and the various types of non-contributing property types and the ability of the historic district to convey its significant themes. The analysis of the current conditions and proposed changes resulted in the following conclusions:

- **The three projects analyzed would have an adverse cumulative effect.** This conclusion is based on the loss of contributing properties and introduction of incompatible and intrusive new construction into the project study area.

- **The proposed projects would be part of a cumulative effect on the St. Anthony Falls Historic District due to the change in land use to high-density residential**. While changing land use has environmental effects, such change does not *per se* impact the integrity of the historic district unless it incorporates the loss of contributing properties and limits its ability to convey historic significance. The redevelopment will have visual impacts on the portion of the historic district northeast of the Mississippi River and alter its setting. Yet this is the type of change expected in a city and adaptive reuse is often necessary to insure the long-term preservation of historic properties.

The determination of the projects’ impacts as adverse cumulative effects is based on the loss of contributing properties and introduction of incompatible and intrusive new construction. However, it is important to note two points concerning this conclusion. Given the size of the area within the historic district that is comprised of non-contributing properties and therefore likely to be redeveloped, it is possible that the overall effect of the anticipated new construction would be incompatible due to its extent and scale; the finding of adverse cumulative effect could be hard to avoid. Also, despite the effects of the new construction on its setting, the Pillsbury “A” Mill complex of resources would continue to convey the historic significance of water power use and flour milling.

7.0 SUMMARY OF EFFECTS

7.1 SUMMARY OF DIRECT PROJECT EFFECTS BY ALTERNATIVE

Alternatives 1 through 4 of the Pillsbury "A" Mill Complex would have effects that are not changed extensively by the varied massing studies for the new construction. The primary difference is found in the issue of the height of the residential towers. These effects are summarized for each alternative, in the format commonly provided for an EIS.

7.1.1 Alternative I: The Project as Described in EAW

The implementation of the Pillsbury "A" Mill Complex project would have both positive and adverse effects. The project would not pose an adverse effect on the Pillsbury "A" Mill NHL property.

The historic preservation components, the positive effects of the proposed project, would include:

- The stabilization and rehabilitation of the Pillsbury "A" Mill, a NHL;
- The rehabilitation of seven additional buildings and a main railroad spur;
- The retention and rehabilitation of all major building types erected in the Pillsbury milling complex, including a grain elevator; and
- The retention of many of the small elements that evoke the industrial past of the property, including the "Pillsbury's Best Flour" sign on the Red Tile Elevator, the water tank of the South "A" Mill building, and various industrial elements such as cranes, bins, and equipment integral to the buildings.

The adverse effects of the project would include:

- The demolition of one historic structure, the Concrete Elevator;
- Changes to a historic property, the Pillsbury "A" Mill complex, in a way that does not meet entirely the *Secretary of Interior's Standards for Rehabilitation* and Guidelines through the loss of a historic resource, new construction, and alterations to the immediate setting;
- Three residential towers taller than the height cap set by the HPC Guidelines, although the conceptual massing plan acknowledges the intent to keep the Red Tile Elevator as an important element in the skyline by positioning the tallest buildings over 280 feet from the historic structure; and
- Introduction of new construction of a size, scale and extent that would be incompatible with other resources in the historic district and intrusive in the setting, and consequently diminish the integrity of the St. Anthony Falls Historic District's character-defining features.

7.1.2 Alternative 2: The Project with Height Limited to that of the Red Tile Elevator

The implementation of the Pillsbury "A" Mill Complex project would have both positive and adverse effects. The Pillsbury "A" Mill Complex project would not pose an adverse effect on the Pillsbury "A" Mill NHL property.

The historic preservation components, the positive effects of the proposed project, would include:

- The stabilization and rehabilitation of the Pillsbury "A" Mill, a NHL;
- The rehabilitation of seven additional buildings and a main railroad spur;
- The retention and rehabilitation of all major building types erected in the Pillsbury milling complex, including a grain elevator; and
- The retention of many of the small elements that evoke the industrial past of the property, including the "Pillsbury's Best Flour" sign on the Red Tile Elevator, the water tank of the South "A" Mill building, and various industrial elements such as cranes, bins, and equipment integral to the buildings.

The adverse effects of the project would include:

- The demolition of one historic structure, the Concrete Elevator;
- Changes to a historic property, the Pillsbury "A" Mill complex, in a way that does not meet entirely the *Secretary of Interior's Standards for Rehabilitation* and Guidelines through the loss of a historic resource, new construction, and alterations to the immediate setting; and
- Introduction of new construction of a size, height, scale and extent that would be incompatible with other resources in the historic district and intrusive in the setting, and consequently diminish the integrity of the St. Anthony Falls Historic District's character-defining features.

7.1.3 Alternative 3: The Project with Reduced Heights

The implementation of the Pillsbury "A" Mill Complex project would have both positive and adverse effects. The Pillsbury "A" Mill Complex project would not pose an adverse effect on the Pillsbury "A" Mill NHL property.

The historic preservation components, the positive effects of the proposed project, would include:

- The stabilization and rehabilitation of the Pillsbury "A" Mill, a NHL;
- The rehabilitation of seven additional buildings and a main railroad spur;
- The retention and rehabilitation of all major building types erected in the Pillsbury milling complex, including a grain elevator; and
- The retention of many of the small elements that evoke the industrial past of the property, including the "Pillsbury's Best Flour" sign on the Red Tile Elevator, the

water tank of the South “A” Mill building, and various industrial elements such as cranes, bins, and equipment integral to the buildings.

The adverse effects of the project would include:

- The demolition of one historic structure, the Concrete Elevator;
- Changes to a historic property, the Pillsbury “A” Mill complex, in a way that does not meet entirely the *Secretary of Interior’s Standards for Rehabilitation* and Guidelines through the loss of a historic resource, new construction, and alterations to the immediate setting;
- Three residential towers taller than the height cap set by the HPC Guidelines, although the conceptual massing plan acknowledges the intent to keep the Red Tile Elevator as an important element in the skyline by positioning the tallest buildings over 280 feet from the historic structure; and
- Introduction of new construction of a size, height, scale and extent that would be incompatible with other resources in the historic district and intrusive in the setting, and consequently diminish the integrity of the St. Anthony Falls Historic District’s character-defining features.

7.1.4 Alternative 4: The Project as Mandated by Current Zoning

The implementation of the Pillsbury “A” Mill Complex project would have both positive and adverse effects. The Pillsbury “A” Mill Complex project would not pose an adverse effect on the Pillsbury “A” Mill NHL property.

The historic preservation components, the positive effects of the proposed project, would include:

- The stabilization and rehabilitation of the Pillsbury “A” Mill, a NHL;
- The rehabilitation of seven additional buildings and a main railroad spur;
- The retention and rehabilitation of all major building types erected in the Pillsbury milling complex, including a grain elevator; and
- The retention of many of the small elements that evoke the industrial past of the property, including the “Pillsbury’s Best Flour” sign on the Red Tile Elevator, the water tank of the South “A” Mill building, and various industrial elements such as cranes, bins, and equipment integral to the buildings.

The adverse effects of the project would include:

- The demolition of one historic structure, the Concrete Elevator;
- Changes to a historic property, the Pillsbury “A” Mill complex, in a way that does not meet entirely the *Secretary of Interior’s Standards for Rehabilitation* and Guidelines through the loss of a historic resource, new construction, and alterations to the immediate setting; and

- Introduction of new construction of a size, height, scale and extent that would be incompatible with other resources in the historic district and intrusive in the setting, and consequently diminish the integrity of the St. Anthony Falls Historic District’s character-defining features.

7.1.5 Alternative 5: No Build

The No Build Alternative would have the following impacts:

- The long-term preservation of the NHL Pillsbury “A” Mill would be uncertain.
- The future of the historic buildings that comprise the Pillsbury “A” Mill Complex property would be uncertain.
- There would be fewer cumulative effects on the St. Anthony Falls Historic District in the short term.
- There would be less of an impact on views of, to, and in the EBMA in the short term due to projects currently under consideration.

The “No Build” condition is likely to be temporary due to the presence of large parcels that are non-contributing to the St. Anthony Falls Historic District and the proximity of the property to the Mississippi River.

This alternative would differ from 1 through 4 in the following ways:

- The demolition of a prominent historic structure would be avoided.
- The setting of the Pillsbury “A” Mill NHL would not altered.
- Both the Pillsbury “A” Mill Complex property and the St. Anthony Falls Historic District would not experience a reduction in integrity in the short term.

7.1.6 Alternative 6: Retain the Concrete Elevator

This alternative would differ from 1 through 4 in the following ways:

- The demolition of a prominent historic structure would be avoided.
- The setting of the Pillsbury “A” Mill NHL would not altered.
- The presence of the Concrete Elevator would not significantly reduce the impact of the proposed new construction on the Pillsbury “A” Mill Complex or the St. Anthony Falls Historic District.
- Two compatible new buildings proposed for the Concrete Elevator site would not be erected.

7.2 SUMMARY OF VISUAL AND CUMULATIVE EFFECTS ANALYSIS

The analysis of visual and cumulative effects considered the impact of the Pillsbury “A” Mill Complex, The Phoenix, and the 520 and 521 2nd Street SE projects.

The analysis of visual effects that the projects would have on the view sheds studied concludes that the visual effects would be very noticeable, but probably do not constitute an adverse effect. This conclusion was based on the following key points:

- The projects would not obstruct views of the Pillsbury "A" Mill and associated historic structures on Main Street SE from across the Mississippi River, the most critical type of change;
- The presence or absence of the Concrete Elevator would make little difference in the views of the EBMA from across the Mississippi River;
- The projects would introduce a very noticeable change in emphasis in views of the EBMA by adding a second focal point, new construction;
- The projects would affect somewhat the prominence of the historic buildings, the association of those buildings with a historic district, and the perception of change over time in views from across the Mississippi River;
- The projects would not alter significantly the perceived accessibility of the Mississippi River banks in the vicinity of the project; and
- The projects would alter views within the EBMA along 2nd Street SE and Main Street SE, but not views through the EBMA of the Mississippi River corridor from the University Avenue area due to grade changes in the area.

Once again, the analysis of the impact of the proposed projects on views of the EBMA could logically reach two conclusions:

- **The proposed projects would have a visual effect**. The change of emphasis in the views would constitute a major effect on views, but not an adverse effect. This conclusion considers obstruction the most important type of change. Because new construction would not obstruct views of the Pillsbury "A" Mill and most of the other historic buildings, the less important changes to emphasis and dominance, perception of organic change over time, and reduced presence of a historic district would not be sufficient to constitute an adverse effect. These types of changes to views often occur in urban areas, including those with historic resources.

- **The proposed projects would have an adverse visual effect due to the cumulative impact of changes**. The shift of emphasis in the views would be very obvious. Although the historic buildings would remain visible, their prominence would be reduced significantly, and their association with a historic district would be tenuous as twenty-first century buildings larger in scale would dominate the view.

The methodology used for the cumulative effects analysis identified a portion of the St. Anthony Falls Historic District as the resource subjected to such effects. The environmental consequences of the proposed projects have been identified as a significant shift in the proportion of contributing and the various types of non-contributing property types and the ability of the historic district to convey its significant

themes. The analysis of the current conditions and proposed changes resulted in the following conclusions:

- **The three projects considered for cumulative effects would have an adverse cumulative effect.** This conclusion is based on the loss of contributing properties and introduction of incompatible and intrusive new construction.

- **The proposed projects would be part of a cumulative effect on the St. Anthony Falls Historic District due to the change in land use to high-density residential**. While changing land use has environmental effects, such change does not *per se* impact the integrity of the historic district unless it incorporates the loss of contributing properties and limits its ability to convey historic significance. The redevelopment will have visual impacts on the portion of the historic district northeast of the Mississippi River and alter its setting. Yet this is the type of change expected in a city and adaptive reuse is often necessary to insure the long-term preservation of historic properties.

The determination of the projects' impacts as adverse cumulative effects is based on the loss of contributing properties and introduction of incompatible and intrusive new construction. However, it is important to note two points concerning this conclusion. Given the size of the area within the historic district that is comprised of non-contributing properties and therefore likely to be redeveloped, it is possible that the overall effect of the anticipated new construction would be incompatible due to its extent and scale; the finding of adverse cumulative effect could be hard to avoid. Also, despite the effects of the new construction on its setting, the Pillsbury "A" Mill complex of resources would continue to convey the historic significance of water power use and flour milling.

7.3 CONCLUSIONS

The extensive analysis of the Pillsbury "A" Mill Complex project and the visual and cumulative effects that extended to two additional projects takes into account the following conditions and highlights the following points.

Historic Properties Affected. The project area includes a NHL, contributing historic properties, and non-contributing and neutral properties.

Project Setting. The Pillsbury "A" Mill Complex project location is within a portion of the St. Anthony Falls Historic District. The project site is almost surrounded by non-contributing properties and open space.

Historic Preservation Component. The Pillsbury "A" Mill Complex project has a strong historic preservation component that would meet the *Secretary of Interior's Standards* and insure the long-term preservation and use of the Pillsbury "A" Mill NHL, as well as seven additional historic buildings and structures. The project would result in the loss of one contributing property, the Concrete Elevator in most of the alternatives,

and in this way does not meet the *Secretary of Interior's Standards*. However, with the retention and rehabilitation of the Red Tile Elevator, the Pillsbury "A" Mill complex would continue to have all of the important property types for, and characteristic features of, a flour milling operation. The project meets the *Standards* with regards to maintaining the historic street pattern of the EBMA, minimizing the impact of parking, and addressing archaeological resources.

New Construction Component. The proposed new construction component of the project does not, however, meet the *Secretary of Interior's Standards* for compatible new buildings in a historic district. The extent and scale of the new construction is the basis for its being incompatible with adjacent historic buildings and structures and intrusive in the EBMA setting. However, as this report illustrates, this incompatibility is virtually inevitable in a location with the considerable amount of land area available for new construction in the Pillsbury "A" Mill Complex project. The finding that the various configurations of the proposed new construction in Alternatives 1 through 4 are incompatible and intrusive supports the conclusion that it would be difficult to propose new construction that would be fully compatible. Alternatives 1 and 3 include residential towers that would rise above the Red Tile Elevator, the tallest historic structure in the EBMA, the height of which has been established in the HPC guidelines as a cap for new construction. Though these two alternatives do not meet the guidelines for maximum height, the location of the tallest proposed towers helps to maintain the presence of the Red Tile Elevator as the tallest of the historic resources.

Visual Effects. The Pillsbury "A" Mill Complex project, and other projects included in the analysis, would contribute to visual effects on the view sheds of the Waterpower Area of the St. Anthony Falls Historic District, the PIZ for visual effects. This PIZ for visual effects is larger than that for cumulative effects in order to encompass view to, from, and within the project areas. Obstruction of the views of the Pillsbury "A" Mill and its associated historic complex is the most critical type of visual effect. The three proposed projects would have visual effects by introducing a shift of emphasis from the historic milling complex to the new residential area that would be created, affecting the perception of organic change over time, and reducing the presence of the historic district. These types of changes to views occur often in urban areas, including those with historic resources. Ultimately, because the projects would not obstruct views of the Pillsbury "A" Mill complex, the visual effects are not considered to be adverse.

Cumulative Effects. The determination of the projects' impacts as adverse cumulative effects is based on the loss of contributing properties and introduction of incompatible and intrusive new construction. However, it is important to note two points concerning this conclusion. Given the size of the area within the historic district that is comprised of non-contributing properties and therefore likely to be redeveloped, it is possible that the overall effect of the anticipated new construction would be incompatible due to its extent and scale; the finding of adverse cumulative effect could be hard to avoid. Also, despite the effects of the new construction on its setting, the Pillsbury "A" Mill complex of

resources would continue to convey the historic significance of water power use and flour milling.

Conclusions. While the Pillsbury “A” Mill Complex project does not meet all of the *Secretary of Interior’s Standards for Rehabilitation* and related guidelines, it does meet many of them. The project is aligned with the goals adopted for the St. Anthony Falls Historic District in 1980, although it challenges the height restriction set for the EBMA. The new construction component of the project does not meet the *Secretary of Interior’s Standards* for compatibility and would pose an adverse effect on the Pillsbury “A” Mill complex and the St. Anthony Falls Historic District. There would be, however, no adverse effect on the Pillsbury “A” Mill NHL. Overall, the Pillsbury “A” Mill Complex project presents historic preservation merits, as well as adverse effects, components that are often inherent in a project of its scope and scale. The Pillsbury “A” Mill Complex, The Phoenix, and the 520 and 521 2nd Street SE projects are considered to pose adverse cumulative effects due to the loss of contributing properties and the introduction of incompatible and intrusive new construction; they are not considered to have adverse visual effects.

REFERENCES CITED

Anfinson, Scott F.
1989 Archaeology of the Central Minneapolis Riverfront. *Minnesota Archaeologist* 48(1-2).

Anfinson, Scott, Thomas Madigan, Drew M. Forsberg, and Patrick Nunnally
2003 *River of History: A Historic Resources study of the Mississippi National River and Recreation Area*. National Park Service and U.S. Army Corps of Engineers, St. Paul District, St. Paul.

Berg, Merlin H.
1982 *Stone Arch Revisited*. Typescript. On file at the Minnesota State Historic Preservation Office, St. Paul.

Bloomberg, Britta L.
2004 Letter Re: EAW—Pillsbury "A" Mill Complex. On file at the Minnesota State Historic Preservation Office, St. Paul.

Bradley, Betsy H.
1999 *The Works: The Industrial Architecture of the United States.* Oxford University Press, New York.

City of Minneapolis (Minneapolis)
2004a *Scoping Decision Document for the Pillsbury A Mill Complex Project Environmental Impact Statement.* On file at the Community Planning and Economic Development Department – Planning Division, Minneapolis.
2004b *Minneapolis Zoning Code*. Chapter 551. Overlay Districts. Electronic document, http://www.ci.minneapolis.mn.us/zoning/code/title20_chapter551.asp, accessed September 22, 2004.

City of Minneapolis HPC (Minneapolis HPC)
2004 Heritage Preservation Commission Staff Report, 520 Second Street SE, 520 ½ Second Street SE, 110 5th Avenue SE Certificate of Appropriateness for New Construction. Report of August 10, 2004 prepared by Amy Lucas. On file at the Minneapolis Heritage Preservation Commission.

Coddington, Donn
1971 *St. Anthony Falls Historic National Register Nomination.* On file at the Minnesota State Historic Preservation Office St. Paul.

Council on Environmental Quality (CEQ)
1997 *Considering Cumulative Effects Under the National Environmental Policy Act*. January 1997. Electronic document, http://ceq.eh.doe.gov/nepa/ccenepa/ccenepa.htm, accessed September 27, 2004.

Dahlgren, Shardlow, and Urban, Inc.
2003 *Master Plan for the Marcy-Holmes Neighborhood*. Prepared for the Marcy-Holmes Neighborhood Association and submitted to the Community Planning & Economic Development (CPED), Planning Division. Electronic document, http://www.ci.minneapolis.mn.us/master-plans/marcy-holmes/index.asp, accessed September 17, 2004

David Braslau Associates, Inc. (David Braslau)
2004 *Pillsbury A Mill Complex Environmental Assessment Worksheet.* Prepared for Schafer Richardson, Inc. and submitted to the City of Minneapolis. Electronic document, http://www.ci.minneapolis.mn.us/planning/docs/EAW3.pdf, accessed September 7, 2004.

Delaware State Historic Preservation Office (SHPO)
2003 *Assessing Visual Effects on Historic Properties.* Electronic document, http://www.state.de.us/shpo/information/visualeffects.shtml, accessed November 2, 2004.

Federal Highway Administration (FHWA)
2003 *Memorandum, July 31, 2003; Information: Interim Guidance: Questions and Answers Regarding Indirect and Cumulative Impact Considerations in the NEPA Process*. Electronic document, http://environment.fhwa.dot.gov/guidebook/qaimpact.htm, accessed September 30, 2004.

Ferrell, Richard L.
1981a Pillsbury's "A" Mill, Part One. *Hennepin County History* 40(1):3-11. Minnesota Historical Society, St. Paul.
1981b Pillsbury's "A" Mill, Part Two. *Hennepin County History* 40(2):9-19. Minnesota Historical Society, St. Paul.

Frame, Robert M.
1980 *The Progressive Millers: A Cultural and Intellectual Portrait of the Flour Milling Industry, 1870-1930*. Ph.D. dissertation, University of Minnesota. Minnesota Historical Society.
1989a *Grain Elevators in Minnesota*. National Register of Historic Places Multiple Property Documentation Form. On file at the Minnesota State Historic Preservation Office, St. Paul.
1989b *The WCCO Elevator Houses No. 2 & No. 3: A Report on the Study of Reuse Possibilities for Two Reinforced-Concrete Grain Elevators.* Submitted to the

Preservation Alliance of Minnesota and the State Historic Preservation Office, St. Paul.

Gunts, Edward
2003 *Panel to Nominate Grain Elevator for Historic Listing.* Electronic document, http://www.baltimoresun.com/features/lifestyle/bal-to.archcol23aug23,0,4583252.column, accessed September 14, 2004.

Hennepin County Department of Housing, Community Works & Transit
2003 *Cepro Grain Elevator Redevelopment Overview.* On file at Mn/DOT Cultural Resources Unit.

Hess, Jeffrey A. and Camille Kudzia
1992 *St. Anthony Falls Historic District, Updated documentation for the St. Anthony Falls Water Power National Register of Historic Places Nomination Form.* On file at the Minnesota State Historic Preservation Office, St. Paul.

Historic American Building Survey (HABS)
1934 *Pillsbury "A" Mill, Minneapolis, Minnesota*. David L. Jacobson, Delineator. U. S. Department of Interior, National Park Service.
1987 *Pillsbury Milling Complex*. Prepared by the University of Minnesota School of Architecture and Landscape Architecture for the Minnesota Historical Society. On file at the Minnesota State Historic Preservation Office St. Paul.

Kuhlmann, Charles B.
1929 *The Development of the Flour-Milling Industry in the United States*. Houghton Mifflin Company, Boston and New York.

Lissandrello, Stephen
1975 *Pillsbury "A" Mill. National Register of Historic Places Inventory-Nomination Form*. On file at the Minnesota State Historic Preservation Office, St. Paul.

MacDonald and Mack Partnership
1979 *Restoration and Preservation Research and Planning Study: Saint Anthony Falls Historic District*. Prepared for the Riverfront Development Coordination Board. Minnesota Historical Society.

Minneapolis Heritage Preservation Commission (HPC)
1979 *St. Anthony Falls Historic District Guidelines*. On file at the Minneapolis Heritage Preservation Commission.

Minneapolis Riverfront Development Coordination Board (MRDCB)
1980 *Saint Anthony Falls Rediscovered*. Minnesota Historical Society, St. Paul.

Mississippi National River and Recreation Area (MNRRA)
2004a *The Mississippi Rover Critical Area*. Electronic document, http://www.nps.gov/miss/programs/critical/caintro.htm, accessed September 22, 2004.
2004b *Comprehensive Management Plan*. Electronic document, http://www.nps.gov/miss/info/cmp/index.html, accessed September 22, 2004.

National Park Service (NPS)
1997a *How to Complete the National Register Registration Form.* U. S. Government Printing Office, Washington, D. C.
1997b *How to Apply the National Register Criteria for Evaluation*. U. S. Government Printing Office, Washington, D. C.
2004a *The Secretary of Interior's Standards for the Treatment of Historic Properties.* Electronic document, http://www2.cr.nps.gov/tps/standguide/index.htm, accessed October 4, 2004.
2004b *The Secretary of Interior's Standards for Rehabilitation*. Electronic document, http://www2.cr.nps.gov/tps/tax/rehabstandards.htm, accessed September 20, 2004.

Powell, William J.
1985 *Pillsbury BEST: A Company History from 1869*. Pillsbury Company, Minneapolis.

Roe, James A.
1988-1989 Pillsbury A Mill; Its Early Years in the Public Eye. *Hennepin County History* 48(1):10-17.

Sanborn Map Publishing Company
1890 *Minneapolis, Minnesota.* Sanborn Map Publishing Company, New York.
1912 *Minneapolis, Minnesota.* Sanborn Map Publishing Company, New York.
1941 *Minneapolis, Minnesota.* Sanborn Map Publishing Company, New York.
1966 *Minneapolis, Minnesota.* Sanborn Map Publishing Company, New York.

Schafer Richardson, Inc./Phoenix Lofts LLC
2004 *Environmental Assessment Worksheet.* Minneapolis. City of Minneapolis Community Planning and Economic Development Planning Division. Electronic document. http://www.ci.minneapolis.mn.us/citywork/planning/. Accessed July 19, 2004.

Vermeer, Andrea
2003 *Archaeological Assessment for the Pillsbury "A" Mill Complex, Minneapolis, Hennepin County, Minnesota.* The 106 Group, Ltd. Submitted to Schafer Richardson Inc.

2004 *Archaeological Assessment for the Proposed Phoenix Lofts, Minneapolis, Hennepin County, Minnesota*. The 106 Group, Ltd. Submitted to Schafer Richardson Inc.

Weeks, Kay D. and Anne E. Grimmer
1995 *Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Buildings*. 2001 Electronic document. http://www2.cr.nps.gov/tps/standguide/index.htm. Accessed July 19, 2004.

Whiffen, Marcus.
1992 *American Architecture Since 1780: A Guide to the Styles* (Revised Edition). The MIT Press, Cambridge, Massachusetts.

Yots, Thomas
2004 Adaptive Reuse of Grain Elevators. In *Rediscovering the Concrete Atlantis: Buffalo Grain Elevators*, edited by Lynda H. Schneekloth, pp. 45-49. The Urban Design Project, School of Architecture and Planning, University at Buffalo/State University of New York.

Zschomler, Kristen
2003 Stewart-Cepro Grain Elevator Site Reuse Study. Letter to Hennepin County Department of Housing, Community Works & Transit. 23 April 2003. On file at Mn/DOT Cultural Resources Unit.

APPENDIX A: PROJECT PERSONNEL

LIST OF PERSONNEL

Project Manager	Anne Ketz, M.A., RPA
Principal Investigator	Betsy H. Bradley, Ph. D.
Graphics and GIS	Matthew Schillerberg