WASHINGTON AVENUE BRIDGE (HE-MPC-4918)
SPANNING THE MISSISSIPPI RIVER AT THE UNIVERSITY OF MINNESOTA:
NATIONAL REGISTER EVALUATION
Background

The Washington Avenue Bridge (Bridge No. 9360) was constructed between 1962 and 1965 by the Minnesota Department of Transportation to replace an earlier bridge built in the same vicinity. The new bridge linked the traditional East Bank campus of the University of Minnesota to the modern West Bank campus, also constructed beginning in the 1960s. The unique design separated pedestrian and vehicular traffic on two levels to facilitate travel between the two campuses. It also incorporated university buildings into its approaches.

The historical, architectural, and engineering significance of the Washington Avenue Bridge is being evaluated as part of the Supplemental Draft Environmental Impact Statement and Final Environmental Statement for the planned construction of the Central Corridor Light Rail Transit project. It had not been evaluated in any of the earlier studies. The proposed light-rail route will cross the bridge on the lower level, potentially subjecting the structure to environmental and physical impacts.

Description

The double-deck Washington Avenue Bridge spans the Mississippi River between the East Bank and West Bank campuses of the University of Minnesota. It measures 1,130’-0” in length and is designed to separate uses between each level. The lower, vehicular, level of the bridge accommodates two lanes of traffic in each direction (four lanes altogether) and is supported by a steel-span superstructure. The three main spans are continuous haunched girders measuring 246’-0”, 315’-0”, and 246-0” in length. Single, beam-girder spans connect the central section of the bridge to each shore. The west girder measures 105’-0” in length and the east girder is 66’-0” long. All of the girders rest on bearings, which are connected to the two reinforced-concrete piers and the reinforced-concrete abutments. The upper, pedestrian, level is supported on steel frames, which run under the concrete-slab deck and down the sides of the bridge to the superstructure. Both levels measure 74’-0” in width, and the upper deck has an enclosure which is 30’-0” wide and 8’-0” tall, which runs the entire length of the bridge. The globe street lamps lining each side of the upper deck are part of the original design and have always lighted the pedestrian level. This bridge was one of the first in the nation to use A441 high-strength, low-alloy steel in its superstructure, which allowed for welding rather than riveting the structure.122

Minneapolis’s Ponte Vecchio

The first Washington Avenue Bridge was built in 1884-1885 to facilitate the Interurban trolley line between Minneapolis and Saint Paul. The line was begun in 1881 with a horse car line on University Avenue from downtown Saint Paul to Dale Street. The line was completed to downtown Minneapolis via University Avenue and Washington Avenue in December 1890. Trusses were added to the bridge in 1890 and 1906 to improve its stability. The Interurban line was one of the busiest in the Twin Cities and the name proved so popular it was adopted by the

122 Mn/DOT, Structure Inventory Sheet for Bridge 9360, May 14, 2003, available from Mn/DOT, Bridges and Structures Department, Oakdale, Minnesota; T. H. 12, State of Minnesota, Department of Highways, Bridge No. 9360, General Plan and Elevation, April 13, 1962, available from Mn/DOT, Bridges and Structures Department, Oakdale, Minnesota; “Two Decks Unite Divided Campus,” Engineering Record 175 (July 8, 1965): 72, 74.
In the 1950s, enrollment at the University of Minnesota reached its highest numbers up to that time and the school needed to expand its East Bank campus, but options were limited. “It was not easy to find space adjacent to the campus, which was hemmed in by railroad yards on the north and the Mississippi River to the west and south. To the east lay a residential area, Prospect Park, home to many faculty members—and Hubert Humphrey.” The neighborhood’s strong political clout meant “expansion in that direction was not likely to be popular or feasible.” The west bank of the river, with a high percentage of renters, appeared to be an easier target for expansion plans.124

In 1954, Ralph Rapson, then head of the School of Architecture, proposed a year-long project for the school’s architectural students that would analyze the university’s expansion problems and offer solutions. Four schemes were presented to the administration in 1955. One scheme proposed renovating and constructing new buildings on existing university land, while another advocated expansion of the Saint Paul campus. The third suggested developing a campus in the suburbs. The fourth plan recommended that the university expand across the Mississippi River with a “Ponte Vecchio-like bridge” connecting the existing east campus and a new west campus. Vehicular traffic would be on the lower level and pedestrians above. University officials proposed, and city officials agreed, that the lower level would carry vehicular traffic from the east riverbank to Oak Street in a tunnel to make the campus free of through traffic. In 1957, the west bank campus concept was adopted by the Board of Regents and political negotiating with the state legislature over money and land was begun. The legislature granted the university $1.5 million to acquire 17.5 acres of land for the new West Bank campus.125

While the university worked on the plans for the West Bank campus, the design for the two-level bridge was promoted to the public. The pedestrian level of the bridge would be equipped with

124 Lehmberg and Pflaum, 77.
moving walkways, called “walkalators,” and the lower level would be approached by tunnels at both ends. One newspaper reporter suggested the project had “Buck Rogers aspects,” but the university architect, Winston A. Close, believed the bridge would become the symbol for a combined campus, like Northrop Auditorium was a symbol for the main East Bank campus. In 1959, the university unveiled tentative plans for four new campus buildings on the west side of the river.126

By 1961, the university’s expansion across the river received notice in the *New York Times*, which observed, “The University of Minnesota has divided itself, amoeba-like, by leaping the Mississippi River in search of expansion space.” The article noted that excavations for three new buildings on the west side were underway and construction of a double-deck bridge to link the two campuses would start later that year. From the start, the bridge was seen as an integral part of the expanded campus. “The west campus area incorporates new techniques of planning which permit extremely compact building arrangements,” said Winston Close. Once the bridge was completed, the *Times* published another article which again noted that the bridge connected the two campuses.127

Buildings on the east campus and on the west bank were designed to accommodate the new bridge. One writer noted, “The upper level of the bridge will be connected with the east bank buildings by a raised plaza running from the bridge to the mysterious balcony on the new Science Classroom Building. The upper walkway will also be extended to connect to the mall in front of Coffman Union.” The same style of lighting standards seen on the mall would be carried over the pedestrian walkway. Meanwhile on the west side, “connections will be made to existing buildings by a temporary timber ramp. This ramp will give access to the classrooms, but will also allow space for the construction of the latest addition to the west bank.” Another west bank building, Anderson Hall, was being planned just as the bridge reached completion. The building “will contain eight large classrooms similar to those in the new Science Classroom Building on the east bank. It is to be built parallel to the existing west bank classroom building [Blegen Hall] but will sit overlooking the river in approximately the same spot the workmen on the bridge now park. The entire ground level will be a glassed-in study area in addition to food services. The study space will have one of the most breathtaking views possible of the east bank campus and the Mississippi River.”128

Preliminary plans for the bridge and its approaches were drawn up by 1960. The state highway department and the engineering firm, Sverdrup and Parcel and Associates of St. Louis, cooperated on the project. While the new bridge began at the same location on the east bank as the old, it angled south of the old bridge on the west bank.129

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129 Kehrberg, 24-25.
Sverdrup and Parcel

The Saint Louis engineering firm of Sverdrup and Parcel was founded in 1928 by Leif J. Sverdrup and John Ira Parcel. Sverdrup, a native of Norway, came to Minneapolis in 1914 for a short visit with his cousin, George Sverdrup, president of Augsburg College. World War I broke out and Sverdrup could not return to Norway. He enrolled at Augsburg and earned a B.A. in 1918. He continued his education acquiring a B.S. in civil engineering from the University of Minnesota in 1921. Parcel was an engineering professor at the university and had also worked for the American Bridge Company. After graduating from the university, Sverdrup worked briefly for the Minnesota Highway Department but moved to the Missouri Highway Department, where he became the chief bridge engineer in 1925.130

In 1927, plans had stalled for a bridge over the Missouri River at Hermann, Missouri. The state was unable to raise the funds for the bridge so a toll bridge was planned for the site. Sverdrup approached the Hermann Bridge Company and proposed to design the bridge and supervise construction as a private contractor. At the same time, he wrote to Parcel and asked him to become a partner in the venture. Parcel was reluctant to leave the university and took a one-year, unpaid leave of absence. The new firm opened its doors on April 1, 1928, just before the Hermann project was approved. Sverdrup soon persuaded several of his former highway department colleagues to join the firm. The firm struggled to build a reputation and secure work in its early years. By the middle of the 1930s, projects were more forthcoming with funding through New Deal programs. The firm also developed a connection with the Army Corps of Engineers (Corps) during this period.131

At the outbreak of World War II, the firm was considered one of the best bridge firms in the country. It benefited from its relationship with the Corps and received the commission for Canol, a top-secret 1,550-mile-long oil pipeline that carried 3,000 barrels of crude oil a day across the arctic reaches of Alaska. The firm also designed a wind tunnel for the U.S. Army Air Corps (precursor to the U.S. Air Force) and island airstrips in the Pacific theater. Sverdrup accepted a commission in the Corps during the war. He reached the rank of major general, commanded all engineering forces in the southwest Pacific, and served as an advisor to General Douglas MacArthur.132

The war-time experience provided Sverdrup and Parcel a chance to diversify its engineering expertise. After the war, the firm was well positioned to enter a number of new fields including air technology research. It was chosen to prepare a national facilities master plan, conduct research, and provide architectural and engineering services at the new Arnold Engineering Development Center in Tennessee, the air force’s flight simulation test facilities. The firm also continued its routine work of building bridges, dams, and electrical substations, and constructing roads. It developed a reputation for its work on breweries and sports arenas, completing the

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Busch Stadium in Saint Louis in 1966. By the mid-1960s, Sverdrup and Parcel had projects in thirty-two states, the District of Columbia, Panama Canal Zone, and fifteen foreign countries. These included the Bridge of the Americas across the Panama Canal (1962); the Chesapeake Bay Bridge-Tunnel (1964) that was named one of the “Seven Engineering Wonders of the Modern World”; the Executive Office Building in Saint Louis (1963); and the Yanhee Dam in Thailand (1964).133

Sverdrup “took steps to identify promising young people to lead the firm in the future and also came to recognize that the firm had developed a broader role with the passage of time—it was no longer a St. Louis firm with national branches but a national firm headquartered in St. Louis.” Although Parcel died in 1965 and Sverdrup in 1975, the firm continued its international work through the 1980s and 1990s under the name Sverdrup Corporation. It recently merged with Jacobs Engineering Group.134

**Building a Bridge at Washington Avenue**

Sverdrup and Parcel’s preliminary plans were for an all-riveted bridge. Excavation and construction of the abutments and piers was begun in 1961. Work followed on the approach on the west bank. The approach on the east bank, in the midst of the university campus, was delayed until the new bridge was close to completion. After construction had begun, Sverdrup and Parcel changed the plans. The new bridge would be welded instead of riveted, using approximately 1.2 million pounds of a new high-strength, low-alloy steel, A441, as well as two types of more conventional steel.

A441 steel was developed in the 1950s along with A440 steel. Research and development had been spurred by the railroads in the early twentieth century and pushed further by bridge designers. Both steels had yield-strength ranges of 50,000 psi and were priced lower than A242, another 50,000 psi yield-strength steel that had been in use since the 1920s. The combination of increased strength and the relatively low price in the new steels “have opened up new vistas bounded less by available materials than by designers’ imaginations. Through skillful selection of high-strength steels, structural engineers can make structures leaner and more graceful, less costly and more durable.”135 High-strength steel was increasingly used for buildings in the early 1960s. U.S. Steel estimated that up to and including 1961, fifteen buildings were constructed with high-strength steels. In 1963, thirty-one buildings had been fabricated with the steels. There was also a shift from riveting to welding. A well-known example of the use of A441 steel was the Beinecke Rare Book and Manuscript Library at Yale University. Designed by Skidmore, Owings and Merrill with structural engineer, Paul Weidlinger, the five-story building had a structural system of Vierendeel trusses that would not have been possible without A441. The high-strength steel was welded into slender, tapered truss members that had thinner plate.

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134 Swierczek.
thicker than conventional steels. The welded trusses also accomplished the designers' aesthetic goals.\textsuperscript{136}

Construction of the Washington Avenue bridge was held up when problems began to occur with the welding of the A441 steel girders at the U.S. Steel plant in Orange, Texas. The Minnesota Highway Department had used high-strength steel and machine welding for the Dartmouth Avenue (Interstate 94) bridge over the Mississippi River. A plant in Gary, Indiana, fabricated the girders for that bridge, but transporting them to Minnesota proved costly and time consuming. The commission for the Washington Avenue Bridge girders was originally given to a Bloomington, Indiana, plant. After the transportation delays with the Dartmouth Avenue girders, the job was farmed out to Orange because of its location on the Sabine River, which empties into the Gulf of Mexico near the Mississippi’s mouth. The girders could be directly loaded onto barges and floated north to Minnesota. The Orange plant had extensive experience as a ship building center during World War II. However, the plant had no experience in machine welding A441 steel. The high humidity in east Texas was also blamed for welding troubles. The solution was to weld the girders by hand. The slow fabrication delayed the bridge construction by a year.\textsuperscript{137}

When it opened in 1965, the bridge connected the modern West Bank campus with the traditional East Bank campus. In early 1966, the thirty-foot-wide pedestrian enclosure on the upper deck was completed. The $500,000 enclosure, funded by donations from university alumni, was envisioned as a gallery space that would house “bookstalls, information and ticket booths, and various types of exhibits” and would be heated by steam lines carried from the east bank to the west bank. Unfortunately, the gallery concept was never implemented because the bridge was at its maximum dead-load capacity and could not support the weight of additional structures, according to planning officials at the time. The glass-pane walls, which were part of the enclosure’s modern style, fell victim to vandalism shortly after completion of the enclosure. Broken glass and graffiti continued to plague the upper deck into the 1990s. The bottom rows of glass panes were replaced with plywood panels in the 1970s, and since the early 1990s have been painted annually by university professors and students as part of the bridge’s maintenance. In 2000, the bridge superstructure was painted maroon, white, and gold as a reflection of its importance to the University of Minnesota.\textsuperscript{138}

Aside from the repainting and the replacement of the bottom row of glass panes with plywood panels, the bridge retains a high degree of integrity in its form, structure, and materials.


\textsuperscript{137} Martin Merrick, “Washington Bridge Will Be Year Late,” \textit{Minneapolis Star}, September 19, 1964.

Bridge Links and Highway Development west of the Washington Avenue Bridge

For many years, the Washington Avenue Bridge was part of State Trunk Highway 12. Because the alignment of the new bridge was south of the old bridge and its continuation westward on Washington Avenue in the Seven Corners area, new bridge approaches were required on the west side of the river. Plans in the Minnesota Department of Highways (now MnDOT) indicate that when the bridge was completed, the roadway west of the bridge extended to a point 75 feet east of Cedar Avenue. A ramp on either side of the road provided access to and from Cedar Avenue. Plans to construct a bridge on Cedar Avenue (Bridge No. 27030) that links the two Washington Avenue ramps were issued in 1967. The route of the roadway (T.H. 12) from the bridge was intended to extend westward under Cedar Avenue approximately along the line of Third Street South.\(^{139}\)

Meanwhile the route of newly opened east-west Interstate 94 was located south of the bridge approach and T. H. 12 and was intended to link to the north-south route of Interstate 35W, still under construction through downtown Minneapolis. The old route of Washington Avenue from Seven Corners, west of Cedar Avenue, required a new bridge over the depressed interstate roadway. This bridge, No. 27881, was built in 1967, shortly before the new Cedar Avenue roadway bridge.\(^{140}\)

The complex arrangement of highway routes and connections for Interstate 94, Interstate 35W, State Highway 55, and State Highway 12, were all part of what the Highway Department called the Hiawatha Interchange. Plans for the connecting roads and bridges were issued between 1968 and 1970. The northern section of the interchange provides the connections to the Washington Avenue Bridge and the University of Minnesota. Clearly the intent of the design was to provide access from downtown Minneapolis that was easier than the complicated route through Seven Corners, as well as allow for connections from Interstate 94 and Interstate 35W.\(^{141}\)

\(^{139}\) State of Minnesota, Department of Highways, Trunk Highway No. 12-104, S.P. 2715-66, sheets 1 and 2, 1965, shows the west bridge approaches and the ramps along the new route of Washington Avenue (T. H. 12). The Cedar Avenue roadway bridge is shown in State of Minnesota, Department of Highways, Trunk Highway No. 12-104, S.P. 2715-74, 1967, sheets 1 and 2. An aerial photograph taken in 1968 shows the new Washington Avenue roadway ending short of Cedar Avenue, the flanking ramps leading up to Cedar Avenue, and the new Cedar Avenue roadway bridge.\(^{140}\) This bridge is shown on S.P. 2715-74 and the 1968 aerial photograph.\(^{141}\) Plans for the road connections and bridges of the Hiawatha Interchange are shown in State of Minnesota, Department of Highways, Trunk Highway No. 12-104, S.P. 2715-86, 1968, sheets 1 and 2 (microfilm roll 438); State of Minnesota, Department of Highways, Trunk Highway No. 35W-394, S.P. 2783-17, 1968, sheets 1 and 2 (microfilm roll 438); State of Minnesota, Department of Highways, Trunk Highway No. 35W-394 and 12-104, S.P. 2783-16 and 2715-75, 1970, sheets 1 and 2 (microfilm roll 438). Two aerial photographs from 1980 show the completed connections.
Recommendation

The Washington Avenue Bridge is recommended for listing in the National Register of Historic Places. Properties listed in the register must meet at least one of four criteria. Properties eligible for Criterion A “are associated with events that have made a significant contribution to the broad patterns of our history.” A property eligible for Criterion B is “associated with the lives of persons significant to our past.” To be eligible for the Register under Criterion C, a property “must embody the distinctive characteristics of a type, period, or method of construction,” represent the work of a master, possess high artistic values, or “represent a significant and distinguishable entity whose components may lack individual distinction.” Properties eligible under Criterion D have archeological value. In addition to the four criteria, properties may also relate to seven criteria considerations. The Washington Avenue Bridge is also evaluated under Criteria Consideration G—a property of exceptional importance that has achieved significance within the last fifty years.142

The Washington Avenue Bridge is eligible for listing in the National Register under Criterion A in the area of Community Planning and Development. When the University of Minnesota was faced with the need to expand its campus, it chose an expansion across the Mississippi River because the City of Minneapolis and the Minnesota Highway Department could build a bridge that separated vehicular and pedestrian traffic. The community went to great trouble and expense to build a double-deck bridge with separate levels for pedestrians and vehicles to ensure the safety and easy movement of university students between the two campuses. The university also took its campus planning a step further by integrating buildings on both sides of the river with the new bridge’s structure. The university has continued this planning, including the Frederick R. Weisman Art Museum, built 1992-1993, and the Elmer L. Andersen Library, built 1997-1999.

The Washington Avenue Bridge is also eligible for listing under Criterion A in the area of Transportation. The original bridge was constructed to hold a streetcar line, and over several decades Washington Avenue developed into a major transportation artery within Minneapolis on both sides of the river. The route would not have been as important an east-west artery if a bridge did not carry it over the Mississippi River. The current Washington Avenue Bridge continues to serve as an important transportation link for the city between the two sides of the Mississippi River. Soon after the bridge opened, it was linked into underpasses and interchanges to provide easy access to downtown Minneapolis and two routes of the interstate highway system.

The Washington Avenue Bridge is eligible for National Register listing under Criterion C in the area of Engineering. The bridge is the only known double-deck bridge in Minnesota with a pedestrian upper deck and vehicular lower deck. Although the concept for the bridge was inspired by historic bridges, like the Ponte Vecchio in Florence, Italy, the design is executed in a very modern way, using recently developed materials and construction techniques.

At this time (2008), the bridge is less than fifty years old, so must be evaluated for the National Register under Criteria Consideration G. The bridge’s period of significance starts in 1960 when construction of the bridge began and ends in 1965 when the bridge was completed. After 2015,

the bridge will have met the fifty-year mark and the criterion consideration will no longer be applicable.

Map showing the location of the bridge. The two circled buildings were the first to be integrated into the bridge approaches. Subsequent buildings have also been connected to the bridge. 

*University of Minnesota campus map*
Original Washington Avenue Bridge in 1905 looking upstream
*Photo: Minnesota Historical Society Collections*

Original Washington Avenue Bridge in 1912 looking downstream.
*Photo: Minnesota Historical Society Collections*
Original Washington Avenue Bridge in ca. 1945 looking east.
*Photo: Twin Cities by Trolley*

Rebuilt Washington Avenue Bridge from the West Bank campus in 1972.
*Photo: Eugene Debs Becker, Minnesota Historical Society Collections*
Washington Avenue Bridge from West River Parkway, view upstream, in 2008.
*Photo: Elizabeth Gales*

Approach to Washington Avenue Bridge, view to west, in 2008.
*Photo: Elizabeth Gales*
Upper level of Washington Avenue Bridge, view to east, in 2008.

*Photo: Elizabeth Gales*

The Science Classroom Building on the East Bank, view to west, in 2008.

*Photo: Elizabeth Gales*
Anderson Hall on the West Bank, view to west, in 2008.

Photo: Elizabeth Gales
This 1968 aerial photograph shows the new road bridges on Cedar Avenue and Washington Avenue over the depressed roadway for I-35W, as well as the west approach to the Washington Avenue Bridge and the adjacent ramps leading to Cedar Avenue.

Photo: MnDOT
Plans for the Hiawatha Interchange, 1970, showing the connecting roads and bridges. The connection to the Washington Avenue Bridge is on the upper right.

Source: MnDOT, Microfilm Roll 438
Timeline for the Depression of Washington Avenue

Background

Washington Avenue extends through the University of Minnesota Mall Historic District. MnSHPO requested further information on changes to Washington Avenue in relation to the Washington Avenue Bridge.

Important Dates

1884-1885 Washington Avenue Bridge constructed for the Interurban Trolley Line (TCRT).143

1931 The University commissioned landscape architects Morrell and Nichols to plan for the increasing streetcar and automobile traffic. Their study, “Report on Campus Development,” had five key points, one of which called for the enclosure of Washington Avenue in a tunnel stretching from Harvard Street to East River Road. “Another consequence of this scheme made the space on the deck over Washington Avenue virtually flat.”144

1930s “The Morrell and Nichols report represented both a modernization of the program for the campus and a downsizing of grandiose architectural and landscape architectural gestures. In the December 1931 submittal, these ideas also focused on the enhanced pedestrian safety associated with the depression of Washington Avenue. Throughout the 1930s various schemes were suggested for Federal Works Progress Administration participation in depressing the Washington Avenue section of the mall; the most difficult obstacle to this plan was the War Department’s requirement that there be a fifty-five foot clearance on the east side of the river. As the June 10, 1935 letter from W. F. Holman, the supervising engineer of the University, to W. T. Middlebrook pointed out, this requirement would raise, not lower the elevation of Washington Avenue.”145

1939 Much of the Morrell and Nichols plan for the upper mall had been completed, “except for the failure to depress Washington Avenue . . . Approximately twenty feet of grade change from the mall to Washington Avenue, shown only partially depressed, was accommodated at the southwest corner of the upper mall by a double flight of stairs.”146

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143 John W. Diers and Aaron Isaacs, Twin Cities by Trolley: The Streetcar Era in Minneapolis and St. Paul (Minneapolis: University of Minnesota Press, 2007), 197-201.
145 Landscape Research, 54.
146 Landscape Research, 54-55
“Arthur Nichols studied the design of a cut-and-cover tunnel that would deck the space of Washington Avenue and create a continuous mall extending to the Union. He included twenty-four-foot lanes in each direction, plus forty-two feet for the street railway right of way.”

1940 Two temporary wood-and-steel pedestrian bridges were built, apparently without the consultation of Morrell and Nichols, across Washington Avenue.

1941 When “construction of a new Washington Avenue bridge seemed imminent; Morrell and Nichols weighed in with an opinion about the desirability of a double-deck bridge to be built in connection with the depression of Washington Avenue and the tunnel.”

1942 “In 1942, the University proposed a $3 million capital expenditure to construct the 900-foot tunnel to depress Washington Avenue; the rationale offered was that the ‘original Campus Plan of 1910 prepared by the late Cass Gilbert anticipated the construction of a tunnel through the campus so that all traffic would be underground. The Campus plan can never be finally finished until the tunnel through campus is completed.’ These claims about the Gilbert idea for the grade of Washington Avenue were, of course, inaccurate.”

1945 The university presented a resolution to the Minneapolis City Council Post-war Progress Committee to urge the rebuilding of the Washington Avenue Bridge. “A desire for a campus completely integrated and unified, without any through traffic of any kind, was the principal reason presented by the University group for their stand through the resolution made by the Regents.” The university wanted the bridge moved downstream. They concluded that “the reconstruction of the Washington Avenue bridge at its present location would make necessary, in University interests, the subsequent construction of a closed tunnel through the University campus which would be costly in construction and operation.”

1946 “Herman Olson of the Minneapolis Planning Commission proposed to depress Washington Avenue through the campus but deck only the portion of the mall; this drew an angry response from Arthur Nichols.”

1954 The city and the university came to an agreement on a two-level bridge to replace the Washington Avenue Bridge. “The lower deck would be an expressway for intercity, through-campus traffic of trucks and buses. That traffic would be carried through the campus from the river bank to Oak Street in a tunnel.”

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147 Landscape Research, 56
148 Landscape Research, 57.
149 Landscape Research, 59
150 Landscape Research, 59.
152 Landscape Research, 60.
1955  The City of Minneapolis proposed a new two-level bridge to the state legislature. “The upper level of this bridge would supply local traffic between the university—a community of 25,000 persons in itself—and the Minneapolis loop. The lower level, constructed as a tunnel, would cut completely under the university campus area to service through traffic between Minneapolis and St. Paul. . . . This plan ties in with an old idea at the University of Minnesota itself, of developing a complete campus free of through traffic.”

1957  A newspaper article offered an initial sketch of the bridge and a description of the bridge as if traveling the new Washington Avenue route in a car. “Our car moves east through the tunnel under the university mall now, past two bus depots, one at Church Street, and gradually upward till we leave the tunnel at the Washington and University Avenue ‘Y.’”

1960  “On the east end the new span will cross over a depressed East River Road and then move to grade on Washington Av. as it crosses the campus.” “At some future time it is hoped by the university and the state highway department to tunnel the thoroughfare beneath the entire east section of the campus.”

1964  “Plans for a $3.4 million four-block tunnel running from the east end of the new Washington Av. bridge to Harvard St. near the University of Minnesota parking ramp are being studied by University officials and the Minnesota state highway department.”

“The tunnel would carry motor and bus traffic. . . . Elevators would connect the lower level with the campus. There would be service lanes and pedestrian walkways on the ground level where Washington Av. now exists.”

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2002 Bridges clad in stainless-steel replaced the two wood pedestrian bridges that crossed Washington Avenue.\textsuperscript{158}

“The recently redesigned terrace surrounding Coffman Memorial Union consists of a concrete plaza edged with period revival light fixtures (approximately 10 feet in height) that rest on overscaled bases. The lights are set in a lawn panel on the south retaining wall of Washington Avenue. In the 2002-3 design by Ellerbe Becket, twenty-nine black ash were planted on small hillocks just beyond the footprint of the underground garage framing the terrace, the lawn, and the Coffman facade. All vestiges of earlier Art Deco beds (ca. 1941), circulation, and the small pavilions that led to the underground parking area have been eliminated. The grade depression and wall construction at Washington Avenue also eliminated all of the original grade crossings.”\textsuperscript{159}

“The landscape of the lower mall around Coffman Memorial Union has been altered several times since its Art Deco plaza was installed in the 1940s. Most notably, new buildings and the overhaul of the Union, one that stripped the interior and much of the interior of its Art Deco character, was undertaken in the 1970s. Another Coffman remodeling that included the complete removal of the Art Deco plaza and parking garage entrances on the plaza and the construction of new pedestrian bridges and reconstruction of Washington Avenue, was designed by Ellerbe Becket and completed in 2002.”\textsuperscript{160}

\textsuperscript{158} Landscape Research, 12.
\textsuperscript{159} Landscape Research, 14.
\textsuperscript{160} Landscape Research, 66.
War Savings Stamps billboard on University of Minnesota campus facing Washington Avenue, 1918

Photo: F. H. Holbrook, Minnesota Historical Society Collections

Aerial view of University of Minnesota, ca. 1935, red arrows point to Washington Avenue

Photo: Minnesota Historical Society Collections
Aerial view of University of Minnesota, ca. 1935, red arrows point to Washington Avenue
Photo: Minnesota Historical Society Collections

Aerial view of University of Minnesota, ca. 1940, red arrows point to Washington Avenue
Photo: Minnesota Historical Society Collections

Supplemental Historic Property Investigations and Evaluations for CCLRT Project
Timeline for the Depression of Washington Avenue
Hess, Roise and Company—Page 221
Aerial view of University of Minnesota, January 7, 1950, red arrows point to Washington Avenue
Photo: Norton and Peel, Minnesota Historical Society Collections

Aerial view of University of Minnesota, August 14, 1956, red arrows point to Washington Avenue
Photo: Norton and Peel, Minnesota Historical Society Collections
Drawing showing the location of a tunnel.

Drawing showing the location of a tunnel.
The tunnel location superimposed on an aerial photo of the campus.