The Stillwater Bridge

Marlena Shudy, Derek Newbauer, Charla Rae Heutinck, David Kmiec
Stillwater, Minnesota

- Located in the St. Croix River Valley on the WI and MN Border

- September 29th, 1837: Treaty Signed by the US Government & Objibwa Nation allowing settlement

- Birthplace of Minnesota

- 22 Miles from Downtown St. Paul

- 27 Miles from Downtown Minneapolis

- Home of the Stillwater Bridge
Stillwater is on the eastern border of the Twin Cities 7 county metro area.
Stillwater Bridge

- Built in 1931
- 1,050 Feet Long
- 23 Feet Wide
- 2 Lane Highway connecting MN State Highway 36 and WI State Highway 64
- Waddell and Harrington Type Vertical-Lift Highway Bridge
- 1989: National Register of Historic Places
History

1910  Stillwater Bridge built as a pontoon swing bridge

1925  City of Stillwater (original owners) switched ownership to Minnesota Department of Highways

1928  New bridge design needed due to heavy traffic on the bridge and St. Croix River

1929  Design Contract of $3,150 granted to Ash, Howard, Needles, and Tammen of Kansas City, Missouri

1930  Construction began with General Contractor as Peppard and Fulton and the Fabricator as the American Bridge Company

1931  Construction completed
      Total Cost: $460,174.00
      Ownership of the new bridge was Minnesota and Wisconsin
What was constructed?

- Repair concrete slabs
- Steel truss spans
- Single vertical-lift Span
  - Waddell and Harrington type
  - Concept from Duluth, MN vertical-lift span
Repair history

1973  Concrete deck rebuilt
1979  Concrete approach span rebuilt
2005  Bridge closed for repairs (source: Mn/DOT)
2006  Bridge reopens for car traffic
       (foot traffic expected in 2007)
New traffic demands higher capacity

- Traffic volumes have increased 2.2% per year (on average) from 1988 – 2000
- Today 16,000 cars use the bridge each day
- During peak hours, queues extend almost a mile along STH-64 in WI and TH-36 in MN

Commuters and some planners suggest congestion warrants a higher capacity or second bridge
Other affected towns

Red Star Indicates Location of Houlton.

Oak Park Heights and Bayport will Possibly be Affected by Approach Roads

Map from Mapquest
Stillwater vs. Houlton

- Population: 16,000
- Median Age: 38.1
- Average Household Size: 2.67
- Total Housing Units: 11,325
- Mean Travel to Work Time: 23 Minutes
- Median Household Income: $67,776
- Single-Family Owner-Occupied Homes: 7,909
- Median Value: $174,600

- Population: 1,421
- Median Age: 37.9
- Average Household Size: 2.68
- Total Housing Units: 552
- Mean Travel To Work Time: 29.5 Minutes
- Median Household Income: $75,000
- Single-Family Owner-Occupied Homes: 362 (about 65%)
- Median Value: $174,600

Some data from Brainyzip.com
Main purposes of a new bridge

• Reduce congestion in Stillwater

• Enable vessels to pass under bridge at anytime without need to raise or lower part of the bridge

• Improve transportation connections between Western Wisconsin and Minneapolis/ Saint Paul area

• Accommodate expected traffic increases produced by future development, primarily in Wisconsin
Options
No build

• Advantages
  – Avoidance of the impacts of the Build Alternatives.

• Disadvantages
  – Existing congestion in the project corridor would not be addressed; congestion would increase and corresponding delays would lengthen as traffic in the project area increased
  – The Lift Bridge would remain as the sole river crossing in the area. Repeated closures for repairs and continued maintenance or rehabilitation work would be required, and the Lift Bridge would be closed for substantial periods of time to make these repairs. Traffic detours would be necessary during these closures.
  – Poor traffic operations and roadway geometrics would continue with greater delays and decreased safety as traffic volumes increase
Build alternatives

• Advantages
  – Decreased congestion and associated delay in downtown Stillwater.
  – Improved interregional corridor connections between Somerset, New Richmond, and the Twin Cities metro area.
  – Improved geometrics and traffic operations which will result in increased safety and decreased delay.
  – Improved treatment of storm water runoff.

• Disadvantages
  – Acquisition and relocation of residences and businesses.
  – Adverse visual impacts on the Riverway.
  – Adverse impacts on historic properties in the area, including (among others) the National Register-listed Lift Bridge, the Stillwater Commercial Historic District, and the Stillwater Cultural Landscape District.
  – Floodplains and wetlands would be filled in.
  – Some residential properties would experience noise pollution.
Alternative B-1 consists of a new four-lane bridge with a bicycle/pedestrian trail on the north side of the bridge. The bridge would be located approximately 6,500 feet south of the Lift Bridge.
Alternative C includes a new four-lane bridge (two through-traffic lanes in each direction) with a bicycle/pedestrian trail on the north side of the bridge. The bridge would be located approximately 3,900 feet south of the Lift Bridge.
Alternative D includes a new four-lane bridge south of the Lift Bridge. The new bridge would be located approximately 1,940 feet south of the Lift Bridge.
Alternative E includes a new one-way bridge approximately 2,010 feet south of the Lift Bridge for two lanes of eastbound traffic, and use of the Lift Bridge as a two-lane one-way roadway for westbound traffic.
[video clip]
Money, it’s a crime.
Share it fairly but don’t take
a slice of my pie. –Pink Floyd

- Both State DOTs, given many other highway priorities, do not want to use regular highway allocation to increase cost beyond what it already is.

- FHWA finds no discretionary money for this purpose.

- Neither the National Park Service nor state DNRs consider it appropriate to tap their funds. They fear it could set a precedent requiring park agencies to pay for mitigation to offset the impacts of transportation projects on the parks they manage.
U.S. Institute for Conflict Resolution: Key Issues

- Nature and sequence of restoration activities for Lift Bridge
- Ongoing ownership of Lift Bridge
- Maintenance and operating responsibilities
- Transportation Management programs to alleviate current and future congestion
- Specific plans for usage as a bicycle/ pedestrian bridge if that choice is made
- Finding funding sources
What to do with the lift bridge

• Remove the bridge completely
  – 7 to 10 years of life left without major investment
  – Another flood could wipe out bridge entirely
  – Some do not value the historical significance of the bridge as much as minimizing the number of structure crossing the river
  – The bridge detracts the natural beauty of the waterway. “a blemish on the landscape.”

• Preserve the bridge
  – Strengthen structural elements and overhaul lift mechanism when necessary
  – Used just of bicyclists and pedestrians or kept open for automobile traffic
What to do with the lift bridge

• Convert bridge into a pier
  – A compromise of both options
  – Remove sections on Wisconsin side, creating a free flowing channel
  – Eliminates costly maintenance and staffing of the lift bridge
  – Would keep the historically important lift bridge and towers in place and would remain an important scenic and tourist attraction
Who should lead the effort for preservation of the lift bridge?

- National Park Service
- Each State’s Department of Natural Resources
- State Historic Preservation Office
What’s happened so far

• For over a decade, both states have wanted a new four-lane bridge over the St. Croix near Stillwater.

• The Braun C Alternative is the current bridge proposal that has been adopted by both Minnesota and Wisconsin.

• Braun C has been accepted by the U.S. Department of Interior as complying with the Wild and Scenic Rivers Act Requirements. But the acceptance is conditional on establishing a land conservation fund of $15 million.

• The Minnesota DOT, who is the current “lead agency” on the New Bridge project has declined to take further action or expend further funds until there is sufficient likelihood that the project will move forward.

Former MNDOT commissioner Dick Braun
Pros and cons for the new bridge

- Wisconsin local and state officials say that there will be some additional growth in western Wisconsin, but not the huge amount that some might oppose. Large development in Wisconsin has not occurred along the I-94 corridor after the four- and later six-lane bridge was constructed at Hudson.
- A land use and travel pattern analysis indicates that adding two lanes of traffic to the St. Croix River Corridor will help direct growth in east-west urban areas instead of north-south, protecting the river corridor.
- Increased or normal business will continue in Stillwater.
- Congestion in downtown Stillwater and across the bridge can be alleviated through “Transportation System Management” measures.
- New Bridge would induce sprawl on Wisconsin side of the river.
- Proposed reconstruction of Hwy. 36 leading to the new bridge would displace businesses and cost the city millions to relocate utilities.
Stillwater residents weigh in

"I could have got clobbered," Holger said. "I've lived here for years and [reopening the bridge] won't make no difference." Slowly raising a finger and pointing to the bridge, Holger said, "We're used to it. Pretty soon, the traffic will be zooming right across there."

Stillwater Gazette
What about the Cheeseheads?

Both Minnesota and Wisconsin have proponents and opponents of the New Bridge Proposal and concerns about environmental impacts and sprawl.
Stillwater is only 8 miles north of the I-94 St. Croix river crossing.
Questions

• Which decision making factors (historical preservation, economics, traffic congestion, sprawl, existing infrastructure, community peace, etc.) impact the project most? Who is disenfranchised by this prioritization?

• How will build decision affect the WI side of the St. Croix?

• How should the I-94 bridge (8 miles downriver) impact decision making?

• Which alternative would you choose for the project?