

ACTION TRANSMITTAL No. 2018-33

DATE: May 18, 2018
TO: Technical Advisory Committee
FROM: TAC Funding and Programming Committee
PREPARED BY: Joe Barbeau, Senior Planner (651-602-1705)
SUBJECT: Scope Change Request for Anoka County's Hanson Boulevard Expansion
REQUESTED ACTION: Anoka County requests a scope change to its Hanson Boulevard Expansion project (SP # 002-678-022) to eliminate widening of the bridge over Coon Creek.
RECOMMENDED MOTION: That the Technical Advisory Committee recommend to the Transportation Advisory Board approval of the scope change request for Washington County's Hanson Boulevard Expansion project (SP # 002-678-022) to eliminate widening of the bridge over Coon Creek.

BACKGROUND AND PURPOSE OF ACTION: Anoka County was awarded \$7,000,000 (\$7,560,000 after inflation adjustment) in Surface Transportation Block Grant funds for the 2019 fiscal year in the Roadway Expansion category of the 2014 Regional Solicitation. The project was awarded funding to expand Hanson Boulevard (CSAH 78), a two-lane roadway, to a four-lane divided facility with six-foot paved shoulders from 139th Lane to Crosstown Boulevard (CSAH 18), a distance of roughly one and a half miles. Anoka County's request proposes changes to the bridge over Coon Creek. The rest of the project length would remain unchanged from the original scope.

Due to the existence of various power lines on both sides of the street, the planned widening of the bridge is impractical. The County considered several alternatives including constructing a separate bridge and alternate routes for the trail but settled on working within the existing bridge width. The impacts of this scope change will primarily be to the bridge. Key impacts would be:

- The overall bridge width would remain at the current 71.5 feet, as opposed to the planned increase to 88 feet.
- The median would be narrowed from the planned six feet to four feet.
- The inside lane width would be reduced from the planned 14 feet to 13 feet.
- The bicycle trail would remain at the current six-foot width with no clear zone, as opposed to the required width of 14 feet. The County received a variance from MnDOT Metro State Aid on this requirement on December 18, 2017.
- Additional bridge upgrades would be made (including installation of additional reinforcing for the beams, addition of concrete approach panels, deck resurfacing, and improvements to the erosion control best management practices).

RELATIONSHIP TO REGIONAL POLICY: Projects that receive funding through the Regional Solicitation process are subject to the regional scope change policy. The purpose of this policy is to ensure that the project is designed and constructed according to the plans and intent described in the original application. Additionally, any federally-funded project scope change must go through a formal review and TIP amendment process if the project description or total project cost changes substantially.

The scope change policy allows project sponsors to adjust their projects as needed while still providing substantially the same benefits described in their original project applications.

A TIP amendment accompanies this request.

STAFF ANALYSIS:

Scoring: This project scored 543 points out of 1,100. The highest-scoring unfunded project in the Roadway Expansion category scored 510. For most scoring categories, there was no need to consider a scoring change. The scorer in the Multimodal Facilities and Connections criterion deducted two points due to the narrowing of the trail improvement on the east side of the bridge along with the removal of the sidewalk on the west side, which could potentially have accommodated future non-motorized infrastructure. With that deduction, the project still scores 541, enough to have been funded.

Funding: The County did not propose a federal funding amount. The bridge replacement was included in the original budget at a cost of \$1,000,000. In lieu of replacing the bridge, the County is estimating \$530,000 for new upgrades to the existing bridge. This results in a \$470,000 reduction from the bridge. Staff provides the following options for federal funds removal:

- Remove \$376,000 of federal funds, which is 80% of the \$470,000 cost reduction.
- Remove \$282,000 of federal funds, which is 60% of the \$470,000 cost reduction. The 60% is based up the fact that the original application was funded with a 60% federal contribution.

COMMITTEE COMMENTS AND ACTION: At its May 17, 2018 meeting, the Funding & Programming Committee voted unanimously to recommend approval of the scope change request for Washington County's Hanson Boulevard Expansion project (SP # 002-678-022) to eliminate widening of the bridge over Coon Creek at a cost reduction of \$376,000.

ROUTING

TO	ACTION REQUESTED	COMPLETION DATE
TAC Funding & Programming Committee	Review & Recommend	5-17-2018
Technical Advisory Committee	Review & Recommend	
Transportation Advisory Board	Review & Approve	



Anoka County

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April 16, 2018

Mr. Paul Oehme
TAC Funding & Programming Chair
Metropolitan Council
390 Robert Street North
St Paul, MN 55101

RE: SP 002-678-022 – CSAH 78 (Hanson Boulevard) Reconstruction
Scope Change Request

Introduction

Hanson Boulevard is currently a two-lane, undivided, rural roadway that will be expanded to a four-lane, divided, urban roadway. Hanson Boulevard is classified as an A-Minor Arterial Expander with an average annual daily traffic (AADT) volume of approximately 17,700. The traffic volume is expected to climb to approximately 33,000 vehicles per day by 2040.

In 2014, Anoka County received funding through the 2014 Regional Solicitation, Roadway Expansion category, for the Hanson Blvd expansion from 139th Lane NW/Jay Street NW to CSAH 18 (Crosstown Blvd NW) in the City of Andover. The 2018-2021 State Transportation Improvement Program (STIP) has allocated \$7,602,951 of federal funds to the project with a total estimated project cost of \$12,532,320 in state fiscal year 2019. The County is requesting a scope change that resolves a buildability issue associated with the originally proposed bridge widening work.

Original Project Scope

The original application was approved under the assumption that the existing bridge (Bridge #02539), over the Coon Creek, would be widened to accommodate Anoka County's typical 4-lane, divided, urban section. The typical section for the proposed bridge widening included 8 feet wide shoulders, a 6 feet wide median, two 14 feet wide inside lanes, and two 12 feet wide through lanes. In addition, a 10 feet wide multi-use trail, with proper clear zone widths would also need to be accommodated on the widened bridge section. The summation of these elements equates to a typical section width of 88 feet on the bridge. With an existing bridge width of 71.5 feet, the proposed bridge improvements were estimated to cost \$1,000,000.

The Power Companies

There are two power companies that use the Hanson Boulevard corridor as an avenue to convey power from the Monticello nuclear power plant to the Twin

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Scope Change Request
Urbanization / Widening of CSAH 78
SP 002-678-022

Cities. Xcel Energy owns and operates an aerial transmission line facility along the west side of the corridor. Great River Energy (GRE) owns and operates a similar facility along the east. Both facilities existed prior to the original construction of Hanson Boulevard and exist within their own private easements.

The Xcel facility has three levels of transmission lines, fastened to poles approximately 140 feet tall, as seen in the attached exhibits. The bottom set of lines carry 345kV of power. When the lines are plotted in 3D it reveals that bottom level of Xcel transmission lines are approximately 30 feet above, and 5 feet west, of the bridge deck. OSHA regulations require a 20' clear zone around these transmission lines during construction. That allows equipment to be approximately 10 feet in height at the west edge of the deck.

Similar to the Xcel facility, the GRE transmission line contains three levels of transmission lines on poles approximately 90 feet tall. The lowest level of lines carry 230kV of power. These lines are located approximately 35 feet above the bridge deck. As with the Xcel lines, OSHA regulations require a 20' clear zone around the transmission lines. This allows equipment to be approximately 15 feet in height at the east edge of the deck.

Xcel and GRE both own easements for their power lines. Costs to shift these power lines away from the bridge would have to be covered locally. The cost to move one Xcel pole was estimated to be approximately \$215,000. The cost to move one GRE pole was estimated to be approximately \$100,000. Multiple poles would have to be relocated to shift either line away from the bridge. The cost to shift the power companies existing easements, and resulting impacts to adjacent properties and vegetation, were not considered but assumed to be substantial.

De-energizing the power lines was also discussed with the power companies. Both companies said they would be willing to de-energize their lines. However, neither utility would guarantee any specific dates, or specified length of time. Additionally, due to the importance of these lines to the power grid for each respective company, both power companies reserved the right to re-energize their lines at any given time; at which point all construction activities that could interfere with the operation of the lines would be required to cease immediately. This makes coordination and scheduling extremely difficult, and the risk of cost over-runs associated with halting construction at a moment's notice would be significant.

The Conclusion

For the reasons described above, Anoka County considered several alternatives, including the use of micro pile, constructing a separate bridge for the multi-use trail, and alternate routes for the trail.

After considering all the alternatives, costs, construction schedule impacts, and stakeholder feedback, it was determined that the best course of action was to modify the existing bridge deck to meet the project needs. The revised typical section for the bridge includes: a narrower median width of 4 feet versus the proposed 6 feet, an

Scope Change Request
Urbanization / Widening of CSAH 78
SP 002-678-022

inside lane width of 13 feet versus 14 feet, and reduced shoulder widths of 3 feet on the east side of the bridge and 4 feet on the west side. In addition, a variance from State Aid Rules was requested and approved allowing the County to maintain the existing trail width (on the bridge) of 6 feet, with no clear zone, in lieu of the required width of 14 feet. The variance was approved December 18, 2017.

The revised typical section across the bridge is consistent with the original intent outlined of the STIP application and can be constructed without widening the bridge. Additionally, construction can be completed with standard construction methods, beneath the live power lines, while meeting OSHA safety requirements.

Additional upgrades to the bridge include: installation of additional reinforcing for the existing bridge beams to extend the life of the bridge, addition of concrete approach panels, resurfacing of the bridge deck, and improvements to the erosion control BMP's protecting the foundation of the bridge.

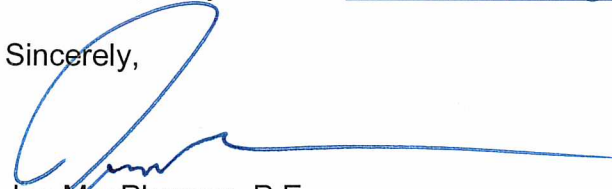
Funding

The proposed funding changes are as follows:

Original Bridge Estimate	\$1,000,000
Revised Bridge Estimate	\$530,000

If you have any questions or need additional information, I can be reached at (763) 324-3199, or by email at Joe.MacPherson@co.anoka.mn.us.

Sincerely,



Joe MacPherson, P.E.
Assistant County Engineer

cc: Nick Dobda P.E., Anoka County Project Manager
Doug Fischer P.E., Transportation Division Manager/County Engineer
File

COON CREEK

12' THRU ←

14' THRU ← 1 : 55

14' THRU → 1 : 55

12' THRU →

12' THRU ← 520

14' THRU ← 1 : 55

14' THRU → 1 : 55

12' THRU → 70

POND 100

100 HWL = 872.65

NWL = 870.00

COON CREEK

14205

POND 200A

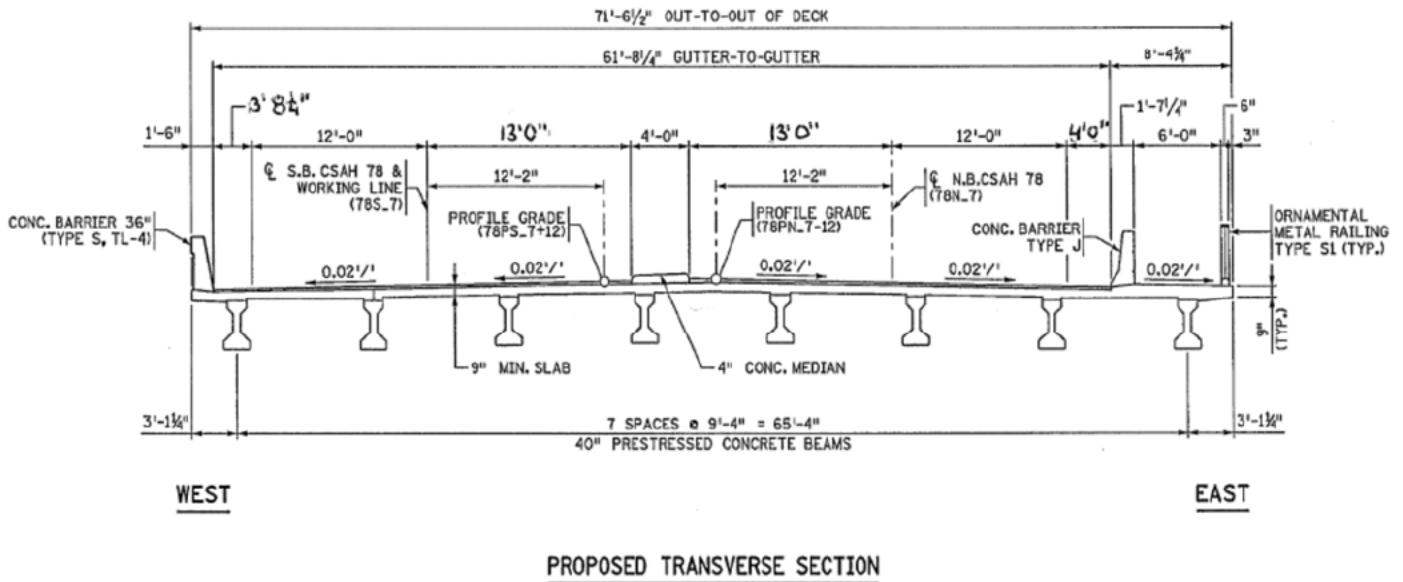
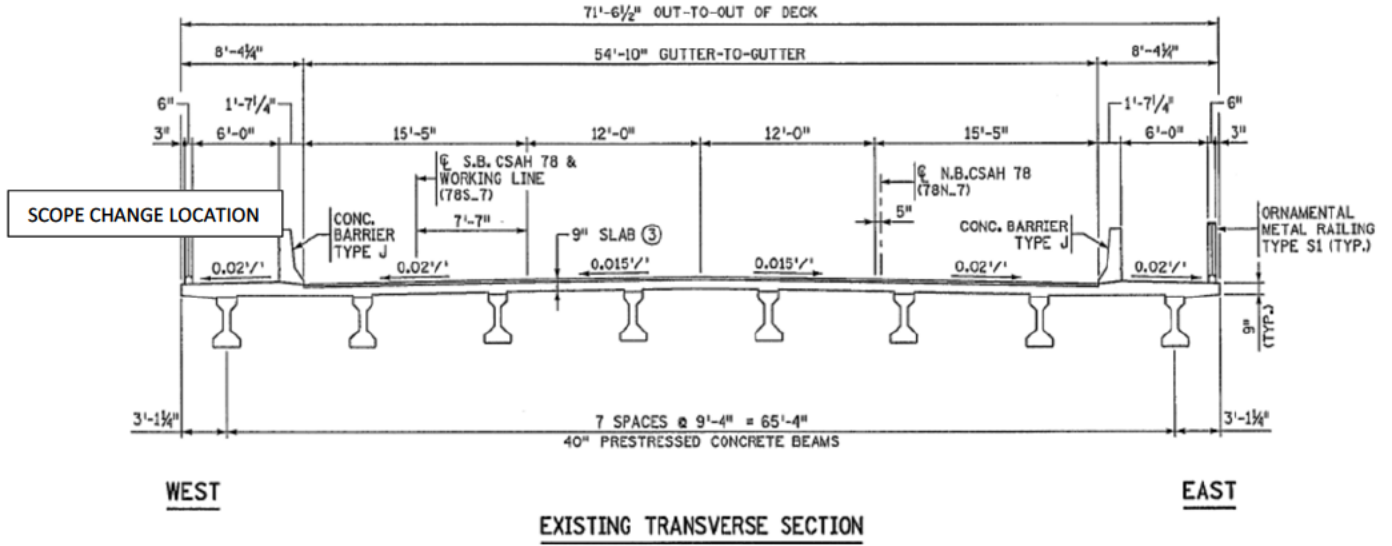
100 HWL = 875.66

NWL = 870.00

T PARK

Anoka County - Scope Change Request
CSAH 78 (Hanson Blvd) Reconstruction Project
 SP 002-678-022

Figure 1: Bridge Sections



Anoka County - Scope Change Request
CSAH 78 (Hanson Blvd) Reconstruction Project
SP 002-678-022

Figure 2: Existing Xcel Energy Transmission Power Lines (west side of CSAH 78)



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CSAH 78 (Hanson Blvd) Reconstruction Project
SP 002-678-022

Figure 3: Existing Great River Energy Power Transmission Lines (east side of CSAH 78)

