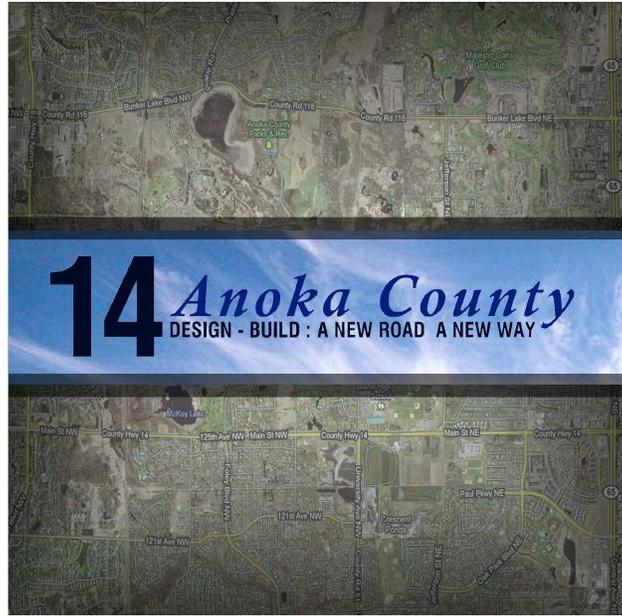


Anoka County CSAH 14 Design-Build Project Lessons Learned Report



August 2011



HNTB

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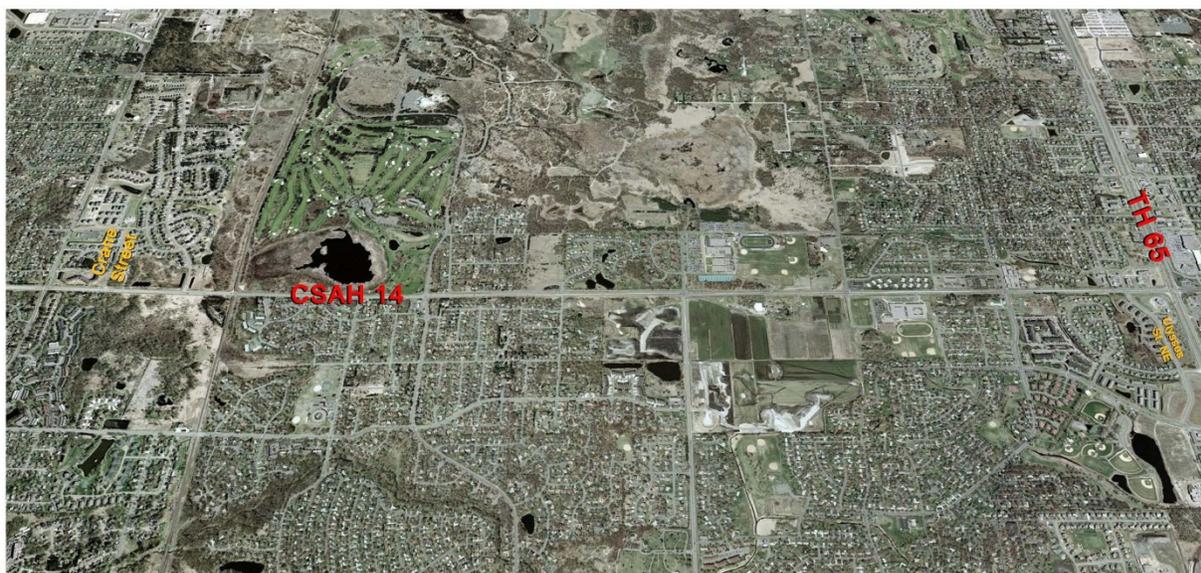
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Acronyms

ATC	Alternative Technical Concepts
ITP	Instructions to Proposers
OCIC	Mn/DOT Office of Construction and Innovative Contracting
RFLOI	Request for Letters of Interest
RFP	Request for Proposals
RFQ	Request for Qualifications
RID	Reference Information Documents
SOQ	Statement of Qualifications

Overview

The Anoka County CSAH 14 project was the first design-build transportation project authorized for local units of government in the State of Minnesota. The program was authorized by the legislature as a pilot program, and the CSAH 14 project was approved by an oversight panel for participation in the pilot program. It included the reconstruction of CSAH 14 from approximately Crane Street to Ulysses Street in the cities of Coon Rapids and Blaine. The project included widening a two-lane roadway to four lanes, a new bridge over the BNSF railroad, retaining walls, drainage facilities, utility relocation, and related facilities.

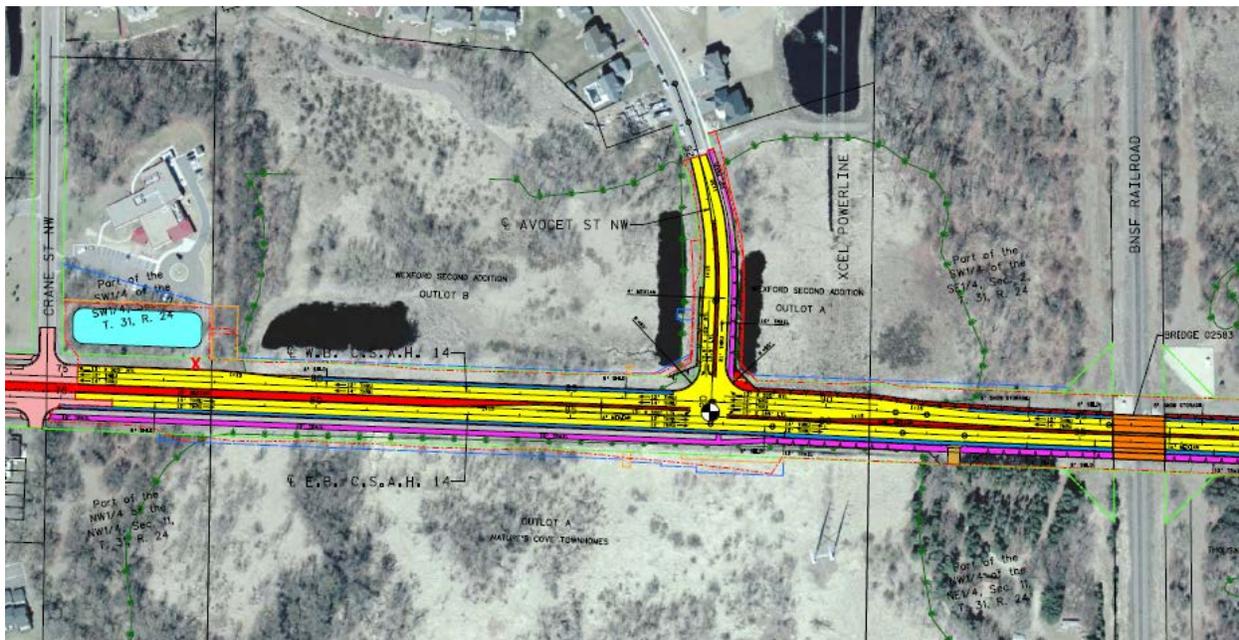


The project closely followed Mn/DOT's design-build contracting process, because the contracting industry was familiar with it, as was Mn/DOT. Mn/DOT provided oversight of the project, as it was funded under the State's Trunk Highway turnback program.

In order to realize as much value from the pilot program as possible, this project included developing a design-build contracting template and contract examples for use by local units of government for subsequent projects, and capturing lessons learned. This report is intended to identify lessons learned on the Anoka County project, from the preliminary engineering stage through contractor selection. It emerged from a workshop with County, City, and Mn/DOT State Aid staff held shortly after the design-build contractor was selected and construction began on the project. It is organized around three aspects of design-build contracting: preliminary engineering, developing the Request for Proposals (RFP), and the procurement process for selecting the contractor.

Preliminary Engineering

Preliminary engineering includes project planning and scoping, environmental study, and preliminary design necessary to initiate the project, secure approvals from other agencies, and lay the groundwork for developing contract documents. Key aspects of the project requiring coordination included an adjacent segment of CSAH 14 under construction west of this project and a new bridge over the BNSF railroad.



What Worked Well

Data Collection and Studies

The CSAH 14 project progressed smoothly and quickly because of early work done on the project. The environmental assessment (EA) was completed before the design-build delivery process began. Topographic surveys and geotechnical work were done early enough to be available for preliminary design work. Coordination work with the railroad was already begun by Anoka County. Development of a preliminary layout began shortly after the County retained a consultant to assist with design-build delivery.

Meetings and Stakeholder Coordination

Communication with stakeholders began immediately during preliminary design; stakeholders were included frequently and regularly in preliminary design decisions. An advisory committee was established that included city representatives in every bi-weekly meeting. Other stakeholders, such as school districts, watershed districts, police departments, and fire departments, were invited to every other bi-weekly meeting. Agendas for these meetings were circulated in advance and focused on specific topic areas. More detailed technical issues, such as those involving city utilities and city street connections, were targeted for sessions with only affected stakeholders. Discussion of broader issues,

such as maintenance of traffic, roadway access, and storm drainage, were scheduled with the larger group of stakeholders.

Experience with Design-Build

County and consultant staff experienced in design-build facilitated the rapid preliminary design and contracting of the project. Anoka County's project manager was experienced with design-build contracting and dedicated to delivering this project efficiently. Having worked on the Mn/DOT TH 212 design-build project, he was familiar with the contracting process, the format of the contract documents, and managing the contract through construction. Thus, he was able to quickly respond to the consultant's need for owner decisions. The consultant assisting the county was experienced with the Mn/DOT design-build documents and process, having worked with Mn/DOT on developing Mn/DOT's design-build contract template and on design-build contracts in several other states.

What Could Be Improved

Funding Discussions

The design-build delivery process presented a learning opportunity for many county, city and Mn/DOT State Aid staff unfamiliar with design-build contracting. Decisions involving state, county, and city funding occurred toward the end of the preliminary engineering phase. Given the fast schedule for advertising the project, funding participants expressed concern with the limited time available for decisions on participation in proposer stipends and other elements of State-Aid eligibility. They also noted the lack of a clear process for communicating the engineer's cost estimate.

Recommendation 1: Future projects should build early discussion of funding into the project schedule and ensure that development and review of the cost estimate follows a clearly communicated process.

Training and Education

The preliminary design process and final design process for design-bid-build projects involves more opportunities and a longer time period for owner/designer decision making about design requirements and design preferences. County staff unfamiliar with design-build felt uncomfortable with the lack of detail and their limited control over roadway profiles, drainage, and other aspects of the design.

Recommendation 2: Build into the schedule more detailed and more frequent discussions during the early stages of design to explain how the preliminary design will be used to demonstrate feasibility only, and how this design will be translated into requirements in the RFP that direct the contractor's final design.

Coordination of Preliminary Design

The preliminary design underwent a number of iterations and revisions as owner requirements, preferences, and priorities emerged during preliminary design. Designers treated some owner design preferences, such as staying within the right-of-way, as absolutes, but later learned that other owner preferences would justify getting construction easements, slope easements, or additional right-of-way.

Recommendation 3: Spend more time early in the project exploring the design assumptions and priorities related to typical cross section, clearances, access, drainage issues, and determining what would justify acquiring additional right-of-way or easements.

Recommendation 4: Advance drainage design to a preliminary design level that confirms feasibility of solutions for items such as culverts and ponding areas within available right-of-way.

Recommendation 5: Provide example sets of the owner's plans used on other projects to help the preliminary designer identify owner preferences that do not emerge from discussion and thus help identify minimum requirements.

Allocation of Owner Resources

The design-build process accelerates projects, which requires a fast-paced preliminary design and contracting process and prompt owner review and comment on products produced by the preliminary design consultant. Some of the county's staff had insufficient time to review and comment on the preliminary reports and emerging design issues due to their other work responsibilities. Some comments were received late in the process, causing schedule concerns, re-work for designers, and, in some cases, RFP addendums while the design-build teams were preparing their proposals.

Recommendation 6: Owners should schedule a design-build project much like other projects, adding it to staff work load and assessing overall ability to deliver their program. A design-build project is sometimes envisioned to have little impact on the owner's resources, because the contractor will be performing the design, but the preliminary design and RFP development stages demand quick response from the owner's staff and need to be factored into staff workload.

RFP Development

The RFP development phase focuses on preparing the RFP documents, which includes the following:

- Instructions to Proposers (ITP): Instructions and forms for preparing the proposal
- Book 1: Contract Terms and Conditions
- Book 2: Project Requirements
- Book 3: Applicable Standards
- Reference Information Documents (RID): Documents provided for information only

The RFQ is a separate document developed for inviting proposers to submit statements of qualifications (SOQ). These documents are considered part of the procurement process and are discussed in a later section of this report.



What Worked Well

Legal Counsel

The owner's attorney was actively involved in developing the RFP and gave quick responses to the consultant's questions about legal issues. He worked closely with a State attorney familiar with design-build contracting.

Input from Mn/DOT's Office of Construction and Innovative Contracting (OCIC) on the development of contracting documents was also helpful. The strong commitment to design-build from Mn/DOT and county staff, along with buy-in from cities and other stakeholders, helped greatly in meeting the

demanding schedule for RFP development, reviews, and municipal consent. Delays and opposition were negligible.

Flow charts of the process and frequent review of the project status against the flow charts helped stakeholders unfamiliar with design-build understand and follow the process. Sample documents from other design-build projects helped stakeholders understand what was needed from them. The CSAH 14 project was similar to other projects familiar to Anoka County staff and stakeholders. If it had been more complex, the design-build process may have been more difficult to understand.

What Could Be Improved

Stakeholder Reviews

The timeframe for decision making by the cities and outside agencies was very tight and some felt they had inadequate time to comment and make changes.

Recommendation 7: Provide stakeholders as much review time as the schedule permits and hold frequent look-ahead discussions about time windows for review.

Owner Staff Involvement

The interactive RFP editing sessions between the consultant and County staff were effective and educational, but interaction with County staff was limited primarily to the project manager.

Recommendation 8: Involve more of the owner's staff to fully realize the benefit of interactive sessions.

Requirements of Permitting Authorities

The design-build teams were sometimes required to contact cities and other agencies to get their requirements, which created some confusion and variation in the information used by proposers.

Recommendation 9: Consider putting as many city and country requirements as possible in the RID.

Owner Representative Involvement

A design-build verification consultant was selected by the County to provide design and construction oversight of the contractor. This consultant, selected after the RFP was issued, was involved in the RFP evaluation process, but was not intimately familiar with the design background and project requirements, which limited the consultant's effectiveness in the evaluation.

Recommendation 10: If a verification consultant is to be involved in RFP review, consider hiring the consultant early to get them more familiar with the design and the documents.

Procurement Process (Contractor Selection)

The procurement process includes activities related to selecting a contractor to design and build the project. This includes advertising the project via a request for letters of interest (RFLOI) to solicit interest from prospective design-build teams, holding one or more project information meetings, issuing an RFQ, reviewing SOQs, short-listing prospective teams, evaluating alternative technical concepts (ATCs), evaluating technical proposals, interviewing proposers, and, ultimately, selecting a contractor.

What Worked Well

The meeting format and training sessions for evaluating SOQs and proposals were deemed effective by those involved. Committed participation was provided by reviewers and technical advisors. Training, guidance, and participation by the consultant facilitator and Mn/DOT's OCIC were helpful in guiding the reviewers and advisors through the process. The technical subcommittees helped identify strengths and weaknesses of teams and proposals. The forms and process effectively captured and summarized the scoring. Correct and appropriate scoring criteria and categories were keys to a smooth scoring process.

What Could Be Improved

Review of Evaluation Criteria

Some evaluators felt a wider spread in the scores would have better reflected the differences in the teams and proposals. They felt the evaluation committee would have benefitted from more orientation on how to more clearly differentiate a weak characteristic from a strong one. The base level point values given for a responsive proposal left little room for the total score to differentiate strengths and weaknesses of proposers.

Recommendation 11: Carefully evaluate the points allocated for a minimally responsive proposal. Run through examples of various possible technical scores and cost proposal combinations to demonstrate potential outcomes. The owner should weigh the possible cost implications of giving more weight to the technical strengths and weaknesses of a proposal.

Size of Evaluation Group

The evaluation of SOQs and technical proposals involved more staff members than were deemed necessary by some evaluators. The number could be reduced for small or less complex projects. Having the verification consultant advise the technical scoring committee was of limited value since the consultant did not have the knowledge of being involved in project development.

Recommendation 12: Carefully evaluate how many technical subcommittees and how many technical advisors on each subcommittee are needed to adequately research and advise the evaluators. Small projects and those with little complexity may only need a few. Each additional advisor in the room consumes additional time as each feels the need to address issues and voice a different viewpoint.

Alternative Technical Concept (ATC) Evaluation Time

The experts required to fully evaluate ATCs often did not have enough time to thoroughly review ATCs in a timely manner.

Recommendation 13: Schedule the time of experts in the various needed disciplines for the review of ATCs so the experts have time allocated for adequate and timely reviews.

ATC Combination

The ATCs proposed often combined multiple alternatives or concepts in a single proposal to avoid the limitation on the number of ATCs. This made responses difficult.

Recommendation 14: Increase the number of ATCs allowed. Limit the ATCs to a single idea or concept and do not allow multiple alternatives in an ATC.

One-on-One Meetings

One-on-one meetings with design-build teams were sometimes stilted and formal because they were limited to discussion of proposed ATCs.

Recommendation 15: Consider allowing a broader discussion in one-on-one meetings, but carefully consider what can and cannot be discussed in these meetings. Broad discussions might lead to clarifications and addendums for all teams about a concept that a proposer might consider to be their unique and valuable idea.

Summary

Overall, Anoka County and Mn/DOT State Aid staff considered the CSAH 14 project successful as the pilot design-build project for municipal and county agencies. Mn/DOT State Aid staff is prepared to recommend to the State Legislature that the Legislature repeal the pilot program and pass a bill making design-build a permanent method of project delivery for municipal and county government agencies.

As the first of its kind in Minnesota, the project presented various challenges, but these were met through collaboration among project participants. Those involved envision that the project and the lessons learned can be a model for future projects, enabling design-build delivery to be used on a wide variety of projects in Minnesota.