
SEP-14 WORK PLAN

M-222 Slope Stability Project At the Kalamazoo River, City of Allegan *Construction Manager / General Contractor (CMGC)*

SUBMITTED TO FHWA: February 15, 2011



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1.0 INTRODUCTION

The Michigan Department of Transportation (MDOT), Southwest Region submits this work plan for review to and approval by the Federal Highway Administration (FHWA) as a Construction Manager / General Contractor (CMGC) project under the provisions of the Special Experimental Project No. 14 (SEP-14) for the use of innovative contracting practices. MDOT has traditionally used Design-Bid-Build (DBB) method for construction of most projects, regardless of scope. This is the first use of CMGC by MDOT.

The scope of this project is to stabilize a volatile slope located between M-222 and the Kalamazoo River in the City of Allegan. This work plan proposes the Project be designed and constructed using the CMGC project delivery method. This innovative delivery method allows for a constructible design given the site constraints and urgent need to stabilize the slope, while minimizing the Owner's risk by providing timely completion within a reasonable cost. This slope is being monitored as additional erosion could cause MDOT to close M-222 to traffic. Further, there is a short window to complete the construction, July 5 to August 26, 2011 due to the site's environmental constraints.

See Figure 1 for Quadrangle Map of the site within Allegan County.

2.0 PURPOSE

The purpose of the CMGC project delivery method is to engage construction expertise, including the use of subcontractors, early in the planning and design to minimize changes, enhance constructability, manage risk, and expedite the contracting process by concurrently executing design and construction contracts without requiring the owner to relinquish control over the design details or to be exposed to undue risks.

The CMGC project delivery method is an integrated approach to the design and construction of a project to control the schedule and budget. It also ensures a quality final product for the Owner. CMGC is similar to traditional DBB projects, where the owner hires a Designer (or performs the design in-house) to prepare the plans and specifications and then hires a Contractor to deliver the project, but differs in the sequence of events. In CMGC, the Designer and Contractor are hired (under separate contracts, utilizing qualifications-based selection processes) at the start of the project development. This ensures the Contractor is involved in all stages of planning and design to improve quality and minimize costly changes during construction. During the construction phase, the Contractor acts as the CMGC to keep the project within budget and on schedule by establishing a Guaranteed Maximum Price (GMP) to perform the construction when the design is sufficiently advanced and the Contractor can provide a price with minimal contingency.

Another advantage is that the CMGC can start construction before design is finalized by establishing a GMP for a portion of the project and an estimate for the remaining. The CMGC would need to perform 35 percent, or more, of the work described in the GMP, and is permitted to seek bids from subcontractors to perform the remaining work identified in the GMP.

If the GMP is not negotiated to the Owner's liking, the project can be delivered using the traditional

DBB method, and the project can be opened for bids when the plans and specifications are completed. This provides the Owner an outlet if an agreement cannot be reached with the CMGC on the GMP, by breaking the CMGC contract into two parts: (1) pre-construction services and (2) construction services. The CMGC would be allowed to bid on the project if the Owner could not negotiate the GMP with the CMGC.

Since a conditional commitment is made to a Contractor, to complete the construction, early in the process, a premium is placed on the proper selection of the CMGC to provide the best value to the Owner. Selection of the CMGC is described in the attached Request for Qualifications (RFQ).

MDOT wishes to use the CMGC project delivery method as a means of exploring alternative and innovating contracting methods, in particular, when construction activities need to be accelerated. Traditionally, MDOT uses the DBB method and has some experience with Design/Build, a contracting method that was considered and rejected due to unacceptable risks for the Owner. MDOT has no direct experience in delivering a project using CMGC. A recent project by the Detroit / Wayne County Port Authority (DWCPA) utilized the CMGC method successfully. MDOT assisted DWCPA by providing CMGC guidance and oversight. MDOT seeks to use the CMGC method to gain experience and evaluate its potential for use on this project as well as future projects.

3.0 PROJECT SCOPE

The project scope consists of analyzing the current slope conditions and previous investigations to develop a constructible design to stabilize approximately 250 feet of slope from future erosion. There is debate as to the appropriate fix and limits of the slope stabilization. The project goals are as follows:

- Protect M-222 in a cost effective manner. Stabilize the slope between M-222 and the Kalamazoo River
- Obtain all proper permits to construct the project
- Protect the Kalamazoo River
- Eliminate / minimize environmental impacts, while addressing soil erosion and sedimentation control, and similar impacts
- Appropriate contaminated soils handling, treatment and disposal
- Maintain traffic on M-222 and within the Kalamazoo River and reduce mobility impacts on M-222
- Substantially complete the construction on August 26, 2011

The CMGC will provide assistance to the Owner during the design phase, described as pre-construction services. The CMGC will have the responsibility for performing the construction, presuming a GMP can be agreed upon, described as construction services. The GMP will be

negotiated when the Owner and CMGC are confident enough in the design for the CMGC to assume the risk, or “guarantee” the price of performing the work. The CMGC will be responsible for all aspects of construction, including soliciting bids from and managing pre-qualified subcontractors to perform 65 percent, or less, of the work.

3.1 PRE-CONSTRUCTION SERVICES BY THE CMGC

- Provide detailed cost estimates and knowledge of marketplace conditions.
- Provide project planning and construction scheduling.
- Provide assistance in determining construction phasing and scheduling, and maintenance of traffic staging to minimize interruption to traffic operations on M-222 and in the Kalamazoo River.
- May use subcontractors to supplement pre-construction services to provide the necessary expertise.
- Provide alternative systems evaluation and constructability studies, including resolving slope access issues for the construction equipment.
- Advise Owner on ways to gain efficiencies in project delivery.
- Provide cost estimates at various stages of project development.
- Negotiate GMP and any contingency items with MDOT.

3.2 CONSTRUCTION SERVICES BY THE CMGC

- Construct, subcontract, and manage all construction related contracts while meeting the Disadvantage Business Enterprise (DBE) and other requirements.
- Execute the Quality Assurance / Quality Control Plan
- Bond and insure the construction.
- Address and adhere to all federal, state, and local permitting requirements.
- Maintain a safe work site.
- Self-perform at least 35% of the work in accordance with CFR 23 Section 635.116. (See Draft RFQ for subcontractor bidding requirements.)

4.0 EVALUATION PROCESS

MDOT will select a designer through the Department’s established consultant selection process which utilizes a Quality Based Selection in accordance with the Brooks Act.

MDOT will advertise a RFQ to select the CMGC. MDOT will evaluate the Statement of Qualifications (SOQs) received from Contractors. The SOQ's will initially be evaluated to determine if the Submitter has met the minimum requirements ("Pass") on all Pass / Fail evaluation factors. Proposals will then be scored using the evaluation criteria. If a Submitter receives a "Fail" on any single Pass / Fail requirement, the Proposal will be rated as unacceptable and will not be scored on the evaluation criteria.

See the attached Draft RFQ for complete evaluation details.

MDOT commits to meeting with the Department's design and contracting industry partners to review the process and selection criteria prior to posting the final RFQ. MDOT will take into consideration any comments and/or concerns prior to posting.

5.0 SCHEDULE

Post RFQ	February 25
Mandatory RFQ / SOQ Pre-Submittal Meeting	March 7
SOQ and Pre-Construction Services Price Proposal Due	March 18
Selection of CMGC	March 18 – March 25
Pre-Construction Services Fee Negotiation	March 28 - 30
Notice to Proceed	April 22
Development of Plans and Specifications	May 2 – July 11
Guaranteed Maximum Price (GMP) Negotiation	June 2011
Construction Letting (if no GMP agreement)	June (mid) 2011
Construction	July 5 – August 26

6.0 MEASURES

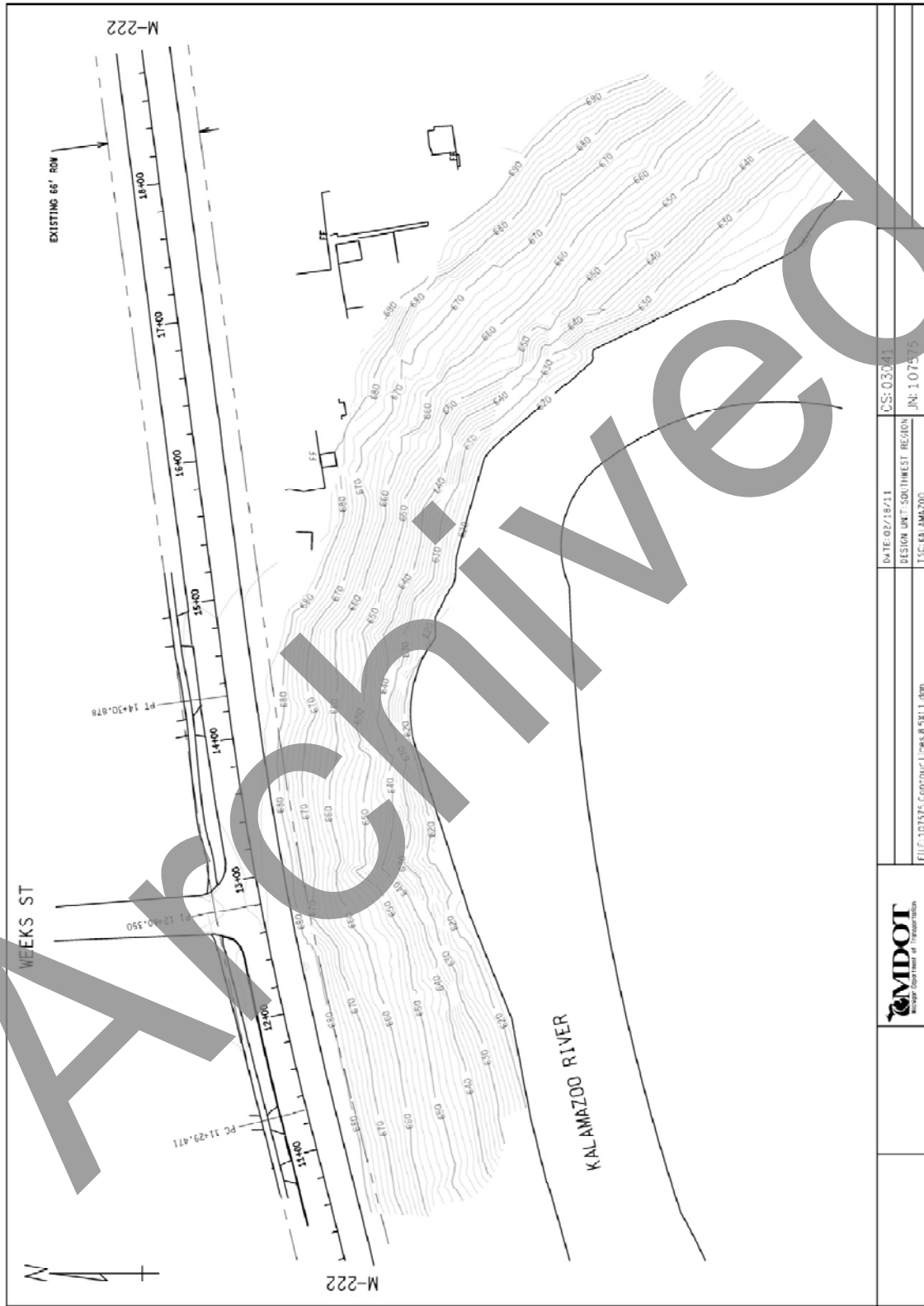
The CMGC project delivery method will be evaluated and measured on the overall product quality, timely completion, and budget management. It is anticipated that the project will result in a better product and reduced design changes during construction because of the CMGC's input during design, thereby reducing the overall construction price.

7.0 REPORTING

MDOT will prepare an interim project report at the start of construction detailing industry reaction and the pros and cons of using CMGC through design.

MDOT will prepare and submit a final report to FHWA on this project within 6 months of completion of the construction contract and final MDOT acceptance. The final report will contain an overall evaluation of the project, stating the positive and negative outcomes, the industry reaction to the CMGC project delivery method, and suggestions and/or recommendations for improving the process on future projects.

Figure 1 - PROJECT MAP



DATE: 02/18/21	CS: 03041
DESIGN UNIT: SOUTHWEST REGION	JN: 107575
FILE: 107575_Conform_Lines_8.5x11.dgn	TSC: 64.LAMAZ00
 Michigan Department of Transportation	