

**SEP-14 Work Plan**  
**Michigan Department of Transportation**  
**Variable Scope Contracting**  
**Job No. 123991, University Region**  
**May 13, 2014**

**Introduction**

The Michigan Department of Transportation (MDOT) proposes to use variable scope contracting on a camera site installation project along US-23, between M-14 and Lee Road, in MDOT's University Region.

**Purpose**

The purpose of variable scope contracting is to construct at least 6, but no more than 8, ITS camera sites within the available project budget.

**NEPA Document**

The project is expected to be classified as a Categorical Exclusion. The project description in the document is expected to be "US-23 ITS Cameras".

**STIP**

The project will be described in the STIP as "US-23 ITS Cameras". Any camera that is not completed by this project will be constructed by a project in 2018.

**Scope**

The project budget is approximately \$1,200,000 and will be funded with federal (CMAQ) and state funds. MDOT anticipates that at least 6 camera sites can be installed with this funding level. Two additional camera sites are desired along US-23, and this level of funding may be sufficient to complete this work. Each site includes items such as detection equipment, cabinets, power, communications and other miscellaneous devices to provide a working system. Recent bid history on similar work has had significant variances making estimating difficult. Variable Scope contracting will allow the possibility for more than 6 cameras to be installed if the bids are below the available budget.

MDOT will provide the FHWA-Michigan Division the contract provisions developed for this project prior to advertising in order to assure that any comments or concerns from the FHWA are addressed in the contract.

**Procurement Process**

The project is anticipated to be divided into 3 sections for contractors to bid on.

Section 1 in the Schedule of Items will include the work needed to install camera sites 1 through 6. Section 1 is the minimum amount of work that can be bid, and bids can be submitted in this section above the \$1,200,000 budget.

Section 2 in the Schedule of Items will include the work needed to install camera sites 1 through 7. Bids will only be accepted for this section if the bid price is equal to or less than the available budget (\$1,200,000).

Section 3 in the Schedule of Items will include the work needed to install camera sites 1 through 8. Bids will only be accepted for this section if the bid price is equal to or less than the available budget (\$1,200,000).

Contractors will only be allowed to bid on one Section. The selection of the contractor will be based on the following criteria:

1. Work Completed: The selected contractor will be the one that can complete the most work.
2. Price: If two or more contractors are tied after applying criteria 1, the tied contractor's price will be considered. The contractor with the lowest price will be the selected contractor.
3. Best and Final Offer (BAFO): If two or more contractors are tied after applying criteria 2, MDOT will request a BAFO from the tied contractors. The contractor with the lowest price will be the selected contractor.
4. Random Selection: If two or more contractors are tied after applying criteria 3, MDOT will draw a name from a container to determine the selected contractor.

Example Bids are shown in Attachment A.

### **Schedule**

The project is scheduled to utilize FY 2014 funds, and be let in November, 2014. Construction will occur in 2015.

### **Evaluation**

In order to evaluate the success of this innovative contracting method, MDOT will assess the completed work under the contract compared to a typical design-bid-build project. To accomplish this, MDOT will estimate the amount of work that would be expected to be constructed using the budgeted dollar amount. Estimating will be performed by using traditional estimating methods based on recent bidding history.

Industry reaction will also be measured by comparing the bids on similar contracts to the number of bids received on the fixed price variable scope contracts, as well as comments and suggestions from Michigan's contracting industry.

### **Reporting**

MDOT will prepare and submit a report to the FHWA within 6 months of the project's completion. The report will contain information on how to access the project's unique contract language, an overall evaluation to determine if this innovative contracting method provided more value for the dollar than traditional contracting methods along with any recommendations for improving the process.

## Attachment A

Example Bid Tab (Actual Bid Tab is more extensive)

### Section 1: Camera Installation: Sites 1 – 6

Pay Item	Quantity	Unit	Price	Total
Mobilization	1	LS		
Wire	100	Ft		
Pole	6	Ea		
Camera	6	Ea		
Integration	1	LS		

### Section 2: Camera Installation: Sites 1 – 7

Pay Item	Quantity	Unit	Price	Total
Mobilization	1	LS		
Wire	120	Ft		
Pole	7	Ea		
Camera	7	Ea		
Integration	1	LS		

### Section 3: Camera Installation: Sites 1 – 8

Pay Item	Quantity	Unit	Price	Total
Mobilization	1	LS		
Wire	150	Ft		
Pole	8	Ea		
Camera	8	Ea		
Integration	1	LS		

**Bid Example 1**

Contractor Name	Bid Results			Acceptable Bid?	Comments
	Section 1	Section 2	Section 3		
A1 Contractors	\$1,500,000			Yes. Section 1 bids can be higher than \$1,200,000	
B2 Contractors		\$1,200,000		Yes. Section 2 and 3 bids must ≤ \$1,200,000	
C3 Contractors		\$1,200,000		Yes. Section 2 and 3 bids must ≤ \$1,200,000	
D4 Contractors		\$900,000		Yes. Section 2 and 3 bids must ≤ \$1,200,000	
E5 Contractors	\$800,000			Yes	
F6 Contractors			\$1,200,000	Yes. Section 2 and 3 bids must ≤ \$1,200,000	
G7 Contractors		\$1,300,000		No. Section 2 bids cannot exceed \$1,200,000	Non-responsive bid
H8 Contractors			\$1,201,000	No. Section 3 bids cannot exceed \$1,200,000	Non-responsive bid
I 9 Contractors	\$200,000	\$550,000		No. You cannot bid on more than 1 section.	Non-responsive bid
J 10 Contractors			\$1,100,000	Yes. Section 2 and 3 bids must ≤ \$1,200,000	Selected Contractor: Criteria 1

**Bid Example 2**

Contractor Name	Bid Results			Acceptable Bid?	Comments
	Section 1	Section 2	Section 3		
A1 Contractors	\$1,500,000			Section 1 bids can be higher than \$1,200,000	
B2 Contractors		\$1,200,000		Section 2 and 3 bids must ≤ \$1,200,000	
C3 Contractors		\$1,200,000		Section 2 and 3 bids must ≤ \$1,200,000	
D4 Contractors		\$900,000		Section 2 and 3 bids must ≤ \$1,200,000	Selected Contractor: Criteria 2
E5 Contractors	\$800,000				
G7 Contractors		\$1,300,000		Section 2 bids cannot exceed \$1,200,000	Non-responsive bid
H8 Contractors			\$1,201,000	Section 3 bids cannot exceed \$1,200,000	Non-responsive bid
I 9 Contractors	\$200,000	\$550,000		You cannot bid on more than 1 section.	Non-responsive bid

**Bid Example 3**

Contractor Name	Bid Results			Acceptable Bid?	Comments
	Section 1	Section 2	Section 3		
A1 Contractors	\$1,500,000			Yes. Section 1 bids can be higher than \$1,200,000	
B2 Contractors		\$1,200,000		Yes. Section 2 and 3 bids must ≤ \$1,200,000	Criteria 3: Request BAFO
C3 Contractors		\$1,200,000		Yes. Section 2 and 3 bids must ≤ \$1,200,000	Criteria 3: Request BAFO
E5 Contractors	\$800,000			Yes	
G7 Contractors		\$1,300,000		No. Section 2 bids cannot exceed \$1,200,000	Non-responsive bid
H8 Contractors			\$1,201,000	No. Section 3 bids cannot exceed \$1,200,000	Non-responsive bid
I 9 Contractors	\$200,000	\$550,000		No. You cannot bid on more than 1 section.	Non-responsive bid