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DEPARTMENT OF TRANSPORTATION
METRO REGION

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July 31, 2012

Mr. Phil Lynwood
Federal Highway Administration
315 West Allegan, Room 201
Lansing, Michigan 48933

Dear Mr. Lynwood:

Per the requirements of the M-39 project SEP-14, enclosed is the Final Report on the Innovative Contracting Processes utilized on this project; Best Value selection and Performance Based Contracting.

Please contact me with any questions at 313 - 967-5407.

Regards,

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**INNOVATIVE CONTRACTING PRACTICES
SPECIAL EXPERIMENTAL PROJECT NO. 14**

BEST VALUE – PERFORMANCE BASED CONTRACTING

**M-39 (Southfield Freeway)
Michigan Department of Transportation
Metro Region**

**Final Report
July 31, 2012**

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Introduction

Per the M-39 (Southfield Freeway) Reconstruction Special Experimental Project No. 14 (SEP-14) document dated June 8, 2010; this document serves as the Final Report evaluating the M-39 Best Value – Performance Based (BV-PB) innovative contracting method. This report discusses the Best Value selection process and results, also discussed in the Interim Report dated April 28, 2011, and the implementation and results of the Performance Based Contracting procedures utilized. Please refer to the appendix of this report for additional information.

Background and Purpose

In November 2011, The Michigan Department of Transportation (MDOT) let a major construction project on M-39 (Southfield Freeway) in the Cities of Southfield, Detroit, Dearborn, Dearborn Heights, and Allen Park Michigan. The project included reconstruction of the roadway from McNichols to M-10, roadway rehabilitation within the rest of the project corridor, rehabilitation of 28 bridges, freeway lighting, freeway signing, ITS infrastructure, sanitary sewer replacement, and screen wall replacement. The engineer's estimate at the time of project advertisement was \$77.3 million.

The majority of the significant project work impacted what is primarily a residential area of northwest Detroit. In recognition of the importance of the roadway to the adjacent community and other stakeholders, and the impact the freeway and its rehabilitation has on the neighborhoods it traverses, MDOT engaged the local community in an extensive context sensitive solutions process. This was to understand and address the community's needs, concerns, and ideas for the project – both the physical infrastructure that would result from the project, as well as how the project would be executed.

MDOT undertook a very thorough public involvement process during the design phase of the project. Three public meetings were held to provide information relative to the project and to solicit ideas and feedback from the community. Outreach with the community and other stakeholders revealed several "Quality of Life" concerns consistently cited. Predominant among these were:

1. **General Construction Concerns**
 - a. Air quality
 - b. Noise
 - c. Restricting construction truck traffic on neighborhood streets
 - d. Maintaining utilities to homes during construction
 - e. Avoiding damage to adjacent property from vibration.

2. **Local Contractor and Workforce Participation Concerns**

3. **Safety & Mobility Concerns**

4. **Schedule Concerns**

MDOT also proposed to the community various maintenance-of-traffic strategies (full closure with detour vs. maintaining one lane in each direction), along with the associated impacts to the public and construction durations. The intent was for the community to decide which strategy should be implemented, taking into account all of the information. Ultimately, the community chose the full closure option, with the most prevalent reason stated being the shorter construction duration.

As a result of the issues raised at the meetings, MDOT moved forward with the Best Value – Performance Based Contracting concept as a means to establish acceptable criteria for the quality of life issues, and the means to enforce them. MDOT determined what we believed to be reasonable solutions and then specified the desired outcomes or parameters that the Contractor had to follow.

MDOT achieved this using two project-specific, Best Value – Performance Based Contracting special provisions. The first special provision, entitled “Bidding Instructions for Best Value Selection”, provided the technical requirements of the proposal that was to accompany the Contractor’s bid. Bid opening information, bid evaluation process information, and the score sheet MDOT devised for scoring of the proposals were also included in the specification. The second special provision, entitled “Contractor Performance”, contained all of the evaluation criteria for the general construction concerns, workforce participation, safety and mobility, and schedule that the Contractor was to adhere to. This specification also outlined the field testing parameters, documentation process, and incentive/disincentive amounts.

As an example, for the air quality and noise concerns, MDOT worked with the Michigan Department of Environmental Quality (MDEQ) and other experts to establish baseline measurements for particulate matter in the air and ambient decibel levels. We then researched the allowable threshold levels during construction and developed an incentive/disincentive strategy to ensure the thresholds were maintained.

During the development of the Best Value special provisions, MDOT met with FHWA and members of the construction industry to solicit feedback on the language and logistics of what MDOT was asking of the industry. MDOT met with the Michigan Infrastructure and Transportation Association (MITA) and received feedback for inclusion into the specifications. MDOT also commissioned an independent third party review of the specifications and project plans to ensure bidability and constructability. When the specifications were ready for approval, MDOT also engaged the Michigan Attorney General’s office

for their feedback on the risk and legality of the specifications, and was given the green light to advertise the project.

The contract award was based on a composite score derived from the Contractor's bid price divided by the technical proposal score. The contractor with the lowest composite score was awarded the bid. In the original SEP-14 document, MDOT proposed to calculate the final score using a weighted average method giving 60% weight to the bid price and 40% weight to the technical proposal score. As the Special Provision was being finalized, it was determined that the simpler, more straight-forward method of the composite score, calculated as described above, would be used. Based on the bid prices and technical scores for this project, either method would have yielded the same result, with Dan's Excavating being the awarded Contractor.

Bid Process

To best control the bid process, MDOT scheduled a special letting consisting of only this project, and a five week advertisement period was used to allow more time for the industry to digest the plans and specifications and submit inquiries. As a result of the thorough nature in which MDOT engaged the contracting industry during the development of the Best Value selection specifications, no addenda were issued due to contractor inquiries regarding the Best Value specifications. Several other addenda were issued regarding pay items and quantities, which is normal for a project this size.

During the advertisement period, MDOT held a mandatory Pre-bid Meeting/DBE Reverse Trade Fair to expose the local workforce and potential DBE contractors to potential prime contractors. MDOT staff provided an overview of the project and answered contractor questions regarding the nature of the work and the logistics of the Best Value Selection.

In accordance with the "Bidding Instructions for Best Value Selection" special provision, the bids were submitted electronically in Bid Express, and the technical proposals were submitted to the Contract Services Division on November 10, 2011. The technical proposals were consensus scored by a team consisting of:

Detroit TSC Manager
Detroit TSC Development Engineer
Detroit TSC Delivery Engineer
Metro Region Engineer
Metro Region Planning Specialist
Director of MDOT Office of Small Business Development
Contract Services Division Administrator

The consensus scoring process was structured to be as objective as possible. A diverse cross section of MDOT staff comprised the scoring team, and for each of

the technical proposal factors scored, the team started with a baseline score and added points for good ideas and innovative thinking. The score sheet included in the special provision for “Bidding Instructions for Best Value Selection” outlined the range of scores depending on the adequacy of the proposed mitigation measures or innovations included in the contractor’s technical proposal. Emphasis was placed on developing a consensus score for each factor, taking into account input from the entire team. Consensus scores and comments were recorded, and each team member signed the score sheets, which are included in the appendix.

To maintain security and confidentiality of the bids, and ensure the bids would not be made public until after the technical proposals were scored, the bids were electronically locked in the Bid Express program until November 17, 2011 at 2:01 pm, the date and time of the public opening. At that time, a representative from Lansing Finance, who attended the bid opening, downloaded the bids from Bid Express. The technical proposal scores and bid results were then publicly announced at the MDOT C&T facility. Members of each contracting team were in attendance. The results are summarized below:

Contractor	Technical Proposal Score	Bid	Composite Score
Toebe/lafrate/Sanches	264	\$79,323,801.75	300469
Dan's/C.A. Hull/Ajax	341	\$71,334,854.93	209193

The Dan’s Excavating team was awarded the contract.

Observations

The technical proposal scoring team was very impressed with the creativity and ingenuity of both contractor teams in not only meeting the requirements of the Best Value specifications, but in understanding the community concerns and proposed additional measures to make the project a success.

For example, for the general construction concerns of noise, both Contractor teams identified the construction activities that had the highest potential for creating noise levels that might exceed the thresholds dictated in the specifications. Both teams then identified means of independent monitoring and tracking noise data, and mitigation measures to be taken should measurements exceed the thresholds. The proposed mitigation measures and responses to measurements exceeding thresholds were developed by the Contractor teams and in some cases exceeded MDOT’s expectations.

MDOT was also impressed with both Contractor teams' proposed emphasis on providing public information throughout the project, and assigning staff to facilitate ongoing communication between the Contractor and the community.

Ultimately, the Dan's Excavating team proposal was scored higher than the Toebe team proposal. Dan's proposal was very thorough, and in some areas went above and beyond the original intent of some of the measurables.

Dan's proposed the use of a Community Liaison Manager to coordinate with the public and offer training and employment opportunities to the local workforce. They proposed modifications of the staging plans to shorten the duration of the M-39 full closure and shorten pedestrian detours at the bridge approaches. They analyzed the bridge construction matrix provided by MDOT and developed more expedited ways to stage and construct the bridge rehabilitations. They also proposed the use of a Mitigation Compliance Technician to assist in the monitoring and maintain compliance with the various environmental mitigation efforts stemming from the community's general construction concerns.

Evaluation of Measures

Per the project SEP-14 document, several measures were outlined to be evaluated in order to ultimately determine the effectiveness of both the Best Value selection process and the Performance Based contracting process. For the Best Value selection process, the first measure is the number of responsive proposals, the second is the quality of the technical proposals, and the third is analysis of the overall selection process. For the Performance Based contracting process, the first measurement is the Contractor's achievement of the project performance criteria, and the second is stakeholder perceptions of the execution of the project.

Best Value Selection Process – Number of Responsive Proposals

MDOT received two bids/proposals for this project. Although that is low compared to the average number of responses for all projects MDOT lets, receiving only two to three bids is typical for high cost, complex or semi-complex projects let by MDOT and located in the southeast Michigan area, due to the relatively small number of Contractors with the capacity to Prime such work. Due to the fact that receiving only two bids is not atypical for this size project in this area of Michigan, MDOT's assessment that both technical proposals were of high quality (see below), and that there were no RFI's related to the Special Provision for Best Value Selection, MDOT's conclusion is that industry was willing and able to successfully respond to this innovative contract.

Best Value Selection Process – Quality of Technical Proposals

MDOT feels that both of the technical proposals received were of high quality, showing a range of innovative ideas developed to meet or exceed the evaluation measures as part of the Best Value Selection.

The blank score sheets included in the Special Provision for Best Value Selection showed three ranges of points that could be achieved for each factor (with the lowest “range” simply being zero (0) points), along with a description of what was expected to meet each point range. When the consensus scoring team met to score the technical proposals, they jointly agreed to start the score for each factor at the middle of the total possible point range, as long as all minimum requirements for the factor were met, and to add points from there for unique ideas and innovations. As shown in the chart above, Dan’s Excavating received the higher technical proposal score, at 341 points. The low score, received by Toebe, was 264 points. Dan’s Excavating scored within the highest available point range (achieving 50% or greater of the possible points) for each of the eight (8) factors evaluated. Toebe scored in the highest available point range (achieving 50% or greater of the possible points) for six (6) of the eight (8) factors evaluated. Toebe scored in the second highest available point range (greater than 0 but less than 50% of the possible points) for the factors “Develop a Local Workforce Development and Participation Plan”, and “Develop a Safety and Mobility Plan”. The highest technical proposal score possible was 500 points, and the difference between the high and low score was 15% of the total score possible.

Both contractors proposed “ordinary” and “extraordinary” measures that would be implemented to ensure air and noise quality thresholds set forth in the contract were met, and both clearly identified independent monitoring and equipment to be used. Dan’s Excavating proposed a “no excuses” policy for construction traffic mitigation. Toebe proposed using Ground Penetrating Radar to avoid damage to utilities. Both Contractors proposed pre-construction videotaping, independent vibration monitoring, and response procedures to address the “Avoiding damage to adjacent private property” factor, and Dan’s additionally proposed the presence of a Community Liaison Manager and Mitigation Compliance Technician. Dan’s Excavating provided an in-depth, multi-step plan to address “Local Workforce Development and Participation”, including strategies for workforce development and use of social media. Dan’s proposed specific staging and traffic maintenance alternatives in response to the “Safety and Mobility Plan” factor. Both Contractor’s exceeded the schedule threshold requirements, committing to an October 1, 2011 maximum incentive Open to Traffic date as opposed to the October 15 date allowed by the Contract. Neither contractor proposed lowering the threshold limits of the other factors, but they did both propose mitigation methods and/or ideas to address the various factors that exceeded MDOT’s expectations.

Some innovative ideas proposed were:

- Use of resonant pavement breakers to reduce noise and vibration

- Enclosure of generators and small equipment, where applicable, to reduce noise
- Dust containment curtains if/where necessary to address air quality
- After-market noise suppression mufflers on large equipment to address noise

Best Value Selection Process – Overall Selection Process

There were no logistical or procedural issues in executing the selection process other than ensuring the bids remained sealed in Bid Express until after the technical proposal scores were announced. MDOT did schedule a special letting for this project.

In comparing the technical proposals, bids, and composite scores, Dan's was the clear winner. They had both the highest technical proposal score and the lowest bid amount. The spread between the bids was larger than expected, and Dan's bid was approximately \$6.5 million less than the Engineer's Estimate, with the non-awarded bid coming in slightly less than \$1.5 million over Engineer's Estimate. MDOT performed an unbalanced bid analysis after the letting and did not find improprieties with Dan's bid. MDOT monitored the costs closely throughout construction. Quantities and extras are still being finalized, but final construction cost is expected to be less than 5% (or < \$3.6 million) over bid (still almost \$3 million below the Engineer's Estimate). It is therefore MDOT's conclusion that this innovative contracting method did not in any way increase the overall cost of the project.

Performance Based Contracting – Contractor Achievement of Performance Criteria

Dan's Excavating met or exceeded all performance criteria set forth in the contract for every assessment test taken, and received full payment for all incentivized criteria, totaling \$3.5 million in incentive payments.

The threshold limit for the Air Quality Evaluation Factor was $150 \mu/m^3$. Assessment tests were taken on randomly selected dates for a 24-hour period at four locations randomly selected from the list included in the Special Provision for Performance Based Contracting. The highest 24-hr average reading taken was $144 \mu/m^3$, which occurred for one test only. The lowest reading was $1 \mu/m^3$, which also occurred only once. The average reading was $46 \mu/m^3$, significantly below the $150 \mu/m^3$ allowed.

The threshold limit for the Noise mitigation factor was 75.0 dB(A) during daytime operations for all locations except Pembroke Bridge, which had a threshold of 76.0 dB(A), and the temporary batch plant location, which had a threshold of 83 pB(A). Assessment tests were taken on randomly selected dates at three separate locations randomly selected from the list included in the Special

Provision for Performance Based Contracting. For the locations with a threshold limit of 75.0 dB(A), the highest reading was 74.6 dB(A), occurring on one occasion. The lowest reading was 56.2 dB(A), also occurring on only one occasion. The average reading was 61.5 dB(A), significantly lower than the 75.0 dB(A) allowable threshold. For the Pembroke location, the highest reading was 75.1 dB(A), the lowest 61.2 dB(A), and the average 66.7 dB(A). The batch plant location never came up in the random selection; therefore no readings were taken at this location.

The criteria for the Truck Traffic on Neighborhood Streets evaluation factor was pass/fail. Thirty-minute long surveys were taken on randomly selected days at randomly selected locations throughout the neighborhood areas bordered as described in the Special Provision. Siting of any construction traffic on a neighborhood street would result in a “fail” for that assessment. The Contractor received zero “fail” assessments for this evaluation factor.

The criteria for the Safety and Mobility evaluation factor was also pass/fail. Assessment tests consisted of both an MDOT and a contractor representative driving a randomly selected detour route on randomly selected dates to ensure that the maximum drive time outlined in the Special Provision was not exceeded. The Contractor received zero “fail” assessments for this evaluation factor.

For the Schedule evaluation factor, an \$80,000 per day incentive, capped at \$1,200,000 max incentive, was established for opening the project in advance of the date proposed in the technical proposal. Dan’s excavating proposed and met a maximum incentive Open to Traffic date of October 1, 2011, and maximum incentive amount was paid.

In addition to the incentivized performance criteria, Dan’s Excavating committed to a “Limiting Construction Damage Plan” and a “Utility Assurance Plan” as part of their technical proposal. No adjacent property damage or utility service interruptions were reported on this project, which points to the successful implementation of these plans.

In addition, Dan’s committed in their technical proposal to a number of means to encourage local workforce participation on the project, provide training and employment opportunities, and provide information to the public, all of which were fulfilled. Dan’s implemented a jobsite trailer staffed with a Community Liaison Manager that was open every weekday during normal business hours to accept employment applications and provide information to the public. They also created and maintained a project website where they posted contact information and project updates. Dan’s brought graduates from MDOT’s RCAR and CEP (Construction Readiness Program) programs onto the project for on the job training. In addition, they committed to hiring fifty (50) persons from the “local” workforce (which they defined as persons living within one of the eleven (11) zip codes traversed by the project), and over seventy (70) such hires were made. In

addition, Dan's implemented a program where they purchased lunch bi-monthly for the top twenty (20) construction, MDOT and/or consultant staff that spent the most money at local businesses, based on receipts turned in to the Community Liaison Manager. From the collected receipts, Dan's reported that over \$400,000 was tabulated as being spent by the project workforce at local businesses during the life of the project.

Performance Based Contracting – Stakeholder Perceptions

The SEP-14 document for this project states that the measure of Stakeholder Perception will be determined via qualitative surveys of the prime contractor and key subcontractors, the MDOT and consultant project staff, and the affected members of the community.

Community Survey Summary

MDOT received twenty-five (25) survey responses from the local community. Of the twenty-five (25), all surveys had all questions answered. Overall the local community was satisfied with all categories of construction concerns, but the perception of the success of the local workforce participation category was less than MDOT desired. 78% answered they were not made aware of the training and employment opportunities for local residents for the M-39 project. The majority of the local community was of the opinion that M-39 was greatly improved and worth the inconvenience of closed roads for a relatively short period of time.

Air quality initiative: Overall, 68% of community respondents agreed they were satisfied with the air quality and amount of dust, debris and exhaust experienced on the project. Only 1% disagreed, with the remainder of respondents being neutral or non-responsive to this question.

Noise monitoring initiative: Overall, 80% of community respondents stated that construction noise rarely or never disrupted their daily activities. 16% responded that construction noise frequently disrupted their daily activities, 1% responded Occasionally, and 3% did not respond.

Construction Traffic initiative: Overall, 84% of community respondents stated they rarely or never saw a construction vehicle take a short cut through local neighborhoods, and 88% responded they rarely or never noticed contractor staff vehicles parked on local streets adjacent to the project. 8% responded Occasionally for both, and 8% responded Frequently to witnessing short-cuts and 4% to witnessing parking on local streets. The remaining percentage of respondents did not respond to this question.

Utility Initiative: Overall, 92% of community respondents stated that they did not experience a loss of any utility services during construction. 8% responded that they experienced loss of service(s), but all noted that they did not think it was due to construction.

Limiting construction damage initiative: 68% of community respondents stated that they did not feel ground vibrations during construction. 32% responded that they did feel ground vibrations.

Local workforce and community outreach initiative: Overall, 84% of community respondents stated that they were adequately informed of events, project milestones and/or meetings associated with the project before construction began. Respondents noted that the top three (3) sources of information were email, US Mail, and newspapers. 16% responded that they were not adequately informed about the project prior to construction start.

Unfortunately, only 22% responded that they were made aware of training and employment opportunities before construction began. 78% responded that they were not made aware of these opportunities prior to construction start.

In addition, only 12% responded that they were aware of local businesses profiting from construction workers purchasing goods from local establishments. Respondents that stated they were aware of this benefit noted that gas and food businesses profited. 88% responded they were not aware of local business profiting from business from the project workforce.

Consultant and MDOT Survey Summary

MDOT received twenty-seven (27) survey responses from MDOT and Consultant project staff. Of the twenty-seven (27), nineteen (19) were fully completed with all questions answered, and eight (8) had questions that were skipped. Overall, roughly 50% of responders felt that the technical proposal and performance based initiatives used on this project would be beneficial on future projects. From those that did not feel initiatives were beneficial, a number of comments were provided as to why, and/or what in the responder's opinion could make the initiatives beneficial for future projects.

Air quality initiative: Overall, 53% thought the air quality initiative was an incentive that would be beneficial to use on future projects, 37% thought it was not beneficial, and 10% had no opinion. Some recommendations/comments expressed by the consultant /MDOT project staff are summarized below:

- "Air quality monitoring over a 24 hour period is not enough time to collect a true record of what goes on for the week as far as dust control."
- "Testing needs to be random and unannounced."
- "Air quality monitoring will only be appropriate in heavily populated areas."
- "More specific requirements for dust control should be incorporated."

Noise monitoring initiative: Overall, 46% thought the noise monitoring initiative was an incentive that would be beneficial to use on future projects, 41% thought

it was not beneficial, and 13% had no opinion. Some recommendations/comments expressed by the consultant/MDOT project staff are summarized below:

- “Noise monitoring incentive will only be appropriate in heavily populated areas.”
- “Monitoring needs to be performed randomly and unannounced.”
- “Test locations during construction activities should be well defined in the proposal. For example, construction activities should not include deck curing (no equipment is running).”
- “Specifications should allow the Engineer more flexibility in determining test locations.”
- “Instead of noise reduction incentives consider restricting certain types of equipment or when they may be used.”

Mobility initiative: Overall, 53% thought the mobility initiative was an incentive that would be beneficial to use on future projects, 26% thought it was not beneficial, and 21% had no opinion. Some recommendations/comments expressed by the consultant/MDOT project staff are summarized below:

- “This initiative is better suited for large corridor projects such as M-39.”
- “More strict travel times are needed.”
- “There are too many factors out of the contractor’s control along the detour route. The contractor cannot implement many changes to the detour route to improve traffic flow. The signing is usually detailed in the plan set, requiring the contractor to maintain it on a regular basis. Instead of providing incentive, penalties for not maintaining the signing should be assessed per the Special Provision for Traffic Control Quality and Compliance.”

Construction traffic initiative: Overall, 53% thought the construction traffic initiative was an incentive that would be beneficial to use on future projects, 26% thought it was not beneficial, and 21% had no opinion. Some recommendations/comments expressed by the consultant/MDOT project staff are summarized below:

- “More frequent tests are necessary.”
- “Large projects may not be monitored properly. Smaller projects adjacent to residential neighborhoods would benefit. More applicable to M-route projects as opposed to freeways.”

Limiting construction damage initiative: Overall, 39% thought the limiting construction damage initiative would be beneficial to use on future projects, 33% thought it was not beneficial, and 28% had no opinion. Some recommendations/comments expressed by the consultant/MDOT project staff are summarized below:

- “This may not be appropriate for all projects. This is very important in densely populated areas where buildings are close to the roadway.”

Local workforce initiative: Overall, 63% thought the local workforce initiative was an incentive that would be beneficial to use on future projects, 16% thought it was not beneficial, and 21% had no opinion. Some recommendations/comments expressed by the consultant/MDOT project staff are summarized below:

- “There is potential to use this initiative on future projects but there are not always opportunities for an untrained person as most positions are actually a skilled position.”
- “It is important that the local community has an opportunity to work on the project.”
- “Newly hired staff have to be willing to travel with the contractor as the next project begins as this is the nature of the construction industry.”

Contractor/Subcontractor Survey Summary

The response by the prime contractor and key subcontractors to the survey was very low. MDOT distributed the survey to twenty-two key personnel of the prime contractor and key subcontractors. The contractors were asked to pass on the survey to additional staff as they deemed appropriate. Only ten (10) surveys with responses were returned, and out of these ten (10), approximately half had “no opinion” checked as the response to the majority of the questions. Below is a summary of the responses that were received:

Air quality initiative: Overall, 55% thought the air quality initiative was an incentive that would be beneficial to use on future projects, and 45% had no opinion. Some recommendations/comments expressed by the contractors/subcontractors are summarized below:

- “Considerable efforts were taken to meet air quality criteria. The additional costs involved to pass the air quality tests were justified by the incentive money offered.”
- “It demonstrates to the local public that MDOT and the contractor are making an above normal effort to control air quality affected by construction.”
- “Sweeper vacuum trucks were employed much more often”
- “Watered the grade more than normal projects.”

Noise monitoring initiative: Overall, 36% thought the noise monitoring initiative was an incentive that would be beneficial to use on future projects, 9% thought it was not beneficial, and 55% had no opinion. Some recommendations/comments expressed by the contractors/subcontractors are summarized below:

- “The noise thresholds were too low. Normal ambient sound based on normal freeway traffic exceeded the allowable thresholds.”
- “The proposal showed sonic breakers to fracture the concrete roadways before pavement removal. The sonic breakers turned out to be only slightly less noisy in the operation and did not break the concrete up into as small of pieces as the drop breakers. The results increased the noise of the next operation which is to remove the concrete. Instead of the excavators dropping small pieces of concrete into semi dump trucks, they were dropping large pieces and causing more impact noise.”
- “There was no criteria to remove noise generated from public traffic when the noise generated from public traffic were above normal. This is a factor we have no control over but affected our noise level readings.”

Mobility initiative: Overall, 30% thought the mobility initiative was an incentive that would be beneficial to use on future projects, 10% thought it was not beneficial, and 60% had no opinion. Some recommendations/comments expressed by the contractor/subcontractor are summarized below:

- “With the various detour routes in conjunction with the influx of traffic from the closed freeway made monitoring the detour route times very difficult. There was additional time allowed for each detour but that amount was based prior to construction. Average time delays should have been established during construction so that the true impact of delay could be determined, rather than based on a number that was conceived during the design phase of the project.”

Construction traffic initiative: Overall, 46% thought the construction traffic initiative was an incentive that would be beneficial to use on future projects, 18% thought it was not beneficial, and 36% had no opinion. Some recommendations/comments expressed by the contractor/subcontractor are summarized below:

- “Temporary signing stated “no construction traffic allowed” were placed in neighborhoods. All subcontractors were made aware of the allowable travel routes designated by a map generated by the Prime Contractor. The Prime Contractor did random monitoring outside of the random assessments performed by the Department.”
- “The prime implemented a penalty to subs and suppliers for not following the rules. The map of allowable areas was given with all PO’s and subcontracts with tolerant expectations.”

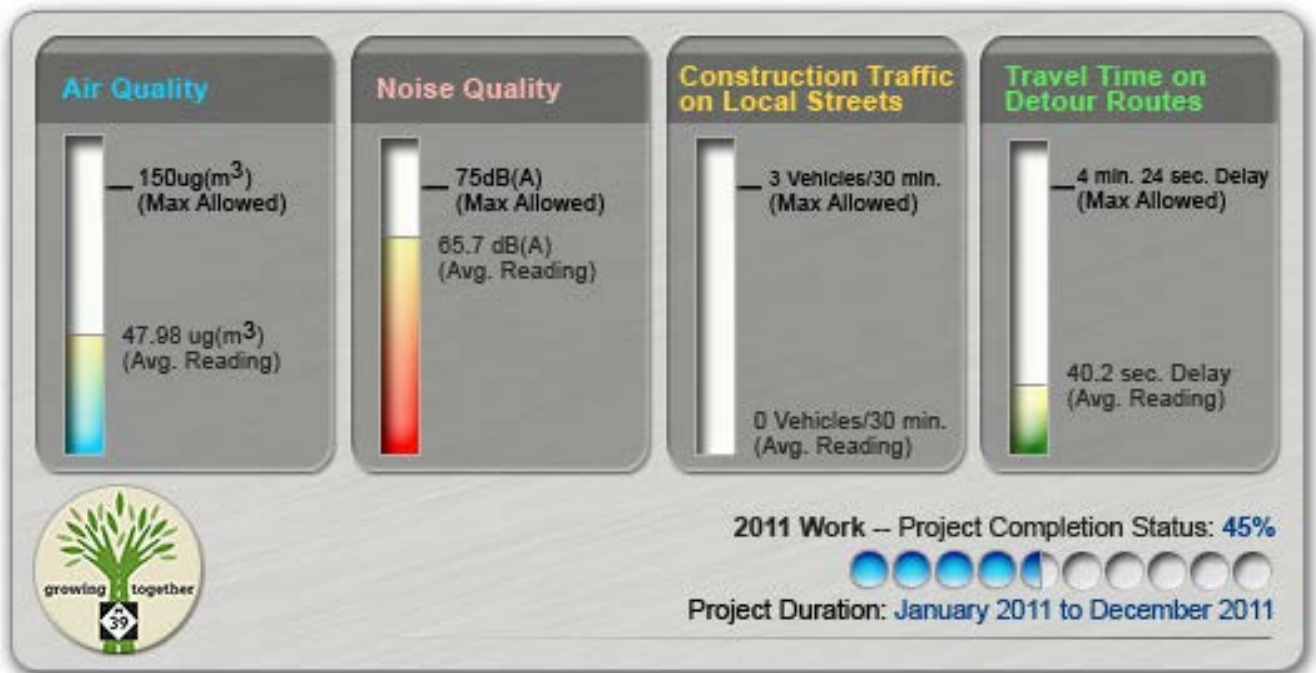
Conclusions

MDOT learned quite a bit about both the Best Value Selection and Performance Based Contracting processes that will be used in the development and execution

of any future projects using one or both of these delivery components. Key “lessons learned” are:

- 1) Although it did not occur on this project, this selection method could possibly result in the low-bidder not being the awarded contractor, and that this must be taken into consideration when determining whether to utilize this selection method.
- 2) From the survey responses, MDOT learned that if similar measures were implemented on future projects, additional measures may need to be taken to get the word out to the local community on the opportunities available, and on the successes of local business benefits and workforce engagement.
- 3) The Performance Based Contracting initiatives (both incentivized and non-incentivized) provided MDOT with regular data that allowed us to develop and post to the public performance “dashboards” to keep the community informed of how the contractor was doing. Thermometer-like graphics were posted to the project webpage to show the average evaluation results for air quality, noise, detour timing, and construction traffic in local neighborhoods. In addition, information was provided regarding the number of “local” hires and the dollars spent in the community.

Snapshot of M-39 Project Performance Measure Dashboard



- 4) For this project, MDOT used a “Best Value – Performance Based” Delivery method. Through execution, MDOT determined that the “Best Value” and “Performance Based” portions really could be separated and used alone, or could be packaged together differently with a different functionality. For example, the technical proposal could be required as a pre-qualification step, with only contractors who demonstrate a pre-determined “minimum” response to the issues stated to be addressed being invited to bid. Performance specifications and incentives could still be included, but the contract award would remain low-bid. MDOT is investigating the use of this approach on a local agency project in 2013. In addition, Performance Based specifications could be used on any low-bid project, with or without a pre-qualification or technical proposal step. Rather than using all available incentive dollars for schedule concerns, incentive dollars can be divided among multiple performance requirements. It is recommended that the specifics of any particular project be carefully considered to determine what types of Performance Requirements would be most beneficial, and what the associated thresholds should be. Community involvement via public meetings and surveys is an excellent way to determine what the needs of a particular area might be. It is important to note that some community concerns may not be able to be incentivized by law, for example local workforce concerns.
- 5) As discussed above, when scoring the technical proposals the consensus scoring team determined at the scoring meeting to begin the scores for each factor at the median point value available as long as the minimum requirements were met. The method of what “starting score” would be used was not considered during the development of the Special Provision, as the need to determine this detail was not realized until the team met. Note that zero (0) points could have been used as the starting score as well. In order to be as transparent and fair to the bidders as possible, for future projects MDOT would recommend determining in advance the details of the scoring procedures the team will use, such as what the starting score for each factor where minimum requirements are met will be, and would include this information in the Special Provision for Best Value Selection.
- 6) MDOT included language in the Special Provision for Best Value Selection that stated, “The contents of the Technical Proposal, including the technical concepts presented by the bidder in responds to the Evaluation Factors, will become the property of the Department. The Department reserves the right to use any proposed innovation or method on future projects without disclosure, or obligation to compensate the bidder.” MDOT would recommend including this language for any similar contract, so that innovations offered by all proposers may be used for the betterment of future projects.

Overall, MDOT concludes, based on the measures and lessons learned discussed in detail above, that both the Best Value Selection and Performance Based Contracting components of this Innovative Contracting Practices Special Experimental Project were very successful. The industry was willing and able to respond with high-quality proposals, there were no logistical problems in executing the selection, the awarded contractor was both the low-bidder and the highest scoring on the technical proposal, and the cost of the project was not increased due to this selection method. The contractor receiving award was able to meet and exceed all performance measures, both incentivized and non-incentivized, and met all commitments outlined in their technical proposal. The community response was very positive, and MDOT learned much about this delivery method that will help us to best use it, or variations of it, where most appropriate in the future.

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APPENDIX

**INNOVATIVE CONTRACTING PRACTICES
SPECIAL EXPERIMENTAL PROJECT NO. 14**

BEST VALUE – PERFORMANCE BASED CONTRACTING

**M-39 (Southfield Freeway)
Michigan Department of Transportation
Metro Region**

June 8, 2010

Introduction

The Michigan Department of Transportation (MDOT) is planning the rehabilitation of M-39 (Southfield Freeway) in Southfield, Detroit, Dearborn, Dearborn Heights, and Allen Park Michigan. This section of M-39 is a major urban freeway essential to the economic viability of the Metro Detroit area, serving over 164,200 vehicles per day. It is primarily a commuter route, linking western suburbs and the city, and interchanging with other major urban freeways, such as I-94, I-96 and M-10, and other principal urban arterials, including US-12 (Michigan Avenue), M-153 (Ford Road), M-5 (Grand River Avenue) and M-102 (Eight Mile Boulevard). The freeway profile runs at grade with the adjacent land use and then dips to go under bridges at road crossings. Four foot tall screen walls or cyclone fence separate the freeway from parallel service drives. The area predates the construction of noise walls, and because of both department policy and physical constraints, construction of new noise walls is not possible.

The majority of the significant project work includes bridge rehabilitation and pavement reconstruction through what is primarily a residential area of northwest Detroit. In recognition of the importance of the roadway to the adjacent community, and the impact the freeway, and its rehabilitation, has on the neighborhoods it traverses, MDOT is engaging them in a context sensitive solutions process, to understand and address the communities needs, concerns, and ideas for the project – both the physical infrastructure that will result from the project, as well as how the project is executed.

Initial outreach with the community has revealed that several “Quality of Life” concerns are consistently raised by members throughout the community. Most notably among these are:

1. **General Construction Concerns.** The community expressed concern about several issues from their experience from previous construction work by MDOT and other agencies.
 - a. Air quality, the extent of dust and debris, and the need for thorough and timely contractor clean-up during and after the project is complete.
 - b. Noise, both the regular noise of traffic, and concerns about the hours of operations and construction noise, especially late at night.
 - c. Restricting construction truck traffic on neighborhood streets.
 - d. Maintaining water pressure and other utilities to homes during construction.
 - e. Avoiding damage to adjacent property from vibration and heavy construction work, and fixing damage that does occur.

2. **Local Contractor and Workforce Participation Concerns.** High unemployment in the southeast Michigan region has drawn significant attention to major construction projects and the perceived opportunity for construction related employment for local residents. There is an expectation that members of their community can and will participate in the economic opportunities including but not limited to local work force hiring, contracting opportunities, and business development made possible by the infrastructure investment being made in their neighborhoods. There is an opportunity to tie this issue into existing efforts of MDOT's Road Construction Apprenticeship Readiness (RCAR) Program and Youth Development & Mentoring Program.
3. **Safety & Mobility Concerns.** Residents expect to be able to travel safely and with minimal disruption to and from their homes. They expect to have reasonable access to local businesses, schools and churches and major routes linking them to employment, health and human services and leisure travel. This includes ensuring vehicular safety and mobility as well as pedestrian safety and mobility, with special attention paid to the needs of the senior and youth residents in the community. Personal safety for community members and adjoining neighborhoods should also be a consideration.
4. **Schedule Concerns.** Given the overall residential and business area within the project corridor, completing the project on an accelerated schedule is key to returning normal mobility to area, with the benefit of improved infrastructure. Close attention must be given to completing each phase of the project ahead of or within the dates specified in the progress clause.

MDOT has had some success addressing similar sorts of issues with communities when building projects in the past. However, the extent of success has been limited by the creativity of just part of the project team – the MDOT designers and construction administration staff. We determine what we believe to be reasonable solutions then specify the desired outcomes or parameters that the contractor must follow. Under traditional contracting methods, we cannot easily seize upon the good ideas and abilities of the contractor to find unique ways to address the concerns of the community. While standard contracts provide the ability for contractors to propose value engineering alternatives, there is no real incentive for contractors to do so, as approaches that add community value usually do not add contractor value. Furthermore, in this process, we place ourselves, as the owner, in the middle between the contractor and the community, creating at times a contentious situation, pushing the contractor to perform above contract requirements in response to community feedback. A more productive approach might be to share the ownership of the community concerns with the contractor, so that we are all working toward the same goals.

MDOT recently completed a Best Value – Performance Based (BV-PB) contract as part of the Federal Highway Administration’s (FHWA) “Highways for Life” (HfL) program. The project was located on M-115 in Clare County and consisted of the rehabilitation of 5.5 miles of two lane, two way rural trunkline and the replacement of two large culverts. The M-115 HfL project was regarded nationally as a huge success, both in terms of the project outcomes and the process and lessons learned on how to deliver higher degrees of value through innovative contracting methods.

One notable aspect of the M-115 HfL project was the degree of attention the contractor paid to the performance criteria and achieving the desired performance outcomes and incentives. They took not only a vested interest, but a proactive role in discovering and applying innovative solutions and adjusting their work processes to ensure that the performance outcomes were achieved. Rather than meeting the baseline or minimum requirements of a specification, as is often the case in standard low bid contracts, the contractor put serious thought and effort into addressing the core issues of the project, as defined by the project performance criteria – both to ensure that they received the award of the contract, and to ensure that they received of the performance incentives, or avoidance of the disincentives.

Purpose

The purpose of this proposal is to investigate if improved response to community concerns on an urban project can be realized through the application of the contracting techniques applied on the M-115 HfL project. The M-115 HfL project proved successful in leveraging the benefits of contractor innovation and engagement in providing value around largely technical project criteria. On the M-39 project, we propose to expand those criteria to also include “Quality of Life” criteria to determine if the same innovative contracting techniques can result in improved overall value for our customers. The expanded “Quality of Life” criteria will be based on input received through the context sensitive solutions outreach process with the community.

Scope

Two innovative contracting methods are being proposed in this application – a Best Value procurement of the contract, which varies from the standard low-bid process and Performance Based contract specifications, affecting contract administration and how payment is determined for certain contract items. Specific, measurable project performance criteria will be established around key community concerns for the project.

1. MDOT proposes to select the contractor using a Best Value procurement process. The contract will be awarded to the bidder who proposes the best value as determined by a formula which will weight 40% toward a Technical Score and 60% to the Price Proposal. MDOT will develop a specification for bidding instructions that will require a contractor to submit a separate Technical Proposal, in which the bidder articulates how they will address each of the project performance criteria. The Technical Proposal will be submitted and evaluated prior to opening the contractor's Price Proposal. A methodology will be developed and included in the specification that explains how the bidder's Technical Proposal will be evaluated for each of the criteria. The bidder's Price Proposal will remain a unit price proposal, with the total sum of the extended unit prices used in the formula to determine the Successful Bidder.
2. MDOT proposes to employ Performance Based contract specifications around each of the selected project performance criteria. The project performance criteria will have a base line value that must be achieved to be in conformance with the contract. The base line value will either be established by the specification or as committed by the bidder in their Technical Proposal. Performance incentives and disincentives will be established for each of the project performance criteria for exceeding or failing to meet the contract base line performance value. A specification will be written to clarify the project performance criteria, base line values, and how measurement and payment will be determined.

Schedule

This project is scheduled to be constructed in the 2011 construction season. The contract is expected to be let in September or October, 2010, depending on funding availability. The contract will be awarded by December, 2010, following the best-value selection process and in accordance with MDOT standard contracting processes. The Performance Based contracting specifications will be in effect throughout the duration of the contract.

MDOT will develop the specifications for Best Value bidding instructions and Performance Based contracting immediately after approval of this SEP-14 proposal. MDOT will consult with the contracting industry in an open and unbiased manner during the development of the specifications, to help prepare the industry for the innovative selection and contract administration processes. MDOT will obtain approval of the final specifications from the FHWA Michigan Division.

Measures

The effectiveness of the Best Value contract selection process will be measured by:

1. The number of responsive proposals (was industry willing and able to successfully respond to this type of contract?).
2. The quality of the technical proposals.
 - a. Average, high and low technical scores, and comparison to the ranges outlined in the evaluation.
 - b. Number of innovative ideas proposed by all bidders to respond to the project performance criteria.
 - c. Number of bidder proposed base line performance criteria that exceeded the specification base line performance criteria.
3. Analysis of the overall selection process.
 - a. Issues in executing the selection process.
 - b. Comparison of Best Value results vs. Price Proposal only results.
 - c. Comparison of Price Proposals to Engineer's Estimate.

The effectiveness of the Performance Based contracting process will be measured by:

1. Contractor achievement of the project performance criteria. This data will be gathered as outlined in the specification.
2. Stakeholder perceptions of the execution of the project, with attention given to the project performance criteria subjects. This data will be gathered through qualitative surveys of:
 - a. The contractor and key subcontractors.
 - b. The MDOT project staff and consultant staff, as applicable.
 - c. Members of the communities affected.

Reporting

MDOT will prepare two reports of this innovative contracting proposal. An interim report will be prepared shortly after contract award and will address the Best Value selection process and results. A final report will be prepared within six months after completion of the project work and will address the entire project and all evaluation measures for both the Best Value selection process and the Performance Based contracting process.

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
BIDDING INSTRUCTIONS FOR BEST VALUE SELECTION

MET:MJC

1 of 12

C&T:APPR:CR:DBP:10-12-10

a. **Description.** This special provision identifies the information the bidders must include in the Technical Proposal and sets forth the process which the bidders must follow to submit the Technical Proposal. The contract for this project will not be awarded solely on price; rather it will be awarded to the bidder whose proposal represents the best value to the Department considering price and performance goals. Failure to include the required information as stated in this special provision will render the bidder's proposal unresponsive, and the bid will be rejected. Section 102 of the Standard Specifications for Construction applies, except as modified herein.

Bidders must submit 7 bound copies of the Technical Proposal by **Wednesday, November 10, 2010 at 12:00 pm** to the MDOT Contract Services Division. The Technical Proposal must not be submitted electronically; rather paper copies must be submitted. Failure to submit a Technical Proposal as described herein, will result in making the bid non-responsive. The Department will date, time stamp and log receipt of the bidder's Technical Proposal as received. The requirements for the contents of the Technical Proposal are described in section b. of this special provision.

The bid must be prepared in accordance with the Standard Specifications for Construction, and must be submitted in Bid Express by **Wednesday, November 10, 2010 at 10:30 am**. The Technical Proposal will be scored in accordance with the Bid Evaluation Process and the contract will be awarded to the bidder with the lowest Composite Score, representing the best overall value, as described in section c. of this special provision.

All bidders will be required to attend a mandatory Pre-Bid Meeting/DBE Reverse Trade Fair at the following time and location:

Date: Thursday, October 7, 2010
Time: 9:00 a.m.
Location: Doubletree Hotel Detroit/Dearborn
5801 Southfield Expressway
Detroit, MI 48228

b. Technical Proposal Requirements. The bidder's Technical Proposal must meet the following requirements:

1. The Technical Proposal document must be organized according to the instructions in this special provision.

2. The cover of the Technical Proposal must clearly identify the packages as, "Contractor's Technical Proposal for the M-39 Improvements, Job Numbers 76902A,

79531A, 79532A, 79535A, 82797A, 86926A, 87496A, 100301A, 101419A, 109419A and 109421A and must contain the following identification of the Bidder:

- A. Name of Prime Contractor.
 - B. Mailing Address of the Prime Contractor.
 - C. Contact person for the Prime Contractor (Principal or Business Manager).
 - D. Contact telephone number.
 - E. Contact facsimile number.
 - F. Contact email address.
3. All pages must be 8 1/2 inches by 11 inches.
 4. Type font must be a minimum of 12 point.
 5. Pages must be numbered continuously throughout, in the format of, "1 of ___".
 6. The entire Technical Proposal must be section tabbed and numbered, and stapled in the upper left hand corner, or bound.
 7. Graphics will be allowed, but must meet the page size requirement.
 8. The number of pages for each section (sections 1, 2, 3 and 4 as outlined below) must be limited to 5.

The Technical Proposal must contain enough detail and sufficient information for the Bid Evaluation Team to properly score the proposal and each evaluation factor therein. The Bid Evaluation Team will base its score solely on the information provided in the Technical Proposal.

The contents of the Technical Proposal, including the technical concepts presented by the bidder in response to the Evaluation Factors, will become the property of the Department. The Department reserves the right to use any proposed innovation or method on future projects without disclosure, or obligation to compensate the bidder.

The bidder's Technical Proposal will become part of the contract documents, should the bidder be awarded the contract. The bidder will be bound by the commitments made in the Technical Proposal as conditions of the contract.

The Technical Proposal must include separate sections addressing the bidder's proposed means, methods and materials to satisfy each of the Evaluation Factors, as outlined below. The majority of the significant work of the project is located in what is primarily a residential area of northwest Detroit. In recognition of the importance of the infrastructure to the adjacent community, and the impact the freeway, and its rehabilitation, has on the neighborhoods it traverses, MDOT has engaged the community in a context sensitive solutions process, to understand and address the communities needs, concerns, and ideas for the project - both the physical infrastructure that will result from the project, as well as how the project is executed.

This outreach with the community has revealed that several "Quality of Life" concerns are consistently raised by residents throughout the community. These concerns are the basis for the Evaluation Factors for the Technical Proposal as follows. The bidder must explain how he intends to address each of these concerns.

To the extent possible, the bidder must present specific actions they will incorporate into the execution of the project to satisfactorily address each concern. The bidders must describe the type and level of effort to achieve the proposed outcomes and any specific work to be performed. The Technical proposal must include a demonstration of the bidder's team's experience, expertise and ability to perform the content of his proposal with success. See the special provision for "Contractor Performance" for guidance on the individual plans required for each evaluation factor.

c. Evaluation Factors.

1. **General Construction Concerns.** The community expressed concern about several issues from their experience from previous construction work by MDOT and other agencies.

A. Air quality, the extent of dust and debris, and the need for thorough and timely contractor clean-up during and after the project is complete.

The proposal must include an "Air Quality Monitoring and Mitigation Plan" addressing how pre-construction (baseline) and during construction airborne particulates will be measured, and if increased during construction, what proposed mitigation measures will be put in place. The "Air Quality Monitoring and Mitigation Plan" should contain at a minimum:

(1) A description of measures taken to prevent decreased air quality from threshold.

(2) The response procedure and actions taken for any single measurement that exceeds threshold.

(3) A complaint response and resolution process.

(4) Mitigation measures where air quality is anticipated to be below threshold, such as:

(a) Methods above and beyond watering to control dust.

(b) Filters for equipment exhaust.

(c) Enclosures for activities anticipated to produce large amounts of air borne particulates.

(5) Any other measures which demonstrate sustaining baseline air quality measurements - methods, materials, etc.

B. Noise, concerns about the hours of operations and construction noise, especially late at night.

The proposal must include an "Ambient and Construction Noise Monitoring and Mitigation Plan" addressing how baseline noise level measurements taken prior to construction will be maintained, and how noise levels will be monitored and mitigated during construction. The "Ambient and Construction Noise Monitoring and Mitigation Plan" should contain at a minimum:

- (1) A description of noise reducing measures to meet the threshold noise levels
 - (a) Mitigation measures taken for day time work.
 - (b) Additional mitigation measures taken for night time work.
- (2) The response procedure and actions taken for any single measurement that exceeds threshold.
- (3) A complaint response and resolution process.
- (4) Mitigation measures where excessive noise levels are anticipated, such as:
 - (a) Noise curtains.
 - (b) Noise barriers.
 - (c) Equipment exhaust muffling systems.
 - (d) Idling shrouds for generators.
- (5) Any other measures which demonstrate anticipated noise reduction benefit, methods, materials, etc.

C. Restricting construction truck traffic on neighborhood streets.

The proposal must include a "Construction Traffic and Mobility Monitoring and Mitigation Plan" addressing mitigation measures to ensure traffic staging can be adjusted to eliminate construction equipment traffic from using local neighborhood streets. The "Construction Traffic and Mobility Monitoring and Mitigation Plan" should contain at a minimum:

- (1) Routes used for construction traffic and equipment to avoid neighborhood streets.
- (2) A description of measures taken to prevent construction traffic and equipment from using neighborhood streets.
- (3) The response procedure and actions taken for any single measurement that exceeds threshold.
- (4) A complaint response and resolution process.

D. Avoiding damage to adjacent property from vibration and heavy construction work, and repairing damage that does occur.

The proposal must include a "Limiting Construction Damage Plan" addressing pre-construction assessments of adjacent infrastructure, provisions for limiting impacts and vibration, and mitigation measures should damage occur. As part of the project documents, MDOT will determine maximum ground acceleration tolerances, and provide monitoring during construction. The "Limiting Construction Damage Plan" must contain at a minimum:

- (1) Understanding of the residential nature of the area.
- (2) Understanding of the ground acceleration limits established by MDOT in the "Vibration Monitoring" note as shown on page 160 of the plans (Note Sheet).
- (3) A description of measures taken to prevent removal and construction operations that could cause excessive vibration.
- (4) The response procedure and actions taken should excessive vibration levels be attained.
- (5) A complaint response and resolution process.

E. Maintaining water and gas pressure and other critical utilities to homes during construction.

The proposal must include a "Utility Assurance Plan" addressing how water and gas pressure, and other critical utility services will be maintained throughout the project. The "Utility Assurance Plan" must contain at a minimum:

- (1) Understanding of critical utilities located throughout the project limits based on information provided on the plans and in the Utility Clearance Notice to Bidders.
- (2) A description of measures taken to prevent construction impacts to utilities within the vicinity of grade changes, excavation, etc.
- (3) The response procedure and actions taken should a utility be damaged or impacted.
- (4) A complaint response and resolution process.

2. Local Contractor and Workforce Participation Concerns. High unemployment in the southeast Michigan region has drawn significant attention to major construction projects and the perceived opportunity for construction related employment for local residents. There is an expectation that members of their community can and will participate in the economic opportunities made possible by the infrastructure investment being made in their neighborhoods. There is an opportunity to tie this issue into existing efforts of MDOT's Road Construction Apprenticeship Readiness (RCAR) Program and Youth Development and Mentoring Program.

To meet established goals included in the DBE program, the Contractor must develop a "Local Workforce Development and Participation Plan" to be included in the bid demonstrating how they will better engage the local community and provide employment

opportunities where feasible. It is the expectation that the Contractor will be in close communication with the immediately impacted community regarding construction and mobility concerns, and as a part of this effort, the Contractor should provide employment opportunities to the local workforce in a manner that is consistent with the law. Nothing in this clause must be construed as requiring the Contractor to establish a local hiring or subcontracting preference.

The "Local Workforce Development and Participation Plan" must contain at a minimum:

- A. Provisions for adherence to the "Prompt Payment to Sub vendors" specification.
- B. Process for timely negotiations of contract modifications.
- C. Process for engaging the local community regarding employment opportunities.

3. **Safety and Mobility Concerns.** Residents expect to be able to travel safely and with minimal disruption to and from their homes. They expect to have reasonable access to local businesses, schools and churches and major routes linking them to employment, health and human services and leisure travel. This includes ensuring vehicular safety and mobility as well as pedestrian safety and mobility, with special attention paid to the needs of the senior and youth residents in the community. Personal safety for community members and adjoining neighborhoods should also be a consideration.

The Contractor is to develop a "Safety and Mobility Plan" to address the mobility of residents within adjacent neighborhoods, and businesses within the construction influence area. This plan must outline the measures that will be taken to ensure maximum mobility and safety during construction.

4. **Schedule Concerns.** Given the overall residential and business area within the project corridor, completing the project on an accelerated schedule is key to returning normal mobility to area, with the benefit of improved infrastructure. Close attention must be given to completing each phase of the project ahead of or within the dates specified in the progress clause.

The Technical Proposal must include provisions as to how all completion and open to traffic dates established by the progress clause will be met, or if the Contractor proposes early completion and open to traffic dates. An incentive will be provided for early open to traffic, and a disincentive will be enforced for missing minimum open to traffic dates.

The Contractor must stipulate the number of "Calendar Days of Contract Time for Opening to Traffic". A total number of calendar days to complete all work, and to open all lanes of Northbound and Southbound M-39, and all bridges included in JN's 79531A, 79532A, 79535A, 86926A and 100301A, within the time restrictions set forth in the Special Provision for Maintaining Traffic, Permanent Signing and Pavement Marking and the Progress Clause contained in this proposal. These days must be consecutive and include any weekend, Holiday, and work break shutdown periods established within the Standard Specifications for Construction.

Per the Special Provision for Maintaining Traffic, Permanent Signing and Pavement Marking, M-39 mainline must not be closed prior to the completion of all work on Stage 1 and 2 bridges requiring NB and SB M-39 service drive closures.

The work completed for "Calendar Days of Contract Time for Opening to Traffic" must include all work on the project including but not limited to pavement, bridges, bridge approaches, drainage, water main, sanitary sewer, freeway lighting, traffic signals, freeway signing, pavement markings, MITS work, and turf establishment with the exception of:

- A. Landscape items.
- B. Bridge concrete surface coatings.

No on site work will be allowed prior to the start of the "Calendar Days of Contract Time for Opening to Traffic" start date unless otherwise approved by the Engineer.

The maximum number of calendar days allowed starts January 1, 2011 at 6:00 a.m. and continues through October 31, 2011 at 11:59 p.m. The "Calendar Days of Contract Time for Opening to Traffic" time will stop when all work is complete (except as noted above), and all lanes, ramps, shoulders, and bridges are open to or accepted for traffic by the Engineer.

To the extent that the bidder wishes to propose specific changes to the physical construction as specified in the plans and proposal as a means to address one or more of the Evaluation Factors, the bidder may submit Alternate Technical Concepts for the Department's review and consideration.

The Contractor's commitments to achieve specific outcomes in the Technical Proposal will become the basis for measurement and payment of the Performance Incentives, as specified in the Special Provision for Contractor Performance.

d. Bid Evaluation Process. Bidders must submit 7 copies of the Technical Proposal by **Wednesday, November 10, 2010, at 12:00 pm** to:

Amy Meldrum, Departmental Analyst
MDOT Contract Services Division
Van Wagoner Building
425 W. Ottawa
P.O. Box 30050
Lansing, MI 48909

Bids must be submitted in Bid Express by **Wednesday, November 10, 2010, at 10:30 am.**

The Department will date/time stamp and log the Technical Proposal packages as received. Ample time should be allotted to ensure mail delivery time, and timely receipt of the proposal package.

All inquiries regarding the Best Value Contractor Selection process must be submitted to the MDOT Project Manager via the instructions on the Notice to Bidders - Inquiry on the last page of the project proposal.

The contents of the Technical Proposal and the bid will become contractual obligations for the selected Best Value bidder. Failure of the selected bidder to accept these obligations may result in no contract award.

The Technical Proposals will be scored by a Bid Evaluation Team, made up of the following members:

Detroit TSC Manager
Detroit TSC Development Engineer
Detroit TSC Delivery Engineer
Metro Region Engineer
Metro Region Planning Specialist
Director of the MDOT Office of Small Business Development
Central Selection Review Team Member

The Bid Evaluation Team will review the Technical Proposal and provide a score for each of the Evaluation Factors using the score sheet shown in Table 1.

The total Technical Proposal score will be the sum of the individual Evaluation Factor scores. After determination of the final Technical Proposal scores for all bidders, the bids will be downloaded from Bid Express and a Composite Score will be calculated for each bidder, as follows:

$$\text{Composite Score} = \frac{\text{Contractor Bid}}{\text{Technical Score}}$$

The Technical Proposal scores will be publicly announced, and the bids will be downloaded from Bid Express on **Wednesday, November 17, 2010 at 2:01 pm** at the following location:

MDOT Construction and Technology Division, Room 100
Secondary Governmental Complex
8885 Ricks Road
Lansing, MI 48909

The contract will be awarded to the bidder with the lowest Composite Score, representing the best overall value to the department. All scores will be reported in Table 2. To ensure fairness, the bids will not be downloaded from Bid Express until all of the Technical Proposals scores are announced.

Failure of the winning Contractor to implement measures outlined in their Technical Proposal as part of the various "Plans" per the "Contractor Performance" special provision will result in an interim Contractor Evaluation, and other measures up to and including Contractor prequalification reviews or revocation.

Table 1: SCORE SHEET

******ALL CONTRACTORS MUST BE SCORED******

CONTRACTORS NAME:		Maximum Possible	Rater's Score
		Best Value	Best Value
A. Factors			
1a.) General Construction Concerns: Air Quality > 0 points: A generic "Air Quality Monitoring & Mitigation Plan" is provided with no/few specifics on how the plan will be followed to achieve the goal. > 1-20 points: An adequate general "Air Quality Monitoring & Mitigation Plan" is provided with some specifics on how the plan will be followed to achieve the goal. > 21-40 points: A clearly defined "Air Quality Monitoring & Mitigation Plan" is provided with a detailed description of how the plan will be followed to achieve the goal including proven air quality assessment tools and analysis to mitigate adverse impacts to existing air quality caused by construction activities	Reviewer's Comments:	40	
1b.) General Construction Concerns: Ambient & Construction Noise > 0 points: A generic "Ambient and Construction Noise Monitoring & Mitigation Plan" is provided with no/few specifics on how the plan will be followed to achieve the goal. > 1-20 points: An adequate general "Ambient and Construction Noise Monitoring & Mitigation Plan" is provided with some specifics on how the plan will be followed to achieve the goal. > 21-40 points: A clearly defined "Ambient and Construction Noise Monitoring & Mitigation Plan" is provided with a detailed description of how the plan will be followed to achieve the goal including proven noise level assessment tools and analysis to mitigate adverse impacts to existing noise levels caused by construction activities	Reviewer's Comments	40	
1c.) General Construction Concerns: Construction Traffic & Mobility > 0 points: A generic "Construction Traffic and Mobility Monitoring & Mitigation Plan" is provided with no/few specifics on how the plan will be followed to achieve the goal. > 1-20 points: An adequate general "Construction Traffic and Mobility Monitoring & Mitigation Plan" is provided with some specifics on how the plan will be followed to achieve the goal. > 21-40 points: A clearly defined "Construction Traffic and Mobility Monitoring & Mitigation Plan" is provided with a detailed description of how the plan	Reviewer's Comments	40	

<p>will be followed to achieve the goal including minimizing construction traffic interaction with neighborhood & local business traffic</p>			
<p>1d.) General Construction Concerns: Maintaining all utilities to adjacent neighborhoods & businesses</p> <ul style="list-style-type: none"> ➤ 0 points: A generic "Utility Assurance Plan" is provided with no/few specifics on how the plan will be followed to achieve the goal. ➤ 1-20 points: An adequate general "Utility Assurance Plan" is provided with some specifics on how the plan will be followed to achieve the goal. ➤ 21-40 points: A clearly defined "Utility Assurance Plan" is provided with a detailed description of how the plan will be followed to achieve the goal including proven existing utility location assessment tools and methods to keep all utilities in service during construction. 	<p>Reviewer's Comments</p>	<p>40</p>	
<p>1e.) General Construction Concerns: Avoiding damage to adjacent private property</p> <ul style="list-style-type: none"> ➤ 0 points: A generic "Limiting Construction Damage Plan" is provided with no/few specifics on how the plan will be followed to achieve the goal. ➤ 1-20 points: An adequate general "Limiting Construction Damage Plan" is provided with some specifics on how the plan will be followed to achieve the goal. ➤ 21-40 points: A clearly defined "Limiting Construction Damage Plan" is provided with a detailed description of how the plan will be followed to achieve the goal including proven vibration monitoring methods, and other measures to limit damage to adjacent private property. 	<p>Reviewer's Comments</p>	<p>40</p>	
<p>2.) Develop a "Local Workforce Development and Participation Plan" as it relates to engaging the community adjacent to the project with employment opportunities</p> <ul style="list-style-type: none"> ➤ 0 points: A generic "Local Workforce Development and Participation Plan" is provided with no/few specifics on how the plan will be followed to achieve the goal. ➤ 1-75 points: An adequate general "Local Workforce Development and Participation Plan" is provided with some specifics on how the plan will be followed to achieve the goal. ➤ 76-150 points: A clearly defined "Local Workforce Development and Participation Plan" is provided with a detailed description of how the plan will be followed to achieve the goal of providing employment opportunities to the local work force where feasible. This should not be construed as requiring the Contractor to establish a local hiring or subcontracting preference. 	<p>Reviewer's Comments</p>	<p>150</p>	
<p>3.) Develop a "Safety and Mobility Plan" as it relates to keeping motorists safe, and limiting user delays in the</p>	<p>Reviewer's Comments:</p>	<p>100</p>	

<p>construction influence area</p> <ul style="list-style-type: none"> ➤ 0 points: A generic "Safety and Mobility Plan" is provided with no/few specifics on how the plan will be followed to achieve the goal. ➤ 1-50 points: An adequate general "Safety and Mobility Plan" is provided with some specifics on how the plan will be followed to achieve the goal. ➤ 51-100 points: A clearly defined "Safety and Mobility Plan" is provided with a detailed description of how the plan will be followed to achieve the goal maximizing mobility within the construction influence area, while addressing potential safety issues during construction activities 			
<p>4.) Project Schedule</p> <ul style="list-style-type: none"> ➤ 0 points :The Contractor proposes an open to traffic date corresponding to that which is stated in the Progress Clause ➤ 1-50 points: The contractor proposes an "Accepted to Traffic Incentive Date" prior to that stated in the Progress Clause. The score will be based on the number of days prior to the "Accepted to Traffic Incentive Date" the Contractor proposes to open the freeway using 3.33 points per day for each calendar day up to a maximum of 15 calendar days. 	<p>Reviewer's Comments:</p>	<p>50</p>	
	<p>Maximum Total</p>	<p>500</p>	
<p>SELECTION TEAM NAME</p>	<p>SELECTION TEAM MEMBER SIGNATURE</p>		<p>DATE</p>
<p>SELECTION TEAM NAME</p>	<p>SELECTION TEAM MEMBER SIGNATURE</p>		<p>DATE</p>
<p>SELECTION TEAM NAME</p>	<p>SELECTION TEAM MEMBER SIGNATURE</p>		<p>DATE</p>
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<p>SELECTION TEAM NAME</p>	<p>SELECTION TEAM MEMBER SIGNATURE</p>		<p>DATE</p>
<p>SELECTION TEAM NAME</p>	<p>SELECTION TEAM MEMBER SIGNATURE</p>		<p>DATE</p>

MICHIGAN
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION
FOR
CONTRACTOR PERFORMANCE

MET:MJC

1 of 18

C&T:APPR:CR:DBP:10-13-10

a. Description. This special provision sets forth the process for evaluation and payment to the Contractor for performance relative to the Evaluation Factors established herein, and as reflected in the Special Provision for Bidding Instructions for Best Value Selection. As part of subsection 102.13 Consideration of Proposals, this contract requires the Contractor to stipulate mitigation measures for all evaluation factors, and how these measures will be implemented as part of the project.

The majority of the significant work of the project is located in what is primarily a residential area of northwest Detroit. In recognition of the importance of the infrastructure to the adjacent community, and the impact the freeway, and its rehabilitation, has on the neighborhoods it traverses, MDOT has engaged the community in a context sensitive solutions process, to understand and address the communities needs, concerns, and ideas for the project - both the physical infrastructure that will result from the project, as well as how the project is executed. This outreach with the community has revealed that several "Quality of Life" concerns are consistently raised by members throughout the community. These concerns are the basis for the Evaluation Factors for the Contractor's performance as follows.

Please refer to the Special Provision for Bidding Instructions for Best Value Selection for technical proposal and scoring requirements. The technical proposal will be the basis for accountability of performance in accordance with commitments made in the Technical Proposal, and each of the individual concerns are addressed.

1. Evaluation Factors.

A. General Construction Concerns. The community expressed concern about several issues from their experience from previous construction work by MDOT and other agencies.

(1) Air quality, the extent of dust and debris, and the need for thorough and timely contractor clean-up during and after the project is complete.

The Contractor must implement the "Air Quality Monitoring and Mitigation Plan" as outlined in their technical proposal. MDOT will conduct random measurements at four locations at a time at the locations shown on Table 2 at random times throughout the project. An assessment consists of 4 measurements. A total of 25 assessments will be made and given a pass/fail rating. A pass rating is achieved if three of the four locations are below the threshold concentration of $150 \mu\text{g}/\text{m}^3$. The Contractor or a Contractor's representative may be present during the random air quality assessment performed by MDOT.

The assessment will focus on PM₁₀ particles measured over a 24-hour period and then compared to the threshold concentration of 150 µg/m³. All air quality measurements will be performed with equipment that is capable of measuring aerosol contaminants, is equipped with a data logger, provides real time mass concentration readings, and is properly calibrated and certified by the manufacturer. The concentration of PM₁₀ particles measured by the equipment will then be compared to the threshold concentration, which is considered an average standard.

(2) Noise, concerns about the hours of operations and construction noise, especially late at night.

The Contractor must implement the "Ambient and Construction Noise Monitoring and Mitigation Plan" as outlined in their technical proposal. The Contractor, all subcontractors, suppliers and vendors must comply with all applicable noise regulations, specification requirements, and noise level thresholds specified herein. This plan must outline how the Contractor will use efficient noise-suppression devices and employ other noise abatement measures such as enclosures and barriers necessary for the protection of the public.

All requirements set forth in the "Ambient and Construction Noise Monitoring and Mitigation Plan" and requirements specified herein must be overseen by an MDOT prequalified Acoustical Consultant employed by the Contractor. This will not be paid for separately, rather included in the project pay items. This Consultant must be prequalified in the Noise Assessment/Abatement service classification. A list of prequalified Consultants can be found on the MDOT website under the following link:

<http://mdotwas1.mdot.state.mi.us/public/psvr/>

MDOT will conduct random assessments at the locations shown on Table 2 at random times throughout the project. Active construction must be ongoing at the location selected if not, another location with active construction ongoing will be selected. A total of 25 assessments will be made during the project duration, and given a pass/fail rating based on the noise level criteria in Table 4. Each assessment will consist of up to 3 measurements of 20 minutes each within a 24 hour period. A pass rating is achieved if two of the three locations are below the Construction Noise Level Threshold in Table 4. Separate thresholds are defined for daytime, evening and nighttime noise levels. Timeframes are defined as follows:

Daytime: 7:01 am - 6:00 pm

Evening: 6:01 pm - 10:00 pm

Nighttime: 10:01 pm - 7:00 am

The Contractor or a Contractor's representative may be present during the random noise assessment.

All noise measurements must be performed with an instrument that is in compliance with the criteria for a Type 1 (Precision) or Type 2 (General Purpose) Sound Level Meter as defined in the current revision of ANSI Standard S1.4. The sound level meter must be capable of measuring dBA noise levels, and must be properly calibrated and certified by the manufacturer.

As part of the "Ambient and Construction Noise Monitoring and Mitigation Plan" the winning bidder must submit all applicable Equipment Noise Compliance Certification measurements for review and acceptance by the Engineer.

(3) Restricting construction truck traffic on neighborhood streets.

The Contractor must implement the "Construction Traffic and Mobility Monitoring and Mitigation Plan" as outlined in their technical proposal. MDOT will conduct random assessments on local neighborhood residential streets within the area bounded by Evergreen to the west, Greenfield to the east, Joy Road to the south, and 9 Mile Road to the north. Detour routes due to bridge closures, major thoroughfares and established truck routes will not be subject to the assessments. The focus will be on residential streets within the adjacent neighborhoods.

Assessments will be taken at random times throughout the project. A total of 25 assessments will be taken, and given a pass/fail rating based on the criteria in Table 7. Each assessment will consist of 30 minute reviews within local neighborhood residential streets.

Maximum incentive = \$600,000 for each factor, for a total of \$1,800,000.

Maximum disincentive = unlimited

Table 1: Maximum Incentive/Disincentive - Construction Concerns

Pass Ratings	Incentive	Disincentive
25	\$600,000	
24	\$540,000	
23	\$480,000	
22	\$420,000	
21	\$360,000	
20	\$300,000	
19	\$240,000	
18	\$180,000	
17	\$120,000	
16	\$60,000	
15	\$0	
14		\$60,000
13		\$120,000
12		\$180,000
11		\$240,000
10		\$300,000
9		\$360,000
8		\$420,000
7		\$480,000
6		\$540,000
5		\$600,000
4		\$660,000
3		\$720,000
2		\$780,000
1		\$840,000
0		\$900,000

Should the Contractor receive 0 pass ratings from the original 25 measurements, MDOT will conduct additional random measurements on a weekly basis, and an additional \$60,000 disincentive per fail rating will be assessed.

Table 2: Air Quality and Noise Measurements*

Location
M-39 @ Joy - NB service drive, NW quad
M-39 @ W. Chicago - SB service drive, SE quad
M-39 @ Plymouth - NB service drive, SW quad
M-39 @ Schoolcraft - SB service drive, NW quad
M-39 @ Fenkell - NB service drive, NW quad
M-39 @ McNichols - SB service drive, SE quad
M-39 @ Curtis - NB service drive, SE quad
M-39 @ 7 Mile - SB service drive, SE quad
M-39 @ Pembroke - NB service drive, NE quad
M-39 @ M-102 - SB service drive, SE quad
The Contractor's proposed batch plant location **

* All measurements must be taken within public right-of-way

** Measurement to be taken at lot line adjacent to the plant, no more than 50 ft ± from plant

Table 3: Ambient Air Quality Criteria ***

Location	Baseline Airborne 4-hour Particulate Concentration ($\mu\text{g}/\text{m}^3$)		
	Max	Min	Average
M-39 @ Joy	50	18	22
M-39 @ W. Chicago	18	8	10
M-39 @ Plymouth	96	14	21
M-39 @ Schoolcraft	41	8	24
M-39 @ Fenkell	64	30	39
M-39 @ McNichols	18	8	10
M-39 @ Curtis	452	16	26
M-39 @ 7 Mile	42	16	25
M-39 @ Pembroke	55	4	8
M-39 @ M-102	22	3	6

*** Pre-construction 4-hour average concentrations for information only

Table 4: Noise Level Criteria

Location	Baseline Noise Level (dBA)			Construction Noise Level Threshold (dBA)		
	Day	Evening	Night	Day	Evening	Night
M-39 @ Joy	60	60	53	75	65	58
M-39 @ W. Chicago	62	61	54	75	66	59
M-39 @ Plymouth	65	64	56	75	69	61
M-39 @ Schoolcraft	63	62	55	75	67	60
M-39 @ Fenkell	67	65	59	75	70	64
M-39 @ McNichols	69	68	59	75	73	64
M-39 @ Curtis	69	68	59	75	73	64
M-39 @ 7 Mile	66	67	62	75	72	63
M-39 @ Pembroke	71	69	62	76	74	67
M-39 @ M-102	63	61	53	75	66	58
Batch Plant	N/A	N/A	N/A	83	75	75

Table 5: Air Quality Assessment

Location	Test	Date	Time	Concentration ($\mu\text{g}/\text{m}^3$)	Threshold ($\mu\text{g}/\text{m}^3$)	Pass/ Fail
	1a				150	
	1b				150	
	1c				150	
	1d				150	
	2a				150	
	2b				150	
	2c				150	
	2d				150	
	3a				150	
	3b				150	
	3c				150	
	3d				150	
	4a				150	
	4b				150	
	4c				150	
	4d				150	
	5a				150	
	5b				150	
	5c				150	
	5d				150	
	6a				150	
	6b				150	
	6c				150	
	6d				150	
	7a				150	
	7b				150	
	7c				150	
	7d				150	
	8a				150	
	8b				150	
	8c				150	
	8d				150	

Table 5: Air Quality Assessment (continued)

Location	Test	Date	Time	Concentration (µg/m ³)	Threshold (µg/m ³)	Pass/Fail
	9a				150	
	9b				150	
	9c				150	
	9d				150	
	10a				150	
	10b				150	
	10c				150	
	10d				150	
	11a				150	
	11b				150	
	11c				150	
	11d				150	
	12a				150	
	12b				150	
	12c				150	
	12d				150	
	13a				150	
	13b				150	
	13c				150	
	13d				150	
	14a				150	
	14b				150	
	14c				150	
	14d				150	
	13a				150	
	13b				150	
	13c				150	
	13d				150	
	14a				150	
	14b				150	
	14c				150	
	14d				150	

Table 5: Air Quality Assessment (continued)

Location	Test	Date	Time	Concentration ($\mu\text{g}/\text{m}^3$)	Threshold ($\mu\text{g}/\text{m}^3$)	Pass/ Fail
	15a				150	
	15b				150	
	15c				150	
	15d				150	
	16a				150	
	16b				150	
	16c				150	
	16d				150	
	17a				150	
	17b				150	
	17c				150	
	17d				150	
	18a				150	
	18b				150	
	18c				150	
	18d				150	
	19a				150	
	19b				150	
	19c				150	
	19d				150	
	20a				150	
	20b				150	
	20c				150	
	20d				150	
	21a				150	
	21b				150	
	21c				150	
	21d				150	
	22a				150	
	22b				150	
	22c				150	
	22d				150	

Table 5: Air Quality Assessment (continued)

Location	Test	Date	Time	Concentration ($\mu\text{g}/\text{m}^3$)	Threshold ($\mu\text{g}/\text{m}^3$)	Pass/ Fail
	23a				150	
	23b				150	
	23c				150	
	23d				150	
	24a				150	
	24b				150	
	24c				150	
	24d				150	
	25a				150	
	25b				150	
	25c				150	
	25d				150	

Table 6: Noise Assessment

Location	Test	Date	Time	Actual (dBA)	Threshold (dBA)	Pass/Fail
	1a					
	1b					
	1c					
	2a					
	2b					
	2c					
	3a					
	3b					
	3c					
	4a					
	4b					
	4c					
	5a					
	5b					
	5c					
	6a					
	6b					
	6c					
	7a					
	7b					
	7c					
	8a					
	8b					
	8c					
	9a					
	9b					
	9c					
	10a					
	10b					
	10c					

Table 6: Noise Assessment (continued)

Location	Test	Date	Time	Actual (dBA)	Threshold (dBA)	Pass/Fail
	11a					
	11b					
	11c					
	12a					
	12b					
	12c					
	13a					
	13b					
	13c					
	14a					
	14b					
	14c					
	15a					
	15b					
	15c					
	16a					
	16b					
	16c					
	17a					
	17b					
	17c					
	18a					
	18b					
	18c					
	19a					
	19b					
	19c					
	20a					
	20b					
	20c					

Table 6: Noise Assessment (continued)

Location	Test	Date	Time	Actual (dBA)	Threshold (dBA)	Pass/Fail
	21a					
	21b					
	21c					
	22a					
	22b					
	22c					
	23a					
	23b					
	23c					
	24a					
	24b					
	24c					
	25a					
	25b					
	25c					

Table 7: Construction Traffic Measurements

Location	Test	Date	Time	# Trucks on local streets	Threshold	Pass/Fail
	1				3	
	2				3	
	3				3	
	4				3	
	5				3	
	6				3	
	7				3	
	8				3	
	9				3	
	10				3	
	11				3	
	12				3	
	13				3	
	14				3	
	15				3	
	16				3	
	17				3	
	18				3	
	19				3	
	20				3	
	21				3	
	22				3	
	23				3	
	24				3	
	25				3	

B. Safety and Mobility Concerns. Residents expect to be able to travel safely and with minimal disruption to and from their homes. They expect to have reasonable access to local businesses, schools and churches and major routes linking them to employment, health and human services and leisure travel. This includes ensuring vehicular safety and mobility as well as pedestrian safety and mobility, with special attention paid to the needs of the senior and youth residents in the community. Personal safety for community members and adjoining neighborhoods should also be a consideration.

The Contractor must implement the "Safety and Mobility Plan" as outlined in their technical proposal, and is responsible for maintaining the plan throughout the duration of the project unless extenuating circumstances are presented as determined by the Engineer.

MDOT will conduct field reviews to ensure conformance to the proposed Safety and Mobility Plan, maintenance of traffic special provision, and staging plans included in the project documents. Should a Value Engineering Change Proposal, or alternate staging concepts that involve changes to the maintenance of traffic and staging plans be approved by MDOT, the Contractor must provide revised plans to MDOT, and the field reviews and travel times will be based on the revised, approved plans. These reviews will evaluate the effectiveness of the safety and mobility measures implemented per the proposal.

The field reviews must consist of MDOT and Contractor personnel driving the posted detour route as dictated by the Special Provision for Maintaining Traffic, Permanent Signing and Pavement Marking, or revisions as approved by the Engineer. Time measurements will be taken starting from the first detour sign, ending with the last detour sign. A total of 25 field reviews will be conducted throughout the project duration. Each review will be conducted at a random time, during an active detour, and given a pass/fail rating. The pass/fail threshold for any detour will be the amounts above the preconstruction travel times as listed in Table 9 below:

(1) +3 min 0 sec above the pre-construction travel times for Curtis and Pembroke.

(2) +4 min 0 sec above the pre-construction travel times for Joy, West Chicago and Plymouth.

(3) +5 min 0 sec above the pre-construction travel times for Schoolcraft, Fenkell, McNichols, 7 Mile and the M-102 left turn bridge.

The focus will be on roadway detours implemented for bridge closures, rather than mainline M-39 closures.

Maximum incentive = \$500,000

Maximum disincentive = unlimited

Table 8: Maximum Incentive/Disincentive - Mobility

Pass Ratings	Incentive	Disincentive
25	\$500,000	
24	\$450,000	
23	\$400,000	
22	\$350,000	
21	\$300,000	
20	\$250,000	
19	\$200,000	
18	\$150,000	
17	\$100,000	
16	\$50,000	
15	\$0	
14		\$50,000
13		\$100,000
12		\$150,000
11		\$200,000
10		\$250,000
9		\$300,000
8		\$350,000
7		\$400,000
6		\$450,000
5		\$500,000
4		\$550,000
3		\$600,000
2		\$650,000
1		\$700,000
0		\$750,000

Should the Contractor receive 0 pass ratings from the original 25 measurements, MDOT will conduct additional random measurements on a weekly basis, and an additional \$50,000 disincentive per fail rating will be assessed.

Table 9: Pre-construction travel times (Baseline)

Location	Travel Time
Joy over M-39	8 min 30 sec
W. Chicago over M-39	7 min 30 sec
Plymouth over M-39	9 min 30 sec
Schoolcraft over M-39	11 min 30 sec
Fenkell over M-39	10 min 30 sec
McNichols over M-39	10 min 00 sec
Curtis over M-39	5 min 00 sec
7 Mile over M-39	10 min 30 sec
Pembroke over M-39	5 min 00 sec
M-39 @ M-102 (left turn bridge)	14 min 30 sec

Table 10: Construction Traffic Measurements

Detour Route	Test	Date	Time	Delay	Baseline	Pass/ Fail
	1					
	2					
	3					
	4					
	5					
	6					
	7					
	8					
	9					
	10					
	11					
	12					
	13					
	14					
	15					
	16					
	17					
	18					
	19					
	20					
	21					
	22					
	23					
	24					
	25					

C. Schedule Concerns. Given the overall residential and business area within the project corridor, completing the project on an accelerated schedule is key to returning normal mobility to area, with the benefit of improved infrastructure. Close attention must be given to completing each phase of the project ahead of or within the dates specified in the progress clause.

The maximum number of calendar days allowed for open to traffic starts January 1, 2011 at 6:00 a.m. and continues through October 31, 2011 at 11:59 p.m.

Per the Special Provision for Maintaining Traffic, Permanent Signing and Pavement Marking, M-39 mainline must not be closed prior to the completion of all work on Stage 1 and 2 bridges requiring NB and SB M-39 service drive closures.

Completing the project with the shortest possible schedule should not be the Contractor's primary focus, as this could adversely impact the previous evaluation factors. The schedule should be considered with the other evaluation factors, as all will be scored equally.

Maximum incentive = \$1,200,000

The maximum incentive will be based on \$80,000 per calendar day for every day prior to the "Accepted for Traffic Incentive Date" established by the Contractor in the Technical Proposal, or no later than October 31, 2011 at 11:59 p.m. for M-39 mainline.

Maximum disincentive = unlimited

The maximum disincentive will be based on \$80,000 per calendar day for every day past the "Accepted for Traffic Incentive Date" established by the Contractor in the Technical Proposal, or no later than October 31, 2011 at 11:59 p.m. for M-39 mainline.

b. Materials. None specified.

c. Construction. None specified

d. Measurement and Payment. Any incentive earned by the Contractor will be based on the procedures contained herein. Any incentive payment will be made using the following contract items (pay items):

Contract Item (Pay Item)	Pay Unit
Incentive, Air Quality	Dollar
Incentive, Noise.....	Dollar
Incentive, Construction Traffic	Dollar
Incentive, Mobility.....	Dollar
Incentive, Schedule	Dollar

Table 1: SCORE SHEET

****ALL CONTRACTORS MUST BE SCORED****

		CONTRACTORS NAME: <u>Dans/Hull/Ajax</u>	Maximum Possible	Rater's Score
			Best Value	Best Value
A. Factors				
1a.)	<p>General Construction Concerns: Air Quality</p> <ul style="list-style-type: none"> > 0 points: A generic "Air Quality Monitoring & Mitigation Plan" is provided with no/few specifics on how the plan will be followed to achieve the goal. > 1-20 points: An adequate general "Air Quality Monitoring & Mitigation Plan" is provided with some specifics on how the plan will be followed to achieve the goal. > 21-40 points: A clearly defined "Air Quality Monitoring & Mitigation Plan" is provided with a detailed description of how the plan will be followed to achieve the goal including proven air quality assessment tools and analysis to mitigate adverse impacts to existing air quality caused by construction activities 	<p>Reviewer's Comments:</p> <p>Discussed testing of identified mitigation measures before full implementation</p> <p>Discussed the use of extraordinary measures for mitigation to be utilized if necessary, i.e. dust curtains and dust palliative.</p> <p>Investigation of current operations and their impacts on air quality, and potential mitigation measure specific to this project.</p> <p>Identified the presence of a Community Liaison Manager and Mitigation Compliance Technician, although didn't identify qualifications for these positions.</p>	40	25
1b.)	<p>General Construction Concerns: Ambient & Construction Noise</p> <ul style="list-style-type: none"> > 0 points: A generic "Ambient and Construction Noise Monitoring & Mitigation Plan" is provided with no/few specifics on how the plan will be followed to achieve the goal. > 1-20 points: An adequate general "Ambient and Construction Noise Monitoring & Mitigation Plan" is provided with some specifics on how the plan will be followed to achieve the goal. > 21-40 points: A clearly defined "Ambient and Construction Noise Monitoring & Mitigation Plan" is provided with a detailed description of how the plan will be followed to achieve the goal including proven noise level assessment tools and analysis to mitigate adverse impacts to existing noise levels caused by construction activities 	<p>Reviewer's Comments</p> <p>Extensive discussion of "ordinary" methods for mitigation of construction noise.</p> <p>Discussion of noise generating activities such as loading broken concrete and debris into trucks, banging of dump truck tailgates, and MIOSHA required backup alarms.</p> <p>Proposed to utilize solar powered arrow and message boards to lessen noise.</p> <p>Discussion of independent noise monitoring and proposed equipment to be used.</p> <p>Identified the presence of a Community Liaison Manager and Mitigation Compliance Technician, although didn't identify qualifications for these positions.</p>	40	28
1c.)	<p>General Construction Concerns: Construction Traffic & Mobility</p> <ul style="list-style-type: none"> > 0 points: A generic "Construction Traffic and Mobility Monitoring & Mitigation Plan" is provided with no/few specifics on how the plan will be followed to achieve the goal. > 1-20 points: An adequate general "Construction Traffic and Mobility Monitoring & Mitigation Plan" is provided with some specifics on how the plan will be followed to achieve the goal. > 21-40 points: A clearly defined "Construction Traffic and Mobility Monitoring & Mitigation Plan" is 	<p>Reviewer's Comments</p> <p>Demonstrated understanding of restrictions presented by MDOT.</p> <p>Presented disciplinary plan for subcontractors, suppliers, and vendors that ignore restrictions, having presented a "no tolerance, no excuse" policy at proposed start up meeting.</p> <p>Demonstrated understanding of tendency for short cutting through neighborhoods.</p> <p>Identified many haul routes, however, some of which included residential areas.</p> <p>Proposed use of hotline for resident reporting of violations.</p> <p>Proposed implementation of internal patrols for identification of violations.</p> <p>Identified the presence of a Community Liaison Manager and Mitigation Compliance Technician, although didn't identify qualifications for these positions.</p>	40	27

✓

<p>provided with a detailed description of how the plan will be followed to achieve the goal including minimizing construction traffic interaction with neighborhood & local business traffic</p>			
<p>1d.) General Construction Concerns: Maintaining all utilities to adjacent neighborhoods & businesses</p> <ul style="list-style-type: none"> ➤ 0 points: A generic "Utility Assurance Plan" is provided with no/few specifics on how the plan will be followed to achieve the goal. ➤ 1-20 points: An adequate general "Utility Assurance Plan" is provided with some specifics on how the plan will be followed to achieve the goal. ➤ 21-40 points: A clearly defined "Utility Assurance Plan" is provided with a detailed description of how the plan will be followed to achieve the goal including proven existing utility location assessment tools and methods to keep all utilities in service during construction. <p>✓</p>	<p>Reviewer's Comments Adequate general discussion provided. Proposed to equip storm sewer crews with devices to locate buried utilities. Identified the presence of a Community Liaison Manager and Mitigation Compliance Technician, although didn't identify qualifications for these positions.</p>	<p>40</p>	<p>22</p>
<p>1e.) General Construction Concerns: Avoiding damage to adjacent private property</p> <ul style="list-style-type: none"> ➤ 0 points: A generic "Limiting Construction Damage Plan" is provided with no/few specifics on how the plan will be followed to achieve the goal. ➤ 1-20 points: An adequate general "Limiting Construction Damage Plan" is provided with some specifics on how the plan will be followed to achieve the goal. ➤ 21-40 points: A clearly defined "Limiting Construction Damage Plan" is provided with a detailed description of how the plan will be followed to achieve the goal including proven vibration monitoring methods, and other measures to limit damage to adjacent private property. <p>✓</p>	<p>Reviewer's Comments Proposed videotaping of all affected properties within vibration impact areas. Proposed use of specific consultant, Inspection Engineering, to implement vibration monitors throughout the project. Proposed use of specific vibration monitoring system. Proposed response procedure for single instances when vibrations exceed threshold. Identified the presence of a Community Liaison Manager and Mitigation Compliance Technician, although didn't identify qualifications for these positions.</p>	<p>40</p>	<p>28</p>
<p>2.) Develop a "Local Workforce Development and Participation Plan" as it relates to engaging the community adjacent to the project with employment opportunities</p> <ul style="list-style-type: none"> ➤ 0 points: A generic "Local Workforce Development and Participation Plan" is provided with no/few specifics on how the plan will be followed to achieve the goal. ➤ 1-75 points: An adequate general "Local Workforce Development and Participation Plan" is provided with some specifics on how the plan will be followed to achieve the goal. ➤ 76-160 points: A clearly defined "Local Workforce Development and Participation Plan" is provided with a detailed description of how the plan will be followed to achieve the goal of providing employment opportunities to the local work force where feasible. This should not be construed as requiring the Contractor to establish a local hiring or subcontracting preference. <p>✓</p>	<p>Reviewer's Comments Demonstrated clear understanding of requirements for local workforce development and presented several strategies for doing so. Proposed use of an onsite office for acceptance of job applications. Proposed hosting a Skilled Trade Resource Fair utilizing a recognized local coalition. Showed recognition that the result of the outreach should lead to employment of local residents. Identified an experienced local resource to be employed to aid in the recruitment of local residents. Proposed the interviewing of RCAR and CEP program graduates. Proposed opportunities for further impacts to local economy by an initiative to encourage employees to patronize local businesses. Proposed project communication tools (urban media, including radio, newspaper, flyers, web). Discussion of prompt payment and expediting of contract modifications. Please note that scoring did not consider specific numbers of employees and dollars cited.</p>	<p>160</p>	<p>108</p>

<p>3.) Develop a "Safety and Mobility Plan" as it relates to keeping motorists safe, and limiting user delays in the construction influence area</p> <ul style="list-style-type: none"> > 0 points: A generic "Safety and Mobility Plan" is provided with no/few specifics on how the plan will be followed to achieve the goal. > 1-50 points: An adequate general "Safety and Mobility Plan" is provided with some specifics on how the plan will be followed to achieve the goal. > 51-100 points: A clearly defined "Safety and Mobility Plan" is provided with a detailed description of how the plan will be followed to achieve the goal maximizing mobility within the construction influence area, while addressing potential safety issues during construction activities <p>✓</p>	<p>Reviewer's Comments: Presented detailed analysis of proposed plans for maintenance of traffic and construction staging, while acknowledging such changes will require MDOT approval. Proposed alternatives to construction staging and maintenance of traffic.</p>	<p>100</p>	<p>57</p>
<p>4.) Project Schedule</p> <ul style="list-style-type: none"> > 0 points: The Contractor proposes an open to traffic date corresponding to that which is stated in the Progress Clause > 1-50 points: The contractor proposes an "Accepted to Traffic Incentive Date" prior to that stated in the Progress Clause. The score will be based on the number of days prior to the "Accepted to Traffic Incentive Date" the Contractor proposes to open the freeway using 3.33 points per day for each calendar day up to a maximum of 15 calendar days. <p>✓</p>	<p>Reviewer's Comments: Contractor stipulated accepted to traffic date: October 15, 2011. Proposed open to traffic date: October 1, 2011.</p>	<p>50</p>	<p>50</p>
<p>Maximum Total</p>		<p>500</p>	<p>391</p>
<p>SELECTION TEAM NAME Joseph A. Kratofil, Jr.</p>	<p>SELECTION TEAM MEMBER SIGNATURE </p>	<p>11-12-10</p>	<p>DATE</p>
<p>SELECTION TEAM NAME Sue Datta</p>	<p>SELECTION TEAM MEMBER SIGNATURE </p>	<p>11-12-10</p>	<p>DATE</p>
<p>SELECTION TEAM NAME VILTON JUDNIC</p>	<p>SELECTION TEAM MEMBER SIGNATURE </p>	<p>11-12-10</p>	<p>DATE</p>
<p>SELECTION TEAM NAME RITA D. SCREWS</p>	<p>SELECTION TEAM MEMBER SIGNATURE </p>	<p>11/12/2010</p>	<p>DATE</p>
<p>SELECTION TEAM NAME Terrence M. Hicks</p>	<p>SELECTION TEAM MEMBER SIGNATURE </p>	<p>11/12/2010</p>	<p>DATE</p>
<p>SELECTION TEAM NAME MARTY CUNTOURETH</p>	<p>SELECTION TEAM MEMBER SIGNATURE </p>	<p>11/12/2010</p>	<p>DATE</p>
<p>SELECTION TEAM NAME Demetrius Parker</p>	<p>SELECTION TEAM MEMBER SIGNATURE </p>	<p>11-15-2010</p>	<p>DATE</p>

Table 1: SCORE SHEET

****ALL CONTRACTORS MUST BE SCORED****

		CONTRACTORS NAME: type/af/rate	Maximum Possible	Rater's Score
			Best Value	Best Value
A. Factors				
1a.) General Construction Concerns: Air Quality > 0 points: A generic "Air Quality Monitoring & Mitigation Plan" is provided with no/few specifics on how the plan will be followed to achieve the goal. > 1-20 points: An adequate general "Air Quality Monitoring & Mitigation Plan" is provided with some specifics on how the plan will be followed to achieve the goal. > 21-40 points: A clearly defined "Air Quality Monitoring & Mitigation Plan" is provided with a detailed description of how the plan will be followed to achieve the goal including proven air quality assessment tools and analysis to mitigate adverse impacts to existing air quality caused by construction activities ✓	Reviewer's Comments: Discussion of staging area and traffic to/from. Discussion of phasing affecting air quality. Clearly described understanding of generators of fugitive dust. Detailed discussion of specific equipment (Elgin Waterless Eagle) as further mitigation efforts to sustain air quality requirements. Clearly defined overall control measures and guidance for mitigation efforts. Discussed plan to do supplemental air quality measurements. Discussed mitigation of smaller particles through use of filters and scrubbers on large pieces of construction equipment. Demonstrated additional understanding of overall air quality issues, including PM _{2.5} size particles.	40	29	
1b.) General Construction Concerns: Ambient & Construction Noise > 0 points: A generic "Ambient and Construction Noise Monitoring & Mitigation Plan" is provided with no/few specifics on how the plan will be followed to achieve the goal. > 1-20 points: An adequate general "Ambient and Construction Noise Monitoring & Mitigation Plan" is provided with some specifics on how the plan will be followed to achieve the goal. > 21-40 points: A clearly defined "Ambient and Construction Noise Monitoring & Mitigation Plan" is provided with a detailed description of how the plan will be followed to achieve the goal including proven noise level assessment tools and analysis to mitigate adverse impacts to existing noise levels caused by construction activities ✓	Reviewer's Comments Discussed use of noise barrier and acoustical insulation as proven on past projects. Discussed strategic scheduling such to perform noise generating activities concurrently. Demonstrated understanding of the type of model of construction equipment and the affects on construction noise. Provided further noise analysis of proposed batch plant location relative to residential areas. Clear discussion of independent noise monitoring and proposed equipment to be used. Presented potential mitigation for extreme situations.	40	27	
1c.) General Construction Concerns: Construction Traffic & Mobility > 0 points: A generic "Construction Traffic and Mobility Monitoring & Mitigation Plan" is provided with no/few specifics on how the plan will be followed to achieve the goal. > 1-20 points: An adequate general "Construction Traffic and Mobility Monitoring & Mitigation Plan" is provided with some specifics on how the plan will be followed to achieve the goal. > 21-40 points: A clearly defined "Construction Traffic and Mobility Monitoring & Mitigation Plan" is provided with a detailed description of how the plan ✓	Reviewer's Comments Demonstrated understanding of restrictions presented by MDOT. Haul routes designated by city and county as appropriate are identified for use. Good plan for logging and tracking all trucks and use of "Truck Boss". Proposed communication plan (including use of flyers) of approved routes and fines and discipline of violators is presented. Identified specific concrete batch plant location, and will prevent dump trucks and agitators from using neighborhood streets to access site.	40	28	

<p>will be followed to achieve the goal including minimizing construction traffic interaction with neighborhood & local business traffic</p>			
<p>1d.) General Construction Concerns: Maintaining all utilities to adjacent neighborhoods & businesses</p> <ul style="list-style-type: none"> > 0 points: A generic "Utility Assurance Plan" is provided with no/few specifics on how the plan will be followed to achieve the goal. > 1-20 points: An adequate general "Utility Assurance Plan" is provided with some specifics on how the plan will be followed to achieve the goal. > 21-40 points: A clearly defined "Utility Assurance Plan" is provided with a detailed description of how the plan will be followed to achieve the goal including proven existing utility location assessment tools and methods to keep all utilities in service during construction. <p>✓</p>	<p>Reviewer's Comments</p> <p>Proposed use of Ground Penetrating Radar for location of potential utility crossings. Identified critical utility crossing locations, number and type. Discussed procedure for protection of utilities during construction. Proposed techniques for working around existing utilities. Discussed procedure for incident reporting, including sharing of information and corrective actions. Proposed contingency plan in the event of interruption.</p>	<p>40</p>	<p>27</p>
<p>1e.) General Construction Concerns: Avoiding damage to adjacent private property</p> <ul style="list-style-type: none"> > 0 points: A generic "Limiting Construction Damage Plan" is provided with no/few specifics on how the plan will be followed to achieve the goal. > 1-20 points: An adequate general "Limiting Construction Damage Plan" is provided with some specifics on how the plan will be followed to achieve the goal. > 21-40 points: A clearly defined "Limiting Construction Damage Plan" is provided with a detailed description of how the plan will be followed to achieve the goal including proven vibration monitoring methods, and other measures to limit damage to adjacent private property. <p>✓</p>	<p>Reviewer's Comments</p> <p>Proposed videotaping of all affected properties within vibration impact areas. Discussed proposed construction methods and equipment to be used to minimize potential damage caused by excess vibration. Discussion of process and actions to be taken when vibration thresholds are exceeded. Proposed use of a consultant to assist with vibration monitoring.</p>	<p>40</p>	<p>25</p>
<p>2.) Develop a "Local Workforce Development and Participation Plan" as it relates to engaging the community adjacent to the project with employment opportunities</p> <ul style="list-style-type: none"> > 0 points: A generic "Local Workforce Development and Participation Plan" is provided with no/few specifics on how the plan will be followed to achieve the goal. > 1-75 points: An adequate general "Local Workforce Development and Participation Plan" is provided with some specifics on how the plan will be followed to achieve the goal. > 76-150 points: A clearly defined "Local Workforce Development and Participation Plan" is provided with a detailed description of how the plan will be followed to achieve the goal of providing employment opportunities to the local work force where feasible. This should not be construed as requiring the Contractor to establish a local hiring or subcontracting preference. <p>></p>	<p>Reviewer's Comments</p> <p>Discussed promotional literature, and acknowledged the need for multiple languages for communication to the community. Proposed hosting a Skilled Trade Resource Fair for recruitment. Provided a comprehensive public awareness plan.</p>	<p>150</p>	<p>49</p>

<p>3.) Develop a "Safety and Mobility Plan" as it relates to keeping motorists safe, and limiting user delays in the construction influence area</p> <ul style="list-style-type: none"> > 0 points: A general "Safety and Mobility Plan" is provided with no/few specifics on how the plan will be followed to achieve the goal. > 1-50 points: An adequate general "Safety and Mobility Plan" is provided with some specifics on how the plan will be followed to achieve the goal. > 51-100 points: A clearly defined "Safety and Mobility Plan" is provided with a detailed description of how the plan will be followed to achieve the goal maximizing mobility within the construction influence area, while addressing potential safety issues during construction activities 	<p>Reviewer's Comments: Presented information regarding plans for communication and public outreach. Presented public complaint and resolution plan.</p>	<p>100</p>	<p>31</p>
<p>4.) Project Schedule</p> <ul style="list-style-type: none"> > 0 points: The Contractor proposes an open to traffic date corresponding to that which is stated in the Progress Clause > 1-50 points: The contractor proposes an "Accepted to Traffic Incentive Date" prior to that stated in the Progress Clause. The score will be based on the number of days prior to the "Accepted to Traffic Incentive Date" the Contractor proposes to open the freeway using 3.33 points per day for each calendar day up to a maximum of 15 calendar days. <p>V</p>	<p>Reviewer's Comments: Contractor stipulated accepted to traffic date: October 15, 2011. Proposed open to traffic date: October 1, 2011.</p>	<p>50</p>	<p>50</p>
Maximum Total		<p>500</p>	<p>264 264</p>
<p>SELECTION TEAM NAME Joseph A. Kratochvil, Jr.</p>	<p>SELECTION TEAM MEMBER SIGNATURE </p>	<p>11-12-10</p>	<p>DATE</p>
<p>SELECTION TEAM NAME Sue Datta</p>	<p>SELECTION TEAM MEMBER SIGNATURE </p>	<p>11.12.10</p>	<p>DATE</p>
<p>SELECTION TEAM NAME VICTOR SUDAL</p>	<p>SELECTION TEAM MEMBER SIGNATURE </p>	<p>11-12-10</p>	<p>DATE</p>
<p>SELECTION TEAM NAME RITA D. SCREWS</p>	<p>SELECTION TEAM MEMBER SIGNATURE </p>	<p>11/12/2010</p>	<p>DATE</p>
<p>SELECTION TEAM NAME LORRENCE M. HICKS</p>	<p>SELECTION TEAM MEMBER SIGNATURE </p>	<p>11/12/2010</p>	<p>DATE</p>
<p>SELECTION TEAM NAME Matt Cynolovich</p>	<p>SELECTION TEAM MEMBER SIGNATURE </p>	<p>11/12/2010</p>	<p>DATE</p>
<p>SELECTION TEAM NAME Demetrius Parker</p>	<p>SELECTION TEAM MEMBER SIGNATURE </p>	<p>11/15/2010</p>	<p>DATE</p>

**INNOVATIVE CONTRACTING PRACTICES
SPECIAL EXPERIMENTAL PROJECT NO. 14**

BEST VALUE – PERFORMANCE BASED CONTRACTING

**M-39 (Southfield Freeway)
Michigan Department of Transportation
Metro Region**

**Interim Report
April 27, 2011**

Introduction

Per the project Special Experimental Project NO. 14 (SEP-14) document dated June 2010; this document serves as the Interim Report addressing the M-39 Best Value Contracting selection process and results. Please refer to the project SEP-14 document, and the special provisions for “Bidding Instructions for Best Value Selection” and “Contractor Performance” for supplemental information included the appendix of this report.

Background

In November 2011, The Michigan Department of Transportation (MDOT) let a major construction project on M-39 (Southfield Freeway) in Southfield, Detroit, Dearborn, Dearborn Heights, and Allen Park Michigan. The project includes reconstruction of the roadway from McNichols to M-10, roadway rehabilitation within the rest of the project corridor, rehabilitation of 28 bridges, freeway lighting, freeway signing, ITS infrastructure, sanitary sewer replacement, and screen wall replacement. The engineer’s estimate at the time of project advertisement was \$77.3 million.

The majority of the significant project work impacts what is primarily a residential area of northwest Detroit. In recognition of the importance of the roadway to the adjacent community and other stakeholders, and the impact the freeway, and its rehabilitation has on the neighborhoods it traverses, MDOT engaged them in a context sensitive solutions process. This was to understand and address the community’s needs, concerns, and ideas for the project – both the physical infrastructure that will result from the project, as well as how the project is executed.

MDOT held a very thorough public involvement process during the design phase of the project, and three public meetings were held to provide information relative to the project, and solicit ideas and feedback from the community. Outreach with the community, and other stakeholders revealed that several “Quality of Life” concerns are consistently raised by members throughout the community. Most notably among these are:

1. **General Construction Concerns**
 - a. Air quality
 - b. Noise
 - c. Restricting construction truck traffic on neighborhood streets
 - d. Maintaining utilities to homes during construction
 - e. Avoiding damage to adjacent property from vibration.

2. **Local Contractor and Workforce Participation Concerns**

3. **Safety & Mobility Concerns**

4. **Schedule Concerns**

MDOT also proposed various maintenance of traffic strategies (full closure and detour vs. maintain one lane in each direction), their impacts to the public, and the associated construction durations with the intent that the community should decide which strategy should be chosen taking into account all of the information. Ultimately, the community chose the full closure option, with the reason most cited being the shorter construction duration.

As a result of the issues raised at the meetings, MDOT moved forward with the Best Value Contracting concept as a means to establish acceptable criteria for the quality of life issues, and the means to enforce them. We determined what we believe to be reasonable solutions then specified the desired outcomes or parameters that the Contractor must follow.

MDOT achieved this with two project specific Best Value special provisions. The first special provision entitled “Bidding Instructions for Best Value Selection” provided the technical requirements of the proposal that was to accompany the Contractor’s bid. Bid opening information, bid evaluation process information, and the score sheet MDOT devised for scoring of the proposals were also included in the specification. The second special provision entitled “Contractor Performance” contained all the evaluation criteria for the general construction concerns, workforce participation, safety and mobility, and schedule that the Contractor was to adhere to. This specification also outlined the field testing parameters, documentation process, and incentive/disincentive amounts.

As an example, for the air quality and noise concerns, MDOT worked with the Michigan Department of Environmental Quality (MDEQ), and other experts to establish baseline measurements for particulate matter in the air, and ambient decibel levels. We then researched the allowable threshold levels during construction, and developed an incentive/disincentive strategy to ensure the thresholds were maintained.

During the development of the Best Value special provisions, MDOT met with FHWA, and members of the construction industry to solicit feedback on the language, and logistics of what MDOT was asking of the industry. MDOT met with the Michigan Infrastructure and Transportation Association (MITA), and received feedback for inclusion into the specifications. MDOT also commissioned an independent third party review of the specifications, and project plans to ensure bidability and constructability. When the specifications were ready for approval, MDOT also engaged the Michigan Attorney General’s office for their feedback on the risk, and legality of the specifications, and was given the green light to advertise the project.

The contract award was based on a composite score derived from the Contractor's bid price divided by the technical proposal score. The contractor with the lowest composite score was awarded the bid.

Bid Process

To best control this process, MDOT scheduled a special letting consisting of only this project, and a five week advertisement period was used to allow more time for the industry to digest the plans and specifications, and submit inquiries. As a result of the thorough nature of which MDOT engaged the contractor industry during the development of the Best Value selection specifications, no addenda were issued as a result of contractor inquiries about the Best Value specifications. Several other addenda were issued regarding pay items and quantities, which is normal for a project this size.

During the advertisement period, MDOT held a mandatory Pre-bid Meeting/DBE Reverse Trade Fair to expose the local workforce and potential DBE contractors to the potential prime contractors. MDOT staff provided an overview of the project, and answered contractor questions regarding the nature of the work, and the logistics of the Best Value Selection.

Per the instructions in the "Bidding Instructions for Best Value Selection" special provision, the bids were submitted electronically in Bid Express, and the technical proposals were submitted to the Contract Services Division on November 10, 2011. The technical proposals were consensus scored by a team consisting of:

Detroit TSC Manager
Detroit TSC Development Engineer
Detroit TSC Delivery Engineer
Metro Region Engineer
Metro Region Planning Specialist
Director of MDOT Office of Small Business Development
Contract Services Division Administrator

The consensus scoring process was structured to be as objective as possible. A diverse cross section of MDOT staff comprised the scoring team, and for each of the technical proposal factors scored, the team started with a baseline score, and added points for good ideas and innovative thinking. The score sheet included in the special provision for "Bidding Instructions for Best Value Selection" outlined the range of scores depending on the adequacy of the proposed mitigation measures, or innovations included in the Contractor's technical proposal. Emphasis was placed on developing a consensus score for each factor, taking into account input from the entire team. Consensus scores and comments were recorded, and each team member signed the score sheets, which are included in the appendix.

To maintain security and confidentiality of the bids, and ensure the bids would not be made public until after the technical proposals were scored, the bids were electronically locked in the Bid Express program until November 17, 2011 at 2:01 pm, the date and time of the public opening. At that time, a representative from Lansing Finance, who attended the bid opening, downloaded the bids from Bid Express. The technical proposals scores, and bid results were then publicly announced at the MDOT C&T facility. Members of each contracting team were in attendance. The results are summarized below:

Contractor	Technical Proposal Score	Bid	Composite Score
Toebe/lafrate/Sanches	264	\$79,323,801.75	300469
Dan's/C.A. Hull/Ajax	341	\$71,334,854.93	209193

The Dan's Excavating team was awarded the contract.

Observations

The technical proposal scoring team was very impressed with the creativity and ingenuity of both Contractor teams in not only meeting the requirements of the Best Value specifications, but in understanding the community concerns and proposal additional measures to make the project a success.

For example, for the general construction concerns of noise, both Contractor teams identified construction activities that have the highest potential for creating noise levels that may exceed the thresholds dictated in the specifications. Both teams then identified means of independent monitoring and tracking noise data, and mitigation measures to be taken should measurements exceed the thresholds. The proposed mitigation measures, and responses to measurements exceeding thresholds were developed by the Contractor teams, and in some cases, the mitigation measures exceed MDOT's expectations.

MDOT was also impressed with both Contractor teams proposed emphasis on providing public information throughout the project, and assigning staff to facilitate ongoing communication between the Contractor, and the community.

Ultimately, the Dan's Excavating team proposal was scored higher than the Toebe team. Dan's proposal was very thorough, and in some areas, went above and beyond the original intent of some of the measurables.

They proposed the use of a Community Liaison Manager to coordinate with the public, and offer training, and employment opportunities to the local workforce.

They proposed modifications of the staging plans to shorten the duration of the M-39 full closure, and shorten pedestrian detours at the bridge approaches. They analyzed the bridge construction matrix provided by MDOT, and developed more expedited ways to stage and construct the bridge rehabilitations. They also proposed the use of a Mitigation Compliance Technician to assist in the monitoring, and maintain compliance with the various environmental mitigation efforts stemming from the community's general construction concerns.

Measures

Per the project SEP-14 document, several measures of effectiveness of the evaluation measures were outlined to be evaluated. This will ultimately determine the effectiveness Best Value Selection process. The first measure is the quality of the technical proposals based on the direction given in the "Bidding Instructions for Best Value Selection" special provision. The second measure will be the effectiveness of the performance based contracting process based on the measurables in the "Contractor Performance" specification. That analysis will be conveyed as part of the final report.

MDOT feels the technical proposals were of high quality, and showed a range of innovative ideas to meet or exceed the evaluation measures as part of the Best Value Selection. There were no logistical, or procedural issues in executing the selection process other than ensuring the bids remained sealed in Bid Express until after the technical proposal scores were announced. MDOT did schedule a special letting for this project.

In comparing the technical proposals, bids, and composite scores, Dan's was the clear winner. They had the highest technical proposal score, and the lowest bid amount. The spread between the bids was a bit surprising, and MDOT is monitoring the costs closely, as their bid was \$6 million less than the engineer's estimate. MDOT performed an unbalanced bid analysis after the letting, and determined that there were no major improprieties with Dan's bid.

The effectiveness of the performance based contracting is still being measured and assessed, along with feedback from the communities impacted by the project. Ultimately, perceptions of the execution of the project from MDOT, the Contractor, and the community will define the success of the project.

At the time this report was written, several air quality and noise random measurements had been taken throughout the project, yielding no measurements exceeding the thresholds dictated in the special provision. This is encouraging, and proves the Contractor is making a concerted effort to abide by the project provisions, and is vested in the success of the project.

SEP 14

M-39 Best Value – Performance Based Contracting Interim Report

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Final Report

Per the project SEP-14 document, a final report addressing the entire project and the effectiveness of the compliance, and/or mitigation of all the evaluation measures will be issued within six months of project completion. The majority of the work is scheduled to be complete by November 2011, with minor work and restoration continuing into the spring of 2012.

APPENDIX

- a. M-39 project INNOVATIVE CONTRACTING PRACTICES SPECIAL EXPERIMENTAL PROJECT NO. 14 (June 8, 2010)**
- b. Approved special provision for “Bidding Instructions for Best Value Selection” (October 12, 2010)**
- c. Approved special provision for “Contractor Performance” (October 13, 2010)**
- d. Best Value Selection consensus score sheets (October 12, 2010)**

Best Value Survey Questions for Community Stakeholders

This survey is being generated and distributed to gauge the community's response to the "Best Value" contract process employed by the Michigan Department of Transportation for the M-39 (Southfield Freeway project. In this innovative approach to road construction contracting the conventional low-bid process was amended to include a Best Value proposal. In the technical proposal, a number of line items were considered in the scoring process, including plans for: Air Quality Monitoring and Mitigation Plan, Ambient and Construction Noise Monitoring, Construction Traffic and Mobility Monitoring and Mitigation Plan, Limiting Construction Damage Plan, Utility Assurance Plan, Local Contractor and Workforce Participation Plan.

The only way we can serve you better or serve others better is by taking your feedback and improving on how we do business. Thanks for taking time out to complete this important survey.

1. Air Quality Monitoring and Mitigation Plan

Contractor was tasked with monitoring and mitigating excess dust and other adverse airborne particles from construction activities.

Thinking about the amount of dust and debris, how did the M-39 project relate to your expectations?:

- 1 – Much worse than I expected
- 2 – A little worse than I expected
- 3 – About what I expected
- 4 – A little better than I expected
- 5 – Much better than I expected

- 1
- 2
- 3
- 4
- 5

Thinking about the smells and exhaust from trucks and construction equipment, how did the M-39 project relate to your expectations?:

- 1 – Much worse than I expected
- 2 – A little worse than I expected
- 3 – About what I expected
- 4 – A little better than I expected
- 5 – Much better than I expected

- 1
- 2
- 3
- 4
- 5

Thinking about the amount of dirt and mud tracked from the construction equipment onto public roadways, how did the M-39 project relate to your expectations?:

- 1 – Much worse than I expected
- 2 – A little worse than I expected
- 3 – About what I expected
- 4 – A little better than I expected
- 5 – Much better than I expected

- 1
- 2
- 3
- 4
- 5

Overall, thinking about the air quality and amount of dust, debris and exhaust, please rate your satisfaction with the project?:

- 1 – very dissatisfied
- 2- somewhat dissatisfied
- 3- neutral
- 4 – somewhat satisfied
- 5 – very satisfied

- 1
- 2
- 3
- 4
- 5

2. Ambient and Construction Noise Monitoring

Contractor was tasked with monitoring and mitigating noise generated from M-39 construction activities.

To what degree did the noise generated by the M-39 construction disrupt your daily activities as a result of the construction schedule?

- 1 – to a great degree
- 2 – fairly often
- 3 – occasionally
- 4 – only once in a great while
- 5 – never

- 1
- 2
- 3
- 4
- 5

3. Construction Traffic and Mobility Monitoring and Mitigation Plan

Contractor was responsible for monitoring construction traffic that might interfere with the serenity of the neighborhood adjacent to the project.

How often did you see truck/construction vehicle traffic that may have “shortcut” through the neighborhood?

- 1 – All the time
- 2 – fairly regularly
- 3 – occasionally
- 4 – rarely
- 5 – never

- 1
- 2
- 3
- 4
- 5

How often did you notice any of the contractor's personal vehicles that may have parked in the neighborhoods adjacent to the project?

- 1 – All the time
- 2 – fairly regularly
- 3 – occasionally
- 4 – rarely
- 5 – never

- 1
- 2
- 3
- 4
- 5

4. Limiting Construction Damage Plan

Contractor was responsible for monitoring the structural integrity of buildings that might be affected by ground vibrations resulting from construction on this project.

Did you notice or feel any ground vibrations strong during the construction of the M-39 project? (yes or no)

Yes ___ No ___

5. Utility Assurance Plan

Contractor was responsible for ensuring that no construction activities interfered or impacted the operations of utilities in the area of the project

Did you experience any loss of utility service during the construction phase of the project? (yes or no). If yes, approximately how many times did this occur?

6. Local Workforce and Contractor Participation Plan

Contractor was responsible for addressing the social-economic needs of the communities that are adjacent to the project particularly focusing on; job opportunities created by the project and on-going communication for the communities affected

Were you adequately informed of events, project milestones, and/or meetings associated with the M-39 project before construction began? (yes or no) If Yes, how were you usually informed?

Yes ___ No ___

Were you made aware of training and employment opportunities for local residents for the M-39 project before actual construction began? (Yes or No). If yes, what did you hear and from whom did you hear about it?

Yes ___ No ___

Are you aware of any local businesses that may have profited by construction workers purchasing goods from their establishments? (Yes or No), If yes, how many?

Yes ___ No ___

Are you aware of any local residents who were hired as a result of the M-39 project? (Yes or No), If yes, how many?

Yes ___ No ___

Additional comments:

Performance-Based Contracting Survey for Consultants & MDOT

This survey is being generated and distributed to gauge MDOT and Consultant opinions of the effectiveness of the performance-based contracting methods used on the M-39 (Southfield Freeway) project, JN 76902. This project included a number of incentive line items for meeting specific criteria in the following categories: Air Quality, Noise, Construction Traffic, and Mobility. In addition there were non-incentivized requirements introduced by the technical proposal that included maintaining resident utility services, avoiding damage to adjacent properties, and local workforce participation.

Please take the time to complete the survey below to help us determine how successful these methods were from the Consulting perspective and to help us identify areas where improvements could be made.

AMBIENT AND CONSTRUCTION NOISE MONITORING

The assessment consisted of three tests at three randomly selected active sites that monitored the level of the noise created from the construction work.

1. Do you feel that the maximum noise levels were appropriately set for the purpose of the noise-monitoring incentive?
 - a. No, levels were set too high
 - b. No, levels were set too low
 - c. Yes, levels were set exactly where they should be
 - d. No opinion

2. Do you feel that the total number of tests was an appropriate amount to collect sufficient data for the noise-monitoring incentive?
 - a. Yes, there was an appropriate amount of tests performed
 - b. No, there were not enough tests performed
 - c. No, there were too many tests performed
 - d. No opinion

3. Do you think the method of selecting random locations along the job site was a sufficient way of choosing test locations?
 - a. Yes, the method worked well and location selections were unbiased and random
 - b. No, the location selections were biased
 - c. No opinion

Suggestions for selecting locations at random (*Optional*):

4. How would you describe the impact of the noise-monitoring incentive on the M-39 project, compared to other projects you have worked on?
 - a. Noise levels were significantly lower on the M-39 project
 - b. Noise levels were somewhat lower on the M-39 project
 - c. Noise levels were about the same on the M-39 project compared to other projects
 - d. Noise levels were somewhat higher on the M-39 project
 - e. Noise levels were significantly higher on the M-39 project
 - f. No opinion

5. Overall, do you feel that the Noise-Monitoring Initiative was an incentive that would be beneficial to use on future projects?
 - a. Yes
 - b. No
 - c. No opinion

Explain:

AIR QUALITY MONITORING AND MITIGATION

Four air tests were performed at four randomly selected active sites to monitor the clarity of the air.

1. To what degree did the contractor regulate the air quality on the M-39 project in comparison to previous projects you have worked on?
 - a. Excellent (Air quality improved)
 - b. Average (Air quality did not change)
 - c. Poor (Air quality reduced)
 - d. No opinion

2. Did you need to remind the contractor to water and sweep the roads to eliminate dust?
 - a. All the time
 - b. Frequently
 - c. Occasionally
 - d. Rarely
 - e. Never

3. If there were issues with dust on the site, how long did it take the contractor to resolve the matter to MDOT standards?

- a. Immediately (1-3 hours)
 - b. By the end of the work day
 - c. By the end of the week
 - d. No resolution/contractor ignored the issue
 - e. Not applicable
4. How would you describe the impact of the air quality initiative?
- a. Improved air quality significantly
 - b. Improved air quality somewhat
 - c. Had no impact on air quality
 - d. Had a negative impact on air quality
 - e. No opinion
5. Overall, do you feel that the Air Quality Initiative was an incentive that would be beneficial to use on future projects?
- a. Yes
 - b. No
 - c. No opinion

Explain:

SAFETY AND MOBILITY MONITORING AND MITIGATION

The monitoring consisted of twenty-five randomly selected sites that observed the time required to travel the detour routes.

1. When mobility monitoring was not being measured, how often did you observe detour signs, message boards, arrow boards, etc. that did not coordinate with the detour routes in place, creating a delay in detour times?
- a. Always
 - b. Frequently
 - c. Infrequently
 - d. Never
 - e. No opinion

2. Do you think that the maximum travel times for detours were appropriately set for the mobility incentive?
 - a. Yes, they were appropriate
 - b. No, they were too strict
 - c. No, they were too lenient
 - d. No opinion

3. Do you feel that the total number of tests was an appropriate amount to collect sufficient data for the mobility incentive?
 - a. Yes, there was an appropriate amount of tests performed
 - b. No, there were not enough tests performed
 - c. No, there were too many tests performed
 - d. No opinion

4. Overall, do you feel that the Construction Safety and Mobility Monitoring Initiative was an incentive that should be used on future projects?
 - a. Yes
 - b. No
 - c. No opinion

Explain:

CONSTRUCTION TRAFFIC AND SAFETY

The assessment consisted of twenty-five tests at randomly selected sites that monitored construction traffic through the neighborhoods.

1. During times when tests were not being conducted, how often did you observe construction equipment, personal vehicles, utility trucks, etc. parked in adjacent properties where it became a hazard for residents and/or other contractors on-site?
 - a. Always
 - b. Frequently
 - c. Infrequently
 - d. Never
 - e. No opinion

2. Do you feel that the total number of tests was an appropriate amount to collect sufficient data for the traffic and safety incentive?
 - a. Yes, there was an appropriate amount of tests performed
 - b. No, there were not enough tests performed
 - c. No, there were too many tests performed
 - d. No opinion

3. At what level did the contractor maintain the traffic and safety on the M-39 project in comparison to previous projects you have worked on?
 - a. Excellent; traffic and safety were consistently maintained during construction
 - b. Average; traffic and safety were somewhat maintained during construction
 - c. Poor; traffic and safety were not maintained during construction

4. Overall, do you think the Construction Traffic and Safety Monitoring Initiative was an incentive that should be used on future projects?
 - a. Yes
 - b. No
 - c. No opinion

Explain:

LIMITING CONSTRUCTION DAMAGE

The Limiting Construction Damage Plan consists of a preconstruction assessment of the adjacent infrastructure and limiting the impact of ground vibrations during construction.

1. How often did you hear of complaints or concerns from residents on the impact of the vibrations?
 - a. Always
 - b. Frequently
 - c. Infrequently
 - d. Never

2. If there were complaints from nearby residents about ground vibrations, did the contractor cease further work or lessen the impact if MDOT asked them to?
 - a. Always
 - b. Sometimes

- c. Never
 - d. Not applicable
3. How would you describe the impact of the Limiting Construction Damage Initiative on keeping ground vibrations to a minimum?
- a. It improved conditions
 - b. It somewhat improved conditions
 - c. It did not improve conditions
 - d. No opinion
4. Overall, do you think the Limiting Construction Damage Initiative should be used in the future?
- a. Yes
 - b. No
 - c. No opinion

Explain:

UTILITY ASSURANCE

The Utility Assurance Plan monitored the critical utility services and maintaining these services throughout the project during construction.

1. Do you feel that the contractor notified and coordinated the project work well with utility companies working on this or adjacent projects and that these utilities were not adversely affected by the project work?
- a. Always
 - b. Sometimes
 - c. Never
 - d. No opinion
2. Did the contractor maintain utility services (Water, gas and other critical utilities) for the adjacent local residents and businesses during construction?
- a. Always
 - b. Sometimes
 - c. Never
 - d. No opinion

LOCAL WORKFORCE DEVELOPMENT AND PARTICIPATION PLAN

The Local Workforce Development and Participation Plan's purpose was to engage the local community and provide employment opportunities where feasible.

1. Do you feel that the local workforce was adequately informed of the potential employment opportunities and local meetings?
 - a. Yes
 - b. No
 - c. No opinion

2. How often did you hear of local residents inquiring about a position working for the contractor?
 - a. Always
 - b. Frequently
 - c. Infrequently
 - d. Never

3. Do you feel that the project website for locals was a sufficient way for those interested in employment opportunities to obtain information?
 - a. Yes
 - b. No
 - c. No opinion

Suggestions for other methods to provide information to the locals *(Optional)*:

4. Do you feel that it would be advantageous to include the Local Workforce Initiative on future projects?
 - a. Yes
 - b. No
 - c. No opinion

Explain:

LOCAL BUSINESS IMPACT

1. Do you feel that local businesses experienced a decline in customers as a result of the M-39 project?
 - a. Yes
 - b. Somewhat
 - c. No
 - d. No opinion

2. If you answered "Yes" or "Somewhat" above, do you feel the decline in customers is likely to be:
 - a. Temporary
 - b. Permanent

ADDITIONAL COMMENTS (*Optional*):

THANK YOU FOR YOUR TIME

Best Value Survey Questions for Prime and Key Sub Contractors

This survey is being generated and distributed to gauge the Contractor's opinion of the effectiveness of the Performance Based contracting methods used on the M-39 (Southfield how Freeway) project, JN 76902. This project included a number of incentive line items for meeting specific criteria in the following categories: Air Quality, Noise, Construction Traffic, Mobility, and Schedule. In addition there were non-incentivized requirements introduced by the technical proposal that included maintaining resident utility services, avoiding damage to adjacent properties, and local workforce participation.

Please take the time to complete the survey below to help us determine how successful these methods were from the Contracting perspective and to help us identify areas where improvements could be made.

A. Air Quality

In your opinion, was the maximum allowable threshold for Air Quality Readings:

- 1 – Too low (effort required to achieve was burdensome and negatively affected work)
- 2 – Appropriate (effort required was above normal projects, but not burdensome)
- 3 – Too high (little or no effort required to achieve)

- 1
- 2
- 3

In your opinion, was the number of Air Quality measurements taken:

- 1 – Too high (more measurements taken than was needed to accurately determine effectiveness)
- 2 – Appropriate
- 3 – Too low (not enough measurements taken to accurately determine effectiveness)

- 1
- 2
- 3

In your opinion, were any of the evaluation factors for the Air Quality Incentive too stringent.

- 1 – No, all evaluation factors were reasonable and achievable
- 2 – Yes, some factors were not necessary or difficult to achieve
- 3 – No opinion

- 1
- 2
- 3

In your opinion, did the Air Quality Incentive improve the air quality on and around the M-39 Construction project in comparison to other projects you have constructed?

- 1 – Improved Air Quality Significantly
- 2 – Improved Air Quality Somewhat
- 3 – Did not Improve Air Quality
- 4 – Had a negative impact on Air Quality
- 5 – Don't Know

- 1
- 2
- 3
- 4
- 5

In your opinion, was the Air Quality Incentive/Disincentive for the required monitoring reasonable?

- 1 – Yes, the Incentive/Disincentive amount per assessment was fair
- 2 – No, the Incentive/Disincentive amount per assessment was too low
- 3 – No, Incentive/Disincentive amount per assessment was too high
- 4 – No opinion

- 1
- 2
- 3
- 4

In your opinion, should MDOT use Air Quality measurements as a Performance Based Incentive on future projects? (Please explain your reasoning below)

- 1 – Yes, Should use again
- 2 – No, Should not use again
- 3 – No opinion

- 1
- 2

● 3

Explain:

What methods were proposed in the Technical proposal to meet the Air Quality Requirements? Were these same methods used during construction, or did adjustments need to be made based on results, and if so why? Were any additional or differing methods used? Were there any "lessons learned" that would impact how you would address an incentive of this nature in the future?

B. Noise

In your opinion, was the allowable maximum threshold for Noise measurements:

- 1 – Too low (effort required to achieve was burdensome and negatively affected work)
- 2 – Appropriate (effort required was above normal projects, but not burdensome)
- 3 – Too high (little or no effort required to achieve)

● 1

● 2

● 3

In your opinion, was the number of Noise measurements taken:

- 1 – Too high (more measurements taken than was needed to accurately determine effectiveness)
- 2 – Appropriate
- 3 – Too low (not enough measurements taken to accurately determine effectiveness)

● 1

● 2

● 3

In your opinion, were any of the evaluation factors for the Noise Monitoring Incentive too stringent.

- 1 – No, all evaluation factors were reasonable and achievable

- 2 – Yes, some factors were not necessary or difficult to achieve
- 3 – No opinion

- 1
- 2
- 3

In your opinion, did the Noise Monitoring Incentive reduce the levels of construction noise on and around the M-39 Construction project in comparison to other projects you have constructed?

- 1 – Reduced Noise Significantly
- 2 – Reduced Noise Somewhat
- 3 – Did not Reduced Noise
- 4 – Had a negative impact on Reducing Noise
- 5 – Don't Know

- 1
- 2
- 3
- 4
- 5

In your opinion, was the Noise Monitoring Incentive/Disincentive for the required monitoring reasonable?

- 1 – Yes, the Incentive/Disincentive amount per assessment was fair
- 2 – No, the Incentive/Disincentive amount per assessment was too low
- 3 – No, Incentive/Disincentive amount per assessment was too high
- 4 – No opinion

- 1
- 2
- 3
- 4

In your opinion, should MDOT use Noise Monitoring as a Performance Based Incentive on future projects? (Please explain you reasoning below)

- 1 – Yes, Should use again
- 2 – No, Should not use again
- 3 – No opinion

- 1
- 2
- 3

Explain:

What methods were proposed in the Technical proposal to meet the Noise Requirements? Were these same methods used during construction, or did adjustments need to be made based on results, and if so why? Were any additional or differing methods used? Were there any "lessons learned" that would impact how you would address an incentive of this nature in the future?

C. Construction Traffic Monitoring on Neighborhood Streets

In your opinion, was the maximum allowable threshold for the Construction Traffic Monitoring:

- 1 – Too low (effort required to achieve was burdensome and negatively affected work)
- 2 – Appropriate (effort required was above normal projects, but not burdensome)
- 3 – Too high (little or no effort required to achieve)

- 1
- 2
- 3

In your opinion, was the number of the Construction Traffic measurements taken:

- 1 – Too high (more measurements taken than was needed to accurately determine effectiveness)
- 2 – Appropriate
- 3 – Too low (not enough measurements taken to accurately determine effectiveness)

- 1
- 2
- 3

In your opinion, were any of the evaluation factors for the Construction Traffic Incentive too stringent?

- 1 – No, all evaluation factors were reasonable and achievable
- 2 – Yes, some factors were not necessary or difficult to achieve
- 3 – No opinion

- 1
- 2
- 3

In your opinion, was the Construction Traffic Incentive/Disincentive for the required monitoring reasonable?

- 1 – Yes, the Incentive/Disincentive amount per assessment was fair
- 2 – No, the Incentive/Disincentive amount per assessment was too low
- 3 – No, Incentive/Disincentive amount per assessment was too high
- 4 – No opinion

- 1
- 2
- 3
- 4

In your opinion, should MDOT use Construction Traffic measurements as a Performance Based Incentive on future projects? (Please explain you reasoning below)

- 1 – No, Should not use again
- 2 – Yes, Should use again
- 3 – No opinion

- 1
- 2
- 3

Explain:

Internally, was Construction Traffic Monitored on a regular basis outside of the required random assessments performed by the Department?

- 1 – All the time
- 2 – Fairly regularly
- 3 – Occasionally
- 4 – Rarely
- 5 – Never

- 1
- 2
- 3
- 4
- 5

Internally, were measures taken to insure all sub contractors adhered to Construction Traffic restriction?

- 1 – Yes, all subcontractors were constantly notified and monitored
- 2 – Yes, occasionally it was mentioned
- 3 – No, rarely was it mentioned
- 4 – No, never, just initially at the beginning of the project

- 1
- 2
- 3
- 4

How often were contractor or sub contractor vehicles observed travelling or Parking in the neighborhoods adjacent to the project?

- 1 – All the time
- 2 – Fairly regularly
- 3 – Occasionally
- 4 – Rarely
- 5 – Never

- 1
- 2
- 3

- 4
- 5

What methods were proposed in the Technical proposal to meet the Construction Traffic on Local Streets requirements? Were these same methods used during construction, or did adjustments need to be made based on results, and if so why? Were any additional or differing methods used? Were there any "lessons learned" that would impact how you would address an incentive of this nature in the future?

D. Safety and Mobility Monitoring

In your opinion, was the maximum allowable threshold for the Safety and Mobility Monitoring:

- 1 – Too low (effort required to achieve was burdensome and negatively affected work)
- 2 – Appropriate (effort required was above normal projects, but not burdensome)
- 3 – Too high (little or no effort required to achieve)

- 1
- 2
- 3

In your opinion, was the number of Safety and Mobility measurements taken:

- 1 – Too high (more measurements taken than was needed to accurately determine effectiveness)
- 2 – Appropriate
- 3 – Too low (not enough measurements taken to accurately determine effectiveness)

- 1
- 2
- 3

In your opinion, were any of the evaluation factors for the Safety and Mobility Incentive too stringent?

- 1 – No, all evaluation factors were reasonable and achievable
- 2 – Yes, some factors were not necessary or difficult to achieve
- 3 – No opinion

- 1
- 2
- 3

In your opinion, was the Safety and Mobility Incentive/Disincentive for the required monitoring reasonable?

- 1 – Yes, the Incentive/Disincentive amount per assessment was fair
- 2 – No, the Incentive/Disincentive amount per assessment was too low
- 3 – No, Incentive/Disincentive amount per assessment was too high
- 4 – No opinion

- 1
- 2
- 3
- 4

In your opinion, should MDOT use Safety and Mobility monitoring as a Performance Based Incentive on future projects? (Please explain you reasoning below)

- 1 – No, Should not use again
- 2 – Yes, Should use again
- 3 – No opinion

- 1
- 2
- 3

Explain:

Internally, was Safety and Mobility Monitored on a regular basis outside of the required random assessments performed by the Department?

- 1 – All the time
- 2 – Fairly regularly
- 3 – Occasionally
- 4 – Rarely
- 5 – Never

- 1
- 2
- 3
- 4
- 5

In your opinion, was Safety and Mobility Plan adhered to as outlined in the approved technical proposal?

- 1 – Yes, all closures and detours were performed exactly as planned
- 2 – Yes, there were minor changes to the approved Maintaining of traffic schedule
- 3 – No, several schedule changes were required
- 4 – No, All of the schedule was revised

- 1
- 2
- 3
- 4

What methods were proposed in the Technical proposal to meet the Safety and Mobility requirements? Were these same methods used during construction, or did adjustments need to be made based on results, and if so why? Were any additional or differing methods used? Were there any “lessons learned” that would impact how you would address an incentive of this nature in the future?

E. Schedule

In your opinion, was the maximum number of calendar days allowed for open to traffic sufficient?

- 1 – Too low (effort required to achieve was burdensome and negatively affected work)
- 2 – Appropriate (effort required was above normal projects, but not burdensome)
- 3 – Too high (little or no effort required to achieve)

- 1
- 2

3

In your opinion, did the Schedule Incentive/Disincentive clause have an adverse impact on the other evaluation factors included in this project?

- 1 – No, the Schedule restrictions did NOT have an adverse impact on other incentivized factors
- 2 – Yes, the Schedule restrictions DID have an adverse impact on other incentivized factors
- 3 – No opinion

1

2

3

In your opinion, were any of the Open to Traffic criterias for the Schedule Incentive too stringent?

- 1 – No, all evaluation factors were reasonable and achievable
- 2 – Yes, some factors were not necessary or difficult to achieve
- 3 – No opinion

1

2

3

In your opinion, did the Schedule Incentive expedite the completion of the M-39 Construction project in comparison to other projects you've constructed?

- 1 – Improved Schedule Significantly
- 2 – Improved Schedule Somewhat
- 3 – Did not Schedule Quality
- 4 – Had a negative impact on the Schedule
- 5 – Don't Know

1

2

3

4

5

In your opinion, was the Schedule Incentive/Disincentive for the required monitoring reasonable?

- 1 – Yes, the dollar amount per day was fair
- 2 – No, the dollar amount per day was too low
- 3 – No, the dollar amount per day was too high
- 4 – No opinion

- 1
- 2
- 3
- 4

In your opinion, should MDOT use the project schedule as a Performance Based Incentive on future projects? (Please explain you reasoning below)

- 1 – No, Should not use again
- 2 – Yes, Should use again
- 3 – No opinion

- 1
- 2
- 3

Explain:

What methods were proposed in the Technical proposal to meet the Schedule requirements? Were these same methods used during construction, or did adjustments need to be made based on results, and if so why? Were any additional or differing methods used? Were there any "lessons learned" that would impact how you would address an incentive of this nature in the future?

F. Limiting Construction Damage Plan

Prior to construction, was a pre-construction assessments of adjacent infrastructure completed as detailed in the submitted plan?

- 1 – Yes, a complete assessment and documentation was completed
- 2 – Yes, some assessment was completed
- 3 – No, it was deemed unnecessary

- 1
- 2
- 3

Internally, was heavy construction work monitored for vibration on a regular basis to avoid damage to adjacent property?

- 1 – All the time
- 2 – Fairly regularly
- 3 – Occasionally
- 4 – Rarely
- 5 – Never

- 1
- 2
- 3
- 4
- 5

In your opinion, were the ground acceleration limits established in the project documents adhered to?

- 1 – All the time
- 2 – Fairly regularly
- 3 – Occasionally
- 4 – Rarely
- 5 – Never

- 1
- 2
- 3
- 4
- 5

What methods were proposed in the Technical proposal to meet the Limiting Construction Damage component of the Contract? Were these same methods used during construction, or did adjustments need to be made based on results, and if so why? Were any additional or differing methods used? Were there any "lessons learned" that would impact how you would address a technical proposal component for limiting construction damage in the future?

G. Utility Assurance Plan

In your opinion, were all water, gas and other critical utilities maintained to all the adjacent homes and business during construction?

- 1 – All the time
- 2 – Fairly regularly

- 3 – Occasionally
- 4 – Rarely
- 5 – Never

- 1
- 2
- 3
- 4
- 5

To the best of your knowledge, were critical utilities ever disrupted to the local community?

- 1 – All the time
- 2 – Fairly regularly
- 3 – Occasionally
- 4 – Rarely
- 5 – Never

- 1
- 2
- 3
- 4
- 5

In your opinion, were all the critical utilities located throughout the project limits clearly shown on the plans and in the Utility Clearance Notice to Bidders?

- 1 – Yes, all utilities on the project were exactly as shown on the project plans
- 2 – Yes, but there were minor differences from the project plans
- 3 – No, several utilities were not shown

- 1
- 2
- 3

What methods were proposed in the Technical proposal to meet the maintaining utility service component of the Contract? Were these same methods used during construction, or did adjustments need to be made based on results, and if so why? Were any additional or differing

methods used? Were there any "lessons learned" that would impact how you would address a technical proposal component for maintaining utilities service in the future?

H. Local Workforce and Contractor Participation Plan

To the best of your knowledge, was the local community adequately informed of events, project milestones, and/or meetings associated with the M-39 project before construction began

- Yes
- No
- Don't Know

To the best of your knowledge, was the local community made aware of training and employment opportunities for the M-39 project before actual construction began?

- Yes
- No
- Don't Know

To the best of your knowledge, how many local residents were hired as a result of the M-39 project?

- 1 – None
- 2 – 1-10
- 3 – 11- 20
- 4 – Over 20

- 1
- 2
- 3
- 4
- Don't Know

To the best of your knowledge, were any of the local employees hired as part of the M-39 project, retained as employees with the hiring contractor after the project was completed.

- 1 – None
- 2 – Yes, all employees hired were retained
- 3 – Yes, some of the employees hired were retained

- 1
- 2
- 3
- Don't Know

In your opinion, was the Workforce Participation program a viable source of qualified candidate for employment?

- Yes
- No

In your opinion, on the M-39 project, was percent of the local workforce:

- 1 – Higher than other projects you have worked on.
- 2 – Lower than other projects you have worked on.
- 3 – The same as other projects you have worked on.
- 4 – Don't Know

- 1
- 2
- 3
- 4

What methods were proposed in the Technical proposal to meet the local workforce and Contractor participation component of the Contract? Were these same methods used during construction, or did adjustments need to be made based on results, and if so why? Were any additional or differing methods used? Were there any "lessons learned" that would impact how you would address a technical proposal component for local workforce and Contractor participation in the future?

SURVEY SIZE AND NUMBER OF RESPONSES			
GROUP	SURVEY SIZE	AVG. NUMBER OF PEOPLE THAT ANSWERED QUESTIONS	AVG. NUMBER OF PEOPLE THAT SKIPPED QUESTIONS
Local Community	25	25	0
Consultants & MDOT	27	19	8
Contractors & Subcontractors	22	10	12

SUMMARY OF COMMUNITY SURVEY RESULTS		
CONSTRUCTION CONCERNS	QUESTIONS	RESULTS
Air Quality	The M-39 project met my expectations with respect to dust and debris.	80% Agree, 16% Neutral, 1% Disagree
	Smells and exhaust from trucks and construction equipment were within my expectations.	84% Agree, 12% Neutral, 1% Disagree
	The amount of dirt and mud tracked from the construction equipment onto public roadways were within my expectations.	88% Agree, 1% Neutral, 8% Disagree
	I am satisfied with the air quality and amount of dust, debris and exhaust with the project.	68% Agree, 28% Neutral, 1% Disagree
Noise	M-39 Construction noise disrupted your daily activities.	80% Rarely or Never, 1% Occasionally, 16% Frequently
Construction Traffic	I saw construction vehicle traffic take short cut through the neighborhood.	84% Rarely or Never, 8% Occasionally, 8% Frequently
	I noticed the contractor's personal vehicles parked in neighborhoods adjacent to the project.	88% Rarely or Never, 8% Occasionally, 4% Frequently
Utilities	I experienced loss of utility service during the construction phase of the project.	92% No, 8% Yes (But did not think construction was to blame)
Vibration	I felt ground vibrations during the M-39 project.	68% No, 32% Yes
Communication of Project Information	Were you adequately informed of events, project milestones, and/or meetings associated with the M-39 project before construction began?	84% Yes, 16% No, Note: Top 3 sources were email, mail, & newspaper
Local Workforce	Were you made aware of training and employment opportunities for local residents for the M-39 project before actual construction began?	22% Yes, 78% No
	Are you aware of any local residents who were hired as a result of the M-39 project?	0% Yes, 100% No
Local Business Profits	Are you aware of any local businesses that may have profited by construction workers purchasing goods from their establishments?	12% Yes, 88% No, Note: Gas and food businesses profited

SUMMARY OF CONSULTANT & MDOT SURVEY RESULTS		
CONSTRUCTION INCENTIVES/CONCERNS	QUESTIONS	RESULTS
Air Quality	<p>To what degree did the contractor regulate the air quality on the M-39 project in comparison to other projects you have worked on?</p> <p>Did you need to remind the contractor to water and sweep the roads to eliminate dust?</p> <p>If there were issues with dust on the site, how long did it take the contractor to resolve the matter to MDOT standards?</p> <p>How would you describe the impact of the air quality initiative?</p> <p>Overall, do you think the air quality initiative was an incentive that would be beneficial to use on future projects?</p>	<p>5% Air quality improved, 63% Air quality did not change, 11% Air quality reduced, 21% No opinion</p> <p>67% Frequently, 17% Occasionally, 16% Rarely or Never</p> <p>12% Within 1 to 3 hrs, 41% By the end of the day, 12% By the end of the week, 12% No resolution, 23% N/A</p> <p>37% Improved air quality, 42% No impact on air quality, 21% No opinion</p> <p>53% Yes, 37% No, 10% No opinion</p>
Noise	<p>Do you think the maximum noise levels were appropriately set for the purpose of the noise monitoring incentive?</p> <p>Do you think enough tests were performed to collect sufficient data for the noise monitoring incentive?</p> <p>Do you think the method of selecting random locations along the job site was sufficient to choose test locations?</p> <p>How would you describe the impact of the noise-monitoring incentive on the M-39 project compared to the other projects you have worked on?</p> <p>Overall, do you think the noise-monitoring initiative was an incentive that would be beneficial to use on future projects?</p>	<p>48% levels set where they should be, 9% levels too high, 4% levels too low, 39% no opinion</p> <p>26% Yes, 35% No, 39% No opinion</p> <p>38% Yes, 19% No, 43% No opinion</p> <p>19% Noise levels were lower on M-39 project, 47% Noise levels were the same on M-39 project, 10% Noise levels were higher on M-39 project, 24% No opinion</p> <p>46% Yes, 41% No, 13% No opinion</p>
Mobility	<p>When mobility was not being measured, how often did you observe detour signs, message boards, arrow boards, etc., that did not coordinate with the detour routes in place, creating a delay in detour times?</p> <p>Do you think the maximum travel times for detours were appropriately set for the mobility incentive?</p> <p>Do you think enough tests were performed to collect sufficient data for the mobility incentive?</p> <p>Overall, do you think the construction safety and mobility monitoring initiative was an incentive that should be used on future projects?</p>	<p>26% Frequently, 53% Infrequently, 11% Never, 10% No opinion</p> <p>58% Yes, 16% No - too lenient, 26% No opinion</p> <p>47% Yes, 21% No - not enough tests, 32% No opinion</p> <p>53% Yes, 26% No, 21% No opinion</p>
Construction Traffic	<p>During times when tests were not being conducted, how often did you observe construction equipment, personal vehicles, utility trucks, etc., parked in adjacent properties where it became a hazard for residents and/or other contractors on the site?</p> <p>Do you think enough tests were performed to collect sufficient data for the traffic and safety incentive?</p> <p>At what level did the contractor maintain the traffic and safety on the M-39 project in comparison to other projects you have worked on?</p> <p>Overall, do you think the construction traffic and safety monitoring initiative was an incentive that should be used on future projects?</p>	<p>16% Always or frequently, 42% Infrequently, 32% Never, 10% No opinion</p> <p>37% Yes, 32% No - there were not enough tests performed, 31% No opinion</p> <p>28% Excellent, 61% Average, 11% Poor</p> <p>53% Yes, 26% No, 21% No opinion</p>
Utilities	<p>Do you think the contractor adequately notified and coordinated the project work with the utility companies working on this or adjacent projects and that these utilities were not adversely affected by the project work?</p> <p>Did the contractor maintain utility services (water, gas, and other critical utilities) for local residents and businesses during construction?</p>	<p>11% Always, 47% Sometimes, 16% Never, 26% No opinion</p> <p>53% Always, 10% Sometimes, 37% No opinion</p>

SUMMARY OF CONSULTANT & MDOT SURVEY RESULTS		
CONSTRUCTION INCENTIVES/CONCERNS	QUESTIONS	RESULTS
Vibration	How often did you hear of complaints or concerns from residents on the impact of the vibrations?	16% Frequently or Always, 84% Infrequently or Never
	If there were complaints from the nearby residents about ground vibrations, did the contractor cease further work or lessen the impact if MDOT asked them to?	11% Always, 28% Sometimes, 61% N/A
	How would you describe the impact of the limiting construction damage initiative on keeping ground vibrations to a minimum?	47% Improved conditions, 11% Did not improve conditions, 42% No opinion
	Overall do you think the limiting construction damage initiative should be used in the future?	39% Yes, 33% No, 28% No opinion
Local Workforce	Do you think the local workforce was adequately informed of the potential employment opportunities and local meetings?	58% Yes, 16% No, 26% No opinion
	How often did you hear of local residents inquiring about a position working for the contractor?	63% Frequently, 21% Infrequently, 16% Never
	Do you think the project website for local residents was a sufficient way for those interested in employment opportunities to obtain information?	42% Yes, 21% No, 37% No opinion
	Do you think it would be advantageous to include the local workforce initiative on future projects?	63% Yes, 16% No, 21% No opinion
Local Business Profits	Do you think local businesses experienced a decline in customers as a result of the M-39 project?	26% Yes (but only temporary decline), 53% Somewhat (but only temporary decline), 11% No, 10% No opinion

SUMMARY OF CONTRACTOR/SUBCONTRACTOR SURVEY RESULTS		
CONSTRUCTION INCENTIVES/CONCERNS	QUESTIONS	RESULTS
Air Quality	<p>In your opinion, was the maximum allowable threshold for air quality readings:</p> <p>In your opinion, was the number of air quality measurements taken:</p> <p>In your opinion, were any of the evaluation factors for the air quality incentive too stringent?</p> <p>In your opinion, did the air quality incentive improve air quality on and around the M-39 project in comparison to other projects you have constructed?</p> <p>In your opinion, was the air quality incentive/disincentive for the required monitoring reasonable?</p> <p>In your opinion, should MDOT use air quality measurement as a performance based incentive on future projects?</p>	<p>100% Appropriate</p> <p>100% Appropriate</p> <p>42% No - all factors were reasonable, 8% Yes - some factors were not necessary or difficult to achieve</p> <p>42% Improved air quality, 17% Did not improve air quality, 41% Don't know</p> <p>46% Yes, 54% No opinion</p> <p>55% Yes, 45% No opinion</p>
Noise	<p>In your opinion, was the allowable maximum threshold for measuring noise:</p> <p>In your opinion, was the number of noise measurements taken:</p> <p>In your opinion, were any of the evaluation factors for the noise monitoring incentive too stringent?</p> <p>In your opinion, did the noise monitoring incentive reduce the levels of construction noise on and around the M-39 project in comparison to other projects you have constructed?</p> <p>In your opinion, was the noise monitoring incentive/disincentive for the required monitoring reasonable?</p> <p>In your opinion, should MDOT use noise monitoring as a performance based incentive on future projects?</p>	<p>9% Too low, 82% Appropriate, 9% Too high</p> <p>9% Too high, 91% Appropriate</p> <p>46% No, 18% Yes, 36% No opinion</p> <p>55% Reduced noise, 9% Did not reduce noise, 36% Don't know</p> <p>36% Yes, 9% No - the amount per assessment was too low, 9% the amount per assessment was too high, 46% No opinion</p> <p>36% Yes, 9% No, 55% No opinion</p>
Construction Traffic	<p>In your opinion, was the maximum allowable threshold for construction traffic monitoring:</p> <p>In your opinion, was the number of construction traffic measurements taken:</p> <p>In your opinion, were any of the evaluation factors for the construction traffic incentive too stringent?</p> <p>In your opinion, was the construction traffic incentive/disincentive for the required monitoring reasonable?</p> <p>In your opinion, should MDOT use construction traffic measurements as a performance based incentive on future projects?</p> <p>Internally, was construction traffic monitored on a regular basis outside of the required random assessments performed by the department?</p> <p>Internally, were measures taken to insure all subcontractors adhered to construction traffic restrictions?</p> <p>How often were contractor or subcontractor vehicles observed traveling or parking in the neighborhoods adjacent to the project?</p>	<p>100% Appropriate</p> <p>91% Appropriate, 9% Too low</p> <p>55% No, 18% Yes, 27% No opinion</p> <p>46% Yes, 18% No - Too high, 36% - No opinion</p> <p>18% No, 46% Yes, 36% No opinion</p> <p>64% All the time, 18% Regularly, 9% Occasionally, 9% Never</p> <p>91% Yes - all subcontractors were constantly notified, 9% No - restrictions were rarely mentioned</p> <p>9% Occasionally, 46% Rarely, 46% Never</p>
Mobility	<p>In your opinion, was the maximum allowable threshold for safety and mobility monitoring:</p> <p>In your opinion, was the number of safety and mobility measurements taken:</p> <p>In your opinion, were any of the evaluation factors for the safety and mobility incentive too stringent?</p> <p>In your opinion, was the safety and mobility incentive/disincentive for the required monitoring reasonable?</p> <p>In your opinion, should MDOT use safety and mobility monitoring as a performance based incentive on future projects?</p> <p>Internally, was safety and mobility monitored on a regular basis outside of the required random assessments performed by the department?</p> <p>In your opinion, was the safety and mobility plan adhered to as outlined in the approved technical proposal?</p>	<p>10% Too low - effort required to achieve was burdensome and negatively affected work, 90% Appropriate</p> <p>100% Appropriate</p> <p>40% No, 20% Yes, 40% No opinion</p> <p>50% Yes, 10% No - the amount per assessment was too high, 40% No opinion</p> <p>10% No, 30% Yes, 60% No opinion</p> <p>50% All the time, 40% Regularly, 10% Rarely</p> <p>80% Yes - closures & detours were performed exactly as planned, some minor changes approved, 20% No- several schedule changes were required or the entire schedule was revised</p>
Project Schedule	<p>In your opinion, was the maximum number of calendar days allowed for open to traffic sufficient?</p> <p>In your opinion, did the schedule incentive/disincentive clause have an adverse impact on the other evaluation factors included in this project?</p> <p>In your opinion, were any of the "Open to Traffic" evaluation factors for the schedule incentive too stringent?</p> <p>In your opinion, did the schedule incentive expedite the completion of the M-39 project in comparison to other projects you've constructed?</p>	<p>80% Appropriate, 20% Too low</p> <p>30% No, 20% Yes, 50% No opinion</p> <p>50% No, 20% Yes, 30% No opinion</p> <p>70% Improved schedule significantly or somewhat, 30% Don't know</p>

SUMMARY OF CONTRACTOR/SUBCONTRACTOR SURVEY RESULTS		
CONSTRUCTION INCENTIVES/CONCERNS	QUESTIONS	RESULTS
	In your opinion, was the schedule incentive/disincentive for the required monitoring reasonable? In your opinion, should MDOT use the project schedule as a performance based incentive on future projects?	40% Yes, 60% No opinion 20% No, 60% Yes, 20% No opinion
Utilities	In your opinion, were water, gas and other critical utilities maintained to all adjacent homes and business during construction? To the best of your knowledge, were critical utilities ever disrupted to the local community? In your opinion, were critical utilities located throughout the project limits clearly shown on the plans and in the utility clearance notice to bidders?	86% All the time, 14% Fairly regularly 71% Rarely, 29% Never 86% Yes - but there were minor changes from the project plans, 14% No - several utilities were not shown
Vibration	Prior to construction, was a pre-construction assessment of adjacent infrastructure completed as detailed in the submitted plan? Internally, was heavy construction work monitored for vibration on a regular basis to avoid damage to adjacent property? In your opinion, were the ground acceleration limits established in the project documents adhered to?	57% Yes - A complete assessment was done and documentation was completed, 43% Yes - some assessment was completed 43% All the time, 57% Fairly regularly 57% All the time, 43% Fairly regularly
Local Workforce	To the best of your knowledge, was the local community made aware of training and employment opportunities for the M-39 project before actual construction began? To the best of your knowledge, how many local residents were hired as a result of the M-39 project? To the best of your knowledge, were any of the local employees hired as part of the M-39 project retained as employees with the hiring contractor after the project was completed? In your opinion, was the Workforce Participation program a viable source of qualified candidates for employment? In your opinion, was the percent of the local workforce on the M-39 project:	78% Yes, 11% No, 11% Don't know 11% 1 to 10, 11% 11 to 20, 33% More than 20, 45% Don't know 11% Yes - all employees hired were retained, 44% Yes - some of the employees hired were retained, 45% Don't know 25% Yes, 75% No 33% Higher than other projects you have worked on, 45% Same as other projects you have worked on, 22% Don't know
Communication of Project Information	To the best of your knowledge, was the local community adequately informed of events, project milestones, and/or meetings associated with the M-39 project before construction?	78% Yes, 11% No, 11% Don't know