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**Innovative Contracting Practices  
Special Experimental Project No. 14  
WORK PLAN**

**Michigan Department of Transportation  
On the Job Training (OJT)  
Voluntary Incentive Program (VIP) Pilot**

**November 6, 2017**

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# 1.0 INTRODUCTION

In March, 2015 the Office of the Secretary of Transportation announced provisions to allow recipients of federal aid through the Federal Highway Administration (FHWA) to pilot the use of hiring preferences in federal aid contracts for the purpose of assessing if contractual provisions for local hiring preference “unduly affect competition”. The Michigan Department of Transportation (MDOT), in consultation with the Michigan Division of FHWA and our industry and community partners, considered several proposals in response to this opportunity. However, after careful analysis, MDOT determined that local hiring preferences under the conditions in the Secretary’s announcement would not be very effective in achieving the overall goal of providing improved pathways into long-term careers in the construction skilled trades for residents of localities that are traditionally underserved or economically challenged. However, in our exploration of alternatives and approaches for local hiring preferences, MDOT does believe there is an effective means to achieve this objective and is therefore submitting this proposal under Special Experimental Projects, Section 14 (SEP-14), separate and distinct from the Local Hiring Preferences Pilot Program (LHPPP).

While not part of the LHPPP, this SEP-14 proposal by MDOT intends to achieve improved outcomes for minority and disadvantaged individuals’ entry and participation in the construction skilled trades while also determining if this can be achieved without unduly affecting competition by applying a specific approach based on the contractor-centered model of how we currently administer the federal aid “On the Job Training” (OJT) program. MDOT’s proposal is to pilot a Voluntary Incentive Program (VIP) across a range of projects, and not just a single project. The goal of this pilot is to assess the impact of contractual bid incentives to increase workforce participation from historically under-represented populations (minority and low income), thereby amplifying the economic impact of federal dollars used in transportation infrastructure improvements for populations in communities whose demographics are predominantly comprised of such traditionally under-represented populations when those investments are being made. To this end, MDOT is seeking approval from the FHWA to modify the criteria for determination of low bidders through the inclusion of bid incentives (deductions) for contractors who voluntarily participate in programs to increase employment from the target populations.

In recent years, MDOT and other industry partners have placed increased importance on skills training, on-the-job-training, apprenticeships and career pathways programs that involve and require active, aggressive and collaborative input from industry, contractors, labor, state and federal as well as local community based organizations. Rather than set traditional project level goals or targets, this proposal seeks to encourage contractor innovation and competitiveness to leverage these recent collaborations through bid incentives. If successful, MDOT is optimistic that this approach will result in expanding and strengthening both the demand and supply of talent from the target populations for future transportation projects using federal funding.

**THIS SEP-14 PLAN IS REVISED FROM THE ORIGINAL PROPOSAL DATED OCTOBER 5, 2016, BASED ON ADDITIONAL CONSULTATION WITH CONTRACTOR INDUSTRY PARTNERS AND SUBSEQUENT MODIFICATIONS TO THE OJT VIP INCENTIVE PROPOSAL.**

## 2.0 BACKGROUND

The purpose of this proposal is to explore the effectiveness of bid incentives to expand the recruitment, development and retention of qualified labor from traditionally under-represented populations (minority and low income) in the heavy construction skilled trades that build federal aid highway construction projects.

The Federal Highway Administration's (FHWA) policy is to require full use of all available training and skill improvement opportunities to assure increased participation of minority groups, disadvantaged persons and women in all phases of the highway construction industry. The FHWA On-the-Job Training (OJT) Program requires the state transportation agencies (STAs) to establish apprenticeships and training programs targeted to move women, minorities, and disadvantaged individuals into journey-level positions to ensure that a competent workforce is available to meet highway construction hiring needs, and to address the historical under-representation of members of these groups in highway construction skilled crafts.

MDOT and other federal aid recipients have successfully applied innovative contracting techniques that enhance or encourage contractors to achieve the goals of the agency's customers and taxpayers. One such technique is cost plus time, or A+B, bidding, where the supplemental value proposition is associated with reducing the duration and traffic impacts of construction. Based on the premise that users of the transportation facility incur a cost related to the delays experienced by construction activities, and therefore would benefit by projects being expedited, contract provisions are established that encourage contractors to apply their creativity and competitive advantages to accelerate the work. Bidders are given the opportunity in the bidding process to specify the number of days in which they can complete the project. These days are converted to a dollar value (B), and added to the contractor's bid price for the work itself (A). Consequently, the bidder who can commit to a faster schedule, has a lower value for (B), making his overall bid more competitive. Accountability is embedded in the process by assigning a corresponding daily incentive and disincentive amount, such that for every day the contractor takes longer than his bid number of days (B), he incurs a disincentive, but for every day the contractor completes the project sooner than his bid number of days (B), he earns an incentive. MDOT's experience has been that A+B contracts are highly effective in achieving both the value objective of accelerating the work as well as achieving a highly competitive bidding environment that encourages each contractor to leverage their strengths and maximize their creativity in achieving the desired outcome.

Through another SEP-14 project, MDOT also piloted a Best Value Performance Based (BVPB) contracting process on the reconstruction of the M-39 freeway in northwest Detroit in 2011. Built off the success we experienced from a Highways for Life BVPB procurement on M-115 that addressed several technical issues, the M-39 BVPB pilot sought to encourage the same degree of contractor innovation and attention on issues that were important to the community, including noise, air quality, construction traffic in the adjacent neighborhoods, as well as local contractor and labor participation. Bidders were required to submit a technical proposal explaining how they intended to address all of these issues. Their proposals were scored, and the scores factored into their bid prices to determine the effective, best value for purposes of awarding the contract. For all but the last two issues, MDOT developed specific, measurable targets, implemented a random sample measurement process, and applied an incentive/disincentive structure based on the contractor's performance. Due to the interpretation of federal regulations at that time, specific measurements and incentives were not applied to the local contractor and labor elements of the value proposition, but the bidders' approaches to these issues in their technical proposals were scored,

and the contractor who received the award was held accountable to follow through on those items to which they committed in their proposal. Overall, our conclusion was that this BVPB procurement and contract administration process was effective at achieving the value propositions that were important to the community. Similar to cost plus time or A+B contracting, BVPB contracting places value on items beyond just the price for the physical construction to determine the most responsive bidder, and incentivizes the awarded contractor to achieve or exceed the desired outcomes.

The bottom line from both of these examples is that contract incentives are effective tools for capturing the attention and creativity of contractors, achieving specified outcomes and motivating new behaviors and practices that the owner agency deems important relative to the needs and expectations of their customers.

Traditionally, local hiring preferences are thought of in terms of simple targets or quotas for the mix of the labor pool on a specific project. While easy to articulate, and appealing in their rhetorical application, such artificial targets fail to acknowledge the realities and complexities of how the heavy construction industry works to deliver high quality, cost-competitive infrastructure. These realities and complexities include the following factors.

- a. Road and bridge construction depends on highly skilled, trained and experienced workers. Many people perceive that road and bridge construction, because the work is performed outside in “dirty” conditions, is unskilled labor that anyone could walk off the street and perform. Nothing could be farther from the truth. The heavy construction industry is rooted in a skilled trades workforce, with specific and rigorous qualifications for entry, training, and experience to successfully and safely perform the work of any project.
- b. Construction skilled trades are a career choice, not just a job on a project. Building on the premise above, development of the skills to successfully perform heavy construction work takes time and experience across multiple projects and multiple years. We know that most heavy construction projects do not span a sufficient length of time to gain the requisite experience; therefore, workers must necessarily move from project to project, which may or may not be located in the same “local” community in which they reside. The very nature of the heavy construction workforce is one that is flexible, mobile, and applicable across many projects within a larger regional area.
- c. The effective and efficient use of skilled labor in heavy construction is crew-based. Contractors assemble crews of workers to learn and perform specific types of tasks, resulting in greater quality and efficiency in the performance of tasks that are commonly needed on most projects. Crew productivity and quality is achieved by the degree of consistency in working predominantly with the same group of people over time, understanding each individual’s abilities and contributions to the work of the whole, while learning and training together and from each other. Keeping a cohesive crew together as much as possible is necessary for the success of the individual crew members and quality project outcomes.
- d. Heavy construction, crew-based work is transitory. Work crews move from project to project within a region that spans multiple localities, wherever a contractor may have projects, such that all projects are completed according to their progress schedules and the crews are applying their skills and abilities most efficiently. The notion that any given work crew stays on one project for their entire season is not plausible. Therefore, if work crews are limited by traditional local hiring preferences, the “local” labor would only be applied when the crew is working on that specific, local

project. They would not be able to transition to work outside their locality, which would be detrimental for both the contractor, in terms of managing their crews' quality and productivity, the workers, in terms of stable, reliable employment, and the owner, in terms of achieving the desired quality and timely outcomes at the most efficient cost.

Consequently, while it may be easy to say, "We want you to hire more 'local' workers on this project", that approach ignores the reality of how heavy construction work is executed and how individual workers develop and apply their skills in the industry over the long term. While the desired, visible outcome might be to see local workers engaged in any given project, the true goal should be to have local workers holding successful, long term careers in the skilled trades of their choice. The question at hand is how to encourage and overcome any barriers that inhibit the latter. The solution is not a "one and done" scenario that can be applied project by project or community by community. The solution must be thought of as a long-term strategy that spans across projects, across a larger geographic area, across broader programs, and across multiple years of cooperative partnerships between owner agencies, communities, contractors, labor, and training institutions that build toward sustainable, long term career success for the target populations.

MDOT, in partnership with the construction industry and heavy construction skilled trades unions have explored this issue in depth over the past several years. One of the outcomes of these endeavors has been the transformation of our federal aid "On the Job Training" (OJT) program from a project-based focus to a contractor-centered focus. For contractors who are awarded and perform above a threshold amount of federal aid work each year with MDOT, a minimum number of OJT positions is assigned that they must fill and maintain during the course of the year. In this way, contractors can place OJTs in meaningful work assignments, such that they learn and become productive members of crew-based work. It also ensures that they remain actively engaged, because they are unencumbered by individual project labor requirements and can move from project to project with their crews. This change has proven to be more successful in recruiting, developing and retaining OJTs, leading toward their ultimate entry into apprenticeships, journey level status, and full-time employment in the heavy construction industry.

Another outcome of the partnership with the industry has been the creation of pre-apprenticeship recruitment and training programs that are specifically tailored to the heavy construction industry. Such programs have ensured that the program graduates meet the needs and expectations that contractors have for their employees to be productive members of their team, and provide the participants with the readiness to successfully meet the requirements of the skilled trade apprenticeship programs they seek to enter. The proposal herein aspires to build upon and leverage such initiatives.

MDOT proposes to evaluate the effectiveness of an approach that uses bid incentives to reward behaviors that result in long term recruitment, development and retention of quality, skilled labor from the targeted populations. The model proposed herein would incentivize contractors for applying efforts and creative techniques, allowing them to leverage their approach as a competitive advantage in the bidding and award of federal aid projects. Some factors to consider as we apply this model, include:

- a. The supply and demand equation. Michigan struggled significantly through the recession of 2008-2012, and the heavy construction industry especially. The demand for labor stagnated as private sector heavy construction work largely came to a halt. State and federal public investments have remained steady but insufficient to create any significant demand for additional labor in the

marketplace. However, the private market is beginning to generate new demand, and we remain optimistic that state and federal law makers soon resolve the long-standing underinvestment in public infrastructure, thus generating more public-sector demand too. The model being proposed here could serve as an effective tool to begin building a supply reservoir in the workforce development pipeline to meet the anticipated future demand in the industry.

- b. A long term, career-minded approach. Understanding the nature of the supply and demand in the labor pool, our approach should be one that is demand driven. Not only is important to not displace current skilled, trained, experienced workers in the industry, the recruitment of new labor should be predicated on eventual placement into a skilled trade position in a construction company. Since the underlying motivation is to leverage federal aid investments to help lift persons out of the cycle of unemployment or underemployment, the processes employed should lead to successful entry into skilled trade careers and not just “potential” opportunities or short-term employment.
- c. Prime and subcontracting realities. MDOT’s contracts are with the prime contractors, who are required to self-perform at least 40% of the work. However, in many cases the primes subcontract a substantial portion of work to subcontractors. The model must reflect the means by which the provisions either would or would not apply to subcontractors as well as the prime contractors.

### **3.0 PROJECT SCOPE**

MDOT, in consultation with the road building industry, has developed modifications to our OJT program procedures to include provisions for a Voluntary Incentive Program (VIP) pilot. In addition, MDOT has also developed contract specifications to be used on select projects to modify the terms for consideration of bids. These OJT program changes are being submitting concurrently for review and approval by the EEO Officer of the FHWA Michigan Division. These documents are contained in the appendix of this proposed work plan for reference, as they are integral to the proposed SEP-14 work plan.

Building off the MDOT’s existing contractor-centered OJT program, the proposed OJT VIP Pilot procedures provide for the methodology for recognizing contractors who voluntarily elect to employ more OJT employees than their normal allocation, or provide more hours of work to their currently allocated OJT employees, resulting in more experience and faster graduation into permanent skilled trades careers. The proposed procedures are provided in the appendix.

This SEP-14 request proposes to offer and apply bid incentives (deductions from the bid amount) for selected projects to bidders who have voluntarily worked their OJT employees additional hours than the established baselines and/or hired and worked additional OJT employees, more than their required allocation, the terms of which are articulated in the OJT VIP Pilot Program Procedures found in the appendix.

## 4.0 SCHEDULE

MDOT proposes that this pilot program be approved for a period of 4 calendar years, from 2018 through 2021. While we understand the need to have defined time limits on pilot initiatives, because skilled trades employment and development is a long-term commitment of time and resources for both the employee and employer, it is essential that the proposed pilot parameters be in place long enough to encourage a shift in behavior and an opportunity for employers to realize the benefits of their investment in people over the long term.

The proposed schedule for implementation of the OJT VIP Pilot will be follows:

<b>Date</b>	<b>Milestones</b>
January, 2018	MDOT determines and communicates the OJT allocation for contractors for Calendar Year (CY) 2018 (January 2018 through December 2018) according to the OJT program procedures.
	MDOT determines and communicates a list of Incentive Year (IY) 2019 projects (March 2019 through February 2020) for consideration of inclusion in the OJT VIP Pilot program
CY 2018	Contractors employ OJTs and work them according to the hours and provisions in the OJT VIIP Pilot Program Procedures, if they intend to voluntarily pursue OJT VIP incentives in IY 2019.
January 2019	MDOT evaluates contract compliance with the OJT VIP Pilot Program Procedures and determines the total number of qualifying OJT employee hours for CY 2018 and associated bid incentive for IY 2019. Contractors will be notified and all determinations made publicly available by February 1 <sup>st</sup> .
March 2019 – February 2020	Contractors apply their bid incentives to projects selected by MDOT in accordance with the Special Provisions
CY 2019-21	The steps above are repeated for each calendar year, 2019 through 2021



## 5.0 EVALUATION PROCESS

MDOT proposes to evaluate this pilot program through a series of evaluations.

1. At the conclusion of the bidding of each contract within the pilot program, MDOT will evaluate the bidding process to determine if an overall competitive bidding environment is preserved. Specifically, we will record:
  - a. The number of bidders, and the comparison to the average number of bidders for projects of that project's relative size.
  - b. The number of bidders that elected to apply their bid incentive.
  - c. Whether or not the bid incentive changed the outcome of who was the successful low bidder.
  - d. anomalies in the bidding that may be identified through an unbalanced bid review, if such as review is performed.
2. At the end of each year in the OJT VIP Pilot, MDOT will evaluate hiring practices by contractors in the OJT program. The evaluation will include, but not be limited to:
  - a. The number of additional hours worked by all OJT employees compared to previous years, by contractor and in total for the Michigan OJT Program.
  - b. The number of contractors who voluntarily hired additional OJT employees.
  - c. The number of additional OJTs (in excess of the required allocation) that are retained beyond the performance year and/or graduate.
  - d. The degree of compliance with the OJT Program Procedures relative to completion of the individual training program for each of the OJT employees.
  - e. The number of OJT employees who are retained as permanent employees by the contractor after completion of the OJT program.
  - f. The number of OJT employees who remain in the heavy construction skilled trades with any employer after completion of the OJT program.
  - g. Any other factors or considerations the workers are aware of that may have been a result of the pilot specifications.

3. At the end of each year of the OJT VIP Pilot, starting in 2019, MDOT will evaluate the overall program impacts of the OJT VIP Pilot Program. The evaluation will include, but not be limited to:
  - a. Number of contracts included in the pilot.
  - b. Average number of bidders for projects in the pilot.
  - c. Average number of bidders who qualified for and used their OJT VIP bid incentive.
  - d. Number and percent of contracts in which the OJT VIP bid incentive changed the outcome of which contractor was determined to be the lowest responsive bidder.
  - e. An analysis for awarded contract amounts compared to the Engineer's Estimate, to see how the bid incentive affected bid prices.
4. At least once annually, MDOT convenes a meeting of the OJT Steering Committee, which includes representation for the contractors and skilled trades unions throughout the state. A discussion will be included in each year of the pilot at these meetings to document success stories, concerns and issues by the industry on how the OJT VIP Pilot program is working. Adjustment may be made to the OJT VIP Pilot Program Procedures and associated special provisions as deemed appropriate, and in consultation with the FHWA Michigan Division.

## 6.0 REPORTING

MDOT will prepare and submit the following reports during and following the implementation of the OJT Incentive Pilot Program.

1. Annual interim reports will be prepared that summarize the findings of each annual evaluation. A draft interim report will be submitted to the FHWA Michigan Division office within 3 months after the end of each calendar year. A final interim report for each calendar year will be issued within 5 months after the end of each calendar year.
2. A final report will be prepared that incorporates the findings of the interim reports as well as final OJT hiring and participation performance results, information garnered from interviews and questionnaires during and following the execution of pilot projects, and conclusions and recommendations. Within 6 months of the completion of the last contract in the pilot program, the aforementioned information will be compiled into a draft final report, which will be shared with the FHWA Michigan Division for review and comment. A final report will be issued 3 months after receipt of comments.

# APPENDIX

- **Special Provision for Preparation and Consideration of Bids on On-The-Job Training Voluntary Incentive Program Projects**
- **OJT VIP Pilot Manual, dated October 24, 2017 (AVAILABLE UPON REQUEST)**

**THIS SPECIAL PROVISION IS ONLY TO BE USED ON PROJECTS APPROVED FOR THE ON-THE-JOB TRAINING VOLUNTARY INCENTIVE PROGRAM. PROJECTS ARE SELECTED BY MDOT'S CONTRACT SELECTION TEAM. CONTACT LISA THOMPSON FOR QUESTIONS. IF THE PROJECT HAS BEEN SELECTED FOR THE ON-THE-JOB TRAINING VOLUNTARY INCENTIVE PROGRAM, THIS NOTE CAN BE DELETED AND THIS SPECIAL PROVISION CAN BE USED WITHOUT ADDITIONAL REVIEW.**

MICHIGAN  
DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION  
FOR  
**PREPARATION AND CONSIDERATION OF BIDS ON ON-THE-JOB TRAINING  
VOLUNTARY INCENTIVE PROGRAM PROJECTS**

DES:CGY

1 of 2

APPR:JJG:LFS:08-04-17

The Department will receive and compare bids according to the process described in the standard specifications and this special provision to determine the low Bidder for this project.

**Delete subsection 102.03, on page 16 of the Standard Specifications for Construction, in its entirety and replace it with the following:**

The Department will use the estimated quantities in the Schedule of Items and the process described in the Special Provision for Preparation and Consideration of Bids on On-the-Job Training Voluntary Incentive Program Projects to compare bids.

**Add the following after the second paragraph in subsection 102.05, on page 17 of the Standard Specifications for Construction:**

To be eligible for the On-the-Job Training Voluntary Incentive Program, the Bidder must follow and comply with the requirements in the Department's On-the-Job Training Voluntary Incentive Program guidance document ([www.michigan.gov/OJT](http://www.michigan.gov/OJT)).

Complete the OJT VIP tab of the AASHTOWare Projects Bids electronic bidding file.

**Delete the first paragraph of subsection 102.13, on page 21 of the Standard Specifications for Construction, in its entirety and replace it with the following:**

The maximum On-the-Job Training Voluntary Incentive Program bid incentive on this contract is the advertised net classification required multiplied by \$50, not to exceed \$500,000.00.

To determine the low Bidder, the Department will compare the bids on the basis of the total bid amounts (the sum of lump sum amounts, the products of the estimated quantities and unit prices, and allowable bid incentive(s) from the Department's On-the-Job Training Voluntary Incentive Program). Allowable bid incentive(s) will be applied by the Department after bids are received, and will be included in the As-Checked Bid results. For a discrepancy between the calculated total and the total shown in the bid, the

Department will use the unit prices entered in the bid and correct the errors found in the calculations.

**Add the following after the first paragraph in subsection 102.18.E, on page 25 of the Standard Specifications for Construction:**

Failure to comply with the requirements of the On-the-Job Training Voluntary Incentive Program guidance document or the commitments made in the OJT VIP tab of the AASHTOWare Projects Bids electronic bidding file may result in the penalties listed in the On-the-Job Training Voluntary Incentive Program guidance document.