

CONSTRUCTION OF FEDERALLY FUNDED (FEDERAL AID) LOCAL AGENCY PROJECTS BY NON-COMPETITIVE BID CONTRACT (FORCE ACCOUNT)

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The Code of Federal Regulations (CFR) Title 23, part 112, and 23 CFR 635.104(b), allow federal aid construction work to be completed by a method other than competitive bidding. Additional guidance regarding use of the force account method is included in the Federal Highway Administration (FHWA) “Policy on Agency Force Account Use”, in FHWA Directive 5060.1, dated March 12, 2012. This method, known as the “**Noncompetitive Bid Contract**”, or **Force Account** method, authorizes the local municipal agency, generally described as a county, city, or village, to complete the project by furnishing the labor, equipment, and materials under its direct control. Work to be completed by force account may be either a stand-alone project, or may be a portion of a larger, competitively bid project.

In this document, “Local Agency” (LA) generally refers to an existing municipality that has been designated in Public Act 51 (PA 51) of 1951 of the State of Michigan, as amended, as eligible to receive Federal or State transportation funding. These municipalities include cities, villages, and county road agencies.

As part of the tasks to be completed before authorization, the local agency must provide documentation demonstrating the **cost effectiveness** of completing the project by force account, and justify that the public interest is best served by constructing the project by force account, rather than by competitive bidding.

Generally, PA 51 of the State of Michigan Public Acts of 1951, as amended requires all federal aid construction projects with estimated construction cost exceeding \$100,000 be completed by contract, awarded following receipt of competitive bids. In addition, 23 CFR 635.204 requires a demonstration of cost effectiveness before the force account work can be authorized. Because the cost effectiveness is determined using estimates prepared by the local agency, the practice of requiring a demonstration of a minimum savings of six percent has been established. This threshold limit is in accordance with PA 51 as amended, as well as policy discussions and agreements between FHWA, the Michigan Department of Transportation (MDOT), and other interested parties in 2003. This demonstration allows projects to be completed by force account only when a six percent or greater savings is demonstrated, with the resulting project construction cost of the force account work being less than \$94,000.

In addition, LA’s may be allowed to use the Non-Competitive Bid - Force Account method to construct projects having an estimated construction costs exceeding the \$100,000 threshold, following receipt of competitive bids. Because this method is rarely used, it is more completely described in Condition 2 in Appendix I.

At the end of each fiscal year, Michigan Department of Transportation’s Local Agency

Program (LAP) posts a list of authorized force account or non-competitive bid projects on its website, at www.michigan.gov/mdotlap.

This document is prepared as part of the Stewardship Agreement between FHWA and MDOT.

Program Project and Authorization Limits

Beginning in March 2012, each Local Agency is limited to the lesser of five force account projects per fiscal year, or force account authorizations totaling \$400,000 per fiscal year, regardless of work type or funding source. These limitations do not include projects funded with Federal Emergency Repair / Response (ER) funds, or to Minor Utility work as defined in this guidance and in 23CFR 635.205(b)

Project Eligibility and Limits

A local agency and its proposed project must meet the following eligibility criteria in order to receive the force account authorization.

- The proposed project must be identified and approved by the appropriate Metropolitan Planning Organization (MPO) or Rural Task Force (RTF), as a project with defined limits and scope of work. MDOT must then approve and program the project. Following approval and programming, the proposed project must be included in the approved State Transportation Improvement Plan (STIP).
- Adjacent or overlapping projects proposed for force account shall not be requested to be authorized in the same fiscal year. MDOT will authorize force account projects in the same fiscal year that have reasonable separation, which is generally accepted to be at least two miles.

The local agency shall not request or otherwise adjust the limits of approved projects in order to keep the estimated cost of the project less than the total non-competitive bid project cost limit.

MDOT reserves the right to combine several projects, which would normally qualify for force account authorization, having similar work type or within close proximity, to allow the proposed construction to be competitively bid.

MDOT also reserves the right to not approve any or all of a local agency's proposed force account projects, if that agency has demonstrated poor performance on delivering its previously authorized force account projects.

The local agency shall design and construct the project in accordance to current applicable standards and guidelines of American Association of State Highway and Transportation Officials (AASHTO), FHWA, and MDOT.

Projects eligible for force account authorization include:

- A portion of a project, or a complete project, with the construction cost estimate for competitively bidding the project being less than \$100,000 and with the local agency's force account cost estimate demonstrating that it can complete the work at a savings of at least six percent when compared to the estimated cost to competitively bid the work. This method is outlined in the main paragraphs of this document.
- Minor utility or railroad work regardless of cost, to be completed either by a railroad or the utility, on an existing system currently located within the limits of the proposed project and owned by the utility or railroad, with work to be completed by that utility or railroad, subject to one of the following criteria:
 - The utility or railroad performs the work with its own forces;
 - The utility or railroad obtains a subcontract secured under a fully competitive bidding process; or
 - The utility or railroad is responsible for completing the work as part of its established contract or franchise agreement with the local agency.

For Minor Utility or Railroad Work projects, including work to be completed by a utility or a railroad, the local agency should obtain or prepare a purchase order from the utility or railroad, which itemizes the proposed work in detail. The local agency should forward the cost estimate to the MDOT LAP staff engineer, along with the other required project documents. Following receipt of the local agency's documentation, the MDOT LAP staff engineer will arrange and conduct a grade inspection plan review meeting, and will process the project in a manner similar to other projects that are competitively bid.

In accordance with 23 USC Part 112 and 23 CFR 635.205(b), Minor Utility or Railroad force account work proposed to be completed by utilities and railroads is allowable, and is not subject to the \$100,000 cost limitation provision or the requirement to demonstrate the six percent savings. Also, these projects are not to be included in and do not count toward either the annual five project or \$400,000 limitation for a local agency.

- Special Projects, if all the following criteria are met:
 - The local agency has traditionally performed work of the type proposed, and has a contract with a specialty supplier to provide material or equipment at a fixed price.
 - The work cannot be defined in bid documents due to the nature of the work. Usually, this is work on existing infrastructure that may require testing or experimentation on a site by site basis in order to obtain the desired results (i.e., adjusting signals, completing interconnections, or improve the efficiencies of existing systems, all of which require a detailed knowledge of the existing infrastructure).
 - Traffic operation center staffing and operation costs
 - Multi - state project, competitively bid and administered by another state transportation agency, in which a Michigan Agency must reimburse the other

State's agency, using non-federal transportation funds.

These special projects are not to be included in and do not count toward either the annual five project or \$400,000 limitation for a local agency.

- Noncompetitive bid projects for which the local agency's engineer's estimate for construction by competitive bid exceeds the \$100,000 limit. If MDOT concurs with the local agency, the LAP staff engineer will forward the project to FHWA for exemption concurrence. Following receipt of that concurrence, MDOT will submit the project to the State Transportation Commission and Legislature for its 90-day review and approval. Because this method is rarely used, it is more completely described in Condition 2 in Appendix I.
- Emergency Repair projects, for cases when the highway system has failed and the situation is such that competitive bidding is not possible or is impractical because immediate action is necessary to:
 - Minimize the extent of the damage, or
 - Protect remaining facilities, or
 - Restore essential travel.

Guidelines for constructing and administering Emergency Repair projects are listed on the MDOT LAP website, in the section headed "FHWA Emergency Relief".

Such Emergency Repair projects are not to be included in and do not count toward either the annual five project or \$400,000 limitation for a local agency.

Work on existing private utilities can be completed by force account authorization, but such work is not eligible for federal funding unless such utilities are located within their own private property, obtained either as a land purchase or as its own separate easement, and the property is described separately from the public right of way or easement. The local agency would need to demonstrate that the proposed force account work on the existing private utility is required to allow successful completion of the approved federal aid project, by mitigating or eliminating the conflicts with the private utility.

Major Utility Work, defined as constructing or installing a new system within the project limits where no system currently exists, is not allowed to be constructed by force account, and will be constructed by competitive bid. Construction of Major Utility Work projects can be completed either as part of the competitively bid construction project, or let separately and coordinated with the competitively bid project.

Requirements for Force Account Authorization

The local agency requests approval for the force account authorization by preparing the following documents and forwarding them to the MDOT LAP staff engineer:

- A written statement from the local agency, demonstrating the benefit achieved or provided to the public by constructing the project using the force account method.

- A written statement from the local agency demonstrating that it:
 - Has the financial capability to complete the project.
 - Has the necessary equipment required and available.
 - Can furnish adequate materials and experienced labor forces.
 - Can and will obtain and document the same level of quality assurance that would be required for a contracted project.
 - Will comply with requirements for a Federal Aid project, as would be required for a contracted project.
- Appropriate construction plans, details, and special provisions, including the progress clause, utility coordination clause, coordination clause, and maintaining traffic special provision, as well as appropriate wage rate decisions for projects having subcontracts.
- Applicable MDOT Frequently Used Special Provisions (FUSP), Notices to Bidders (NTB), and Supplemental Specifications (SS).
- A construction cost estimate presuming the project will be competitively bid,
- A separate construction cost estimate representing the local agency's proposed force account cost,
- Program application on the appropriate MDOT form,
- Copies of all required permits, approval letters, and right of way certifications, all prior to obligation of the federal or state funds.

Following receipt of the local agency's documentation, the LAP staff engineer will arrange and conduct a grade inspection plan review meeting, and will process the project in a manner similar to other projects that are competitively bid.

Force Account - Construction Cost Estimates and Documentation

The local agency shall prepare two separate construction cost estimates and forward them to the MDOT LAP staff engineer.

One estimate, referred to as the LA Detailed Cost Estimate, will be prepared presuming the project will be constructed using competitive bids, and be based on the plans and special provisions prepared by the local agency and submitted to MDOT LAP. The estimate should be prepared using the Michigan Engineer's Research Library (MERL) software and database. The total amount of this estimate shall be less than \$100,000, to verify that the proposed force account project will meet the requirements of PA 51 of 1951 as amended.

The second cost estimate, referred to as the LA Force Account Estimate, is the local agency's proposed cost to complete the project by force account, and will include the agency's estimate of labor, equipment, material, and overhead or indirect cost rates, as well as all subcontract costs. Subcontract costs shall include provisions for paying prevailing wage rates, if any portion of the project will be paid for using federal funds.

MDOT's authorization for the force account project will be issued using these cost estimates.

The MDOT LAP staff engineer will prepare a third cost estimate, known as the Bid Base Unit Price Estimate, using the items and estimated quantities provided by the local agency,

and using historic unit prices from the MDOT Average Unit Price database. The LAP cost estimate will be used in verifying the cost estimate provided by the local agency for the proposed contracted work. The LAP staff engineer may request that the local agency provide documentation and justification for all differences in project items and quantities between the two construction cost estimates.

The LA Force Account estimate must be prepared on a force account basis, rather than unit price basis. The local agency's approved audited overhead or indirect cost rate should be included as a line item in the estimate, separate from the estimate of labor, equipment, materials, and subcontracts. The local agency's overhead or indirect costs rates must be developed in compliance with the Cost Principles for State, Local, and Indian Tribal Governments (2 CFR Part 225).

See the example in Appendix II.

The local agency's detailed force account estimate should include the following:

- All labor costs including hours and pay rate for supervisors, laborers, drivers, operators, etc.
- All equipment required to complete the project with hours of use and rental rates for graders, bulldozers, tandem trucks, etc. Rental rates will be based on actual costs with receipts or based on Schedule C rates approved by the MDOT Office of Commission Audit (OCA).
- Costs for all materials to be used in the project (aggregate, HMA, culverts, drainage structures, devices to maintain and control traffic during construction, lights, etc.). If material is supplied by the local agency, the value of the material should be defined as the price listed on their cost inventory sheets or purchase order. Please note that the current Buy America provisions and requirements apply to all projects for which federal or state funds will be used to pay for the project. The Federal Highway Administration (FHWA) website contains additional information regarding the Buy America requirements, at the following links:
 - <http://www.fhwa.dot.gov/construction/cqit/buyam.cfm>
 - <http://www.fhwa.dot.gov/utilities/buyam.cfm>
- Costs associated with the local agency's overhead costs, using its current audited and approved overhead rate.

Costs associated with profit are not allowed to be included in the force account estimate. Costs associated with professional engineering services, including but not limited to design engineering, construction engineering, testing, staking, and inspection, are not allowed to be included in the force account estimate because these costs are generally not part of a biddable construction package.

For the force account work to be authorized, the cost estimates must demonstrate that the local agency can complete the work at a savings of at least six percent when compared to the

estimated cost prepared by the local agency to competitively bid the work. Therefore, for projects that are not classified as Minor Utility Work, the maximum authorized amount of the force account authorization will be less than \$94,000.

Force Account - Subcontracting

Subcontracting of authorized force account work is allowed for up to ten percent of the amount of the force account authorization. Costs associated with the subcontracted work are eligible for reimbursement of federal or state funds. The cost of the subcontracted work must be included in the local agency's force account estimate and the total project cost, including the subcontracted work, is subject to the \$100,000 limit. Work completed by subcontract is subject to all current requirements for Federal Aid projects, including the requirements for competitive bidding or small purchase requirements, and applicable prevailing wage rate requirements. The subcontract must include form FHWA-1273 (Required Contract Provisions for Federal-aid Construction Projects).

For proposed force account projects having subcontracted work, the local agency must submit to the MDOT LAP staff engineer its documentation regarding the method it used to select and obtain the subcontracted work. This documentation should include a summary of the local agency's selection criteria, its advertisement, and the proposed subcontract document. All proposed subcontracts must be reviewed by the Department prior to the MDOT LAP staff engineer issuing the force account authorization. See Appendix III.

If more than ten percent of the work is subcontracted, then the entire force account project is ineligible to receive federal or state funds and all costs previously reimbursed to the local agency for this work shall be repaid to the State of Michigan.

Authorization of the Force Account Project

After receiving all the acceptable documents for the project from the local agency, the MDOT LAP staff engineer will request that the federal or state funds be obligated, and MDOT will prepare the cost sharing agreement for the project. The MDOT LAP staff engineer will issue the force account authorization to the local agency to construct the project, typically using the State of Michigan electronic authorization process currently identified as the Local Agency Reimbursement System (LARS).

All force account work must be authorized by the MDOT LAP staff engineer before the local agency begins work on the project.

The local agency must construct the project according to the same specifications that would be required by the competitive bid process.

All work performed without MDOT authorization will not be eligible for reimbursement with federal or state funds. Also, MDOT will not issue any reimbursements until the cost sharing agreement between MDOT and the local agency is fully executed.

Modifying the Original Force Account Authorization

The authorized amount of the force account project may be increased using a contract modification, after the local agency forwards adequate documentation to the MDOT LAP staff engineer that supports the additional work. The modification is generally the result of extra work being required within the approved project limits, but is not the result of additional work items or a change in project scope. In this case, MDOT may increase the total force account authorization for the project up to the maximum amount of \$94,000.

If the cumulative authorized amount exceeds \$94,000, MDOT must have concurrence from the FHWA and be submitted for the 90-day review to the State Transportation Commission and Legislature.

If the local agency elects to complete the project prior to obtaining the necessary approvals, no reimbursement for the additional costs will be made.

Case 1: A local agency has been authorized for an \$84,600 force account project, based on its demonstration of cost savings of at least six percent, for a project with a contracted cost estimate of \$90,000. During construction, additional work is required due to unforeseen circumstances, resulting in an increase of the project cost to \$99,000. The local agency works with the TSC Designated Representative to prepare a Contract Modification, and forwards the Contract Modification to the MDOT LAP staff engineer. The staff engineer will issue an additional LARS authorization to the local agency to include the contract modification, and the local agency can request reimbursement of the original \$84,600 project cost plus the additional amount up to \$8,460, included in the approved contract modification. Note that in this case total reimbursement will not exceed \$93,060, which is 94% of the total cost of the project if it were constructed using the contract method.

Case 2: A local agency has been authorized for a \$84,600 force account project, based on its demonstration of cost savings of at least six percent, for a project with a contracted cost estimate of \$90,000. During construction, additional work is required due to unforeseen circumstances, resulting in an increase of the project cost to \$110,000. The local agency works with the TSC Designated Representative to prepare a Contract Modification, including documentation supporting its request for the additional work, and forwards the Contract Modification and the documentation to the MDOT LAP staff engineer for approval. The staff engineer will issue a LARS authorization to the local agency for the additional work up to \$100,000, and the local agency can request reimbursement of the original \$84,600 project cost plus the additional amount up to \$9,400, included in the approved contract modification. Note that in this case total reimbursement will not exceed \$94,000, which is 94% of a project with an estimated cost of \$100,000.

For the portion of the proposed MDOT - approved additional force account work exceeding the \$100,000 limitation, MDOT will request concurrence from FHWA and then submit the project to the State Transportation Commission and Legislature for

the 90-day review. If approved after the 90-day review, MDOT will issue the additional LARS authorization to the local agency for this work, and the local agency can request reimbursement of the project costs that exceed \$100,000, as included in the approved contract modification.

Please note that the local agency is cautioned to not begin such work until MDOT receives all the required concurrences and approvals, and issues the authorization for the work. All force account work must be authorized by the MDOT LAP staff engineer before the local agency begins work on the project. All work performed without MDOT authorization will become not eligible for reimbursement with federal or state funds.

Costs exceeding \$100,000 may or may not be eligible for federal or state fund reimbursement pending the determination of eligibility.

Documentation Required During Construction

Each local agency is responsible for obtaining all construction related documents and maintaining the construction file record, in accordance with current the MDOT Construction Manual and information included in Appendix III of this document. Also, each local agency is responsible for obtaining and documenting the same level of construction quality that is required for contracted projects.

Information to be maintained in the file includes, but is not limited to:

- Compliance with all applicable requirements of Title 23 during construction, including but not limited to applicable sections of FHWA-1273 (Required Contract Provisions for Federal-aid Construction Projects), job site poster requirements, etc.
- Buy America compliance documentation
- Permits and environmental commitments
- Inspection records, material certifications, and testing results. See Appendix III.
- Work Zone Safety analyses and documentation
- Applicable wage rate interviews and biweekly payroll reports and certifications if subcontractors are used, and if federal funds are used to pay for any portion of the project
- Contract modifications
- Project correspondence

The construction record should be kept on file in a manner similar to other federal aid projects that are competitively bid, for final MDOT review and audit. MDOT will conduct a final site visit and inspection of the project, after the local agency submits its request for final request for reimbursement. See Appendix III.

Required Billing Information

Local agencies will request reimbursement using MDOT's electronic reimbursement system, currently referred to as the Local Agency Reimbursement System (LARS). Information

regarding LARS is available on the MDOT LAP website, or by contacting the MDOT LAP staff engineer. Guidelines for the reimbursement request include the following:

- The billing statement submitted through LARS must reflect the same level of detail as described in the local agency's original force account cost estimate. DO NOT submit documents with code numbers unless a legend is provided describing the codes.
- Labor costs must be documented by certified payrolls, including those certifications received from subcontractors and certified by the local agency.
- Certifications that all applicable materials used on the project meet the current Buy America requirements
- A breakdown of materials must be listed and the value of the material defined. If material was purchased, a copy of the voucher must be submitted.
- Equipment used for the project must be detailed and supported by either Schedule C rates or rental receipts when applicable.
- Overhead or indirect cost charges should be itemized.
- Costs associated with profit are not allowed and shall not be included.
- If more than ten percent of the work is subcontracted, then the entire force account project is ineligible to receive federal or state funds and all costs previously reimbursed to the local agency for this project shall be repaid to the State of Michigan.

APPENDIX I

Basis for Cost Effectiveness Required for Authorization of Force Account Projects

According to 23 USC, part 112 and 23 CFR 635.203(e), “The term *cost effective* shall mean the efficient use of labor, equipment, materials, and supplies to assure the lowest overall cost”.

Cost effectiveness is determined as follows:

- Condition 1: Projects less than or equal to \$100,000 based on the engineer’s estimate for construction by competitive bid. The local agency will demonstrate the prudent use of public funds by documenting that it can perform the work at a cost at least six percent less than the estimated cost of competitively bidding the project.
- Condition 2: Projects greater than \$100,000 based on the engineer’s estimate for construction by competitive bid. The local agency may perform the work provided all of the following conditions are met:
 - The project was previously competitively bid.
 - The low bid received on the project exceeded the engineer’s estimate for construction by at least ten percent.
 - The Department and the local agency reviewed the bids and determined that the bid amounts were not a result of unclear contract plans or proposal information or other conditions that would result in an increase in the estimated project costs. If this is not the case, and the Department and local agency determine that the plan, proposal, estimate, or other unconsidered factors may have caused the increased bids, then the Department will require that the project be rebid.
 - If the bid review has not shown any underlying reason for a bid 10% or more over the engineer’s estimate for construction by competitive bid, the Department may consider allowing the project to proceed using the non-competitive bid process, provided the local agency demonstrates that the project can be completed by force account at a cost at least six percent less than the original engineer’s estimate. In this case, MDOT will contact FHWA for its concurrence and, following the concurrence, will submit the project for the 90-day review to the State Transportation Commission and Legislature. After the 90-day review is completed, the MDOT LAP staff engineer will authorize the local agency to perform the work by force account, and limit the project cost limit to the local agency’s force account estimate. This amount will not change unless a change order for the increased work has been received and approved MDOT.
 - If the project was advertised and no competitive bids were received, MDOT will review the project documents to determine that the reason that bids were not

submitted was not due to reasons related to the proposal documents or other factors that should have been considered. In this case, MDOT LAP and the local agency may determine that the project is cost effective for the local agency to perform the work.

If MDOT determines that the project documents may have been the reason that no bids were received, then MDOT will require that the local agency revise the bid documents, and bid the project again.

APPENDIX II

EXAMPLE OF COST EFFECTIVENESS DETERMINATION

The following example demonstrates how cost effectiveness is determined for a sample project.

Description of Work:

The Smith County Road Commission (SCRC) proposes to crush and shape a 0.5-mile segment of Road A, from Road B to Road C. The Road Commission currently employs adequate staff on its payroll that have experience in completing many such projects during the recent past.

SCRC believes that using the force account method to construct this project will result in the project being completed and open to traffic within a shorter timeframe than if the project were contracted.

Supporting Information:

- The Smith County Road Commission has the necessary experience and ability to perform the work. The County has completed several crush and shape projects per year for the past 10 years.
- The Road Commission will use its own equipment, does not need to rent equipment, and will not subcontract any work.
- The Road Commission will provide 100 percent of the labor and supervision for this work.
- The Road Commission will use material currently in its stockpile and supply, at a price currently listed in the County's inventory, and for which it has all the required manufacturer's certifications.
- All work will comply with requirements of 23 CFR 637 and current MDOT requirements for design, including the 2011 Michigan Manual of Uniform Traffic Control Devices (MMUTCD).
- All materials used on the project will meet the current Buy America provisions and requirements.
- Construction will be completed in accordance with the current MDOT Standard Specifications for Construction and the project special provisions.
- Oversight, inspection, and materials acceptance will be meet current MDOT requirements. See Appendix III.
- The use of Road Commission forces will result in an estimated savings of approximately \$ 5,793 or 6.41 percent when considering all contract and agency costs. See the sample calculation on the next page.

Cost-Effectiveness Analysis

Estimated Construction Cost, if contracted

Pay Item Code	Description	Units	Estimated Quantity	Estimated Unit Price	Amount
1500001	Mobilization, Max. ____ 10%	LS	1	\$9,000.00	\$ 9,000.00
3050002	HMA Base Crushing and Shaping	Syd	6450	1.10	7,095.00
3070125	Shoulder, CI II, 3 inch	Syd	1174	3.00	3,522.00
4010134	Culv, CI A, 24 inch	Ft	60	44.00	2,640.00
5010033	HMA, 13A	Ton	1065	60.00	63,900.00
8120170	Minor Traf Devices	LS	1	1,000.00	1,000.00
	Pavt Mrkg, Type NR, Tape, 4 inch,				
8120231	Yellow, Temp	Ft	260	0.50	130.00
8120340	Sign, Type A, Temp, Prismatic, Furn	Sft	356	3.00	1,068.00
8120341	Sign, Type A, Temp, Prismatic, Oper	Sft	356	3.00	1,068.00
8120370	Traf Regulator Control	LS	1	1,000.00	1,000.00
Estimated Construction Cost – Contracted Method					\$90,423.00

Estimated Construction Cost of Proposed Force Account Authorization

Labor	\$30,000.00
Equipment	\$18,000.00
Material	\$30,000.00
Subtotal (labor, equipment, materials)	\$78,000.00
Overhead (assume 8.5%)	\$ 6,630.00
Estimated Construction Cost - Force Account Method	\$84,630.00
Savings by Force Account Method	\$ 5,793.00
Percentage difference	6.41%

APPENDIX III

OVERSIGHT, INSPECTION, AND MATERIALS ACCEPTANCE REQUIREMENTS FOR FEDERALLY FUNDED LOCAL AGENCY TRANSPORTATION PROJECTS

General

The Michigan Department of Transportation (MDOT) is charged with overseeing local agency construction projects to ensure compliance with federal funding requirements. These requirements are defined in Title 23 of the Code of Federal Regulations (CFR) under Part 635.105(a). This appendix document consolidates construction oversight practices related to local agency projects for noncompetitive bid (force account) projects, for which construction costs are reimbursed to local agencies with federal funding. This document does not supersede any MDOT Construction Manual instructions regarding Federal Aid contract administration procedures.

Definitions

The following definitions apply:

- LPS The local agency project supervisor. This person is employed directly by the local agency and is accountable for the project.
- LPE The local agency project engineer. This person is a professionally licensed engineer either directly employed or contracted by the local agency. The local agency must assign a LPE for each force account project.
- DR The MDOT designated representative. This person is responsible for oversight of local agency construction projects. The DR must be a licensed professional engineer and will usually work from the MDOT Transportation Service Center (TSC). The DR may designate other MDOT or consultant staff to act on their behalf. However, by doing so the DR is not relieved of their oversight responsibilities. References to the DR in this document represent the DR or designee, unless otherwise noted.

The DR is available to the LPE as a technical resource and to provide guidance to the LPE, if requested.

- LAP The MDOT Local Agency Program Unit.

Construction Documentation

Project construction records must be established and maintained for force account projects in the same manner as MDOT Let contracted projects. **The local agency risks losing its federal aid funding if proper documentation is not maintained or file deficiencies cannot be resolved.**

Refer to the MDOT Construction Manual, Material Source Guide, Material Quality Assurance Procedures Manual, and the Minimum Documentation Guide. These documents provide information for project administration procedures, documentation requirements, and details

for the retention and disposal of project records.

The LPS must coordinate with the DR to establish processes for submittals, inspections, reviews, communications, and other oversight activities prior to the start of the work.

Preconstruction Meeting

The LPS, LPE, and DR should meet to review the project and progress schedule at a Pre-Construction meeting. This meeting can be a phone call, a series of e-mails or in-person meetings depending on the complexity of the project. A summary of the meeting and attendance sheet, as prepared by the LPS should be kept in the project files, and distributed to all meeting attendees. The Local Agency Pre-Construction Meeting Boilerplate can be used. At a minimum, project number, federal project, item number, project schedule, items or work/basis of acceptance, safety/traffic, utilities, personnel, project documentation, and Inspector Daily Reports (IDR's) should be discussed.

If a testing company or consultant will be used, a letter must be submitted by the testing company or consultant indicating they will be working on the project, along with the pertinent contact information and certifications of their personnel and a statement indicating they are qualified to do the work.

Should any information or personnel change during the project, the LPE shall notify the DR in writing within seven (7) days of the change. Additional personnel can be listed on the letter as backup or alternates as needed. The LPE must retain a copy of the notification letter in the project file.

Construction Schedule

The local agency must prepare a progress schedule (MDOT form 1130), keep a copy of this schedule in the project file, and provide a copy to the DR. The schedule must indicate a start date, scheduled work, and a completion date.

For any change in the approved completion schedule, the LPE shall prepare and submit an Extension of Contract Time Request (Form 1100A) to the DR for approval. The LPE will retain the approved 1100A in the project file, and copy the DR and LPS.

Inspection of the Work

The local agency is responsible for providing inspection reports documenting daily field activities. The local agency can use MDOT Form 1122, "Inspector's Daily Report" (IDR), or its own form. At a minimum, daily inspection reports must contain weather, date, temperature, inspector name, workers and equipment, activities performed, materials used, applicable calculations, and basis of acceptance. The IDR's shall note that the installations were reviewed and determined to be acceptable. Supporting documentation, calculations, measurements, and reports must be maintained in the project files. The LPE must ensure quantities of completed work are accurately determined, reviewed, and documented. Additional information such as site conditions, traffic control, site visitors, soil erosion measures, and any issues affecting construction work is highly encouraged to be included in the IDR.

If a local agency changes or modifies an inspection report, it must keep the original and modified reports in the project files as a permanent part of the project records.

Materials and Quality Assurance

All materials used on the project must conform to the MDOT Standard Specifications for Construction, the supplemental specifications, special provisions, and the project plans.

The Local Agency must ensure all quality assurance procedures, as identified in MDOT's Material Quality Assurance Procedures Manual (MQAP), are followed and documented in the project files. The local agency will serve as the quality assurance program manager.

The local agency is also responsible for assuring all steel and iron materials, products, and components comply current Buy America requirements.

Governmental Agency Labor Reporting

In some instances, a Government agency (or a State or political subdivision thereof using Federal money) may perform construction work utilizing force account type methods. Such work is not generally subject to prevailing wage and certified payroll reporting, because governmental agencies and States or their political subdivisions are not considered "contractors" or "subcontractors" within the meaning of the Davis Bacon Act. However, any part of the work not done under "force account" but contracted out and paid for using federal funds is subject to prevailing wage requirements in the usual manner, per U.S. Department of Labor Field Operations Handbook, Chapter 15, section 15B06.

Although certified payrolls are not required for governmental agencies, documentation for labor utilization may be necessary to justify reimbursement requests. The following information shall be placed in the project files

- Project Number
- Federal Project and Item Number
- Employee Name
- Work Classification
- Dates Worked
- Hours worked
- Activity Description for each day or portion thereof
- Summary of payroll charges for each bi-weekly period during the project time frame
- Applicable overhead charges for the project

Subcontracting

The local agency must provide and maintain all required documentation for subcontracted force account work as approved in the force account authorization.

The local agency shall maintain the following information for each subcontractor in the project file:

- Quoted costs for subcontracted work.
- Specific services to be provided.
- Anticipated number of days or time that the service or work will be provided.
- Specific information to ensure the subcontractor can provide the service as requested. The intent of this documentation is to reduce the likelihood of subcontract claims for additional compensation. If any adjustments are made to the original quoted price in the subcontractor's request for final billing, then the local agency should refer to the original documentation and include such additional information that justifies the change in the subcontractor's price including but not limited to differing site conditions, additional time, quantity increases/decreases, schedule changes, specification alterations, etc.
- Subcontractors are required to provide the local agency with sufficient liability insurance required for the project. The LPE is to ensure this insurance has been provided and is active during the construction phase of the project. Copies of the insurance certificates must be placed in the project files.
- Certified payrolls and wage rate interviews as conducted by the local agency.

Interim Project Documentation Reviews

During the active construction phase, MDOT may conduct an interim review of the project record files as outlined in the MDOT Construction Manual.

Field Inspections

During the active construction phase, MDOT may conduct a field inspection of the project as outlined in the MDOT Construction Manual.

Modifying the Original Force Account Authorization (Contract Modifications)

Increases to the authorized force account amount will be processed as noted in the current guidelines for Construction of Federally Funded Local Agency Projects by Non-Competitive Bid Contract (Force Account).

Final Inspection/Acceptance of Project, and Final Estimate Review

Upon completion of the project, the LPE shall notify the DR, in writing, that the project is ready for a final field inspection and final estimate review. The DR will request that the Region Construction Engineer complete the final estimate review, outlined in the MDOT Construction Manual. If any file review deficiencies cannot be corrected by the local agency, then a percentage of funds, up to 100 percent of the Federal Aid participation, may be removed from the project.

A final estimate project review is required on all local agency force account projects unless the local agency engineer is certified as part of the MDOT Certified Engineer Program as provided for in the MDOT Construction Manual, in which case the Region Construction Engineer may waive the final review.

The LPE must inform the DR of project completion, and provide an opportunity for the DR to perform a site visit/final inspection. The LPE must complete and submit Form 1120 (Final Inspection/Acceptance) to the DR for signature by the MDOT TSC manager. The "inspected

by” section on Form 1120 must be filled out for all who are present during the site visit/final inspection. The completed 1120 form is to be placed into the project files. The approved 1120 Form is required for final project reimbursement to the local agency.

Local Agency Requests for Reimbursement

The local agency shall prepare periodic requests for reimbursement for work completed, and submit these requests to the LAP staff engineer in accordance with terms and conditions included in the Authorization for Force Account Work, issued to the local agency by the LAP staff engineer. The local agency shall also include adequate supporting documentation for its reimbursement request, as outlined in the current guidelines for Construction of Federally Funded Local Agency Projects by Non-Competitive Bid Contract (Force Account).

The LAP staff engineer will not process the final reimbursement until the approved 1120 Form (Final Inspection/Acceptance) is received.

APPENDIX IV

FHWA ORDER 5060.1 – FHWA POLICY ON AGENCY FORCE ACCOUNT USE


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U.S. Department
of Transportation
**Federal Highway
Administration**

Order

Subject
FHWA Policy on Agency Force Account Use

Classification Code	Date	Office of Primary Interest
5060.1	March 12, 2012	HIPA-30

Par.

1. What is the purpose of this directive?
2. Is this a new directive?
3. What authorities govern this directive?
4. What is the scope of this directive?
5. What definitions are used in this directive?
6. What information must FHWA Division Administrators ensure they have from the agency to prove that force account is more cost effective than contracting by competitive bidding?
7. At what point does an agency's price become more cost effective in comparison with competitive prices?
8. Do the General Material Requirements of 23 CFR 635, Subpart D, apply to force account work?
9. Do the Quality Assurance Procedures for Construction provisions of 23 CFR 637, Subpart B, apply to force account work?
10. Do the prevailing wage rate requirements of 23 CFR 635.117(f) apply to force account projects?
11. Is an agency allowed to perform a portion of a Federal-aid project on a force account basis and let a competitive contract for the remainder of the project?
12. Is a cost-effectiveness finding necessary for a railroad or utility to perform minor adjustments on its own facility?
13. Is there a limitation for an agency to request programmatic force account approval?
14. What are the requirements for the approval of agency force account projects assumed by the State DOT?
15. Are FHWA Division Office and the State DOT allowed to include additional review and approval procedures for agency force account cost-effectiveness determinations?
16. Where can I obtain additional guidance?

1. **What is the purpose of this directive?** This directive clarifies the Federal Highway Administration (FHWA) policy for the approval of the use of agency force account procedures on Federal-aid projects. This directive clarifies when agency force account is permitted under law and regulation. The directive addresses the use of agency force account procedures which include the direct performance of work by any direct recipient (typically the State department of transportation (DOT)) or subrecipient of Federal-aid funding under Title 23 of the Code of Federal Regulations (CFR). It does not address the use of contract force account procedures for work performed by construction contractors as referenced in 23 CFR 635.120 (d).
2. **Is this a new directive?** Yes. This is a new directive. Division Administrators are to refer to this directive for all future requests to use agency force account.
3. **What authorities govern this directive?** The FHWA's statutes for Federal-aid construction projects require Federal-aid highway projects to be performed by contracts awarded by competitive bidding. Agency force account can be used only when a State DOT demonstrates to the satisfaction of the Secretary of Transportation that it is more cost effective than competitive bidding or an emergency exists. The following authorities govern this directive:
 - a. Section 112 (a) of Title 23, United States Code (U.S.C.), states that "In all cases where the construction is to be performed by the State transportation department or under its supervision, a request for submission of bids shall be made by advertisement unless some other method is approved by the Secretary. The Secretary shall require such plans and specifications and such methods of bidding as shall be effective in securing competition."

- b. 23 U.S.C. 112(b) states “. . . construction of each project . . . shall be performed by contract awarded by competitive bidding, unless the State transportation department demonstrates, to the satisfaction of the Secretary, that some other method is more cost effective or that an emergency exists. Contracts for the construction of each project shall be awarded only on the basis of the lowest responsive bid submitted by a bidder meeting established criteria of responsibility.”
- c. 23 CFR 635.204(a) states that competitive bidding must be used unless “. . . the State transportation department demonstrates, to the satisfaction of the Secretary, that some other method is more cost effective or that an emergency exists.”
- d. 23 CFR 635.204(c) of states “Except as provided in paragraph (b) of this section, when a State transportation department desires that highway construction work financed with the aid of Federal funds, other than the kinds of work designated under 635.205(b), be undertaken by force account, it shall submit a request to the Division Administrator identifying and describing the project and the kind of work to be performed, the estimated costs, the estimated Federal funds to be provided, and the reason or reasons that force account for such project is considered cost effective.”
- e. 23 CFR 635.205(a) states “It may be found cost effective for a State transportation department or county to undertake a federally financed highway construction project by force account when a situation exists in which the rights or responsibilities of the community at large are so affected as to require some special course of action, including situations where there is a lack of bids or the bids received are unreasonable.”
- f. 23 CFR 635.203 defines the terms “some other method, force account, county, cost effective and emergency” as follows:
 - (1) “Except as provided for as emergency repair work in 668.105(i) and in §635.204(b), the term *some other method* of construction as used in 23 U.S.C. 112(b) shall mean the *force account* method of construction as defined herein. In the unlikely event that circumstances are considered to justify a negotiated contract or another unusual method of construction, the policies and procedures prescribed herein for force account work will apply.”
 - (2) “The term force account shall mean the direct performance of highway construction work by a State transportation department, a county, a railroad, or a public utility company by use of labor, equipment, materials, and supplies furnished by them and used under their direct control.”
 - (3) “The term county shall mean any county, township, municipality or other political subdivision that may be empowered to cooperate with the State transportation department in highway matters.”
 - (4) “The term cost effective shall mean the efficient use of labor, equipment, materials and supplies to assure the lowest overall cost.”
 - (5) “For the purpose of this part, an emergency shall be deemed to exist when emergency repair work as provided for in §668.105(i) is necessary or when a major element or segment of the highway system has failed and the situation is such that competitive bidding is not possible or is impractical because immediate action is necessary to:
 - (a) Minimize the extent of the damage,
 - (b) Protect remaining facilities, or
 - (c) Restore essential travel.”

4. What is the scope of this directive?

- a. This directive applies to all Federal-aid highway construction projects (projects meeting the definition of “construction” in 23 U.S.C. 101 and physically located within the right-of-way of a public highway) that are proposed to be undertaken by the agency force account method of construction.
- b. This directive does not apply to the contract force account method of construction. Also, this directive does not apply to Federal-aid construction projects that are not located within a public highway right-of-way or projects that, by definition, are not considered to be highway construction

projects. A State DOT may use State-approved procurement procedures, or a local public agency (LPA) may use State-approved local procurement procedures for these types of projects (see [Procurement of Federal-aid Construction Projects memorandum](#), issued June 26, 2008). Some examples of projects that are not considered to be highway construction are as follows:

- (1) Transportation Enhancement projects that are physically located outside the right-of-way of a public highway (restoration of historic railroad stations, shared use paths, recreational trails, landscaping and scenic beautification, railroad mainline improvements, rail yard improvements, etc.).
- (2) Operational improvements or service-related projects that take place within the right-of-way of a public highway, but the scope of the contract does not meet the definition of “construction” in 23 U.S.C. 101 (e.g., operational improvement projects such as service patrols, route diversion and evacuation routing, 911/511 telephone systems, computer-aided dispatch systems, highway advisory or other radio systems for communicating with vehicles, etc.).

5. What definitions are used in this directive?

- a. **Force Account.** For purposes of this directive, the term “force account” shall have the same meaning as defined in 23 CFR 635.203(c). For clarity, the term “agency force account” refers to the direct performance of work by any direct recipient (typically the State DOT) or subrecipient of Federal-aid highway funding. The term “contract force account” refers to the method of paying a contractor based on the cost of labor, equipment, and materials furnished, with consideration for overhead and profit.
- b. **Some Other Method.** For purposes of this directive, the term “some other method” shall have the same meaning as defined in 23 CFR 635.203(b).
- c. **Cost Effective.** For purposes of this directive, the term “cost effective” shall have the same meaning as defined in 23 CFR 635.203(e) and clarified in this directive.
- d. **Emergency.** For the purpose of this part, the term “emergency” shall have the same meaning as defined in 23 CFR 635.203(f).

6. What information must FHWA Division Administrators ensure they have from the agency to prove that force account is more cost effective than contracting by competitive bidding? As defined in 23 CFR 635.203(e), the term cost effective means “. . . the efficient use of labor, equipment, materials and supplies to assure the lowest overall cost.” Under 23 CFR 635.204(c), States must submit a request to the Division Administrator identifying and describing the project and the kind of work to be performed, the estimated costs, the estimated Federal funds to be provided, and the reasons that force account is more cost effective than competitive bidding. In evaluating the project description, the kind of work to be performed, estimated costs, and reasons agency force account is more cost effective, Division Administrators must ensure that they have the following information from the agency:

- a. **Demonstrated ability of the agency to perform the work.** Division Administrators must be able to determine that the agency has the experience, resources, and demonstrated ability to complete the work with the same level of quality as that expected on a competitively let construction contract.

(1) Availability of equipment.

- (a) The agency must own (or currently lease) most of the equipment that is needed to perform the work. If the agency must acquire or lease substantially more equipment than required for its normal operation, it would be difficult to justify an affirmative finding of cost-effectiveness. While no contractor, subcontractor or agency owns all of the equipment that it may need, the costs associated with leasing equipment on a force account project should be a relatively minor portion of the overall cost. The FHWA Division Office and the State may elect to limit the percentage of equipment leasing costs for differing types of work.
- (b) In agency force account work, the rates on publicly owned equipment eligible for Federal participation may be the agreed unit price or actual cost. For agreed unit prices, the equipment need not be itemized on the estimate. If the project is to be

performed on the basis of actual cost, the estimate should include a schedule of rates, exclusive of profit, to be charged for the use of publicly owned equipment.

- (2) **Use of minor agreements.** It is anticipated that the agency will perform all work with its own forces. However, in some instances, it may be appropriate for the agency to enter into agreements for specific minor services associated with the scope of work (e.g., guardrail installation). Such instances should be documented and pre-approved. Any work done by contract forces would be subject to prevailing wage rate requirements as appropriate.
 - (3) **Ability to comply with design, construction and material, quality standards.** The agency must have the ability to comply with the appropriate design, construction, and material quality standards.
 - (4) **Ability to document compliance with quality assurance requirements.** The agency must be able to obtain and document the same level of quality that is required for competitively let contracts under 23 CFR 637.
 - (5) **Schedule.** The project/contract completion time is to be equal for both agency and contract work estimates in order to provide a fair comparison of prices.
- b. **Cost comparison.** Division Administrators must obtain sufficient cost information so that a cost-effectiveness determination can be made by comparing the total cost for the agency to perform the work versus the total cost using competitively bid prices. See the [Appendix](#) for a sample cost-effectiveness submittal.
- (1) The agency's cost estimate should be prepared on a force account basis including estimated quantities and prices for material, labor, and equipment. The estimate should be based on one of two methods:
 - (a) Actual cost. Payment will be based on the actual cost of labor, materials, and equipment rates. Estimated hours and rates should be included and final reimbursement will be based on an audit of actual costs.
 - (b) Unit prices. Payment will be based on agreed unit prices and the actual number of units constructed. Agreed unit prices must be developed using quantities, man-hours, pay rates, material costs, and equipment rental rates.
 - (2) When an agency proposes to use previously purchased and stockpiled material, the value of the material should be the same as the price listed on the agency's cost inventory. All material must comply with FHWA's general material requirements in 23 CFR Subpart D.
 - (3) The agency should include all work items in the agency cost estimate (regardless of Federal participation) so that a fair comparison can be made with the estimate of contract work.
 - (4) The agency's total cost estimate should include an adjustment for the agency's overhead or indirect cost rates for labor, equipment, and materials. The agency's overhead or indirect costs rates must be developed in compliance with the Cost Principles for State, Local, and Indian Tribal Governments (2 CFR Part 225). More information about application of these cost principles within the Federal-aid Highway Program may be found in the [Clarification of Policy on Indirect Costs of State and Local Governments](#) memorandum issued May 5, 2004.
 - (5) The total agency cost estimate should not be reduced by:
 - (a) Potential savings resulting from use of less than complete plans,
 - (b) Potential savings from reduced quality assurance during construction, and
 - (c) Anticipated savings from reduced construction management and documentation.
- c. **Assurances that the project will comply with all Federal-aid requirements.** The agency must assure that it will comply with all applicable Title 23 requirements during construction such as the applicable sections of Form FHWA-1273 (Required Contract Provisions for Federal-aid Construction Projects), job site poster requirements, environmental commitments, etc.

- d. **Assurances that the performance of the project by force account will not hinder the State's attainment of its approved Disadvantaged Business Enterprise (DBE) goal.** Whenever an agency performs work by force account, contracting opportunities are not available. Thus, the agency must assure that the performance of the project by force account will not negatively affect the ability of the State to achieve its approved DBE goal.
7. **At what point does an agency's price become more cost effective in comparison with competitive prices?** There is no specific percentage or margin that defines a cost effective determination. However, when comparing the estimate of the agency's prices with competitive prices, it is reasonable to expect that the agency's prices would produce a savings considering the normal price fluctuations in a competitive market.
8. **Do the General Material Requirements of 23 CFR 635, Subpart D, apply to force account work?** Yes. Materials used to complete the work must meet the requirements in 23 CFR 635, Subpart D.
9. **Do the Quality Assurance Procedures for Construction provisions of 23 CFR 637, Subpart B, apply to force account work?** The provisions of Part 637 apply to all projects on the National Highway System (NHS). Non-NHS Federal-aid projects may use the quality assurance procedures of the contracting agency as allowed by the FHWA Division Office and State DOT Stewardship and Oversight Agreement.
10. **Do the prevailing wage rate requirements of 23 CFR 635.117(f) apply to force account projects?**
- a. Davis-Bacon prevailing wage rate requirements apply to mechanics and laborers employed by contractors and subcontractors on the site of the work. Davis-Bacon prevailing requirements apply to Federal-aid projects located within the right-of-way of a Federal-aid highway pursuant to 23 U.S.C. 113.
- b. As it relates to agency force account work:
- (1) Prevailing wage rate requirements do not apply to State, local, or municipal government employees of the owner-agency. Public agencies are not considered "contractors" or "subcontractors" within the meaning of the Davis-Bacon Act. (See the [U.S. Department of Labor's Field Operations Handbook, Section FOH 15b06\(a\)](#).) Any work that is "subcontracted" to private firms, is subject to the application of prevailing wage requirements.
- (2) The [U.S. Department of Labor's May 29, 2009, letter to the U.S. Department of the Interior](#) provides an advisory opinion that Federal prevailing wage rate requirements do not apply to Federal youth programs where a Federal statute establishes specific compensation to be given participants. On the other hand, State and local youth conservation corps employees and employees of other private organizations (non-profits) are subject to prevailing wage rate requirements.
11. **Is an agency allowed to perform a portion of a Federal-aid project on a force account basis and let a competitive contract for the remainder of the project?** Yes, however, the same principles apply to force account approvals when the agency is performing a portion of the project – there must be a finding of cost-effectiveness for that portion of the project. The FHWA must have the following assurances from the agency:
- a. The agency's work must be shown to be more cost effective than competitive bidding, and
- b. There must be some assurance that the agency's work will be an integral part of a functional project when completed. For example, a proposal for a State DOT to perform the final pavement markings on a roadway rehabilitation project would, by the nature of the pavement marking work, logically provide this assurance. On the other hand, a proposal for a LPA to perform utility adjustments on a roadway reconstruction project, by itself, does not provide an assurance that the force account work will result in a functional project.
12. **Is a cost-effectiveness finding necessary for a railroad or utility to perform minor adjustments on its own facility?** No. 23 CFR 635.205(b) states that it is cost effective to allow utilities and railroads to perform minor work on their own systems due to the inherent nature of the operations.
13. **Is there a limitation for an agency to request programmatic force account approval?** Yes. The approval should be limited to a specific time period, not to exceed 2 years. Consideration should be given

to specific caps for projects or programs (e.g., capping the total annual value of specific preventive maintenance activities).

14. **What are the requirements for the approval of agency force account projects assumed by the State DOT?**
 - a. The Stewardship and Oversight Agreement between the FHWA Division Office and the State DOT must address the assumption of this approval. Per 23 U.S.C. 106(c), the State DOTs shall assume this responsibility for all non-NHS projects and may, if appropriate, assume this responsibility for projects that are on the NHS but are not located on the Interstate System.
 - b. Agency force account approval authority shall not be further assumed by subrecipients, such as local public agencies. The State DOT is responsible for the review of cost-effectiveness of all LPA requests.
 - c. In all situations where this approval is assumed, the State DOT will be responsible for reviewing cost effectiveness determinations in accordance with the above procedures and ensuring that the project records adequately address any emergency or finding of cost-effectiveness.
15. **Are FHWA Division Office and the State DOT allowed to include additional review and approval procedures for agency force account cost-effectiveness determinations?** Yes. The Division Office and the State DOT may include additional review and approval procedures for cost-effectiveness determinations as long as these procedures do not conflict with this directive.
16. **Where can I obtain additional guidance?** For additional guidance, contact the FHWA's Office of Infrastructure [Contract Administration Group Leader](#) or the Office of Chief Counsel [Senior Attorney Advisor](#) on preconstruction approval procedures.



Victor M. Mendez
Administrator

Attachment

Appendix – Sample Cost-Effectiveness Determination

Description of Work:

Smith County proposes to install pavement markings as the final work item for the overlay of 0.9 miles of Smithfield Road. Contract forces will provide for the milling and resurfacing of the project by milling and providing a 2 inch overlay throughout the project limits.

Supporting Information:

- Smith County has the necessary experience and ability to perform the work. The County has been installing pavement markings on its roadway system for the past 10 years.
- The County will use its own equipment and does not need to rent equipment.
- The County will provide 100 percent of the labor and equipment for this work.
- The material will come from existing County stockpiles and supplies at a price currently listed in the County's inventory.
- All work will comply with MUTCD, 23 CFR 637 and State DOT requirements.
- Oversight, inspection and materials acceptance will follow State LPA standards.
- The use of Smith County forces will result in an estimated savings of approximately \$2,700 when considering all contract and agency costs.

Cost-Effectiveness Analysis

Estimate of Contract Prices	
Mobilization	\$ 1,000.00
Pavement Markings (11,000 lf @ \$0.50/lf)	\$ 5,500.00
Traffic Control Supervisor	\$ 1,000.00
Contract Total	\$ 7,500.00
Smith County Construction Engineering and Inspection at 10 percent	\$ 750.00
Total Project Estimate by Contract Forces	\$ 8,250.00
Estimate of Smith County Prices	
Labor	\$ 675.00
Equipment	\$ 573.50
Material	\$ 2,125.30
Subtotal (labor, materials, equipment)	\$ 3,373.80
Construction Engineering and Inspection at 10 percent	\$ 337.38
Subtotal Smith County (labor, materials, equipment, CEI)	\$ 3,711.18
Indirect Costs (Overhead at 50 percent)	\$ 1,855.59
Smith County total estimated cost	\$ 5,566.77
Difference in estimated costs	\$ 1,933.23
Percentage difference	26 percent

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