

Maryland Department of Transportation
State Highway Administration
Application for SEP 14
Indefinite Delivery/ Indefinite Quantity (ID/IQ) Contract
February 21, 2020

PURPOSE

For the last 20 or more years, the Maryland Department of Transportation State Highway Administration (MDOT SHA) routinely advertises \$10 million contracts using 100% state funding for the repair, rehabilitation, replacement, or preservation activities of highway bridges, retaining walls, and other highway structures with spans less than 20'. These are procured through a specialized Design-Bid-Build method that MDOT SHA calls "time and material" contracts.

MDOT SHA is now requesting SEP-14 approval for the implementation using this modified Indefinite-Delivery/Indefinite-Quantity (ID/IQ) contracting "time and material" method. MDOT SHA uses these contracts to speed up the time it takes between identification of a defect on a highway structure to engineering a solution to completing a traditional Design-Bid-Build procurement process to address the defect. These contracts are also used to respond to emergency situations due to traffic impacts or weather-related damage such as scour (this will continue to use state funds). In some cases, a defect could have gotten much worse in the timeframe it would take to procure a traditional Design-Bid-Build contract and would result in large overruns of quantities and massive amounts of extra work. It is far better and easier to have on-call "time and material" contractors for preventive maintenance to remedy a defect within a day, week, or a few months of identification. MDOT SHA believes that there will be no issues with this delivery method based on the rich history of using this method in the past with 100% state funds.

SCOPE

Under the "time and material" method, a specifications booklet with some quantities (based on historical data) are advertised. There are no plans, tasks, or locations identified at the time of bidding, and just a general scope of the types of work is included in the project description. These contracts will include bridge preservation, rehabilitation, replacement, and emergency repair activities. There are items for commonly used Maintenance of Traffic equipment (Cones, Drums, Protection Vehicles, etc.), items for commonly used contractor equipment (Flatbed Truck, Air Compressor, Dump Truck, Concrete Mixer, etc.), and items for various types of labor (Skilled, Forman, Welder, etc.). These items are all measured and paid by the amount of time they are used (hourly, daily, monthly, etc.).

Since there are an unknown number of tasks and quantities at the time of bidding, there are four additional items that have pre-established prices to make sure that the contract has enough money in it to carry the contract through the two-year duration of the contract. (If these items do not have pre-established prices, bidders would bid these items low, and then MDOT would have to constantly add money to the contract through hundreds or thousands of change orders every time these items are used.) These items, Materials for Structural Rehabilitation, Specialized

Equipment for Structural Rehabilitation, Subcontracting for Structural Rehabilitation, and Travel Expenses handle all other miscellaneous expenses that are incurred. They are all paid based on receipts, invoices, rental agreements, and/or blue book rates for material and equipment that are actually used on the contract plus a pre-established markup. This markup is 10% for all materials, 5% for all rental equipment, 0% contractor owned equipment (paid at blue book rate), 5% for all subcontractor work, and 0% for travel expenses. These pre-established markup rates are stated within the Section TC-7.03 Force Account Work in the MDOT Standard Specifications for Construction and Materials and/or the Section 400 Specifications for these items within the Invitation for Bid Booklet. The receipts will be attached to the Inspector Daily Reports for each task assignment before payment will be made. For the materials item, the contractor is reimbursed for a permanent and temporary material including consumables (gasoline, oxygen, etc.) based on the receipts and invoice submitted to the inspectors. For the specialized equipment item, the contractor is reimbursed the rental agreement price for the equipment based on the rental agreement or the blue book rate if the contractor owns the equipment. For the Subcontractor item, the contractor is required to submit prices from three or more subcontractors for any work that they plan on giving to a subcontractor. The prices include all labor, materials, and equipment for the subcontractor's task. The contractor is then required to select the lowest of the three subcontractors to complete the work. Lastly, for the travel expense item, MDOT will reimburse the contractor for hotels and meals as well as tolls if the contractor is required to travel long distances away from their central office. This increases safety and saves time on these statewide contracts. The contractor will have to supply receipts for these expenses, and MDOT will paid up to a maximum pre-establish limit.

Since the contractors are paid the exact amounts of money for work they complete on a month by month basis, the contractor has no way to front load the payment of items and will not likely abandon these types of contracts in the middle. Thus, MDOT SHA does not hold the standard retainage during the payment process like we would on other traditional contracts. As a consequence, a non-bid item (which the contractor never sees in the bidding process) has been created for all "liquidated damages". This item will be used to deduct any penalties incurred by the contractor on a month-by-month basis instead of MDOT's normal procedure of reducing the amount of retainage paid at the end of the contract. The penalties range from the Contractor not providing enough workers and crews, not removing lane closures on time, not conforming to the environmental regulations, and overall failure to maintain the project, etc.

Before the contract advertises, MDOT SHA's Structure Remedial Engineering Division (SIREM) will follow SHA's MDOT Programmatic Agreement procedures for processing Categorical Exclusion Actions and in this instance for Areawide or Statewide construction projects. A Programmatic Categorical Exclusion (PCE) is completed for construction without knowing the exact locations for the work. Then, prior to any task being provided to the contractor, SIREM submits individual locations with a scope of work and other environmental information to the MDOT SHA's Environmental Planning Division (EPLD) to ensure the scope is consistent with the previously approved PCE. EPLD will then complete the appropriate NEPA documentation based on the scope and impacts associated with the proposed action at the individual locations. This process is used when the Invitation for Bids doesn't include any specific locations. Currently, SIREM has a back-logged list of tasks that are being submitted now for all expected tasks to be on these contracts.

After award of the contract to the lowest bidder, a list of previously established task assignments is given to the contractor. Additional tasks can be added to the list as the contract progresses and more tasks are developed from the Structure Remedial Engineering Division. Each task assignment includes a location, scope of work, plans for the repairs, and material quantities for completing the work. For tasks over \$200,000, the contractor is required to give their prices for the material quantities, the amount of labor and equipment needed, and a schedule to complete the task. This is to make sure that the Contractor understands all the work that is involved with a particular task. The contractor then proceeds with the work and provides invoices, receipts, and rental agreements for actual work spent as stated above per task. Task under \$200,000 will be state funded but will also follow the procedures above except the contractor will not be asked to submit an estimate and schedule.

The scope of these assigned tasks can vary from the list below:

- (a)** Preservation and minor rehabilitation of piers, pier caps, and abutments.
- (b)** Jacking beams under traffic and restoring bearings or bearing pedestals on piers and abutments.
- (c)** Preservation and minor rehabilitation or replacement of deteriorated, damaged or cracked beams, girders, heat straightening and other structural steel including cleaning and painting of repaired or rehabilitated steel areas.
- (d)** Construct temporary bents and rehabilitate existing bents, piers, and abutments.
- (e)** Construct sheet pile end walls and wing walls. (state funded)
- (f)** Underpin of piers and abutment footings.
- (g)** Preservation and minor rehabilitation of damaged stringers.
- (h)** Preservation and minor rehabilitation or replacement of timber bridge components.
- (i)** Splicing of timber piles.
- (j)** Preservation and minor rehabilitation of piers in water and install pile protective devices.
- (k)** Placement of riprap and grout filled bag scour protection.
- (l)** Removal and replacement of various structures such as pipes, culverts and bridges. (state funded)
- (m)** Preservation and minor rehabilitation of retaining walls.
- (n)** Investigations such as test piles, utility test pits, checking bridge decks for shear reinforcement and any other tests required to determine existing unknown conditions. (state funded)

- (o) Working in conjunction with engineering consultants, fabricators, and suppliers to design and construct major and complex upgrades to electrical and structural bridge components. (state funded)
- (p) Destructive and non-destructive testing as necessary to determine existing condition of structures. (state funded)
- (q) Wrapping pier columns with fiber reinforced polymer protective system.
- (r) Applying a protective coating to concrete substructures as directed by the engineer.
- (s) Paving or lining of pipe inverts for both bridges over 20 feet in length and pipe structures under 20 feet.
- (t) Repairing pipe and culvert structures under 20 feet in length.
- (u) Installing roadway joint seals.
- (v) Installing waterproof membrane and new wearing surface on a deck.
- (w) Preservation and minor rehabilitation or replacement of damaged fender systems and dolphins.
- (x) Preservation and minor rehabilitation of movable bridge electrical systems.
- (y) Preservation and minor rehabilitation of movable bridge mechanical and hydraulic machinery systems.
- (z) Preservation and minor rehabilitation of movable bridge structural systems.
- (aa) Emergency response to weather events, i.e. washout of structures or approach roadways. (state funded)
- (bb) Emergency repairs to bridge superstructures and substructures due to traffic impacts. (state funded)
- (cc) Emergency response to defects either found by bridge inspectors or discovered under traffic loading, i.e. broken roadway joint angles, loose concrete. (state funded)

As can be seen on the list above, there is a combination of preservation, rehabilitation, replacement, and emergency repair activities. Non-preservation and emergency activities will be state funded. These \$10 million contracts will be created so that they can be used for preservation, rehabilitation, replacement, and emergency repair activities to highway bridges, retaining walls, and bridges with spans less than 20'. We refer to bridges with spans less than 20' as "small" structures. These contracts, including all task orders regardless of the scope, shall conform to all FHWA construction contracting requirements, including the FHWA-1273, 23 CFR 635 Subpart D (including Buy America), Davis Bacon wages, and MBE/DBE requirements.

SCHEDULE

All existing contracts end on June 30, 2020, so MDOT SHA will need to have new contracts started by July 1, 2020. Of the current five contracts, only two of them will be requesting Federal Funds under the SEP-14 program. One is for statewide tasks and the other is for tasks in District 6 only (Washington, Allegany, and Garrett Counties). MDOT SHA utilizes this other contract to reduce travel expenses to this remote part of the State of Maryland. Both contracts have a two-year duration and are scheduled to be completed by June 30, 2022. The milestone dates for each contract are listed in the chart below:

Milestone	Contract No.	
	XX1635Q80- District 6	XX1635P80- Statewide
Advertisement	02/18/2020 TUESDAY	03/03/2020 TUESDAY
Bid Opening	03/26/2020 THURSDAY	04/09/2020 THURSDAY
Notice to Proceed	06/01/2020 MONDAY	06/15/2020 MONDAY

MEASURES

MDOT SHA will analyze the measures below during the ID/IQ “time and material” contract:

- Quality of work through the final inspection process.
- Compare the original engineer’s task cost to actual contract task invoices.
- Reaction of contractors and industry to the use of this method on Federal-aid contracts.
- Lessons learned and suggestions for improvements on future contracts.

REPORTING

MDOT SHA will provide annual reports to FHWA documenting the status of all contracts and providing information regarding evaluation measures.

Based on past history, MDOT SHA believes the procedures described above will result in very successful projects. MDOT SHA looks forward to collaborating with FHWA throughout the life of the contracts and providing FHWA and other DOTs the benefits of MDOT SHA’s experience.