1. Contract Force Account

Also known as Extra Work Force Account

### What is it?

Force account is a payment method used for extra work when the contractor and the State Transportation Agency cannot agree on a unit price or lump sum amount, or if either of those methods are impracticable *(1)*. Force account payments are based on established hourly rates and the quantities of labor, materials, and equipment that are used to complete the work.

### Why use it?

Some of the advantages of force account work provisions are:

* Permits fast track start of construction in critical schedule areas *(2)*
* Saves staff time and overhead costs required for the preparation of contract packages and the bidding, evaluation and award of contracts *(2)*
* Reduces costs and enhances flow of engineering design concepts and drawings through eliminations of engineered contract packages and contract drawings *(2)*

### What does it do?

This method reimburses the contractor the actual costs of labor, equipment and materials incurred in the performance of the work including allowable overhead and markup *(3)*. This provision can be included in the contract when the quantities and scope of work are unknown at the time of bid letting. At the same time, force account provisions can also be used for extra work that is identified after the project has started *(4)*.

### How to use it?

Force account work that is not included in the contract is usually authorized through change orders. Here, the Project Engineer becomes responsible for directing the work for the force account items, not the Contractor. The Colorado Department of Transportation provides the following guidelines for Project Engineers to discuss with the contractors *(4)*:

* Scope of work – This includes the work to be accomplished, limits, expectations, and acceptance
* Construction methods – Most efficient methods and procedures available to complete the work
* Efficiency Improvements – Project Engineer and the contractor should continually monitor the progress of the work and determine whether better methods are available to improve efficiency and reduce costs.
* Labor Issues – Most efficient use of manpower available to complete the work. Try to utilize manpower that is available but ensuring not to negatively affect the progress of other contract work.
* Materials – Define the required types of materials, available sources, quantities and rate of use, pricing, and acceptance criteria
* Equipment – Define the most efficient use of the equipment available to complete the work. Similarly to labor, try to use equipment that is available on the site but making sure that it does not negatively affect the progress of contract work.

A majority of the DOTs that use force account provisions reimburse the contractors in the following categories:

* Labor – Includes the costs of labor and foreman at the rate of wage paid shown on the payroll and for every hour that the workers are actually engaged in the work *(5)*. In addition, STAs also include subsistence and travel allowances, health and welfare benefits, pension fund benefits, and other benefits required by collective bargaining agreements or other employment contracts *(6)*. Finally, STAs usually add a percentage of the labor costs to be paid as an overhead or profit.
* Materials – Includes the costs of all materials used on the work *(5)*, supplies and consumables, as well as freight and handling charges *(6)*. STAs may require contractor to provide multiple quotations from different vendors with the prices and terms, so the most advantageous options can be chosen. Here, the STA should set up adequate procedures for reporting and approval of usage of materials on force account work.
* Equipment – This includes the costs of any work performed by the contractor’s equipment. Here, the STA should define what constitutes contractor owned equipment and how rented equipment should be treated including rental rates. Equipment force account costs should include a percentage for overhead, profit, bonding, insurance and taxes.
* Services – Services are usually accounted for through invoices *(6)*. Under this category, STAs may require contractor to obtain multiple quotations from difference vendors in order to select the most advantageous options. This costs also include a percentage for project overhead, company overhead, profit, bonding, and any other costs incurred.
* Mobilization – This category includes any preparatory work performed by the contractor including procurement, loading and transportation of tools and equipment, and personal travel time *(6)*. Mobilization also includes the costs of “demobilization”. The STA needs to contractually define the procedures to follow when mobilization is made not only for the force account work but also for other contract work.

### When to use it?

This type of provisions should be used for extra work not covered in the contract documents when the STA and contractor cannot agree on a unit price or lump sum amount, or if those methods are impracticable *(1)*.

### Limitations?

Force account work provisions can have the following risks and disadvantages:

* STA bares the risks for the costs of correcting installation errors and poor workmanship *(2)*,
* STA bares the risks of cost overruns as a results of poor productivity, and any labor related problems *(2)*, and
* There are no incentives for the contractors to control cost and schedule *(2)*.

### Who uses it?

Many STAs have force account provisions in their standard specifications including California, Colorado, Minnesota, New Mexico, North Carolina, Ohio, Oregon, and Washington.

### Example

 The following are the force account work standard provisions used by the American Association of State Highway and Transportation Officials *(5)*:

109.04 Extra Work and Force Account Work

If the agency revised the contract under subsection 104.02, the agency will pay for the work by one of the following methods:

1. Contract Unite Prices. The engineer will use the contract unit prices if they are representative of the work to be performed
2. Negotiated Prices. The Engineer and the Contractor may negotiate new unit or lump sum prices before the work is performed.
3. Force Account. The Agency may direct the Contractor to perform work on a force account basis, which will be compensated as follows:
4. Labor. For the actual time labor and foremen are engaged specifically on force account work, the Agency will pay the cost of those employees’ wages at the rates agreed to in writing prior to beginning work. The Agency will not pay for general superintendence.

The Agency will include the actual costs paid for, subsistence and travel allowances, health and welfare benefits, pension fund benefits, or other benefits required by a collective bargaining agreement or other employment contract applicable to the class of labor employed.

The Agency will apply an additional [35] percent of the above sum for project overhead and profit.

1. Bond, Insurance, and Tax. The Agency will pay the actual cost, plus [10] percent, for property damage, liability, and worker’s compensation insurance premiums, unemployment insurance contributions, and social security taxes. Furnish evidence of the actual rate(s) paid.
2. Materials Costs. For materials accepted by the Engineer and used in force account work, the Agency will pay the actual invoiced delivery costs plus [15] percent.
3. Equipment and Plant. For the approved use of Contractor-owned machinery or special equipment other than small tools, obtain the hourly rates from the latest edition of the identified equipment rental rate guide.

The Contractor shall apply, and the Agency will confirm, rental rates identified in the guide as follows:

1. Use hourly rates, determined by dividing the monthly rate by 176
2. The number of hours to be paid for on a force account activity is the number of hours that the equipment or plant is actually used
3. Use the rates in the guide in effect on the first day work is performed on the force account activity throughout the performance period of the force account work.
4. Do not apply an area adjustment. Use rate adjustment tables to correct for equipment life.
5. Base overtime calculations on Subsection 109.04(C)(4)(a).
6. Include estimated operating costs for each hour the equipment or plant is in operation. Do not include idle time, regardless of cause, except as provided for in Subsection 109.04(C)(4)(g).
7. For equipment that remains on a standby basis at the request of the Engineer, the Agency will pay for idle time at one-half the rate established in Subsection 109.04(C)(4)(a). The Agency will not pay for standby time on a day that the equipment operates for eight or more hours. For equipment operating less than eight hours on a normal workday, the Agency will limit standby payment to the hours that, when added to the operating hours for that day, equals eight hours. The Agency will not make standby payment for days not normally considered a work day.
8. Calculate transportation costs to move equipment or plant to or away from the site.
9. Include the cost of fuel, oil, lubrication, supplies, small tools, necessary attachments, repairs, overhaul and maintenance, depreciation, storage, overhead, profits, insurance, and all incidentals in the rates established above.

Obtain the Engineer’s approval for rates exceeding those outlined above.

The Agency will not pay for (1) time lost for equipment breakdowns, (2) time spent to repair equipment, or (3) time exceeding 24 hours after Engineer notification that equipment is no longer needed.

Obtain written agreement before using equipment not included in the rental rate guide.

These provisions only apply to equipment and plant owned directly by the Contractor or by entities associated with the Contractor or its parent company.

Before using the rented equipment on the work, inform the Engineer of the need to rent the equipment and of the rate to rent that equipment. The Agency will reimburse the Contractor for rental equipment based on actual work time and transportation to and from the work site, provided the Contractor submits a copy of a paid invoice for the rental expense incurred.

The Agency will reimburse the Contractor for transportation charges to and from the work site provided (1) equipment is obtained from the nearest approved source, (2) return charges do not exceed delivery charges, (3) haul rates do not exceed established rates of licensed haulers, and (4) equipment units are unavailable on or near the project.

Submit invoices for all charges by individuals or firms other than the Contractor.

1. Subcontracting. If a subcontractor performs force account work, the Agency will pay the approved Subcontractor invoice plus [5] percent for administrative costs.
2. Cost Records. Obtain Engineer’s daily approval of cost records.
3. Statements. Furnish a weekly itemized cost statement to the Engineer. Detail as follows:
	1. Name, classification, date, daily hours, total hours, rate, and extension for each laborer and foreman.
	2. Designation, dates, daily hours, total hours, rental rate, and extension for each unit of equipment.
	3. Quantities of materials, prices, and extension.
	4. Materials transportation costs.
	5. Property damage, liability, and workers’ compensation insurance premiums, unemployment insurance contributions, and social security costs.

Support statements with accompanying certified payrolls and invoices for all materials used and transportation charges. Furnish an affidavit for materials taken from the Contractor’s stock and not specifically purchased for the work; certify origin, quantity used, price, and transportation cost.

Accept the total payment as provided for above as full compensation for the work.

### References

1. Minnesota Department of Transportation (MnDOT). Force Account. <http://www.dot.state.mn.us/const/tools/forceaccount.html> [Accessed: March 12, 2014].
2. Bartz, R. E. *Design & Construction of the Contract Package Concept*. AuthorHouse, 2013.
3. Ohio Department of Transportation (ODOT). *Construction Inspection Manual of Procedures*. Columbus, Ohio, 2009.
4. Colorado Department of Transportation CDOT). *General Provisions*. Denver, CO, 2012.
5. American Association of State Highway and Transportation Officials (AASHTO). *Guide Specifications for Highway Construction*. Washington, DC, 2008.