

Technical Circular T-5/92
October 29, 1992

TO: ALL H.Q. DIRECTORS: Prof. Services, Planning & Major Projects
ALL REGIONAL MANAGERS: Prof. Services, Planning & Operations
ALL DISTRICT HIGHWAYS MANAGERS

SUBJECT: DRILLING AND BLASTING POLICY AND PROCEDURES

PURPOSE:

To provide guidance for handling of the drilling and blasting phase of projects, either by Hired Equipment or by contract.

BACKGROUND:

In the past drilling and blasting has been done as part of larger contracts or by separate purchasing of consumables, hiring of equipment and blasting services. It could not be handled properly by hired equipment because of the other services required and the special considerations for the liabilities. The new agreement form now addresses these considerations and allows the work to be done by an all included (all found) hired equipment method.

PROCEDURE:

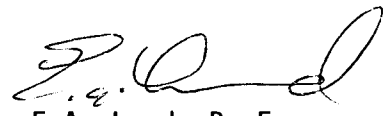
The policy statement attached, outlines the project size and special considerations for completing the work either by Hired Equipment (day labour) or by contract and gives some guidelines for items to be considered and included in contract documentation if the work is to be completed that way. The dividing line between the two methods is currently set as outlined in the policy, and is subject to a change sometime in the future if field experience in the use of the two methods requires an adjustment.

CONTACT:

Regional Manager, Operations - Region where the work is to be done.

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Attachment

cc. A.D.M. Highways Operations
A.D.M. Planning & Major Projects
All Regional Directors

Ministry Policy

Drilling & Blasting Projects

There are two methods established for completion of Drilling and Blasting operations, tendered contracts and hourly hired equipment. A value for the Drilling & Blasting phase of the project of \$50,000 has been set as the upper limit for completion of the work by Hired Equipment, with some flexibility depending on the degree of risk to nearby buildings, structures or utilities. The dividing value is to be set lower if high risk is involved and may be higher if there is low risk. If more cost effective to do so, consider the purchase of explosives separately by the Ministry.

Hired Equipment Method

A standard hire agreement H246A is being printed to facilitate work on an hourly basis. Limited to smaller projects as outlined above.

Tendered Contract Method

For larger projects and/or high risk Drilling and Blasting conditions, the work is to be completed by tendered contract on an all found basis, to include all labour, materials, explosives, equipment and other expenses, to complete the work. The contract can be called either as a lump sum tender or on a per cubic yard/meter of rock basis, depending on which would be most practical for the job conditions.

In the contract documents, special consideration is to be placed on the liability coverage involved with the blasting phase of the work. Clauses similar to those used in the H246A may be used in the contract documentation, but should be modified if the degree of risk requires additional liability coverage.

All companies tendering shall identify a crew member that holds a blasting certificate suitable for the work to be done.

All work related to the handling of explosive and completion of the loading and blasting phase of the work, shall be completed by, or under the close supervision of, the holder of the certificate.

The handling and transport of explosives and detonating devices, and the on-site storage in a powder magazine and/or day box shall be as required by WCB and Federal Regulations.

The contract documentation shall contain descriptions and distances from the blast site to any buildings, structures or utilities that could be affected by the blasting operation. The contractor shall submit a blasting diagram prior to the start of drilling work and shall control the blasting operation to minimize damage to the identified buildings, structures and utilities.

All unused, damaged or deteriorated explosives and detonating devices shall be removed by the contractor upon completion of the work.

DRILLING AND BLASTING HIRE AGREEMENT

This Agreement is to be used for Drilling and Blasting projects with estimated cost under \$50,000 and projects not subject to special high risk considerations. If beyond these limitations, the work is to be tendered as outlined in Ministry Policy.

For Project for an estimated period of
commencing 199 ...

1. Drilling and Associated Equipment

A standard H-246 Equipment Rental Agreement is to be completed for the drilling equipment associated with this work.

Equipment description
.....
.....

All found Rental Rate per hour as per attached H-246. Additional "helper or security" labour may be included in this rate and/or in the blaster rate but there shall be no duplication of hours charged for the same crew member.

2. Explosives and Detonators

All consumable materials required by the project are to be supplied at cost plus 10% under this agreement. This agreement requires the removal of all unused, damaged or deteriorated explosives or detonating devices, and the cleanup of any undetonated explosives from the blast site, upon completion of the work. The first sentence of this clause is to be crossed out or modified if the Ministry supplies materials, and initialed by both parties.

3. Licensed Blaster (with appropriate Blasting Certificate)

Supplied under this agreement at the Hourly All Found rate of per hour. To include all labour related overhead costs. Including but not limited to: labour plus benefits, transportation, transportation of explosives and detonators, powder magazine and/or day box, blasting mats, signs, warning signal horns, tools, blasting machine, and miscellaneous items required in the loading and blasting phase of the work. Supply blasting diagram and other documentation as required by Regulations.

4. Additional requirements/conditions of the agreement are as follows:

a) The contractor shall at the Contractors expense, obtain and maintain in force during the term of this agreement, Comprehensive (Commercial) General Liability insurance including non-owned automobile and contractual liability insurance. Her Majesty the Queen in Right of the Province of British Columbia, as represented by the Minister of Transportation and Highways together with any employees, agents or servants of the Minister, shall be added as an Additional Named Insured. Such liability insurance shall have inclusive limits of not less than TWO MILLION DOLLARS (\$2,000,000.00) per occurrence for bodily injury, death and property damage, including loss of use thereof, which may arise directly or indirectly out of the acts or omissions of the Contractor, the Ministry or any of them under this agreement. In addition, Automobile liability insurance is required with inclusive limits of not less than TWO MILLION DOLLARS (\$2,000,000.00) on a Standard Owner's Form

DRILLING AND BLASTING HIRE AGREEMENT

Automobile Policy providing third party liability and accident benefits insurance for all licensed vehicles owned, leased, rented or used in the performance of this contract. The insurance coverage shall be Issued with insurers acceptable to the Minister, and Issued by companies duly licensed to transact business in the Province of British Columbia. Certification that the insurance requirements have been met, by way of a duly completed Ministry Certificate of Insurance shall be filed with an authorized Ministry Representative upon execution of this agreement.

b) The Contractor shall indemnify and save harmless the Ministry from and against any and all losses, claims, damages, actions, causes of actions, costs and expenses the Ministry may sustain, incur, suffer or be put to at any time or times (whether before or after completion date or termination of this agreement) where the same or any of them are based upon, arise out of, or occur by reason of any act or omission of the Contractor or of any employee, agent, servant, officer, director, shareholder or subcontractor of the contractor pursuant to this agreement.

c) All equipment and operations must comply with applicable Motor Vehicle and Motor Carrier Acts and Regulations, and all applicable Federal Regulations.

d) It is expressly understood that the owner/operator under this Agreement shall comply with all safety requirements and regulations of the Ministry of Transportation and Highways.

e) All equipment rented and services provided to the Ministry of Transportation and Highways must conform with the regulations of the current Workers' Compensation Board Industrial Health and Safety Regulations, including the maintenance of required log books.

f) The owner/operator must provide a valid W.C.B. Registration Number, and by signing this form hereby confirms that Workers' Compensation Board Registration is current and not in arrears.

Blaster's Name.....Blasting Certificate No.....

ClassValid W.C.B. Registration number

Dated at this day of199...

Owner/Company Name

Address

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.....
Owner Representative

.....
Ministry Official

Form to be completed in triplicate for all equipment hired by Ministry. Original copy to owner, duplicate to district office and triplicate copy to regional office. Where authority to hire is required, when received, is to be noted on district and regional copy.

Rental authorized by

District

Hired Equipment Approval Number