

**ITEM 63203.0295XX M - ICE DRILLING AND BLASTING, EMERGENCY STANDBY CONTRACT WORK**

**DESCRIPTION:**

Under this item the Contractor shall create, by the use of explosives, a channel free of ice jams to dimensions as ordered by the Engineer.

**MATERIALS:**

Blasting shall be done with gelatin dynamite or approved packaged water gels. Detonation of the explosives shall be accomplished only with electrical blasting caps or detonating fuse. Several delays may be required for each round.

**CONSTRUCTION METHODS:**

A blasting crew shall comprise of a blaster, a blaster's assistant, a driller, and as many laborers as are required to adequately provide for the protection and safety of people and property in or near the work site. The Engineer in Charge shall be the final judge of the adequacy of this protection. No blasting shall commence until such protection has been provided.

A project meeting relative to the location, method, manner and procedure of drilling and blasting shall be held at the site with the Engineer, the contractor, and representatives of all interested agencies including a Departmental Engineering Geologist prior to the commencement of drilling and blasting operations.

Each drill hole shall be a minimum of 102 mm in diameter and shall be free of slush, ice or other material which would impede the loading of explosives. Holes shall be drilled in a pattern, at the location and to the depth ordered by the Engineer.

Whenever practicable, holes will be drilled through the ice to allow explosives to be loaded in the underlying water.

The explosives shall be of such character and strength and in such amounts as is permitted by the state and local laws and ordinances, and all respective agencies having jurisdiction over them. The right is reserved for the Engineer to specify the size of the charge, number and type of delays, and number of holes fired in each round. Explosives shall be located beneath the ice whenever practicable. Positive methods shall be employed to prevent explosive charges from being separated from the rest of the round due to water turbulence.

The contractor shall employ only experienced supervisors and workmen in the handling, loading and firing of explosives. The contractor's attention is directed to the requirements of the Industrial Code Rule 30 of the State of New York, Department of Labor, Board of Standards and Appeals, and the applicable sections of the Labor Law which, together with the conditions indicated herein, shall provide for the possession, handling, storage and transportation of all explosives used at the site.

Blasting shall be done only at such times and at such locations as the Engineer shall approve and under such restrictions as the Engineer may impose.

The Contractor shall have a blasting crew with required materials and equipment at the designated work site within eight hours after notification by the Department. The crew shall initiate blasting operations and continue to drill and blast as ordered by the Engineer until the Engineer shall order them to stop. The blasting crew may be moved from site to site and from river to river as ordered by the Engineer. If a change of location requires additional laborers and/or equipment to provide adequate protection and safety of people and property in or near the work site, the Contractor shall provide such equipment and/or personnel. The cost of providing such additional personnel and/or equipment shall be included in the price bid for ice drilling and blasting and no separate payment will be made. The Engineer may order more than one crew to work at a time. The Contractor shall provide fully equipped additional crew(s) within eight hours of being so ordered by the Engineer. The Engineer may order one or more crews to stop work while another crew or crews is ordered to continue work.

**METHOD OF MEASUREMENT:**

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Ice drilling and blasting shall be measured by the crew-day. A crew shall include a blaster, a blaster assistant, a driller and as many laborers as are required to adequately provide for the protection and the safety of people and property in or near the work site. The crew shall also include detonators, blasting accessories, Ice Augurs, signs and tools to complete the work. A crew shall also include the cost involved in moving it from site to site and from river to river including but not limited to any additional personnel and/or equipment required to adequately provide protection and safety of people and property in or near the work site. A day shall be a calendar day. The total number of crew-days shall be the sum of the number of calendar days by each crew from the time it actually commenced work to the time it was ordered to stop work by the Engineer. This time shall be measured in whole crew-days, and regardless of the number of hours a crew works in any one calendar day, it will be counted as one crew-day.

**BASIS OF PAYMENT:**

The unit price bid for this item shall include the cost of all labor, equipment, and materials including detonators and fuse, but not including explosives necessary to complete the work. Explosives will be paid for under the item for explosives.

Payment will be made under:

<b><u>ITEM NO.</u></b>	<b><u>ITEM DESCRIPTION</u></b>	<b><u>PAY UNIT</u></b>
63203.029501M	Ice Drilling and Blasting, Emergency Standby Contract work, Quantity Range 1 (0 to 2)	Crew-Day
63203.029502M	Ice Drilling and Blasting, Emergency Standby Contract work, Quantity Range 2 (3 to 5 )	Crew-Day
63203.029503M	Ice Drilling and Blasting, Emergency Standby Contract work, Quantity Range 3 (Over 5)	Crew-Day