



## **Section 20**

### **Blasting**

## Section 20. Blasting

### 20.1 State Standards

Pursuant to the State's Site Law, applicants shall provide a blasting plan and report. All blasting shall be in accordance with 38 MRSA paragraph 490-Z(14)(Blasting).

### 20.2 Blasting Assessment

During construction, it is likely that blasting will be required for the development of roadways, preparing turbine pads, and turbine foundations. All blasting will be performed by properly licensed professionals who will handle, transport, store, and use all explosive materials according to the provisions for safety, notification, planning, and documentation set out in the draft blasting plan provided.

To the greatest extent practical, blasted rock will be crushed into a well-graded mixture according to specifications from the Maine Department of Transportation ("MDOT") and used onsite as surface aggregate for crane paths, access roads, riprap, and embankment fills. Proposed site grades have been designed to balance cuts and fills to minimize the net import or export of blasted material.

See the attached Draft Blasting Plan in Exhibit 20-1.

## Exhibit 20-1 Draft Blasting Plan

### **General:**

Applicant will follow all local, state and federal blasting regulations related to transportation and the use of explosives, including blasting law for site location of development projects: 38 MRSA paragraph 490-Z(14). Safety is the top priority during all stages of blasting operations.

### **Pre-Blast Surveys and Notifications:**

All property owners within a 2,400-foot radius of the project limits will be given an opportunity to fill out a pre-blast survey. Any property owner who desires to fill out this survey will be given appropriate notice and appointments will be arranged for them. Survey results will be documented through narration, written reports, videos or photos.

In addition, all property owners within a 2,400-foot radius of the project limits will be given a blasting schedule. This schedule will contain the following information: 1) name, address, and telephone number of the operator, 2) identification of the specific areas where blasting will take place, 3) dates and time periods that explosives are to be detonated, 4) methods to be used to control access to blasting areas, and 5) types and patterns of audible warnings and all-clear signals to be used before and after blasting.

### **Blast Monitoring**

All blasting operations will be monitored by a representative who has been properly trained in the set-up and use of seismic monitoring equipment. There will be at least one seismograph in use at all times, and there will be monitoring equipment at the nearest structure to the blast site with the instrument's transducer firmly coupled to the ground. Results of blast monitoring will typically be available before the next blast, and modifications will be made to the blast design for the next blast if necessary.

### **Sequence of Blasting**

All blasting operations will be coordinated with the Fire Department and the Blasting Contractor. The focus will be on safely and efficiently removing the rock on the project site without impacting surrounding structures. Blasts will be developed to create adequate relief, which will minimize ground vibrations and offer the greatest possible protection to the surrounding environment.

### **Blasting Procedures**

1. Blasting will take place Monday through Friday between the hours of 7 AM to 7 PM. A maximum of 4 blasts per day will be allowed.

2. Blasting will be conducted at the times outline in the blasting schedule except in the case of an emergency, such as electrical storms, in which times may need to be adjusted.
3. All people inside of the permit area will be notified of the meaning of warning and all-clear signals, which will be given within a range of ¼ mile of the blast.
4. Access to the blasting area will be regulated to protect the public. Before and after each blast, an authorized representative will determine whether any unusual circumstances exist before granting access to the site.
5. Areas with charged holes that are awaiting firing will be guarded, barricaded, and flagged against unauthorized entry.
6. All blasts shall be made in the direction of the stress relieved face.
7. All stemming will be kept to a minimum using clean, dry crushed stone.
8. Blasting mats shall be used as necessary.
9. The Blasting Contractor shall insure that extra safety and judgement is exercised by his blaster.
10. If a blast is initiated by a detonated cord, the cord will be covered by crushed stone or suitable cover to reduce noise.
11. Explosives will be delivered to the job site each day in the amount that is necessary for that day's work.
12. To prevent excessive amounts of rock movement, the blaster will place rubber tire blast mats on or surrounding the blast site and property.

### **Blast Security and Warning Whistles**

Prior to each blast, a security check and series of warning whistles will be performed. All personnel in the vicinity of the blast area will be warned, and communications will be made with job site supervisors and local officials. The warning whistles will follow this sequence: 3 audible signal pulses = 5 minutes to blast, 2 audible signal pulses = 1 minute to blast, 1 audible signal pulse = all clear.

### **Blaster Personnel**

All blasters performing this job will be licensed by the state of Maine and will have received training on the safe handling of explosives. All blasters are familiar with the OSHA, state, and federal regulations regarding construction site safety. The following qualifications will also be required of all blasters: possess a Certificate of Competence, not addicted to narcotics or other drugs, and capable of using good judgement.

### **Licenses and Permits**

All blasters are fully licensed and insured for the transportation, use and handling of explosives. Blasting permits will be applied for as required from local authorities.

### **Blast Vibrations**

Vibrations will be monitored and will adhere to the guidelines described in the state regulations. Blasting sounds will comply with 38 M.R.S. 490-Z (14)(H).