



**STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION**



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October 13, 2016

Subject: Project No. 302-0015
Bethel Rail Station Parking Lot Expansion in the Town of Bethel

NOTICE TO CONTRACTORS:

This is to notify all concerned and especially the prospective bidders that the bid opening for the subject project is being postponed One (1) week from October 12, 2016 to October 19, 2016 at 2:00 P.M. in the Conference Room of the Department of Transportation Administration Building, 2800 Berlin Turnpike, Newington, Connecticut.

Addendum No. 1 is attached

The Department has established a general mailbox to receive contractor questions. Please send all future questions to DOTContracts@ct.gov

Philip J. Melchionne

For: Gregory D. Straka
Contracts Manager
Division of Contracts Administration

OCTOBER 12, 2016
BETHEL RAIL STATION PARKING LOT EXPANSION
FEDERAL AID PROJECT NO. N/A
STATE PROJECT NO. 302-015
TOWN OF BETHEL

ADDENDUM NO. 1

SPECIAL PROVISION
NEW SPECIAL PROVISION

The following Special Provision is hereby added to the Contract:

- **ITEM NO. 0203100A – STRUCTURE EXCAVATION-ROCK (COMPLETE)**

CONTRACT ITEMS
NEW CONTRACT ITEM

<u>ITEM NO.</u>	<u>DESCRIPTION</u>	<u>UNIT</u>	<u>QUANTITY</u>
0203100A	STRUCTURE EXCAVATION-ROCK (COMPLETE)	C.Y.	6860

DELETED CONTRACT ITEM

<u>ITEM NO.</u>	<u>DESCRIPTION</u>	<u>ORIGINAL QUANTITY</u>	<u>REVISED QUANTITY</u>
0202100	ROCK EXCAVATION	6860 C.Y.	0

The Detailed Estimate Sheets do not reflect these changes.

The Bid Proposal Form has been revised to reflect these changes.

There will be no change in the number of calendar days due to this Addendum.

The foregoing is hereby made a part of the contract.

ITEM #0203100A – STRUCTURE EXCAVATION-ROCK (COMPLETE)**Subarticle 2.03.01 - Description:**

Add the following after the second paragraph;

Rock Excavation, as called for in this project and specifications, is to be accomplished within a restrictive work area and with restrictive time constraints.

Rock Excavation shall include furnishing all labor, equipment, materials and services and performing operations required to fragment rock utilizing controlled blasting techniques such that damage is prevented to adjacent structures, utilities, and property such that resulting ground vibrations are maintained below the specified maximum levels.

The Contractor shall also conduct blast monitoring of every blast round required to excavate rock during the conduct of construction utilizing monitoring procedures and equipment specified in this Section.

Subarticle 2.02.03 – Construction Methods:

Add the following to the end of the subarticle;

Submittals:

Advance Submittals: The Contractor shall submit the following information to the Engineer at least two (2) weeks prior to commencing drilling and blasting operations:

1. Sequence and schedule of blasting rounds, including the general method of developing the excavation, lift heights, starting locations and estimated start dates, and estimated progress rates.
2. Specifics of a typical production round and perimeter control to be implemented at the highest rock cut for each area of rock excavation.
3. For each of the typical blast rounds in 2. Above, include the following blast round details:
 - a. Diameter, spacing, burden, depth, tip elevation, and orientation of each blast hole for each round design.
 - b. Manufacturer and amount (in terms of weight and number of cartridges) of explosives and distribution of charge to be used within each hole, on each delay, and the total for the blast.

- c. Manufacturer and type of detonators; delay pattern wiring diagram for the round: type and capacity of firing source, size, type and location of safety switches and lightning gap.
 - d. Type and location of stemming to be used in holes.
 - e. Calculations of anticipated vibration levels at nearest adjacent structure.
4. Methods of matting or covering of the blast area to prevent flyrock and excessive airblast overpressure.
 5. Written evidence of the licensing, experience and qualifications of the blaster(s) who will be directly responsible for the loading of each shot and for firing it.
 6. Name and qualifications of the person(s) responsible for designing and directing the blasting.
 7. Name and qualifications of the person(s) responsible for monitoring and reporting blast vibrations.
 8. Details of an audible advance signal system to be employed at the job site.
 9. Instrumentation that the Contractor proposes to use to monitor vibrations and airblast overpressure levels complete with performance specifications.
 10. Recent calibration certificate(s) for the proposed blast monitoring instrumentation.
 11. Copy of the blasting permit(s) obtained to conduct blasting on the site.
 12. Copies of all Pre-blast condition surveys performed.

Progress Submittals:

Within 24 hours following each blast, the Contractor shall submit to the Engineer, a Blast Monitoring Report. Each Blast Monitoring Report shall include the following applicable items:

1. Blast round data, as indicated above.
2. Blast Monitoring Location Plan, indicating the location from the blast to monitoring locations.
3. Vibration and airblast overpressure data from each seismograph, including a copy of the strip chart (or other permanent record of velocity/time waveform) with calibration and monitoring record marked with the date, time and location of the blast.

Review by the Engineer of blast designs and techniques shall not relieve the Contractor of responsibility for the accuracy, adequacy and safety of the blasting, exercising proper supervision and field judgment and producing the results within the blasting limits required by these Specifications.

Personnel Requirements:

Persons responsible for blasting shall be licensed blasters in the State of Connecticut and shall have had acceptable experience in similar excavations in rock and controlled blasting techniques.

Blast monitoring shall be conducted by persons trained in the use of a seismograph and records shall be analyzed and results reported by persons familiar with analyzing and reporting the frequency content of a seismograph record.

Peak Particle Velocity (PPV) Limits:

The Contractor shall conduct all blasting activity in such a manner that the maximum peak particle velocity does not exceed the following limits:

<u>Distance from Blast to Structure</u>	<u>Max. PPV mm/sec (in/sec)</u>
<45.7m (<150 ft)	50.8 (2.0)
45.7m - 91.4m (150 ft - 300 ft)	31.8 (1.25)
>91.4m (>300 ft)	12.7 (0.5)

Blast Vibration Monitoring:

The Contractor shall monitor peak particle velocities resulting from each blast, at a location adjacent to the nearest structure from the blast.

All instrumentation proposed for use on the project shall have been calibrated within the previous six (6) months to a standard which is traceable to the National Bureau of Standards. Characteristics of required instrumentation are listed below:

Measure the three (3) mutually perpendicular components of particle velocity in directions vertical, radial, and perpendicular to the vibration source. Measure and display the maximum peak particle velocity component and airblast overpressure. These readings must be displayed and be able to be read in the field, immediately after each blast.

Furnish a permanent time history record of particle velocity and airblast overpressure waveforms.

Compliance with the peak particle velocity limits as set forth in this specification shall not relieve the Contractor of responsibility for damage resulting from its blasting operation.

General Blasting Procedures:

The time during which explosives may be used must be in compliance with lane closure allowances as put forth in Section 1.08 - Prosecution and Progress. In addition, the use of explosives is restricted to daylight hours. In order to minimize traffic disruptions, the Contractor shall schedule blasting such that any two successive blasts detonated anywhere on the project are separated by at least 2 hours. The Contractor's blasting operations shall be performed using extreme care to minimize the inconvenience and interruption to traffic and damage to the pavement, structures, guardrail, median fence and surrounding areas.

Mechanical means shall be used for rock removal within the 100 feet distance from the Metro North Railroad track.

Immediately after blasting, the Contractor shall have sufficient equipment available at the site to clear the pavement of blast rock as noted below. The Contractor shall also use, as required, a mechanical sweeper to control dust and small stones.

The Contractor shall advise the Engineer at least two working days in advance of the dates on which he proposed to perform blasting operations, giving the approximate hour, for the Engineer's approval.

The Contractor will notify the Engineer by noon of the day prior to any day he plans not to blast where the weekly schedule shows a day of blasting. This does not include changes due to weather or unexpected equipment breakdowns.

If at any time the Engineer determines that the Contractor's rock excavation program does not comply with the requirements of this specification, the Engineer may direct the Contractor to halt all rock excavation activities and have the Contractor submit a revised rock excavation procedure for review and approval by the Engineer.