


<b>TO:</b>  <b>SUPERSEDED BY EB 96-016</b> <b>EFFECTIVE 5/7/96</b>	<h1>ENGINEERING INSTRUCTION</h1> <p>NEW YORK STATE DEPARTMENT OF TRANSPORTATION</p>
	<b>SUBJECT:</b> CONSTRUCTION SUPERVISION MANUAL SECTION 202 - DEMOLITION OF STRUCTURES AND OBSTRUCTIONS <b>Subject Code:</b> 7.27-1-202
<b>Distribution:</b> 30 Main Office    32 Regions    34 Consultants  <b>APPROVED:</b>  <hr/> P.T. Wells, P.E., Deputy Chief Engineer, Constr. Div.	<b>Code:</b> <u>94-001</u> <b>Date:</b> <u>3/8/94</u> <b>Supersedes:</b>

Attached is a new section for the Construction Supervision Manual relating to demolition and steel removal operations. This section is to be inserted in existing manuals as pages 202-1 through 202-3.

Questions should be addressed to the Construction Division at 518-457-6472.

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## 202 - DEMOLITION OF STRUCTURES & OBSTRUCTIONS

- A. Demolition of structures and buildings, and the replacement of structural elements on structures that are to remain in place, represent significant safety risks both to the workers involved and to the traveling public. It is essential that these operations are carried out under the careful supervision of the contractor with adequate consideration of safety. The Engineer's attention is directed to Sections 202 and 589 of the Standard Specifications, which provide specific requirements that the contractor must address. Any demolition or removal of structural elements carried out under other sections of the specifications must address the same general requirements as listed in Sections 202 and 589, based on the general health and safety provisions of Section 107-05A of the Standard Specifications, and on Subpart T of Title 29 Code of Federal Regulations Part 1926 (OSHA health and safety regulations for Construction).

Specific requirements include the following:

1. Prior to demolition operations, the contractor's competent person shall make an engineering survey of the building or structure.
2. For bridge structures longer than 20 feet, the competent person must be a registered Professional Engineer, unless this requirement is specifically waived in the contract documents. The decision to waive the requirement is made by the project designer, based on the type of structure, the condition of the structure and the type of feature crossed.

For buildings, other than ordinary wood frame construction, the competent person must be a registered Professional Engineer or a registered Professional Architect.

3. The written findings and recommendations of this survey shall constitute a removal plan, which must be given to the Engineer and filed with the Project Safety and Health Plan. The removal plan must meet all the requirements of Title 29 Code of Federal Regulations Part 1926, Subpart T-Demolition, and also be consistent with the contractor's Project Safety and Health Plan. It should address the following areas of concern:
  - a. Existing condition of the building or structure
  - b. Possibility of collapse of any portion during demolition operations

- c. Condition of adjacent buildings or structures within 100 feet (if directed by the Engineer). To make this determination, the Engineer should consider whether the stability of adjacent buildings or structures will be significantly affected by demolition operations.
  - d. Description of type, size and location of equipment to be used in the demolition operations.
  - e. Sequence and preliminary schedule of removal activities. The schedule should also identify any critical operations which will require on-site monitoring by the contractor's competent person.
  - f. Bracing or shoring required to secure or stabilize deteriorated buildings or structures so that workers can perform operations safely.
  - g. Walls, supports and bracing necessary to accomplish the demolition of party wall structures
  - h. Details of the shoring and shoring foundations necessary to prevent damage to adjacent property
  - i. Designation and identification of non-access areas (areas that could become unstable or subject to collapse)
  - j. The presence of asbestos, lead or other hazardous materials, and the impact on demolition operations.
  - k. Plans for monitoring the building or structure during demolition operations. The contractor's competent person does not always have to be present, but should monitor the operations on a frequent and continuing basis, and be on-site to monitor any critical operations.
  - l. Plans for shutting off or maintaining utilities on the building or structure.
  - m. Maintenance and protection of traffic scheme.
4. Removal plans that must be prepared by a Professional Engineer or a Professional Architect shall be submitted to the Engineer 30 days prior to the commencement of demolition operations. Other removal plans shall be submitted 15 days prior to commencement.
- B. The Engineer should review the contractor's demolition plan to ensure that it addresses all appropriate specification requirements. If any obvious omissions are noted, the plan

should be returned to the contractor with a request that the necessary information be provided. On particularly large and complicated jobs, the Engineer may also request the Regional Structures Engineer to review the demolition plan.

During the course of demolition operations, the Engineer and the inspection staff must ensure that the contractor complies with all aspects of the demolition plan submitted. Inspectors must be knowledgeable about the specific aspects of the demolition operations for which they are responsible.

Any changes to the demolition plan must be submitted to the Engineer for review as noted above. The Engineer is responsible for ensuring the inspection staff is kept informed of all such changes.

C. References:

1. Local building codes
2. NYS Fire Prevention & Building Code
3. NYC Building Code (for NYC projects)
4. Title 29 Code of Federal Regulations, Part 1926, Subpart T-Demolition
5. EI 92-020 "Demolition Specification"
6. EI 92-034 "Asbestos"
7. EI 93-034 "Protecting Workers from Lead and Materials Containing Lead (Paint)"

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