

SPECIAL INSPECTIONS DURING CONCRETE CONSTRUCTION

Construction Codes Requirements

HIGHLIGHTS

Severe cracking of reinforced concrete column elements at a New York City construction job site was investigated and shown to be caused by non-conforming concrete. The grout used in lubricating the boom and hoses attached to the concrete pumps had contaminated the design concrete mix and was not properly discarded into grout boxes. Inadequate special inspections also contributed to the concrete performance failure.



(Source: constructionwashout.com)

Figure 1: Grout Box

Buildings Bulletin 2021-003 clarifies the role of the Special Inspector during concrete placement and the attention that must be given to the proper discarding of grout.

BACKGROUND

Special inspectors verify and inspect the use of the design concrete mix during concrete construction. It is conducted in collaboration with the required onsite Construction Safety Manager.

Grout boxes (Figure 1) are adequately sized receptacles employed for discarding the anticipated amount of grout that has been used to prime placement booms attached to concrete pumps.

PROCESS OVERVIEW

Special Inspections are performed at the job site as per the 2014 NYC Building Code. The role of the Special Inspector is a full-time observation and continuous presence in the area where the work is being performed at the jobsite. Responsibilities include, but are not limited to, the following:

- verify and inspect the use of the design concrete mix is in accordance with the NYC Building Code
- must be present during concrete placement at the point of application of the design concrete mix from the boom
- confirm that the concrete to be conveyed to the place of final deposit by methods that will maintain the properties of the design concrete mix delivered
- verify with the Construction Safety Manager that no contaminated concrete is deposited in the structure
- confirm the design concrete mix specified for the structural element being poured is not contaminated with lubricating grout and the concrete mix consistency has uniformity
- may require a Slump Test at the point of discharge to verify consistency of the concrete prior to placement

Speak with your architect or engineer about how **Buildings Bulletin 2021-003** is applicable to your proposed scope of work. **Read [Buildings Bulletin 2021-003](#) for more details on the requirements.**

Send questions to constructioncodes@buildings.nyc.gov.