

**SECTION 01 56 16**  
**TEMPORARY DUST CONTROL**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Dust Control Requirements

**1.02 RELATED REQUIREMENTS**

- A. 01 41 00 - Regulatory Requirements

**1.03 GENERAL REQUIREMENTS**

- A. Coordinate the Work of this Section with other Sections / Divisions.
- B. All Work shall conform to the latest industry practices and standards as applicable. Install all materials as per manufacturer's instructions.
- C. All Work shall be performed by competent workmen trained and experienced in the particular type of work.

**1.04 WORK INCLUDED**

- A. These procedures shall be utilized in the Work of all Divisions outside of the building.
- B. These procedures shall be utilized by the Contractor in all locations as directed by NYCHA.
- C. Dust Control procedures shall be performed by the Contractor to assure that dust and debris is limited to the work areas and controlled to prevent residents and workers from being exposed to excessive dust and that proper clean-up is conducted in all areas to prevent present or future residents or workers from exposure to excess dust.
- D. The Scope of Work shall include, but shall not be limited to the following:
  - 1. Dust Control Procedures shall be performed during all operations that create dust as defined herein.
  - 2. Dust Control Procedures shall be performed during all exterior brickwork repair procedures.
  - 3. Set up, maintenance and removal of all dust control enclosures, related accessories, materials and equipment as specified.
  - 4. Cleanup of work areas as specified.
  - 5. Legal disposal of all debris as specified.

**1.05 DEFINITIONS**

- A. Dust - any concentration of airborne solid particles or solid particles capable of remaining suspended in the air for a period of time longer than 10 seconds and which exceed 0.3 microns in diameter.
- B. Dust Control - Means and methods employed by the Contractor to limit the spread of dust generated or disturbed by the Work to be performed under this Contract.
- C. Dust Control Level - Specific methods and means employed by the Contractor, as described herein, to limit the spread of dust generated by the Work. The Dust Control Level to be employed by the Contractor will depend on the concentration of dust generated by the Work as determined by NYCHA whose determination is final.

**PART 2 PRODUCTS**

**2.01 MATERIALS**

- A. Special Types
  - 1. Polyethylene sheeting of a fire retardant type in a roll size to minimize the frequency of joints with a factory label indicating six-mil thickness.
  - 2. Polyethylene disposable bags of six-mil thickness with plastic tie wraps a minimum of five (5) inches long pointed and looped to secure filled plastic bags.
  - 3. Tape or adhesive spray capable of sealing joints in adjacent polyethylene sheets for attachment of polyethylene sheets to finished or unfinished surfaces of dissimilar materials and capable of adhering under both wet and dry conditions.

4. Vacuum units of a suitable size and capacity of trapping and retaining 99.97% of all monodispersed particles of 0.3 micrometers in diameter or greater (HEPA Vacuums).
5. Dust collectors of a suitable size and capacity to exhaust and HEPA filter dust-containing air from apartments or public spaces, through temporary exhaust ductwork. Dust Collectors shall utilize HEPA multi stage filters with 99.97% efficiency for retaining particles of 0.3 microns in size or larger.
6. Flexible air duct of a suitable size and capacity to channel exhausted air from work area to dust collectors.
7. Power generator of suitable size and capacity to operate dust collectors.

**B. Standard Types**

1. String mops and buckets.
2. Five gallon plastic pails.
3. Cleaning solution (Ledizolv or equivalent) which does not contain trisodium phosphate (TSP.)
4. Water mister or spray bottle.
5. Dust pan and soft broom.
6. Utility or razor knife to cut plastic and tape.

**PART 3 EXECUTION**

**3.01 WORK PROCEDURE**

**A. Methods of Limiting Dust and Debris**

1. The Contractor shall employ any or all of the following methods to limit and control the creation and spreading of dust and debris during the Work. The means and methods of dust control employed by the Contractor are subject to the approval of NYCHA. The dust control procedures employed by the Contractor shall be as specified herein.
  - a. Wetting the surface to be disturbed with a fine spray mist.
  - b. Utilizing power tools equipped with a HEPA vacuum collection system (i.e. power sanding and cutting tools, etc.).
  - c. Bagging and sealing all debris and cleaning all equipment before removing it from the Work area.
  - d. Sealing all areas adjacent to the Work with 6-mil polyethylene sheeting.
  - e. Containment of work spaces with 6-mil polyethylene sheeting.
  - f. There shall be NO DRY SWEEPING of dust or debris.
2. Worker Protection
  - a. The Contractor shall implement engineering controls whenever dust exposure exists to employees through inhalation, ingestion or skin absorption. To achieve full compliance, protective equipment or other protective measures shall be employed by the Contractor to keep the exposure of employees to air contaminants within limits prescribed by O.S.H.A. regulations. All equipment and technical means used for this purpose are subject to approval of NYCHA.
  - b. The Contractor shall provide all workers with dust filter respirators, properly fitted for short, intermittent or occasional dust exposure such as cleanup or dumping of dust collectors when it is not feasible to control the dust by enclosure. Respirators shall contain eye protective observation windows with safety glass protected by screening where hard deep cutting abrasives are used.
  - c. The Contractor shall provide workers with protective work clothing, booties, hard hats, gloves, face shields and vented goggles appropriate for the Work being performed.
3. Dust Control Level
  - a. The extent and method of dust control required will depend upon the particular work being performed and is subject to the approval of NYCHA. Dust Control procedures are required by all Contractors and Subcontractors working on this project. NYCHA's determination of the Dust Control Level to be followed by the Contractor shall be final. The cost of Dust Control shall be included in the Contractor's Bid Amount and shall not be subject to any additional payments.
    - 1) Level 1 - Negligible Dust

- (a) All Contractors shall employ level 1 dust control procedures when work is localized to one small area and no observable dust is generated. The Contractor shall place a 5' x 5' polyethylene drop cloth immediately below the Work area.
- 2) Level 2 - Moderate Amount of Dust
  - (a) Level 2 dust control procedures shall be employed by all contractors when the Work produces moderate amounts of dust which is clearly visible and may contain debris and paint chips which will not spread beyond a small area drop cloth to any other surface in the room. The Contractor shall place an 8' x 8' polyethylene drop cloth immediately below the Work area and shall cover all adjacent horizontal surfaces with polyethylene sheets. (Examples of a need for Level 2 Dust Controls are during hand tool cutting or punching a hole in a wall.)
- 3) Level 3 - Significant Amount of Dust
  - (a) Level 3 dust control procedures shall be employed by all Contractors during cutting or chopping with mechanical tools in materials which do not contain lead-based paint, during grinding of reinforcement bars, during drilling holes with mechanical devices, and during scraping and painting operations.
  - (b) Contractors shall utilize tools equipped with HEPA vacuum exhaust/dust collection systems during Level 3 work. Filters shall be kept clean and operable at all times.
  - (c) The entrance of the Work area shall be covered with one layer of six-mil polyethylene sheeting taped to the top and one side of the door frame and weighted at the bottom with short pieces of pipe or other suitable weights to keep it closed.
  - (d) All vents, pipe sleeves, and light fixtures shall be covered with polyethylene sheeting.
  - (e) Windows shall be covered with polyethylene sheeting to prevent dust from settling on the horizontal surfaces.
  - (f) All tears, which occur in polyethylene sheeting during the Work, shall be repaired immediately.
  - (g) Air Filtration: Air within the Work area shall be continuously filtered with HEPA vacuum machines of sufficient capacity and number to maintain clean air within the workspace and to prevent the migration of dust outside the limits of the polyethylene barriers. Vacuum filters shall be kept clean and operable at all times.
- 4) Level 4 - Extreme amounts of dust and debris
  - (a) Level 4 dust control procedures shall be employed by the Contractor during saw cutting and grinding of masonry and surfaces and elements outside of buildings.
  - (b) Affected area shall be covered with two (2) layers of six-mil polyethylene sheeting. All seams shall be taped with waterproof tape (i.e. where the floor covering overlaps the furnishing covering and where two floor covering sheets overlap) and free edges of the polyethylene sheeting shall be taped to the bottom of the wall or baseboards so as to form a continuous barrier to the penetration of dust to the floor. Optional: Area of repair may be isolated from the remaining room by utilizing an air tight chamber consisting of two (2) layers of six-mil polyethylene sheeting on floors and walls, held in place by a rigid framework of PVC piping or furring. Entrance to chamber shall be through three-flap curtained doorway.
  - (c) The entrance of all work areas shall consist of a protective curtained doorway of three (3) overlapping sheets of six-mil polyethylene sheeting over an existing or temporary framed doorway. The first sheet shall be secured with duct tape at the top and left side, the second sheet shall be secured at the top and right side and the third sheet shall be secured at the

top and left side. All sheets shall be weighted at the bottom to keep them hanging straight and maintain a seal over the doorway.

- (d) The Contractor shall shut down all HVAC and air moving systems affecting the Work area.
- (e) Windows in the Work area of apartments shall be covered with a single layer of six-mil polyethylene sheeting to prevent dust from settling on the horizontal surfaces of the window.
- (f) All tears, which occur in polyethylene sheeting during the Work, shall be repaired immediately.
- (g) Dust collectors shall be of sufficient size and capacity to effectively exhaust the air and dust from the Work area. Dust collectors shall be positioned on the roof of the building in a secure manner, locked up so as to be inaccessible to the public. Dust collectors shall be self-cleaning type and shall be maintained operable at all times by the Contractor. The Contractor shall provide generators as necessary for operation of dust collectors.

### **3.02 CLEAN-UP PROCEDURE**

- A. At the end of each day or at the end of the task at hand, clean-up procedures shall be implemented as follows:
- B. All debris too large to be picked up by the HEPA Vacuum shall be picked up by hand and placed in a six-mil polyethylene bag, being careful not to puncture the bag with any pointed or sharp pieces of debris.
- C. Remaining debris shall be picked up with the HEPA Vacuum. The HEPA Vacuum shall travel at a moderate speed to ensure complete pick-up of all dust and remaining debris.
- D. The polyethylene sheeting shall then be dampened with a fine mist, to keep the dust from becoming airborne, then folded inward, upon itself, so as to contain any dust and debris remaining and prevent the contamination of the Work area with dust during clean-up.
- E. Polyethylene sheeting may not be cleaned and re-used. It shall be disposed of in a six-mil polyethylene bag, which is secured with a 5" plastic tie.
- F. At the completion of all work, in addition to the clean-up of gross debris described above, HEPA Vacuums shall be utilized to vacuum the floor(s) and any other surfaces bearing dust generated during the Work. The floor(s) shall be vacuumed starting at the far end of the room and working toward the entrance of the room. Every inch of the window sills, window troughs and other window surfaces where dust can accumulate must be HEPA Vacuumed.
- G. After using the HEPA Vacuum the entire work area shall be wet mopped with a cleaning solution to remove all visible dust and debris. Also, all window sills and wells are to be wiped down.

### **3.03 DISPOSAL**

- A. All debris shall be removed from the Work area daily and legally disposed of by the Contractor, including all debris generated by the subcontractors.
- B. At no time debris shall be left unattended in occupied apartments.