

SECTION 011500 - SPECIAL PROJECT REQUIREMENTS

Excerpts from 8 NYCRR Section 155.5 as they address "General Safety and Security Standards for Construction Projects".

STATEMENT OF PURPOSE: "The occupied portion of any school building shall always comply with the minimum requirements necessary to maintain a certificate of occupancy"

1.1 GENERAL

- A. Requirements set forth herein are in addition to and shall be considered as complementary to the General Conditions of the Contract for Construction and the Project specifications.
- B. All Contractors, Subcontractors, Sub-subcontractors, Vendors and the like shall be required to familiarize themselves with said provisions.
- C. All contractors, subcontractors, Sub-subcontractors, vendors and the like shall monitor their workers and require that they adhere to the following safety provisions during all construction and maintenance activities for the duration of the project.

1.2 REQUIREMENTS INCLUDED IN THIS SECTION AS APPLICABLE TO THE PARTICULAR PROJECT SCOPE OF WORK

- A. Safe and Secure Storage of Construction Materials
- B. Fencing – Project; Material storage areas; Container/Refuse areas
- C. Gates – Manned during working hours; locked and secure off hours.
- D. Sidewalk bridges, security barriers, etc. reference "Exterior Renovations"
- E. Worker identification system
- F. Temporary partitions – separation of construction areas from occupied spaces; construction, materials, inspection and maintenance.
- G. Worker access both horizontal and vertical in occupied buildings
- H. Debris removal.
- I. Ventilation of workspaces
- J. Exiting
- K. Fire and hazard prevention
- L. No Smoking
- M. Fire extinguishers
- N. Temporary sprinklers (if any)
- O. Smoke detectors (temporary)
- P. Fire watch and maintenance of existing fire alarm systems
- Q. Storage of gas and welding equipment
- R. Noise abatement procedures
- S. Construction fume controls

- T. Off-Gassing/bake out procedures
- U. Material Safety Data Sheet log
- V. Asbestos Code Rule 56
- W. Asbestos TEM
- X. Lead Abatement/Lead paint
- Y. Indoor Air Quality

1.3 SAFE AND SECURE STORAGE OF CONSTRUCTION MATERIALS

- A. Materials stored on the Site shall be neatly arranged and protected and shall be stored in an orderly fashion in locations that shall not interfere with the progress of the Work.

NOTE: If approval is given to store materials in any part of the building area, they shall be so stored as to cause no overloading of the structure.

1.4 FENCING – PROJECT; MATERIAL STORAGE AREAS; CONTAINER/REFUSE AREAS

- A. Barrier fencing constructed as outlined in Section 015000 shall be provided surrounding all work areas, material storage locations and around dumpsters and/or chutes when involved with demolition/removal operations.
- B. Fencing shall be maintained in good sound condition throughout the entire course of construction by the Owner's Representative and/or Contractor and removed only when directed by the Architect and/or Owner's Representative.

1.5 GATES

- A. Gates in construction fencing shall be of construction outlined in Section 015000 and shall be under either the Owner's Representative or Contractors' supervision throughout the workday and shall be secured in a locked condition at the close of any single business day and on all non-workdays. Gates shall be manned at all times work is in progress.

1.6 SIDEWALK BRIDGES, SECURITY BARRIERS, ETC. REFERENCE "EXTERIOR RENOVATIONS"

- A. As applicable to the project involved, provide overhead protective devices for the work consisting of tubular framed scaffold bridges, joist trusses and solid decking. Provide guard rails, lights and warning signs.

1.7 WORKER IDENTIFICATION SYSTEM

- A. All Contractors' employees shall use a single means of access and egress, except in the case of emergency, to be designated by the General Contractor.
- B. The Contractor shall, for all work covered under the Contract, establish a security control system for personnel and material involved with the work herein.
- C. The control system shall include photo identification badges and the like so as to insure against unauthorized entry to the site and resultant entry to the building proper.

1.8 TEMPORARY PARTITIONS – SEPARATION OF CONSTRUCTION AREAS FROM OCCUPIED SPACES; CONSTRUCTION, MATERIALS, INSPECTION AND MAINTENANCE

- A. Provide temporary partitions from floors to underside of structure above, in sash and any other openings created by new construction, additions and alterations.
- B. Such partitions shall be constructed dust-tight using steel studs and acoustically and/or thermally insulated, Level 1 taped fire rated gypsum board.
- C. Locate enclosures as directed by the Architect and/or as shown on the drawings.
- D. In addition to partitions and closures, provide tight fitting filters over all return air grilles and/or open ducts in order to properly protect central air handling equipment.
- E. Take all necessary precautions to avoid unnecessary dust spreading to adjoining rooms and spaces.
- F. Keep all doors to spaces closed and provide positive seals around cracks, frames, doors and other openings within work areas.
- G. Where exterior closures are required, insulate same to maintain a temperature of sixty-five (65) degrees Fahrenheit within the space without the use of special heating equipment.
- H. All temporary enclosures/partitions/containment barriers shall be periodically inspected and maintained in good repair so as to prevent exposure to dust and contaminants outside the work and/or containment areas.

1.9 WORKER ACCESS BOTH HORIZONTAL AND VERTICAL IN OCCUPIED BUILDINGS

- A. A specific stairwell and/or elevator shall be assigned for construction worker use during work hours. Workers may not use corridors, stairs or elevators designated for students or school staff.

1.10 DEBRIS REMOVAL

- A. Large amounts of debris must be removed by use of enclosed chutes or similar systems. There shall be no movement of debris through corridors of occupied spaces of the building. No materials shall be dropped or thrown outside the walls of the building.
- B. All occupied parts of the building or buildings affected by renovation activity shall be cleaned at the close of each workday.
- C. School buildings occupied during any construction period shall maintain required health, safety and educational capabilities at all times that classes are in session.

1.11 VENTILATION OF WORKSPACES

- A. The General Contractor shall provide indoor air quality management as follows:
 - 1. Provide an exhaust air system for the project indoor areas which could produce fumes, VOC's off-gasses, gasses, dusts, mists, or other emissions both during construction activities and during required curing periods, coordinate with manufacturer's requirements for all materials used.

2. Exhaust air system for the project areas which could produce emissions listed in Paragraph 1 shall be utilized. Work area exhaust shall terminate at the building exterior.
 3. Provide temporary partitions and air seals to prevent the migration of airborne contaminants from unoccupied areas to occupied areas when applicable.
 4. Quality assurance:
 - a. Maintain a negative pressure between the work area and the space surrounding the work area.
 - b. Before start of work, submit a design for the exhaust air system. Do not begin work until approval of the Construction Manager is obtained. The design shall include, but not be limited to:
 1. The number of machines required.
 2. Location of the machines in the workspace.
 3. Description of the methods used to test air flow and pressure differential.
 5. System operation:
 - a. A sufficient quantity of exhaust fans in existing window openings or other approved locations shall be operated in accordance with the following standards:

Provide one workplace air change every 15 minutes.

To calculate total air flow requirements:

$$\frac{\text{TOTAL FT}^3/\text{MIN} - \text{VOLUME OF WORK AREA (IN FT}^3\text{)}}{15 \text{ MINUTES}}$$

To calculate the number of units needed for the work area.

$$\frac{\text{NUMBER OF UNITS NEEDED} - \text{TOTAL FT}^3/\text{MIN}}{(\text{CAPACITY OF UNIT IN FT}^3/\text{MIN})}$$
 - b. Exhaust air system shall operate for a minimum of 72 hours after work is completed, or until all materials have cured sufficiently as to stop out gassing of fumes or odors and area has been ventilated to remove all detectable traces of odors and fumes.
 - c. Maintain 25 feet clearance from all temporary exhaust outlets to all active building outdoor air intakes.
 6. During reroofing operations, air intakes shall be "shut-down" or made safe in other approved manners.
- B. The HVAC Specialty Contractor is to be completely responsible for maintaining all required ventilation in the occupied areas of the building during construction as follows:
1. Prior to construction, the HVAC Specialty contractor will examine the existing ductwork in the occupied areas of the building.
 2. The layout of existing ductwork is shown, to the extent that it was originally documented, on the HVAC drawings.
 3. The HVAC Specialty contractor will reroute, disconnect, or cap any duct, which because of its proximity to the construction area, may carry contaminants from the construction area to the occupied area.

- 4. This alteration of the existing ventilation system must prevent contaminants from entering the occupied areas but must not prevent the maintenance of necessary ventilation in the occupied area.
- C. Additionally, as the HVAC Specialty contractor provides and connects new ductwork it will continue to evaluate the effect of such ducts and connections on contaminant migration. It will reroute, disconnect or cap this ductwork as needed to prevent contaminants from the construction area from entering the occupied section of the building.
- D. At each point in the construction where such evaluation and rerouting, disconnecting or capping is required, the HVAC Specialty contractor will confer with the Architect and Construction Manager (as appropriate) in determining its course of action and will obtain the Architect's approval prior to executing this work."

1.12 EXITING

- A. At all times, the General Contractor is responsible for maintenance of safety and egress requirements from work areas.

NOTE: All legal forms of egress must be maintained at all times.

- B. Provide temporary exit passage system(s) with guard and handrails and ramps and such other measures indicated on the drawings and as specified.

1.13 NO SMOKING – No smoking is permitted on the grounds or within the construction area of any project.

1.14 FIRE EXTINGUISHERS – Fire extinguishers shall be provided within the work area and shall be monitored on a scheduled maintenance basis and so tagged to indicate same.

1.15 SMOKE DETECTORS – The Electrical contractor shall provide a temporary battery powered smoke detection system for all areas under construction.

1.16 FIRE WATCH AND MAINTENANCE OF EXISTING FIRE ALARM SYSTEMS

- A. All Contractors shall comply with the safety provisions of the National Fire Protection Association's "National Fire Codes" pertaining to the work and, particularly, in connection with any cutting or welding performed as part of the work.
- B. During welding or cutting operations, a contractor's man shall act as a fire watcher. The fire watcher shall have proper eye protection and suitable firefighting equipment including fire extinguisher (bearing current inspection Certificate), protective gloves and any other equipment deemed necessary.
- C. The Electrical Specialty Contractor will provide for and maintain the proper operation of fire alarm and smoke detection systems in all areas throughout the course of the project. The Electrical Specialty Contractor will provide all labor and material required to accomplish this in occupied areas of the school buildings and in areas under construction.

1.17 NOISE ABATEMENT PROCEDURES

- A. Develop and maintain a noise abatement program and enforce strict discipline over all personnel to keep noise to a minimum. Equipment and work shall not produce noise in excess of 60db in occupied areas or shall be scheduled for off hours or acoustical abatement procedures shall be taken. Noise level measurements (dba) shall be taken with a type 2 sound level meter in the occupied space in a location closest to the source of the noise.

- B. Execute construction work by methods and by use of equipment which will reduce excess noise.
- C. Equip air compressors with silencers, and power equipment with mufflers.

1.18 CONSTRUCTION FUME CONTROLS – See Article 1.11 herein.

1.19 OFF-GASSING / BAKE OUT PROCEDURES

- A. Heat all areas of new construction to 95 degrees for a minimum of 72 hours.
- B. At the end of this period ventilate area with 100 percent outside air and exhaust air for a minimum of 24 hours to eliminate off gassing that occurs during bake out period.
- C. Change all air filters upon completion.
- D. Manufacturers shall be contacted to obtain information regarding appropriate temperatures and times needed to cure or ventilate the product during use and before safe occupancy of a space can be assured. Building materials or furnishings which “off-gas” chemical fumes, gases, or other contaminants shall be aired out in well-ventilated heated warehouse before they are brought to the project for installation or the manufacturer’s recommended “off-gassing” periods must be scheduled between installation and use of the space. If the work will generate toxic gases that cannot be contained in an isolated area, the work must be done when school classes and programs are not in session. The building must be properly ventilated, and the material must be given proper time to cure or “off-gas” before re-occupancy.

1.20 MATERIAL SAFETY DATA SHEET LOG

- A. Contractor shall maintain "MSDS" file on site, accessible to workers and otherwise in compliance with jurisdiction's "Right To Know" legislation.
- B. The submittal of the required MSDS information shall be segregated from the required material/shop drawing/sample submittals in a separate binder and not co-mingled with the technical submittals, failure to so conform will be cause for rejection of any submittal.

1.21 ASBESTOS CODE RULE 56 AND ASBESTOS CONTAMINATED MATERIALS (ACM)

- A. Abatement projects as defined by Rule 56 shall not be performed while the building is occupied.
- B. In the event asbestos-contaminated materials are encountered during the work Contractor shall immediately notify the Architect and/or Owner for instructions as to procedures to be taken.
- C. All asbestos abatement projects shall comply with all applicable federal and State laws including but not limited to the New York State Department of Labor industrial code rule 56 (12 NYCRR 56), and the federal Asbestos Hazard Emergency Response Act (AHERA), 40 CFR Part 763 (Code of Federal Regulations, 1998 Edition, Superintendent of Public Documents, U.S. Government Printing Office, Washington, DC 20402; 1998; available at the Office of Facilities Planning, Education Building Annex, Room 1060, State Education Department, Albany, New York 12234). Large and small asbestos projects as defined by 12 NYCRR 56 shall not be performed while the building is occupied. Minor asbestos projects defined by 12 NYCRR 56 as an asbestos project involving the removal, disturbance, repair, encapsulation, enclosure or handling of 10 square feet or less of asbestos or asbestos material, or 25 linear feet or less of asbestos or asbestos material may be performed in unoccupied areas of an occupied building in accordance with the above referenced regulations.

1.22 LEAD ABATEMENT/LEAD PAINT

- A. In the event lead-based paint is encountered during the work Contractor shall immediately notify the Architect and/or Owner for instructions as to procedures to be taken.
- B. Any construction or maintenance operations which will disturb lead-based paint shall be abated pursuant to protocols detailed in the "Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing" (June 1995; U.S. Department of Housing and Urban Development, Washington, DC 20410; available at the Office of Facilities Planning, Education Building Annex, Room 1060, State Education Department, Albany, NY 12234). All areas scheduled for construction as well as areas of flaking and peeling paint shall be tested for the presence of lead and abated or encapsulated in accordance with the above noted guidelines

END OF SECTION 011500