

**SECTION 01 5050
PIPE SCAFFOLDING**

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including School Facilities Management Contract Manual and Specifications and Division 1 Specification Sections, apply to this Section.
- B. In the event of discrepancies between the specifications and School Facilities Management Contract Manual and Specifications the School Facilities Management Contract Manual and Specifications shall prevail.

1.2 DESCRIPTION OF WORK

- A. Sidewalk Bridges: The Contractor shall furnish, install, maintain and pay for sidewalk bridges.
 - 1. Maintain the safety fences and sidewalk bridges until the all work is complete.
- B. Pipe Scaffolding: Install and maintain pipe scaffolding where new masonry work is specified until all work and punch list work is complete and approved by the Architect.
 - 1. Scaffolding may be installed and removed in phases as the work progresses, at the Contractor's option and approved by the Fuller and D'Angelo, P.C.
- C. Install and maintain warning signs, and snow fence and saw horse barricades to alert persons on or about the site, and direct them away from the work areas. Comply with Section 01 3553 - Site Safety and Security Procedures.
 - 1. Maintain the safety fence and scaffold until all work is complete.

1.3 RELATED WORK SPECIFIED ELSEWHERE

- A. Section 01 3553 - Site Safety and Security Procedures.
- B. Section 01 5000 - Temporary Facilities and Controls
- C. Section 03 0100 - Maintenance of Concrete
- D. Section 04 2000 - Unit Masonry
- E. Section 01 7000 - Execution
- F. Section 09 2750 - Exterior Portland Cement Stucco.

1.4 QUALITY ASSURANCE

- A. Obtain all components of safety fence and scaffold from a single source supplier or manufacturer.
 - 1. Install the safety fence and scaffold using personnel thoroughly skilled and competent in the work.
 - 2. Perform the work causing as little inconvenience to the public and building occupants as possible.
 - 3. Furnish and install all scaffold, including supports, fastenings, connections, and details that are designed, sealed and signed by a New York State licensed Professional Engineer, utilizing a minimum safety factor of not less than four times the maximum weight intended to be placed thereon when in use.
 - 4. Post signage on the scaffold, to indicate the safe permissible scaffold design load. Do not load the scaffold or sidewalk bridges in excess of the safe design loads.

1.5 SUBMITTALS

- A. Manufacturer's technical product data, specifications, and installation instructions for all components of pipe scaffolding and sidewalk bridges.
 - 1. Shop drawings showing the locations, dimensions, and details for all components and assemblies of the pipe scaffolding and sidewalk bridges, signed, sealed and stamped by a professional engineer licensed in New York State.
 - 2. Evidence that all wood products used (for example planking) are fire retardant where required by code.

1.6 PROJECT CONDITIONS

- A. Bidders must visit the work site to determine the existing conditions and take whatever measurements are needed before submitting bids.

PART 2 - PRODUCTS

2.1 MATERIALS FOR PIPE SCAFFOLDING

- A. Pipe scaffolding shall be constructed of tubular metal sections, or other non-combustible material, to meet at a minimum the NYS Building Code, and OSHA requirements.
 - 1. Lumber used in the erection of the scaffold or sidewalk bridges shall be at least equal in strength and quality to construction grade Douglas fir, and treated with a recognized fire retardant.
 - 2. Fasteners to secure lumber and timber shall be galvanized nails or bolts of a suitable size to produce a secure joint capable of withstanding the design load.
 - 3. Mud sills shall be 2 X 10 inch wood planks.
 - 4. Scaffolding base enclosure barrier: 1/2" CDX Plywood.

2.2 MATERIAL FOR SIDEWALK BRIDGES

- A. Posts - 3-1/2 inch standard pipe spaced 8 feet on center longitudinally.
 - 1. Beams - 6 I to 10 I structural steel beams, dependent upon sidewalk width and live load.
 - 2. Joists - 3 I to 6 I structural steel beams, or 3 x 6 inch to 4 x 8 inch timber, dependent upon joist spacing and live load.
 - 3. Decking - nominal 2 inch thick planking, dependant upon joist framing and live load.
 - 4. Top platform perimeter fence – 1/2 inch hardware cloth mesh, installed 4 feet high above the top platform, fastened to catch and prevent material or debris from sliding down the roof and off the scaffold.
 - 5. Bracing - 1-1/2 inch standard pipe for girts and railings, 3/4 standard pipe for cross bracing.
 - 6. Mud Sills - 2 x 10 inch wood planks.
 - 7. Enclosure barrier: 1/2" CDX plywood.

PART 3 - EXECUTION

3.1 INSTALLATION OF PIPE SCAFFOLDING

- A. Install and maintain pipe scaffolding to access masonry areas being constructed.
- B. Except as otherwise indicated, install planks to overhang their end supports at least 6 inches, and fasten them securely to prevent dislodgement. Do not allow planks to overhang in excess of 18 inches. Lay planks tight together, to form a full scaffold width platform.
- C. Install guardrails and toe boards on the sides and ends of every scaffold platform.
- D. Install wire screening along the outside edge of scaffold to prevent debris and material from falling off.
- E. Install cross bracing supports in all scaffold bays.
- F. Install at one set of scaffold access stairs from grade to each work level, at each section of the building where / when work is underway. Provide a 12 foot high plywood fence, and a hinged gate with a padlock to secure the bottom of each set of stairs. Distribute twelve padlock keys to representatives of the Owner, Architect and other authorized personnel.
- G. Install plywood to cover the bottom 8 feet of scaffold in all areas.

3.2 INSTALLATION OF SIDEWALK BRIDGES

- A. Maintain sidewalk bridges to maintain public egress pathways to and from the building.
 - 1. Install the bridges such that they do not block lighting fixtures, fuel oil intakes, exhaust vents and doors.
 - 2. Plank over the sidewalk bridges the full width of the egress path.

3. Brace the sidewalk bridges longitudinally and horizontally in each bay. Make connections with clamps.
4. Provide solid plywood barrier to separate egress area from construction operations.

3.3 MAINTENANCE

- A. Maintain work areas free of waste materials, debris and rubbish. Maintain the site in a clean and orderly condition.
 1. Immediately provide temporary measures to safe guard any safety fence and scaffold, which is damaged or otherwise adversely effected for any reason, and persons on or about the site, and repair or replace the effected portions of scaffolding and/ or bridging within 48 hours, but before any further use.

3.4 OWNER & ARCHITECT ACCESS

- A. Permit representatives of the YPS Office of Facilities Management and Fuller and D'Angelo, P.C. access to the scaffold at all times.

3.5 DISMANTLING AND REMOVAL

- A. Carefully dismantle and remove scaffolding, fencing and sidewalk bridges only after all work, and all Punch List work is complete and approved in writing by the YPS Office of Facilities Management and Fuller and D'Angelo, P.C.
 1. Remove scaffold material from the site the same day it is disassembled. Do not store material at the site except with the specific prior permission of the YPS Office of Facilities Management.
 2. Post signs and erect barricades around the site to prevent accidents and to insure the protection of the public.
 3. Clean and repair damage caused by the installation and removal of the safety fence and scaffold. Restore existing facilities used or affected by construction activities to their original condition.

END OF SECTION