

# 05 50 00 – Metal Fabrications

## DIVISION 5 - Metals



Saint Paul  
PUBLIC SCHOOLS

### STATEMENT OF PURPOSE & BACKGROUND

- Scope:
  - Selection and installation of roof access ladders and steel fabrications, including steel pipe railings and guardrails and steel bollards.
- Statement of goals:
  - Provide consistent, high quality products complying with all industry standards.
- Revision history of section:
  - 09/04/2018 (date of adoption)
  - 10/28/2022

### OUTLINE SPECIFICATION

- Part 1 General
  - Aluminum roof ladders and steel fabrications as noted in construction documents.
- Part 2 Products
  - Roof Ladders:
    - Alaco Ladder Co., Model #563 or 564 is basis of design for parapet conditions.
    - Other acceptable manufacturers:
      - Halliday Products
      - O’Keeffe’s Inc.
      - Precision Ladders LLC
      - Royalite Manufacturing Inc.
      - Thompson Fabricating LLC
      - Equivalent manufacturers **approved, in writing, in advance, by the Architect**, may be substituted in accordance with the provisions of the Contract.
    - Space side rails 18” apart U.N.O..
    - Side rails: Continuous extruded-aluminum channels or tubes, not less than 2-1/2 inches deep, 3/4 inches wide, and 1/8 inch thick.
    - Rungs: extruded-aluminum tubes min. 3/4 inches deep and 1/8 inch thick with ribbed tread surfaces.
    - Extend side rails 42 inches above top of ladder and extend 24 inches horizontally with downward returns to roof to comply with OSHA safety regulations (ALACO Model #562 as basis of design).
    - Provide parapet return (and crossover platform as required) at all parapet conditions.
    - Provide personal fall arrest system (PFAS) or Ladder Safety System at ladders exceeding 24 feet in height.
    - Finish: Standard mill finish.
  - Steel Pipe Railings and Guardrails:
    - Handrails – Wall-mounted and Guardrail-mounted:
      - Schedule 40 round pipe. Provide brackets with anchors appropriate for mounting to substrate.
      - Outside diameter: 1-1/4 inch minimum, to 1-1/2 inch maximum.
      - Galvanize railings and fittings for exterior use.
      - Prime paint railings and fittings for interior use.

- Bollards:
  - Fabricate bollards from 6 inch diameter Schedule 40 steel pipe.
  - Cap bollards at bottom with ¼ inch minimum thickness steel plate.
  - Anchor bollards in concrete using pipe sleeves preset and anchored into concrete with ¼ inch steel plate welded to bottom of sleeve.
  - Fill annular space between bollard and sleeve with grout.
  - Fill pipe with concrete with crowned cap for drainage.
  - Install plumb and level.
  - Prime paint finish for final painting.
  - Final paint finish to be Safety Yellow color.
- Part 3 Execution
  - Per Consultant and / or manufacturer specification.

End of Section