

SECTION 07227 - FALL PROTECTION DEVICES

PART 1 – GENERAL

1.01 SUMMARY

- A. Section Includes: Guardrail system for fall prevention for worker safety, to be installed on concrete decking.
- B. Related Sections:
 - a. Section 03300 – Cast-In-Place Concrete
 - b. Section 03400 – Pre-Cast Concrete
 - c. Section 07510 – Built-Up Roofing
 - d. Section 07700 – Roof Specialties and Accessories

1.02 REFERENCES

- A. American Society for Testing and Materials (ASTM)
- B. American National Standard Institute (ANSI)
 - a. ANSI A21.1 – Safety Requirements for Floor and Wall Openings, Railings and Toe Boards.
- C. Occupational Health And Safety Administration (OSHA)
 - a. OSHA 1910.21 – Guarding Floor and Wall Openings and Holes
 - b. OSHA 1926.502 – Fall Prevention Systems Criteria and Practices

1.03 SYSTEM DESCRIPTION

- A. General: Provide guardrail system capable of withstanding loads and stresses within limits and under conditions specified in OSHA and other applicable safety codes. Provide system permanently attached to roof structure.
- B. Design Requirements: Guardrail shall withstand, without failure, a minimum point load of 200 pounds applied in any direction at any point on the top edge, 150 pounds applied in any direction at the mid-rail, and 50 pounds applied in any downward or outward direction at the toe-board if applicable.

1.04 SUBMITTALS

- A. Product Data: For each type of device specified, including manufacturer's standard fabrication details and installation instructions.
- B. Shop Drawings: Show layout, profiles, and details. Submit engineering calculations demonstrating compliance with the references of Section 1.02.
- C. Maintenance Data: Written instructions for maintenance of fall prevention safety devices to be included in the operation and maintenance manual.

1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Firm having at least 10 years continuous experience in manufacturing fall safety equipment similar to systems specified and exhibiting records of successful in-service acceptability and performance. Firm must employ personnel dedicated to provide regularly scheduled Authorized and Competent Person Training courses as mandated by OSHA 1926 and 1910 for owner's authorized safety personnel.

- B. OSHA Standards: Comply with Occupational Safety and Health Administration Standards for the Construction Industry 29 CFR § 1926.500 Subpart M (Fall Protection), and with applicable State Administrative Code safety standards for Fall Restraint and Fall Arrest.
- C. Source Limitations: Obtain complete system through one source from a single manufacturer.

1.06 COORDINATION

- A. Contractor to coordinate installation of structural deck and roof substrate to meet requirements of manufacturer.
- B. Contractor to coordinate placement of roofing system, insulation and flashing to ensure water-tight integrity to roof where applicable.

1.07 WARRANTY

- A. Provide manufacturer's standard warranty to guarantee products will be free from defects for a period of 12 months. Warranty period shall become effective on date of substantial completion.

PART 2 – PRODUCTS

2.01 MANUFACTURER

- A. Provide fall protection system manufactured by Guardian Fall Protection Inc., 6305 South 231st Street Kent, WA, phone 800-466-6385, fax 800-670-7892, or equal.

2.02 MATERIALS

- A. Hot rolled steel, powder coated.

2.03 MANUFACTURED ASSEMBLIES

- A. Guardian Guardrail System.

2.04 FABRICATION

- A. Prepare, treat and powder coat hot rolled steel to comply with manufacturer's written instructions. Prepare metal by removing grease, dirt, oil, flux, and other foreign matter.
- B. Fit and shop assemble components in largest practical sizes for delivery to site.
- C. Upright tops shall be plugged with weather and light resistant material.
- D. Assemble components with joints tightly fitted and secured.
- E. Fabricate work true to dimension, square, plumb, level, and free from distortions or defects detrimental to appearance and performance.

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Examine framing and substrate and verify conditions comply with structural requirements for proper system performance.

- B. Proceed with installation of guardrail system only after verifying conditions are satisfactory.

3.02 INSTALLATION

- A. General: Installation to be performed by contractor according to manufacturer's instructions and recommendations.

3.03 ADJUSTMENT AND INSPECTION

- A. Ensure all guardrail systems have been installed in accordance with fall protection manufacturer's documentation and specifications.
- B. Provide plan drawings with any deviations in guardrail locations as installed.