Revisions made to the original MasterSpec text are made solely by the Licensee and are not endorsed by, or representative of the opinions of, Deltek or The American Institute of Architects (AIA). Neither AIA nor Deltek are liable in any way for such revisions or for the use of this Section by any end user. A qualified design professional should review and edit the document to suit project requirements.

SECTION 224213.16 - COMMERCIAL URINALS

1. GENERAL
	* + 1. SUMMARY
				1. Section Includes:

Urinal flushometer valves.

* + - * 1. Related Requirements:

Retain subparagraph below to cross-reference requirements Contractor might expect to find in this Section but are specified in other Sections.

Section 224600 "Security Plumbing Fixtures" for security urinals.

* + - 1. ACTION SUBMITTALS
				1. Product Data: For each type of product.

Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for urinals.

Include rated capacities, operating characteristics, electrical characteristics, and furnished specialties and accessories.

Retain "Shop Drawings" Paragraph below if equipment includes wiring.

* + - * 1. Shop Drawings: Include diagrams for power, signal, and control wiring.
			1. CLOSEOUT SUBMITTALS
				1. Operation and Maintenance Data: For flushometer valves[ **and electronic sensors**] to include in operation and maintenance manuals.
			2. MAINTENANCE MATERIAL SUBMITTALS
				1. Furnish extra materials that are packaged with protective covering for storage and identified with labels describing contents.

Flushometer-Valve Repair Kits: Equal to [**10**] <**Insert number**> percent of amount of each type installed, but no fewer than [**one**] [**six**] <**Insert number**> of each type.

Waterless Urinal Trap-Seal Cartridges: Equal to [**200**] <**Insert number**> percent of amount of each type installed, but no fewer than [**12**] <**Insert number**> of each type.

Waterless Urinal Trap-Seal Liquid: Equal to [**1 gal.**] <**Insert volume**> for each urinal installed.

1. PRODUCTS
	* + 1. URINAL FLUSHOMETER VALVES

Copy "Battery-Powered, Solenoid-Actuator, Piston Flushometer Valves" Paragraph below and re-edit for each type of battery-powered, solenoid-actuator, piston flushometer valve required.

Insert designation. Use these designations to identify each valve.

* + - * 1. Battery-Powered, Solenoid-Actuator, Piston Flushometer Valves: <**Insert designation**>.

Retain "Basis-of-Design Product" Subparagraph and list of manufacturers below to identify a specific product or a comparable product from manufacturers listed.

Basis-of-Design Product: Subject to compliance with requirements, provide **Zurn Industries, LLC; ZTR6203-ULF** or comparable product by one of the following:

<**Insert manufacturer's name**>

Standard: ASSE 1037/ASME 112.1037/CSA B125.37.

Minimum Pressure Rating: 125 psig.

Features: Include integral check stop and backflow-prevention device.

Material: Brass body with corrosion-resistant components.

Exposed Flushometer-Valve Finish: Chrome plated.

Retain "Panel Finish" Subparagraph below for concealed flushometer-valve components.

Panel Finish: Chrome plated or stainless steel.

Style: [**Exposed**] [**Concealed**].

Actuator: Solenoid complying with UL 1951; listed and labeled as defined in NFPA 70, by a qualified testing agency; and marked for intended location and application.

Trip Mechanism: Battery-powered electronic sensor complying with UL 1951; listed and labeled as defined in NFPA 70, by a qualified testing agency; and marked for intended location and application.

Consumption: [**0.5 gal.**] [**1.0 gal.**] <**Insert value**> per flush.

Minimum Inlet: [**NPS 3/4**] [**NPS 1**].

Minimum Outlet: [**NPS 3/4**] [**NPS 1-1/4**].

1. EXECUTION
	* + 1. EXAMINATION
				1. Examine roughing-in of water supply and sanitary drainage and vent piping systems to verify actual locations of piping connections before urinal installation.
				2. Examine walls and floors for suitable conditions where urinals will be installed.
				3. Proceed with installation only after unsatisfactory conditions have been corrected.
			2. INSTALLATION
				1. Urinal Installation:

Install urinals level and plumb according to rough-in drawings.

Install wall-hung, back-outlet urinals onto waste fitting seals and attached to supports.

Install wall-hung, bottom-outlet urinals with tubular waste piping attached to supports.

Indicate on Drawings those urinals that are required to be accessible.

Install accessible, wall-mounted urinals at mounting height for the handicapped/elderly, according to ICC A117.1.

Install trap-seal liquid in waterless urinals.

* + - * 1. Support Installation:

Install supports, affixed to building substrate, for wall-hung urinals.

Use off-floor carriers with waste fitting and seal for back-outlet urinals.

Use carriers without waste fitting for urinals with tubular waste piping.

Use chair-type carrier supports with rectangular steel uprights for accessible urinals.

* + - * 1. Flushometer-Valve Installation:

Install flushometer-valve water-supply fitting on each supply to each urinal.

Attach supply piping to supports or substrate within pipe spaces behind fixtures.

Install lever-handle flushometer valves for accessible urinals with handle mounted on open side of compartment.

Install fresh batteries in battery-powered, electronic-sensor mechanisms.

* + - * 1. Wall Flange and Escutcheon Installation:

Install wall flanges or escutcheons at piping wall penetrations in exposed, finished locations.

Install deep-pattern escutcheons if required to conceal protruding fittings.

Comply with escutcheon requirements specified in Section 220500 "Common Work Results for Plumbing."

Retain "Joint Sealing" Paragraph below if sealants are not specified in Section 079200 "Joint Sealants."

* + - * 1. Joint Sealing:

Seal joints between urinals and walls and floors using sanitary-type, one-part, mildew-resistant silicone sealant.

Match sealant color to urinal color.

Comply with sealant requirements specified in Section 079200 "Joint Sealants."

* + - 1. PIPING CONNECTIONS

Coordinate piping installations and specialty arrangements with Drawings and with requirements specified in piping systems. If Drawings are explicit enough, these requirements may be reduced or omitted.

* + - * 1. Connect urinals with water supplies and soil, waste, and vent piping. Use size fittings required to match urinals.
				2. Comply with water piping requirements specified in Section 221116 "Domestic Water Piping."
				3. Comply with soil and waste piping requirements specified in Section 221316 "Sanitary Waste and Vent Piping."
				4. Where installing piping adjacent to urinals, allow space for service and maintenance.
			1. ADJUSTING
				1. Operate and adjust urinals and controls. Replace damaged and malfunctioning urinals, fittings, and controls.
				2. Adjust water pressure at flushometer valves to produce proper flow.
				3. Install fresh batteries in battery-powered, electronic-sensor mechanisms.
			2. CLEANING AND PROTECTION
				1. Clean urinals and fittings with manufacturers' recommended cleaning methods and materials.
				2. Install protective covering for installed urinals and fittings.
				3. Do not allow use of urinals for temporary facilities unless approved in writing by Owner.

END OF SECTION 224213.16