Sioux Chief Manufacturing prepared the following guidelines to aid design professionals. Incorporate these guidelines into the appropriate project specification Section. Sioux Chief Manufacturing is not liable in any way for 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.

Notes are included to assist the design professional in editing the specifications to suit project requirements and are not intended to be included in the final specification. These notes appear in blue text.

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# SECTION 224213.13 – COMMERCIAL WATER CLOSETS

Revise this Section by deleting and inserting text to meet Project-specific requirements.

Verify that Section titles referenced in this Section are correct for this Project's Specifications; Section titles may have changed.

# GENERAL

## RELATED DOCUMENTS

Retain or delete this article in all Sections of Project Manual.

### Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

## SUMMARY

### Section includes the following fixtures and specialties:

#### Water Closets.

#### Flush Valve.

#### Toilet Seat.

#### Support.

### Related Requirements:

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

#### Section 224100 "Residential Plumbing Fixtures" for residential fixtures for use in facilities, but not requiring special fixture attributes.

#### Section 224213.13 "Commercial Water Closets" for conventional water closets, flushometer valves, carriers, and seats for use facilities, but not requiring special fixture attributes.

#### Section 224213.16 "Commercial Urinals" for urinals for use in facilities.

#### Section 224216.13 "Commercial Lavatories" for lavatories for use in facilities, but not requiring special fixture attributes.

#### Section 224216.16 "Commercial Sinks" for sinks for use in facilities, but not requiring special fixture attributes.

#### Section 224223 "Commercial Showers" for showers for use in facilities, but not requiring special fixture attributes.

#### Section 224500 "Emergency Plumbing Fixtures" for emergency showers and eye-wash units.

## ACTION SUBMITTALS

### Product Data: For each type of product.

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

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

Retain "LEED Submittals" Paragraph below if applying for LEED certification. See the "LEED Rating System" Article in the Evaluations.

### LEED Submittals:

Retain one of three "Product Data" subparagraphs below. Retain first subparagraph for LEED-NC and LEED-CS.

#### Product Data: Documentation indicating that flow and water consumption requirements comply with [Prerequisite WE 1] [Prerequisite WE 1 and Credit WE 3] [Prerequisite WE 1, Credit WE 2, and Credit WE 3].

Retain first "Product Data" Subparagraph below for LEED-CI.

#### Product Data: Documentation indicating that flow and water consumption requirements comply with Prerequisite WE 1 [and Credit WE 1].

Retain "Product Data" Subparagraph below for LEED-EB.

#### Product Data: Documentation indicating that flow and water consumption requirements comply with Prerequisite WE 1[ and Credit WE 2].

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

### Shop Drawings: Include diagrams for power, signal, and control wiring.

## CLOSEOUT SUBMITTALS

### Operation and Maintenance Data: For plumbing fixtures and faucets to include in operation and maintenance manuals.

#### In addition to items specified in Section 017823 "Operation and Maintenance Data," include the following:

##### Servicing and adjustments of [flushometer valves] [electronic sensors] [ bathing units] [bedpan washer/sanitizers] [hydrotherapy whirlpools] [and] [morgue equipment].

# PRODUCTS

## WATER CLOSETS

Insert letter and number combination to complete drawing designation. Use these designations on Drawings to identify each water closet.

### Wall Hung Water Closets <Insert drawing designation>:

Retain "Basis-of-Design Product" Subparagraph and list of manufacturers below to identify a specific product or a comparable product from manufacturers listed. Retain option and delete insert note if manufacturer's name and model number are indicated on Drawings.

#### Basis-of-Design Product: Subject to compliance with requirements, provide <Insert Specified Manufacture>; <Insert product name or designation>:

##### Substitutions: [Under provisions of Division 01.] [Not permitted.]

### ADA, Wall Hung Water Closets <Insert drawing designation>:

Retain "Basis-of-Design Product" Subparagraph and list of manufacturers below to identify a specific product or a comparable product from manufacturers listed. Retain option and delete insert note if manufacturer's name and model number are indicated on Drawings.

#### Basis-of-Design Product: Subject to compliance with requirements, provide <Insert Specified Manufacture>; <Insert product name or designation>:

##### Substitutions: [Under provisions of Division 01.] [Not permitted.]

### JR, Wall Hung Water Closets <Insert drawing designation>:

Retain "Basis-of-Design Product" Subparagraph and list of manufacturers below to identify a specific product or a comparable product from manufacturers listed. Retain option and delete insert note if manufacturer's name and model number are indicated on Drawings.

#### Basis-of-Design Product: Subject to compliance with requirements, provide <Insert Specified Manufacture>; <Insert product name or designation>:

##### Substitutions: [Under provisions of Division 01.] [Not permitted.]

Coordinate "Flushometer Valve" Subparagraph below with "Flushometer Valves" Article. To require conventional flushometer valves on water closets, cross-reference Section 224213.13 "Commercial Water Closets."

## Flush Valve:

### Basis-of-Design Product: Subject to compliance with requirements, provide <Insert Specified Manufacture>; <Insert product name or designation>:

#### Substitutions: [Under provisions of Division 01.] [Not permitted.]

Coordinate "Toilet Seat" Subparagraph with "Toilet Seats" Article.

## Toilet Seat:

### Basis-of-Design Product: Subject to compliance with requirements, provide <Insert Specified Manufacture>; <Insert product name or designation>:

#### Substitutions: [Under provisions of Division 01.] [Not permitted.]

Coordinate "Support" Subparagraph with "Support" Article.

## SUPPORT:

### Horizontal, Cast-Iron *Floor Affixed Fixture Support* Carrier:

#### Basis-of-Design Product: Subject to compliance with requirements, provide Sioux Chief Manufacturing [837-H Series]:

##### Substitutions: [Under provisions of Division 01.] [Not permitted.]

#### Description: Waste-fitting assembly as required to match drainage piping material and arrangement with faceplates, couplings gaskets, and feet; bolts and hardware matching fixture.

##### Standard: [ASME A112.6.1M-1997].

##### Material: Cast Iron.

##### Coupling/Waste Orifice Diameter: 4*-*inch.

##### Connection Type: No-Hub.

##### Horizontal Waste Fitting: Required.

##### Load Rating: [Heavy Duty = 500 lbs.] [Extra Heavy Duty = 750 lbs.] [Bariatric = 1,000 lbs.].

Flow Direction: The flow direction of a closet carrier fitting is determined by FACING THE BOWL.

If the flow is FROM the RIGHT, a right-hand fitting is required.

If the flow is FROM the LEFT, a left-hand fitting is required.

##### Flow Direction: [Right “R”] [Left “L”] [Double “D”].

#### Accessories:

##### Coupling: 12 inch.

##### Tiling Flange: Required.

### Horizontal, Wide Chase Cast-Iron *Floor Affixed Fixture* Support Carrier:

#### Basis-of-Design Product: Subject to compliance with requirements, provide Sioux Chief Manufacturing [837-HW Series]:

##### Substitutions: [Under provisions of Division 01.] [Not permitted.]

#### Description: Waste-fitting assembly as required to match drainage piping material and arrangement with faceplates, couplings gaskets, and feet; bolts and hardware matching fixture.

##### Standard: [ASME A112.6.1M-1997].

##### Material: Cast Iron.

##### Coupling/Waste Orifice Diameter: 4*-*inch.

##### Connection Type: No-Hub.

##### Horizontal Waste Fitting: Required.

##### Wide Chase: Required.

##### Load Rating: Heavy Duty = 500 lbs.

Flow Direction: The flow direction of a closet carrier fitting is determined by FACING THE BOWL.

If the flow is FROM the RIGHT, a right-hand fitting is required.

If the flow is FROM the LEFT, a left-hand fitting is required.

##### Flow Direction: [Right “R”] [Left “L”] [Double “D”].

#### Accessories:

##### Coupling: 12 inch.

##### Tiling Flange: Required.

### Vertical, Cast-Iron *Floor Affixed Fixture* Support Carrier:

#### Basis-of-Design Product: Subject to compliance with requirements, provide Sioux Chief Manufacturing [837-V Series]:

##### Substitutions: [Under provisions of Division 01.] [Not permitted.]

#### Description: Waste-fitting assembly as required to match drainage piping material and arrangement with faceplates, couplings gaskets, and feet; bolts and hardware matching fixture.

##### Standard: [ASME A112.6.1M-1997].

##### Material: Cast Iron.

##### Coupling/Waste Orifice Diameter: 4*-*inch.

##### Connection Type: No-Hub.

##### Vertical Waste Fitting: Required.

##### Load Rating: [Heavy Duty = 500 lbs.] [Extra Heavy Duty = 750 lbs.] [Bariatric = 1,000 lbs.].

##### Type: [Single] [Double “D”].

##### Side Inlet: [No-Side Inlet] [Left-Side Inlet] [Right-Side Inlet] [2-Side Inlets].

#### Accessories:

##### Coupling: 12 inch.

##### Tiling Flange: Required.

### Vertical, Wide Chase Cast-Iron *Floor Affixed Fixture* Support Carrier:

#### Basis-of-Design Product: Subject to compliance with requirements, provide Sioux Chief Manufacturing [837-VW Series]:

##### Substitutions: [Under provisions of Division 01.] [Not permitted.]

#### Description: Waste-fitting assembly as required to match drainage piping material and arrangement with faceplates, couplings gaskets, and feet; bolts and hardware matching fixture.

##### Standard: [ASME A112.6.1M-1997].

##### Material: Cast Iron.

##### Coupling/Waste Orifice Diameter: 4*-*inch.

##### Connection Type: No-Hub.

##### Vertical Waste Fitting: Required.

##### Wide Chase: Required.

##### Load Rating: Heavy Duty = 500 lbs.

##### Type: [Single] [Double “D”].

##### Side Inlet: [No-Side Inlet] [Left-Side Inlet] [Right-Side Inlet] [2-Side Inlets].

#### Accessories:

##### Coupling: 12*-*inch.

##### Tiling Flange: Required.

# EXECUTION

## EXAMINATION

### Examine roughing-in of water-supply and sanitary drainage and vent piping systems to verify actual locations of piping connections before fixture installation.

### Examine walls, floors, cabinets, and counters for suitable conditions where fixtures will be installed.

### Proceed with installation only after unsatisfactory conditions have been corrected.

## INSTALLATION

### Install plumbing fixtures level and plumb according to roughing-in drawings.

### Install supports, affixed to building substrate, for wall-mounted fixtures.

#### Use carrier supports with waste fitting and seal for back-outlet fixtures.

#### Use carrier supports without waste fitting for fixtures with tubular waste piping.

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

### Install floor-mounted water closets on bowl-to-drain, connecting fitting attachments to piping or building substrate.

First paragraph below applies to counter-mounted fixtures such as sinks.

### Install counter-mounted fixtures in and attached to casework.

### Install water-supply piping with stop on each supply to each fixture to be connected to water-distribution piping. Attach supplies to supports or substrate within pipe spaces behind fixtures. Install stops in locations where they can be easily reached for operation.

#### Exception: Use ball or gate valve if supply stops are not specified with fixture. Comply with valve requirements specified in Section 220523.12 "Ball Valves for Plumbing Piping" and Section 220523.15 "Gate Valves for Plumbing Piping."

### Install flushometer valves on water closets.

### Install flushometer valves for accessible water closets, with lever handle mounted on wide side of compartment.

### Install toilet seats on water closets.

### Install faucet flow-control fittings with specified flow rates and patterns in faucet spouts, if faucets are not available with required rates and patterns. Include adapters if required.

### Install laminar-flow, faucet-spout fittings in faucet spouts where laminar-flow fittings are specified.

### Install shower flow-control fittings with specified maximum flow rates in shower arms.

### Install traps on fixture outlets.

#### Exception: Omit trap on fixtures with integral traps.

### Set showers in leveling bed of cement grout.

Coordinate first paragraph below with Drawings. Indicate on Drawings those fixtures and sinks that are required to be accessible.

### Install protective shielding pipe covers and enclosures on exposed supplies and waste piping of accessible sinks. Comply with requirements in Section 220719 "Plumbing Piping Insulation."

### Seal joints between plumbing fixtures, counters, floors, and walls using sanitary-type, one-part, mildew-resistant silicone sealant. Match sealant color to fixture color. Comply with sealant requirements specified in Section 079200 "Joint Sealants."

### Install wall flanges or escutcheons at piping wall penetrations in exposed, finished locations. Use deep-pattern escutcheons if required to conceal protruding fittings. Comply with escutcheon requirements specified in Section 220518 "Escutcheons for Plumbing Piping."

## CONNECTIONS

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

### Connect fixtures with water supplies, stops, and risers, and with traps, soil, waste, and vent piping. Use size fittings required to match fixtures.

### Comply with requirements for water piping specified in Section 221116 "Domestic Water Piping."

### Comply with requirements for soil and waste drainage piping and vent piping specified in Section 221316 "Sanitary Waste and Vent Piping."

### Comply with requirements for atmospheric vent piping specified in Section 221316 "Sanitary Waste and Vent Piping."

### Install protective shielding pipe covers and enclosures on exposed supplies and waste piping of accessible sinks. Comply with requirements in Section 220719 "Plumbing Piping Insulation."

## ADJUSTING

### Operate and adjust faucets and controls. Replace damaged and malfunctioning plumbing fixtures, fittings, and controls.

### Adjust water pressure at faucets and flushometer valves to produce proper flow.

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

## CLEANING AND PROTECTION

### After installing plumbing fixtures, inspect and repair damaged finishes.

### Clean plumbing fixtures, faucets, and other fittings with manufacturers' recommended cleaning methods and materials.

### Provide protective covering for installed fixtures and fittings.

### Do not allow use of plumbing fixtures for temporary facilities unless approved in writing by Owner.

# END OF SECTION 224213.13 – COMMERCIAL WATER CLOSETS