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SECTION 224200 - COMMERCIAL PLUMBING FIXTURES

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

MasterSpec includes provisions for LEED v4, LEED v4.1, IgCC/ASHRAE 189.1, Green Globes, and CALGreen.

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Commercial lavatories.
2. Commercial showers.
3. Commercial sinks.
4. Commercial urinals.
5. Commercial water closets.
6. Commercial wash fountains.
7. Flushometer valves.
8. Toilet seats.

9. Fixture carriers.

B. Related Requirements:

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

Retain first subparagraph below for projects that include Section 114000 "Foodservice Equipment," and revise "Kitchen/Utility Sinks" and "Handwash Sinks" paragraphs in this Section accordingly.

1. Section 114000 "Foodservice Equipment" for NSF-compliant foodservice and handwash sinks.
2. Section 224100 "Residential Plumbing Fixtures" for residential plumbing fixtures.
3. Section 224300 "Healthcare Plumbing Fixtures" for healthcare plumbing fixtures.
4. Section 224500 "Emergency Plumbing Fixtures" for emergency plumbing fixtures.
5. Section 224600 "Security Plumbing Fixtures" for security plumbing fixtures.

1.2 DEFINITIONS

Retain terms that remain after this Section has been edited for a project. Include only essential definitions or acronyms not well understood by the affected industry or trade.

- A. FRP: Fiberglass-reinforced plastic.
- B. High-Efficiency Flush Volume: 1.28 gal. (4.8 L) or less per flush.
- C. PMMA: Polymethyl methacrylate; also known as "acrylic."
- D. Standard-Efficiency Flush Volume: 1.6 gal. (6 L) per flush.
- E. WaterSense Fixture: Water closet and/or flushometer valve/tank certified by the EPA to meet the WaterSense performance criteria.

1.3 ACTION SUBMITTALS

Action submittals are submittals requiring responsive action and return of reviewed documents to Contractor.

- A. Product Data:
 1. Include construction details, material descriptions and thicknesses, dimensions of individual components and profiles, and finishes for plumbing fixtures.
 2. Include rated capacities, operating characteristics, electrical characteristics, and furnished specialties and accessories.

Retain "Shop Drawings" Paragraph below if required for Project.

- B. Shop Drawings:

1. Plans, elevations, sections, and [**mounting**] [**attachment**] details.
2. Details of equipment assemblies, including accessories. Indicate dimensions, weights, loads, required clearances, method of field assembly, components, location and size of each field connection, location and size of each cutout, and anchorage provisions and attachment methods. Indicate coordination requirements for adjacent and interfacing Work.
3. Diagrams for power, signal, and control wiring.

Retain "Sustainable Design Submittals" Paragraph below if required to attain sustainability rating or to track sustainability submittals.

C. Sustainable Design Submittals:

"Product Data" Subparagraph below applies to IgCC/ASHRAE 189.1 and Green Globes for fixtures and equipment that consume water.

1. Product Data: For water consumption.

Retain "Plumbing Fixtures" Subparagraph below for CALGreen WE Credit 601.3.2.1, "Plumbing Fixtures and Fittings."

2. Plumbing Fixtures: Provide the following:
 - a. Manufacturer cut sheet indicating water consumption.
 - b. WaterSense certification for residential fixtures, commercial water closets, commercial urinals, and commercial showers.

Retain "Plumbing Fixtures" Subparagraph below for LEED v4 and LEED v4.1 "WEp Indoor Water Use Reduction" and "WEc Indoor Water Use Reduction."

3. Plumbing Fixtures: Provide the following:
 - a. Manufacturer cut sheet indicating water consumption.
 - b. WaterSense certification for residential fixtures, commercial water closets, commercial urinals, and commercial showers.

1.4 INFORMATIONAL SUBMITTALS

Informational submittals are submittals that require review by Architect, but they do not require Architect's responsive action and return of reviewed documents to Contractor, provided submittals comply with requirements. If rejected, submittals with responsive action must be returned to Contractor.

Retain "Coordination Drawings" Paragraph below where coordination is required for installation of products and materials by separate installers. Preparation of coordination drawings requires participation of each trade involved; coordinate with other Sections specifying products and materials to be included. See Section 013100 "Project Management and Coordination."

- A. Coordination Drawings: Counter cutout templates for mounting of counter-mounted lavatories and/or counter-mounted sinks.

1.5 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data:

1. For lavatories and faucets.

Retain first subparagraph below if automatic, electronic-sensor faucets are required for Project.

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

- 1) Servicing and adjustments of automatic faucets.
2. For shower valves to include in maintenance manuals.
3. For sinks and faucets to include in operation and maintenance manuals.

Retain first subparagraph below if automatic, electronic-sensor faucets are required for Project.

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

- 1) Servicing and adjustments of automatic faucets.
4. For flushometer valves[**and electronic sensors**] to include in operation and maintenance manuals.
5. For wash fountains and components to include in operation and maintenance manuals.

1.6 MAINTENANCE MATERIAL SUBMITTALS

See Section 017700 "Closeout Procedures" for submission of maintenance material items.

A. Furnish extra materials to Owner that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Faucet Washers and O-Rings: Equal to [10] <Insert number> percent of amount of each type and size installed.
2. Faucet Cartridges and O-Rings: Equal to [5] <Insert number> percent of amount of each type and size installed.
3. Shower Valve Washers and O-Rings: Equal to [10] <Insert number> percent of amount of each type and size installed.
4. Shower Valve Cartridges and O-Rings: Equal to [5] <Insert number> percent of amount of each type and size installed.
5. 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.
6. Waterless Urinal Trap-Seal Liquid: Equal to [1 gal. (3.8 L)] <Insert volume> for each urinal installed.
7. 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.

PART 2 - PRODUCTS

Manufacturers and products listed in this Section are neither recommended nor endorsed by the AIA or Deltek. Before selecting manufacturers and products, verify availability, suitability for intended applications, and compliance with minimum performance requirements. Product options commonly available from manufacturers are included in square brackets throughout the Section Text. Not every manufacturer listed can provide every option offered; verify availability with manufacturers. For definitions of terms and requirements for Contractor's product selection, see Section 016000 "Product Requirements."

Do not use same plumbing fixture designation as is used for another plumbing fixture in Section 224100 "Residential Plumbing Fixtures," Section 224300 "Healthcare Plumbing Fixtures," Section 224500 "Emergency Plumbing Fixtures," and Section 224600 "Security Plumbing Fixtures."

Caution: Bariatric water closets are not included in this Section. They are generally constructed of stainless steel and require special mounting and supports depending on whether they are floor or wall mounted.

2.1 PERFORMANCE REQUIREMENTS

The U.S. Safe Drinking Water Act (SDWA) has required national compliance with less than or equal to 0.25 percent weighted average lead content at wetted surfaces for pipe, fittings, and devices intended to convey or dispense water for human consumption since January 2014. The IPC and the Uniform Plumbing Code have the same requirements. Items in compliance with NSF 61 and NSF 372 also comply with this requirement. Some manufacturers choose to meet this requirement through independent testing and have "Certified Lead-Free" products, which may or may not have NSF 61 or NSF 372 certification.

- A. Lavatory faucets, sink faucets, shower valves, and wash fountain spray heads and faucets intended to convey or dispense water for human consumption are to comply with the U.S. Safe Drinking Water Act (SDWA), with requirements of the Authority Having Jurisdiction (AHJ), and with NSF 61 and NSF 372, or be certified in compliance with NSF 61 and NSF 372 by an ANSI-accredited third-party certification body, in that the weighted average lead content at wetted surfaces is less than or equal to 0.25 percent.
- B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

2.2 COMMERCIAL LAVATORIES

Do not use same lavatory designation as is used for another lavatory in Section 224100 "Residential Plumbing Fixtures," Section 224300 "Healthcare Plumbing Fixtures," Section 224500 "Emergency Plumbing Fixtures," and Section 224600 "Security Plumbing Fixtures."

- A. Lavatories, Counter Mounted:

Copy "Lavatories, Counter Mounted - Enameled Cast Iron, Flat Rim, Flush Mount" Subparagraph below and re-edit for each type of counter-mounted, enameled cast-iron, flat-rim, flush-mount lavatory required.

Insert drawing designation. Use these designations on Drawings to identify each counter-mounted, enameled cast-iron, flat-rim, flush-mount lavatory.

1. Lavatories, Counter Mounted - Enameled Cast Iron, Flat Rim, Flush Mount <Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) Commercial Enameling Company.
 - 2) Kohler Co.
 - 3) <Insert manufacturer's name>.
- b. Fixture:
 - 1) Standard: ASME A112.19.1/CSA B45.2.
 - 2) Type: For flush mounting with kit.
 - 3) Nominal Size: Rectangular, [18 by 15 inches (457 by 381 mm)] [20 by 18 inches (508 by 457 mm)].
 - 4) Faucet-Hole Punching: [Three holes, 2-inch (51-mm)] [Three holes, 4-inch (102-mm)] centers.
 - 5) Faucet-Hole Location: Top.
 - 6) Color: [White] <Insert color>.
 - 7) Mounting Materials: With stainless steel ring and sealant.
- c. Faucet: <Insert lavatory faucet designation from "Lavatory Faucets, Manually Operated" or "Lavatory Faucets, Automatically Operated" Paragraph>.

Copy "Lavatories, Counter Mounted - Enameled Cast Iron, Self-Rimming" Subparagraph below and reedit for each type of counter-mounted, self-rimming, enameled cast-iron lavatory required.

Insert drawing designation. Use these designations on Drawings to identify each counter-mounted, self-rimming, enameled cast-iron lavatory.

2. Lavatories, Counter Mounted - Enameled Cast Iron, Self-Rimming <Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following::
 - 1) Kohler Co.
 - 2) Zurn Industries, LLC.
 - 3) <Insert manufacturer's name>.
- b. Fixture:
 - 1) Standard: ASME A112.19.1/CSA B45.2.

- 2) Type: Self-rimming for above-counter mounting.
 - 3) Nominal Size: Oval, [20 by 17 inches (508 by 432 mm)] <Insert dimensions> nominal.
 - 4) Faucet-Hole Punching: [Single center hole] [Three holes, 2-inch (51-mm) centers] [Three holes, 4-inch (102-mm) centers].
 - 5) Faucet-Hole Location: Top.
 - 6) Color: [White] <Insert color>.
 - 7) Mounting Material: Sealant.
- c. Faucet: <Insert lavatory faucet designation from "Lavatory Faucets, Manually Operated" or "Lavatory Faucets, Automatically Operated" Paragraph>.

Copy "Lavatories, Undercounter Mounted - Enameled Cast Iron" Subparagraph below and re-edit for each type of undercounter-mounted, enameled cast-iron lavatory required.

Insert drawing designation. Use these designations on Drawings to identify each undercounter-mounted, enameled cast-iron lavatory.

3. Lavatories, Undercounter Mounted - Enameled Cast Iron <Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) <Insert manufacturer's name>.
- b. Fixture:
 - 1) Standard: ASME A112.19.1/CSA B45.2.
 - 2) Type: For undercounter mounting.
 - 3) Nominal Size: Oval, [20 by 17 inches (508 by 432 mm)] <Insert dimensions> nominal.
 - 4) Faucet-Hole Punching: No holes.
 - 5) Faucet-Hole Location: On countertop.
 - 6) Color: [White] <Insert color>.
 - 7) Mounting Materials: Sealant and undercounter mounting kit.
- c. Faucet: <Insert lavatory faucet designation from "Lavatory Faucets, Manually Operated" or "Lavatory Faucets, Automatically Operated" Paragraph>.

Copy "Lavatories, Counter Mounted - Vitreous China, Self-Rimming, Rectangular" Subparagraph below and re-edit for each type of rectangular, counter-mounted, self-rimming, vitreous-china lavatory required.

Insert drawing designation. Use these designations on Drawings to identify each rectangular, counter-mounted, self-rimming, vitreous-china lavatory.

4. Lavatory, Counter Mounted - Vitreous China, Self-Rimming, Rectangular <Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) Gerber Plumbing Fixtures LLC.
 - 2) Kohler Co.
 - 3) Mansfield Plumbing Products LLC.
 - 4) TOTO USA, INC.
 - 5) <Insert manufacturer's name>.

- b. Fixture:
 - 1) Standard: ASME A112.19.2/CSA B45.1.
 - 2) Type: Self-rimming for above-counter mounting.
 - 3) Nominal Size: Rectangular, [21 by 19 inches (533 by 483 mm)] [24 by 20 inches (610 by 508 mm)] <Insert dimensions> nominal.
 - 4) Faucet-Hole Punching: [One hole] [Three holes, 2-inch (51-mm) centers] [Three holes, 4-inch (102-mm) centers].
 - 5) Faucet-Hole Location: Top.
 - 6) Color: [White] <Insert color>.
 - 7) Mounting Material: Sealant.

- c. Faucet: <Insert lavatory faucet designation from "Lavatory Faucets, Manually Operated" or "Lavatory Faucets, Automatically Operated" Paragraph>.

Copy "Lavatories, Counter Mounted - Vitreous China, Self-Rimming, Oval or Round" Subparagraph below and re-edit for each type of oval or round, counter-mounted, self-rimming, vitreous-china lavatory required.

Insert drawing designation. Use these designations on Drawings to identify each oval or round, counter-mounted, self-rimming, vitreous-china lavatory.

5. Lavatory, Counter Mounted - Vitreous China, Self-Rimming, Oval or Round <Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) American Standard.
 - 2) Briggs Plumbing Products, Inc.
 - 3) Gerber Plumbing Fixtures LLC.
 - 4) Kohler Co.
 - 5) Mansfield Plumbing Products LLC.
 - 6) ProFlo; a Ferguson Enterprises, Inc. brand.
 - 7) Sloan Valve Company.
 - 8) TOTO USA, INC.
 - 9) Zurn Industries, LLC.

10) <Insert manufacturer's name>.

b. Fixture:

- 1) Standard: ASME A112.19.2/CSA B45.1.
- 2) Type: Self-rimming for above-counter mounting.
- 3) Nominal Size:

Retain one of first two subparagraphs below. Retain first for oval lavatories and second for round lavatories.

- a) Oval, [**19 by 17 inches (483 by 432 mm)**] [**20 by 17 inches (508 by 432 mm)**] <Insert dimensions>.
- b) Round, [**19 inches (483 mm)**] <Insert dimension>.

- 4) Faucet-Hole Punching: [**One hole**] [**Three holes, 2-inch (51-mm) centers**] [**Three holes, 4-inch (102-mm) centers**].
- 5) Faucet-Hole Location: Top.
- 6) Color: [**White**] <Insert color>.
- 7) Mounting Material: Sealant.

c. Faucet: <Insert lavatory faucet designation from "Lavatory Faucets, Manually Operated" or "Lavatory Faucets, Automatically Operated" Paragraph>.

Copy "Lavatories, Undercounter Mounted - Vitreous China, Oval" Subparagraph below and re-edit for each type of oval, undercounter-mounted, vitreous-china lavatory required.

Insert drawing designation. Use these designations on Drawings to identify each oval, undercounter-mounted, vitreous-china lavatory.

6. Lavatories, Undercounter Mounted - Vitreous China, Oval <Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) American Standard.
 - 2) Gerber Plumbing Fixtures LLC.
 - 3) Kohler Co.
 - 4) Mansfield Plumbing Products LLC.
 - 5) ProFlo; a Ferguson Enterprises, Inc. brand.
 - 6) Sloan Valve Company.
 - 7) TOTO USA, INC.
 - 8) Zurn Industries, LLC.
 - 9) <Insert manufacturer's name>.

b. Fixture:

- 1) Standard: ASME A112.19.2/CSA B45.1.
- 2) Type: For undercounter mounting.
- 3) Nominal Size: Oval, [**19 by 16 inches (483 by 406 mm)**] [**22 by 14 inches (559 by 356 mm)**] [**23 by 15 inches (584 by 381 mm)**] <Insert dimensions>.
- 4) Faucet-Hole Punching: No holes.
- 5) Faucet-Hole Location: On countertop.
- 6) Color: [**White**] <Insert color>.
- 7) Mounting Material: Sealant and undercounter mounting kit.

- c. Faucet: <Insert lavatory faucet designation from "Lavatory Faucets, Manually Operated" or "Lavatory Faucets, Automatically Operated" Paragraph>.

B. Lavatories, Wall Mounted:

Copy "Lavatories, Wall Mounted - Enameled Cast Iron, Rectangular" Subparagraph below and re-edit for each type of rectangular, wall-mounted, enameled cast-iron lavatory required.

Insert drawing designation. Use these designations on Drawings to identify each rectangular, wall-mounted, enameled cast-iron lavatory.

1. Lavatory, Wall Mounted - Enameled Cast Iron, Rectangular <Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following: American Standard.

- 1) Kohler Co.
- 2) Zurn Industries, LLC.
- 3) <Insert manufacturer's name>.

- b. Fixture:

- 1) Standard: ASME A112.19.1/CSA B45.2.
- 2) Type: Straight-front apron with straight back.
- 3) Nominal Size: Rectangular, [**19 by 17 inches (483 by 432 mm)**] [**20 by 18 inches (508 by 457 mm)**].
- 4) Faucet-Hole Punching: [**One hole**] [**Three holes, 2-inch (51-mm) centers**] [**Three holes, 4-inch (102-mm) centers**].
- 5) Faucet-Hole Location: Top.
- 6) Color: [**White**] <Insert color>.
- 7) Mounting Material: Wall bracket.

- c. Faucet: <Insert lavatory faucet designation from "Lavatory Faucets, Manually Operated" or "Lavatory Faucets, Automatically Operated" Paragraph>.

Coordinate "Support" Subparagraph below with "Fixture Carriers - Lavatory" Paragraph in "Fixture Carriers" Article.

- d. Support: [Lavatory carrier, framing affixed] [Lavatory carrier, floor affixed with steel uprights] <Insert carrier>.
- e. Lavatory Mounting Height: [Standard] [Juvenile] [Accessible in accordance with ICC A117.1].

Copy "Lavatories, Wall Mounted - Vitreous China, Rectangular with Back" Subparagraph below and reedit for each type of wall-mounted, vitreous-china lavatory required.

Insert drawing designation. Use these designations on Drawings to identify each wall-mounted, vitreous-china lavatory.

- 2. Lavatories, Wall Mounted - Vitreous China, Rectangular with Back <Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) American Standard.
 - 2) Briggs Plumbing Products, Inc.
 - 3) Gerber Plumbing Fixtures LLC.
 - 4) Kohler Co.
 - 5) Mansfield Plumbing Products LLC.
 - 6) ProFlo; a Ferguson Enterprises, Inc. brand.
 - 7) Sloan Valve Company.
 - 8) Zurn Industries, LLC.
 - 9) <Insert manufacturer's name>.
- b. Fixture:
 - 1) Standard: ASME A112.19.2/CSA B45.1.
 - 2) Type: For wall hanging.
 - 3) Nominal Size: Rectangular, [18 by 16 inches (457 by 406 mm)] [20 by 18 inches (508 by 457 mm)] <Insert dimensions>.
 - 4) Faucet-Hole Punching: [One hole] [Three holes, 2-inch (51-mm) centers] [Three holes, 4-inch (102-mm) centers].
 - 5) Faucet-Hole Location: Top.
 - 6) Color: [White] <Insert color>.
 - 7) Mounting Material: Chair carrier.
- c. Faucet: <Insert lavatory faucet designation from "Lavatory Faucets, Manually Operated" or "Lavatory Faucets, Automatically Operated" Paragraph>.

Coordinate "Support" Subparagraph below with "Fixture Carriers - Lavatory" Paragraph in "Fixture Carriers" Article.

- d. Support: [Lavatory carrier, framing affixed] [Lavatory carrier, floor affixed with steel uprights] [,] [exposed arm] [concealed arm] <Insert carrier>.
- e. Lavatory Mounting Height: [Standard] [Juvenile] [Accessible in accordance with ICC A117.1].

Copy "Lavatories, Wall Mounted - Vitreous China, Rectangular with Ledge Back" Subparagraph below and re-edit for each type of wall-mounted, vitreous-china lavatory required.

Insert drawing designation. Use these designations on Drawings to identify each wall-mounted, vitreous-china lavatory.

3. Lavatories, Wall Mounted - Vitreous China, Rectangular with Ledge Back **<Insert drawing designation>**:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

- 1) American Standard.
- 2) Briggs Plumbing Products, Inc.
- 3) Gerber Plumbing Fixtures LLC.
- 4) Kohler Co.
- 5) Mansfield Plumbing Products LLC.
- 6) ProFlo; a Ferguson Enterprises, Inc. brand.
- 7) Sloan Valve Company.
- 8) TOTO USA, INC.
- 9) **<Insert manufacturer's name>**.

- b. Fixture:

- 1) Standard: ASME A112.19.2/CSA B45.1.
- 2) Type: For wall hanging.
- 3) Nominal Size: Rectangular, [**19 by 17 inches (483 by 432 mm)**] [**20 by 18 inches (508 by 457 mm)**] **<Insert dimensions>**.
- 4) Faucet-Hole Punching: [**One hole**] [**Three holes, 2-inch (51-mm) centers**] [**Three holes, 4-inch (102-mm) centers**].
- 5) Faucet-Hole Location: Top.
- 6) Color: [**White**] **<Insert color>**.
- 7) Mounting Material: Chair carrier.

- c. Faucet: **<Insert lavatory faucet designation from "Lavatory Faucets, Manually Operated" or "Lavatory Faucets, Automatically Operated" Paragraph>**.

Coordinate "Support" Subparagraph below with "Fixture Carriers - Lavatory" Paragraph in "Fixture Carriers" Article.

- d. Support: [**Lavatory carrier, framing affixed**] [**Lavatory carrier, floor affixed with steel uprights**] [,] [**exposed arm**] [**concealed arm**] **<Insert carrier>**.
- e. Lavatory Mounting Height: [**Standard**] [**Juvenile**] [**Accessible in accordance with ICC A117.1**].

Copy "Lavatories, Wall Mounted - Vitreous China, Rectangular, Wheelchair" Subparagraph below and re-edit for each type of rectangular, wheelchair, wall-mounted, vitreous-china lavatory required.

Insert drawing designation. Use these designations on Drawings to identify each rectangular, wheelchair, wall-mounted, vitreous-china lavatory.

4. Lavatories, Wall Mounted - Vitreous China, Rectangular, Wheelchair <Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

- 1) American Standard.
- 2) Gerber Plumbing Fixtures LLC.
- 3) Kohler Co.
- 4) Zurn Industries, LLC.
- 5) <Insert manufacturer's name>.

- b. Fixture:

- 1) Standard: ASME A112.19.2/CSA B45.1.
- 2) Type: Wheelchair.
- 3) Nominal Size: Rectangular, 27 by 20 inches (686 by 508 mm).
- 4) Faucet-Hole Punching: [One hole] [Three holes, 2-inch (51-mm) centers] [Three holes, 4-inch (102 mm) centers] [Three holes, 5- to 6-inch (127- to 150-mm) centers].
- 5) Faucet-Hole Location: Top.
- 6) Color: [White] <Insert color>.
- 7) Mounting: For concealed-arm carrier.

- c. Faucet: <Insert lavatory faucet designation from "Lavatory Faucets, Manually Operated" or "Lavatory Faucets, Automatically Operated" Paragraph>.

Coordinate "Support" Subparagraph below with "Fixture Carriers - Lavatory" Paragraph in "Fixture Carriers" Article.

- d. Support: [Lavatory carrier, floor affixed with steel uprights] [,] [exposed-arm] [concealed-arm] <Insert carrier>.
- e. Lavatory Mounting Height: [Juvenile] [Accessible in accordance with ICC A117.1].

Copy "Lavatories, Wall Mounted - Vitreous China, Corner Type" Subparagraph below and re-edit for each corner-type, wall-mounted, vitreous-china lavatory required.

Insert drawing designation. Use these designations on Drawings to identify each corner-type, wall-mounted, vitreous-china lavatory.

5. Lavatories, Wall Mounted - Vitreous China, Corner Type <Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) American Standard.
 - 2) **<Insert manufacturer's name>**.
- b. Fixture:
 - 1) Standard: ASME A112.19.2/CSA B45.1.
 - 2) Type: Three-sided-front apron with three-sided back.
 - 3) Nominal Size: Corner, **16 by 16 inches (406 by 406 mm)**.
 - 4) Faucet-Hole Punching: [**One hole**] [**Three holes, 2-inch (51-mm) centers**].
 - 5) Faucet-Hole Location: Back wall.
 - 6) Color: [**White**] **<Insert color>**.
 - 7) Mounting Materials: Wall brackets.
- c. Faucet: Manufacturer's standard; factory installed.

Coordinate "Support" Subparagraph below with "Fixture Carriers - Lavatory" Paragraph in "Fixture Carriers" Article.

- d. Support: [**Lavatory carrier, framing affixed**] [**Lavatory carrier, floor affixed with steel uprights**] **<Insert carrier>**.
- e. Lavatory Mounting Height: [**Standard**] [**Juvenile**] [**Accessible in accordance with ICC A117.1**].

Copy "Lavatories, Wall Mounted - Precast GFRC, Rectangular Countertop Deck with Integral Ramp Basin(s)" Subparagraph below and re-edit for each type of wall-mounted, precast-GFRC lavatory required.

Insert drawing designation. Use these designations on Drawings to identify each wall-mounted, precast-GFRC lavatory.

6. Lavatories, Wall Mounted - Precast GFRC, Rectangular Countertop Deck with Integral Ramp Basin(s) **<Insert drawing designation>**:

Standard overall countertop size (per station) below complies with Uniform Plumbing Code, International Plumbing Code, and International Building Code requirements. Some countertop sizes refer to specific standard products of TrueForm Concrete. Basins can be integral in any size countertop larger than the basin itself. Contact manufacturer for custom designs.

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) Trueform Concrete, LLC.
 - 2) **<Insert manufacturer's name>**.
- b. Basin(s) and Countertop:

- 1) Standards: CSA B45.8/IAPMO Z403 and ICC A117.1.
 - 2) Type: Straight front and side aprons with straight back.
 - 3) Number of Stations: [One] [Two] [Three] [Four].
 - 4) Overall Countertop Size: [30 by 21 by 5 inches (762 by 533 by 127 mm) (per station)] <Insert dimension>.
 - 5) Basin I.D.: [20 by 13 by 5 inches (508 by 330 by 127mm) [18 by 12 by 5 inches (457 by 305 by 127 mm)] [14 by 10 by 5 inches (356 by 254 by 127 mm)].
 - 6) Faucet-Hole Punching (per Station): [Zero holes] [One hole] [Three holes, 2-inch (51-mm) centers] [Three holes, 4-inch (102-mm) centers] <Insert hole pattern>.
 - 7) Faucet-Hole Location: [Top] [Wall mount].
 - 8) Drain Type: Slot drain
 - 9) Color: [White linen] [Concrete] [Charcoal] [Limestone] [Graphite] [Pewter] [Dusk] [Taupe] <Insert color>.
 - 10) Mounting: Concrete wall brackets.
- c. Faucet: <Insert lavatory faucet designation from "Lavatory Faucets, Manually Operated" or "Lavatory Faucets, Automatically Operated" Paragraph>.
- d. Waste Fittings:
- 1) Standard: ASME A112.18.2/CSA B125.2.
 - 2) Connection: 1-1/4-inch (32-mm) fine thread tailpiece.
 - 3) Finish: [Polished chrome] [Brushed nickel] [Oil-rubbed bronze].
- e. Support: Manufacturer's standard product.
- f. Lavatory Mounting Height: [Standard] [Juvenile] [Accessible in accordance with ICC A117.1].

Copy "Lavatories, Wall Mounted - Precast GFRC, Rectangular Countertop Deck with Integral Rectangular Basin(s)" Subparagraph below and re-edit for each type of wall-mounted, precast-GFRC lavatory required.

Insert drawing designation. Use these designations on Drawings to identify each wall-mounted, precast-GFRC lavatory.

7. Lavatories, Wall Mounted - Precast GFRC, Rectangular Countertop Deck with Integral Rectangular Basin(s) <Insert drawing designation>:

Standard overall countertop size (per station) below complies with Uniform Plumbing Code, International Plumbing Code, and International Building Code requirements. Some countertop sizes refer to specific standard products of TrueForm Concrete. Basins can be integral in any size countertop larger than the basin itself. Contact manufacturer for custom designs.

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) Trueform Concrete, LLC.

- 2) <Insert manufacturer's name>.
- b. Basin(s) and Countertop:
 - 1) Standards: CSA B45.8/IAPMO Z403 and ICC A117.1.
 - 2) Type: Straight front and side aprons with straight back.
 - 3) Number of Stations: [One] [Two] [Three] [Four].
 - 4) Overall Countertop Size: [30 by 21 by 5 inches (762 by 533 by 127 mm) (per station)] <Insert dimension>.
 - 5) Basin I.D.: 20 by 13 by 5 inches (508 by 330 by 127 mm).
 - 6) Faucet-Hole Punching (per Station): [Zero holes] [One hole] [Three holes, 2-inch (51-mm) centers] [Three holes, 4-inch (102-mm) centers] <Insert hole pattern>.
 - 7) Faucet-Hole Location: [Top] [Wall mount].
 - 8) Drain Type: 1-1/4-inch (32-mm) grid drain assembly.
 - 9) Color: [White linen] [Concrete] [Charcoal] [Limestone] [Graphite] [Pewter] [Dusk] [Taupe] <Insert color>.
 - 10) Mounting: Concrete wall brackets.
 - c. Faucet: <Insert lavatory faucet designation from "Lavatory Faucets, Manually Operated" or "Lavatory Faucets, Automatically Operated" Paragraph>.
 - d. Waste Fittings:
 - 1) Standard: ASME A112.18.2/CSA B125.2.
 - 2) Type: 1-1/4-inch (32-mm) grid drain assembly.
 - 3) Finish: [Polished chrome] [Brushed nickel] [Oil-rubbed bronze].
 - e. Support: Manufacturer's standard product.
 - f. Lavatory Mounting Height: [Standard] [Juvenile] [Accessible in accordance with ICC A117.1].

Copy "Lavatories, Wall Mounted - Precast GFRC, Rectangular Countertop Deck with Integral Half-Trough Basin(s)" Subparagraph below and re-edit for each type of wall-mounted, precast-GFRC lavatory required.

Insert drawing designation. Use these designations on Drawings to identify each wall-mounted, precast-GFRC lavatory.

8. Lavatories, Wall Mounted - Precast GFRC, Rectangular Countertop Deck with Integral Half-Trough Basin(s) <Insert drawing designation>:

Standard overall countertop size (per station) below complies with Uniform Plumbing Code, International Plumbing Code, and International Building Code requirements. Some countertop sizes refer to specific standard products of TrueForm Concrete. Basins can be integral in any size countertop larger than the basin itself. Contact manufacturer for custom designs.

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

- 1) <Insert manufacturer's name>.
- b. Fixture:
- 1) Standards: CSA B45.8/IAPMO Z403 and ICC A117.1.
 - 2) Type: Straight front and side aprons with straight back.
 - 3) Number of Stations: [One] [Two] [Three] [Four].
 - 4) Overall Countertop Size: [30 by 21 by 5 inches (762 by 533 by 127 mm) (per station)] <Insert dimension>.
 - 5) Basin I.D.: [20 by 13 by 5-1/2 inches (508 by 330 by 140 mm)] [16 by 14 by 5-1/2 inches (406 by 356 by 140 mm)].
 - 6) Faucet-Hole Punching (per Station): [Zero holes] [One hole] [Three holes, 2-inch (51-mm) centers] [Three holes, 4-inch (102-mm) centers] <Insert hole pattern>.
 - 7) Faucet-Hole Location: [Top] [Wall mount].
 - 8) Drain Type: 1-1/4-inch (32-mm) grid drain assembly.
 - 9) Color: [White linen] [Concrete] [Charcoal] [Limestone] [Graphite] [Pewter] [Dusk] [Taupe] <Insert color>.
 - 10) Mounting: Concrete wall brackets.
- c. Faucet: <Insert lavatory faucet designation from "Lavatory Faucets, Manually Operated" or "Lavatory Faucets, Automatically Operated" Paragraph>.
- d. Waste Fittings:
- 1) Standard: ASME A112.18.2/CSA B125.2.
 - 2) Type: 1-1/4-inch (32-mm) grid drain assembly.
 - 3) Finish: [Polished chrome] [Brushed nickel] [Oil-rubbed bronze].
- e. Support: Manufacturer's standard product.
- f. Lavatory Mounting Height: [Standard] [Juvenile] [Accessible in accordance with ICC A117.1].

Copy "Lavatories, Wall Mounted - Precast GFRC, Rectangular Countertop Deck with Single Integral Ramp Basin, Two Station" Subparagraph below and re-edit for each type of wall-mounted, precast-GFRC lavatory required.

Insert drawing designation. Use these designations on Drawings to identify each wall-mounted, precast-GFRC lavatory.

9. Lavatories, Wall Mounted - Precast GFRC, Rectangular Countertop Deck with Single Integral Ramp Basin, Two Station <Insert drawing designation>:

Standard overall countertop size below complies with Uniform Plumbing Code, International Plumbing Code, and International Building Code requirements. Some countertop sizes refer to specific standard products of TrueForm Concrete. Basins can be integral in any size countertop larger than the basin itself. Contact manufacturer for custom designs.

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) Trueform Concrete, LLC.
 - 2) **<Insert manufacturer's name>**.
- b. Fixture:
 - 1) Standards: CSA B45.8/IAPMO Z403 and ICC A117.1.
 - 2) Type: Straight front and side aprons with straight back.
 - 3) Overall Countertop Size: **[60 by 21 by 5 inches (1525 by 533 by 127 mm)] [72 by 21 by 5 inches (1829 by 533 by 127 mm)] <Insert dimension>**.
 - 4) Basin I.D.: **[48 by 13 by 5 inches (1220 by 330 by 127 mm)] [50 by 12 by 5 inches (1270 by 305 by 127 mm)] [50 by 13 by 5 inches (1270 by 330 by 127 mm)] [60 by 13 by 5 inches (1525 by 330 by 127 mm)]**.
 - 5) Faucet-Hole Punching (per Station): **[Zero holes] [One hole] [Three holes, 2-inch (51-mm) centers] [Three holes, 4-inch (102-mm) centers] <Insert hole pattern>**.
 - 6) Faucet-Hole Location: **[Top] [Wall mount]**.
 - 7) Drain Type: Slot drain.
 - 8) Color: **[White linen] [Concrete] [Charcoal] [Limestone] [Graphite] [Pewter] [Dusk] [Taupe] <Insert color>**.
 - 9) Mounting Material: Concrete wall brackets.
- c. Faucet: **<Insert lavatory faucet designation from "Lavatory Faucets, Manually Operated" or "Lavatory Faucets, Automatically Operated" Paragraph>**.
- d. Waste Fittings:
 - 1) Standard: ASME A112.18.2/CSA B125.2.
 - 2) Type: **1-1/2-inch (38-mm)** slip joint connection.
 - 3) Finish: **[Polished chrome] [Brushed nickel] [Oil-rubbed bronze]**.
- e. Support: Manufacturer's standard product.
- f. Lavatory Mounting Height: **[Standard] [Juvenile] [Accessible in accordance with ICC A117.1]**.

Copy "Lavatories, Wall Mounted - Precast GFRC, Rectangular Countertop Deck with Single Integral Ramp Basin, Three Station" Subparagraph below and re-edit for each type of wall-mounted, precast-GFRC lavatory required.

Insert drawing designation. Use these designations on Drawings to identify each wall-mounted, precast-GFRC lavatory.

10. Lavatories, Wall Mounted - Precast GFRC, Rectangular Countertop Deck with Single Integral Ramp Basin, Three Station **<Insert drawing designation>**:

Standard overall countertop size below complies with Uniform Plumbing Code, International Plumbing Code, and International Building Code requirements. Some countertop sizes refer to specific standard

products of TrueForm Concrete. Basins can be integral in any size countertop larger than the basin itself. Contact manufacturer for custom designs.

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) Trueform Concrete, LLC.
 - 2) <Insert manufacturer's name>.
- b. Fixture:
 - 1) Standards: CSA B45.8/IAPMO Z403 and ICC A117.1.
 - 2) Type: Straight front and side aprons with straight back.
 - 3) Overall Countertop Size: [72 by 21 by 5 inches (1829 by 533 by 127 mm)] [90 by 21 by 5 inches (2286 by 533 by 127 mm)] <Insert dimension>.
 - 4) Basin I.D.: [60 by 13 by 5 inches (1524 by 330 by 127 mm)] [72 by 13 by 5 inches (1829 by 330 by 127 mm)] [80 by 12 by 5 inches (2032 by 305 by 127 mm)] [84 by 12 by 5 inches (2134 by 305 by 127 mm)].
 - 5) Faucet-Hole Punching (per Station): [Zero holes] [One hole] [Three holes, 2-inch (51-mm) centers] [Three holes, 4-inch (102-mm) centers] <Insert hole pattern>.
 - 6) Faucet-Hole Location: [Top] [Wall mount].
 - 7) Drain Type: Slot drain.
 - 8) Color: [White linen] [Concrete] [Charcoal] [Limestone] [Graphite] [Pewter] [Dusk] [Taupe] <Insert color>.
 - 9) Mounting Material: Concrete wall brackets.
- c. Faucet: <Insert lavatory faucet designation from "Lavatory Faucets, Manually Operated" or "Lavatory Faucets, Automatically Operated" Paragraph>.
- d. Waste Fittings:
 - 1) Standard: ASME A112.18.2/CSA B125.2.
 - 2) Type: 1-1/2-inch (38-mm) slip joint connection.
 - 3) Finish: [Polished chrome] [Brushed nickel] [Oil-rubbed bronze].
- e. Support: Manufacturer's standard product.
- f. Lavatory Mounting Height: [Standard] [Juvenile] [Accessible in accordance with ICC A117.1].

Copy "Lavatories, Wall Mounted - Precast GFRC, Rectangular Countertop Deck with Single Integral Ramp Basin, Four Station" Subparagraph below and re-edit for each type of wall-mounted, precast-GFRC lavatory required.

Insert drawing designation. Use these designations on Drawings to identify each wall-mounted, precast-GFRC lavatory.

11. Lavatories, Wall Mounted - Precast GFRC, Rectangular Countertop Deck with Single Integral Ramp Basin, Four Station <Insert drawing designation>:

Standard overall countertop size below complies with Uniform Plumbing Code, International Plumbing Code, and International Building Code requirements. Some countertop sizes refer to specific standard products of TrueForm Concrete. Basins can be integral in any size countertop larger than the basin itself. Contact manufacturer for custom designs.

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) Trueform Concrete, LLC.
 - 2) <Insert manufacturer's name>.
- b. Fixture:
 - 1) Standards: CSA B45.8/IAPMO Z403 and ICC A117.1.
 - 2) Type: Straight front and side aprons with straight back.
 - 3) Overall Countertop Size: [106 by 21 by 5 inches (2692 by 533 by 127 mm)] [120 by 21 by 5 inches (3048 by 533 by 127 mm)] <Insert dimension>.
 - 4) Basin I.D.: [96 by 12 by 5 inches (2438 by 305 by 127 mm)] [110 by 12 by 5 inches (2794 by 305 by 127 mm)].
 - 5) Faucet-Hole Punching (per Station): [Zero holes] [One hole] [Three holes, 2-inch (51-mm) centers] [Three holes, 4-inch (102-mm) centers] <Insert hole pattern>.
 - 6) Faucet-Hole Location: [Top] [Wall mount].
 - 7) Drain Type: Slot drain.
 - 8) Color: [White linen] [Concrete] [Charcoal] [Limestone] [Graphite] [Pewter] [Dusk] [Taupe] <Insert color>.
 - 9) Mounting Material: Concrete wall brackets.
- c. Faucet: <Insert lavatory faucet designation from "Lavatory Faucets, Manually Operated" or "Lavatory Faucets, Automatically Operated" Paragraph>.
- d. Waste Fittings:
 - 1) Standard: ASME A112.18.2/CSA B125.2.
 - 2) Type: 1-1/2-inch (38-mm) slip joint connection.
 - 3) Finish: [Polished chrome] [Brushed nickel] [Oil-rubbed bronze].
- e. Support: Manufacturer's standard product.
- f. Lavatory Mounting Height: [Standard] [Juvenile] [Accessible in accordance with ICC A117.1].

- C. Lavatories, Freestanding:

Copy "Lavatories, Freestanding - Precast GFRC, Rectangular Countertop Deck with Integral Ramp Basin, Two Station" Subparagraph below and re-edit for each type of freestanding, precast-GFRC lavatory required.

Insert drawing designation. Use these designations on Drawings to identify each freestanding, precast-GFRC lavatory.

1. Lavatories, Freestanding - Precast GFRC, Rectangular Countertop Deck with Integral Ramp Basin, Two Station <Insert drawing designation>:

Standard overall countertop size below complies with Uniform Plumbing Code, International Plumbing Code, and International Building Code requirements. Some countertop sizes refer to specific standard products of TrueForm Concrete. Basins can be integral in any size countertop larger than the basin itself. Contact manufacturer for custom designs.

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) Trueform Concrete, LLC.
 - 2) <Insert manufacturer's name>.
- b. Fixture:
 - 1) Standards: CSA B45.8/IAPMO Z403 and ICC A117.1.
 - 2) Type: Straight front and side aprons with straight back.
 - 3) Overall Countertop size: [68 by 22 by 5 inches (1727 by 559 by 127 mm)] <Insert dimension>.
 - 4) Basin I.D.: [48 by 13 by 5 inches (1219 by 330 by 127 mm)] [50 by 12 by 5 inches (1270 by 305 by 127 mm)] [50 by 13 by 5 inches (1270 by 330 by 127 mm)] [60 by 13 by 5 inches (1524 by 330 by 127 mm)].
 - 5) Faucet-Hole Punching (per Station): [Zero holes] [One hole] [Three holes, 2-inch (51-mm) centers] [Three holes, 4-inch (102-mm) centers] <Insert hole pattern>.
 - 6) Faucet-Hole Location: [Top] [Wall mount].
 - 7) Drain Type: Slot drain.
 - 8) Color: [White linen] [Concrete] [Charcoal] [Limestone] [Graphite] [Pewter] [Dusk] [Taupe] <Insert color>.
 - 9) Mounting Material: Concrete sink steel base.
- c. Faucet: <Insert lavatory faucet designation from "Lavatory Faucets, Manually Operated" or "Lavatory Faucets, Automatically Operated" Paragraph>.
- d. Waste Fittings:
 - 1) Standard: ASME A112.18.2/CSA B125.2.
 - 2) Type: 1-1/2-inch (38-mm) slip joint connection.
 - 3) Finish: [Polished chrome] [Brushed nickel] [Oil-rubbed bronze].

- e. Support: Concrete sink steel base.
- f. Lavatory Height: Accessible in accordance with ICC A117.1.

Copy "Lavatories, Freestanding - Precast GFRC, Rectangular Countertop Deck with Integral Ramp Basin, Three Station" Subparagraph below and re-edit for each type of freestanding, precast-GFRC lavatory required.

Insert drawing designation. Use these designations on Drawings to identify each freestanding, precast-GFRC lavatory.

- 2. Lavatories, Freestanding - Precast GFRC, Rectangular Countertop Deck with Integral Ramp Basin, Three Station <Insert drawing designation>:

Standard overall countertop size below complies with Uniform Plumbing Code, International Plumbing Code, and International Building Code requirements. Some countertop sizes refer to specific standard products of TrueForm Concrete. Basins can be integral in any size countertop larger than the basin itself. Contact manufacturer for custom designs.

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) Trueform Concrete, LLC.
 - 2) <Insert manufacturer's name>.
- b. Fixture:
 - 1) Standards: CSA B45.8/IAPMO Z403 and ICC A117.1.
 - 2) Type: Straight front and side aprons with straight back.
 - 3) Overall Countertop Size: [72 by 22 by 5 inches (1829 by 559 by 127 mm)] [84 by 22 by 5 inches (2134 by 559 by 127 mm)] [98 by 22 by 5 inches (2489 by 559 by 127 mm)] <Insert dimension>.
 - 4) Basin I.D.: [60 by 13 by 5 inches (1524 by 330 by 127 mm)] [72 by 13 by 5 inches (1829 by 330 by 127 mm)] [80 by 12 by 5 inches (2032 by 305 by 127 mm)] [84 by 12 by 5 inches (2134 by 305 by 127 mm)].
 - 5) Faucet-Hole Punching (per Station): [Zero holes] [One hole] [Three holes, 2-inch (51-mm) centers] [Three holes, 4-inch (102-mm) centers] <Insert hole pattern>.
 - 6) Faucet-Hole Location: [Top] [Wall mount].
 - 7) Drain Type: Slot drain.
 - 8) Color: [White linen] [Concrete] [Charcoal] [Limestone] [Graphite] [Pewter] [Dusk] [Taupe] <Insert color>.
 - 9) Mounting Material: Concrete sink steel base.
- c. Faucet: <Insert lavatory faucet designation from "Lavatory Faucets, Manually Operated" or "Lavatory Faucets, Automatically Operated" Paragraph>.
- d. Waste Fittings:

- 1) Standard: ASME A112.18.2/CSA B125.2.
 - 2) Type: **1-1/2-inch (38-mm)** slip joint connection.
 - 3) Finish: [**Polished chrome**] [**Brushed nickel**] [**Oil-rubbed bronze**].
- e. Support: Manufacturer's concrete sink steel base.
 - f. Lavatory Height: Accessible in accordance with ICC A117.1.

Copy "Lavatories, Freestanding - Precast GFRC, Rectangular Countertop Deck with Integral Ramp Basin, Four Station" Subparagraph below and re-edit for each type of freestanding, precast-GFRC lavatory required.

Insert drawing designation. Use these designations on Drawings to identify each freestanding, precast-GFRC lavatory.

3. Lavatories, Freestanding - Precast GFRC, Rectangular Countertop Deck with Integral Ramp Basin, Four Station <Insert drawing designation>:

Standard overall countertop size below complies with Uniform Plumbing Code, International Plumbing Code, and International Building Code requirements. Some countertop sizes refer to specific standard products of TrueForm Concrete. Basins can be integral in any size countertop larger than the basin itself. Contact manufacturer for custom designs.

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) Trueform Concrete, LLC.
 - 2) <Insert manufacturer's name>.
- b. Fixture:
 - 1) Standards: CSA B45.8/IAPMO Z403 and ICC A117.1.
 - 2) Type: Straight front and side aprons with straight back.
 - 3) Overall Countertop Size: [**107 by 22 by 5 inches (2718 by 559 by 127 mm)**] [**128 by 22 by 5 inches (3251 by 559 by 127 mm)**] <Insert dimension>.
 - 4) Basin I.D.: [**96 by 12 by 5 inches (2438 by 305 by 127 mm)**] [**110 by 12 by 5 inches (2794 by 305 by 127 mm)**].
 - 5) Faucet-Hole Punching (per Station): [**Zero holes**] [**One hole**] [**Three holes, 2-inch (51-mm) centers**] [**Three holes, 4-inch (102-mm) centers**] <Insert hole pattern>.
 - 6) Faucet-Hole Location: [**Top**] [**Wall mount**].
 - 7) Drain Type: Slot drain.
 - 8) Color: [**White linen**] [**Concrete**] [**Charcoal**] [**Limestone**] [**Graphite**] [**Pewter**] [**Dusk**] [**Taupe**] <Insert color>.
 - 9) Mounting Material: Concrete sink steel base.
- c. Faucet: <Insert lavatory faucet designation from "Lavatory Faucets, Manually Operated" or "Lavatory Faucets, Automatically Operated" Paragraph>.

d. Waste Fittings:

- 1) Standard: ASME A112.18.2/CSA B125.2.
- 2) Type: **1-1/2-inch (38-mm)** slip joint connection.
- 3) Finish: [**Polished chrome**] [**Brushed nickel**] [**Oil-rubbed bronze**].

e. Support: Manufacturer's concrete sink steel base.

f. Lavatory Height: Accessible in accordance with ICC A117.1.

Caution: Lavatory systems are a completely integrated sink system that typically includes sensor-operated faucets, sensor-operated soap dispensers, and electric deck-mounted hand dryers. They are available in solid-surface materials and natural quartz and are customizable to fit the application. A solid-surface linear wash fountain is a similar product and may be required by the Project depending on the features required and the manufacturers' available products. See "Commercial Wash Fountains" Article for additional information.

D. Lavatory Systems:

Copy "Lavatory System - Single or Multiple Stations" Subparagraph below and re-edit for each type of single- or multiple-station lavatory system required.

Insert drawing designation. Use these designations on Drawings to identify each single- or multiple-station lavatory system.

1. Lavatory Systems - Single or Multiple Stations <Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

- 1) Acorn Engineering Company; a Division of Morris Group International.
- 2) Bradley Corporation.
- 3) D13 Group.
- 4) Sloan Valve Company.
- 5) Splash Lab (The).
- 6) Willoughby Industries, Inc.
- 7) <Insert manufacturer's name>.

b. Source Limitations: Obtain lavatory systems from single source from single manufacturer.

c. Standards:

- 1) ASME A112.18.1/CSA B125.1.
- 2) CSA B45.5/IAPMO Z124.
- 3) NSF 61.
- 4) NSF 372.
- 5) Uniform Plumbing Code, International Plumbing Code, and GREENGUARD Certified.

- d. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- e. Bowl(s) and Counter:
 - 1) Material: Solid-surface or natural quartz surface.
 - 2) Height to Rim: [**Standard**] [**Accessible in accordance with ICC A117.1**] <Insert height>.
 - 3) Color or Finish: [**Not applicable**] <Insert if required>.
 - 4) Access Panel: **16-1/8-inch (410-mm)** access panel.
 - 5) Number of Bowls or User Stations: [**One**] [**Two**] [**Three**] [**Four**] <Insert number>.
 - 6) Bowl Shape: [**Trough**] [**Oval**] [**Round**] [**Square**] [**Rectangular**] <Insert shape>.
 - 7) Drain: Grid with **NPS 1-1/2 (DN 40)** tailpiece, each bowl.
- f. Pedestal: [**Not required**] [**Required, with access panel**].
- g. Faucets:
 - 1) Type: Manufacturer's standard, chrome-plated solid brass, each bowl/station.

Verify option retained in "Control" Subparagraph below is available from listed manufacturers and for type of lavatory system required.

- 2) Control: [**Manual, push-button**] [**Hardwired, control-voltage, sensor-actuated**] [**Battery-powered, sensor-actuated**] <Insert type> actuation with [**pressure-balancing**] [**thermostatic**] mixing valve with check stops for each bowl or user station.
- h. Mixer Point-of-Use:
 - 1) Material: Solid bimetal (bronze, brass, stainless steel).
 - 2) Security: Hot limit stop set to a maximum of **109.4 deg F (43 deg C)**.
 - 3) Set: Screwdriver adjustment temperature dial with scale: Cold-hot.
 - 4) Operation: Electronic "no-touch" hardwired powered.
 - 5) Power: 120 V ac.
- i. High-Speed, Warm-Air Hand Dryer:

In "Dryer Mounting" Subparagraph below, retain last option for surface-mounted units that project from walls by a limited dimension and that comply with the Americans with Disabilities Act (ADA) and Architectural Barriers Act (ABA) Accessibility Guidelines. Recessed and semirecessed may also comply with the ADA-ABA.

- 1) Dryer Mounting: [**Surface mounted**][, **with low-profile design**].
- 2) Operation: Electronic-sensor activated with operation time of [**10 to 20**] <Insert number(s)> seconds.
- 3) Cover Material and Finish: [**Chrome-plated steel**] <Insert material and finish>.

- 4) Electrical Requirements: [115 V, 13 A, 1500 W] [115 V, 15 A, 1725 W] [115 V, 20 A, 2300 W] [208-240 V, 9-10 A, 1900-2300 W] <Insert electrical requirements>.

Verify first or second option, if retained in "Liquid-Soap Dispensers" Subparagraph below, is available from listed manufacturers and for type of wash fountain required. Typically, sensor-operated soap dispensers are battery powered; however, they require hardwiring if the nozzles are hardwired.

- j. Liquid-Soap Dispensers: [**Hardwired, sensor actuated**] [**Battery powered, sensor actuated**] [**Not required**], for each bowl or user station.
- k. Mounting: [**Manufacturer's wall-mounting bracket**] [**and/or**] [**commercial floor-mounted carrier**] <Insert type>.
- l. Supply Fittings:
- 1) Piping: **NPS 1/2 (DN 15)** copper tubing, each bowl.
 - 2) Valves: Shutoff valve on each supply.
 - 3) Supply Piping: From wall.
- m. Waste Fittings:
- 1) Standard: ASME A112.18.2/CSA B125.2.
 - 2) Trap and Drain Piping: **NPS 1-1/2 (DN 40)**, each bowl.

Copy "Lavatory Faucets, Manually Operated" Paragraph below and re-edit for each manually operated lavatory faucet required.

Insert drawing designation. Use these designations in lavatory description to identify required faucet for each manually operated lavatory faucet.

- E. Lavatory Faucets, Manually Operated <Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. American Standard.
 - b. CHG; Component Hardware Group, Inc.
 - c. Chicago Faucets; Geberit Group.
 - d. Delta Faucet Company.
 - e. Elkay.
 - f. Gerber Plumbing Fixtures LLC.
 - g. Just Manufacturing.
 - h. Kohler Co.
 - i. Krowne.
 - j. Moen Incorporated.
 - k. ProFlo; a Ferguson Enterprises, Inc. brand.
 - l. Speakman Company.
 - m. T&S Brass and Bronze Works, Inc.
 - n. Whitehall Manufacturing; a division of Morris Group International.

- o. Zurn Industries, LLC.
 - p. <Insert manufacturer's name>.
2. Standard: ASME A112.18.1/CSA B125.1.
 3. Operation Type: [Single control, mixing] [Single control, nonmixing] [Two handle, mixing], [Commercial] [General duty].
 4. General: Include hot- and cold-water indicators; coordinate faucet inlets with supplies and fixture hole punchings; coordinate outlet with spout and fixture receptor.

Retained option in "Body Type" Subparagraph below must match fixture hole punching.

5. Body Type: [Centerset] [Widespread] [Single hole] <Insert type>.
6. Body Material: Commercial, solid-brass, or die-cast housing with brazed copper and brass waterway.
7. Finish: [Polished chrome plate] <Insert finish>.

Retain "Maximum Flow Rate" or "Maximum Flow" Subparagraph below.

8. Maximum Flow Rate: [0.5 gpm (1.9 L/min.)] <Insert value>.
9. Maximum Flow: [0.25 gal. (0.95 L)] <Insert value> per metering cycle.
10. Mounting Type: [Deck, exposed] [Deck, concealed] [Back/wall, exposed] [Back/wall, concealed].
11. Valve Handle(s): [Single lever] [Knob] [Knob, nonmetallic] [Cross, three arm] [Cross, four arm] [Wrist blade, 4 inches (102 mm)] [Elbow, 6 inches (150 mm)] [Push button] <Insert type>.
12. Spout: [Rigid] [Swing] [Rigid, gooseneck] [Swivel, gooseneck] type.

Retain second option in "Spout Outlet" Subparagraph below when nonaerating, laminar stream is required.

13. Spout Outlet: [Aerator] [Laminar flow] [Spray] <Insert type>.
14. Operation: [Compression, manual] [Noncompression, manual].
15. Drain: [Not part of faucet] <Insert type>.

Copy "Lavatory Faucets, Automatically Operated" Paragraph below and re-edit for each type of automatically operated lavatory faucet required.

Insert drawing designation. Use these designations in lavatory description to identify each automatically operated lavatory faucet.

F. Lavatory Faucets, Automatically Operated <Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Advanced Modern Technologies Corporation - AMTC.
 - b. American Standard.
 - c. Bradley Corporation.
 - d. Chicago Faucets; Geberit Group.
 - e. Delta Faucet Company.
 - f. Elkay.

- g. Hydrotek International, Inc.
 - h. Just Manufacturing.
 - i. Kohler Co.
 - j. Krowne.
 - k. Moen Incorporated.
 - l. ProFlo; a Ferguson Enterprises, Inc. brand.
 - m. Sloan Valve Company.
 - n. Speakman Company.
 - o. Stern Engineering Ltd.
 - p. T&S Brass and Bronze Works, Inc.
 - q. TOTO USA, INC.
 - r. Whitehall Manufacturing; a division of Morris Group International.
 - s. Zurn Industries, LLC.
 - t. <**Insert manufacturer's name**>.
2. Standards: ASME A112.18.1/CSA B125.1 and UL 1951.
 3. Operation Type: [**Battery powered**] [**Hardwired**] electronic sensor operated, [**mixing**] [**nonmixing**].
 4. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
 5. General: Include hot- and cold-water indicators; coordinate faucet inlets with supplies and fixture hole punchings; coordinate outlet with spout and fixture receptor.

Retained option in "Body Type" Subparagraph below must match fixture hole punching.

6. Body Type: [**Single hole**] <**Insert type**>.
7. Body Material: Commercial, solid-brass, or die-cast housing with brazed copper and brass waterway.
8. Finish: [**Polished chrome plate**] <**Insert finish**>.
9. Maximum Flow Rate: [**0.5 gpm (1.9 L/min.)**] <**Insert value**>.
10. Mounting Type: [**Deck, concealed**] [**Back/wall, concealed**] <**Insert type**>.
11. Spout: [**Rigid**] [**Swing**] [**Rigid, gooseneck**] [**Swivel, gooseneck**] type.

Retain second option in "Spout Outlet" Subparagraph below when nonaerating, laminar stream is required.

12. Spout Outlet: [**Aerator**] [**Laminar flow**] [**Spray**] <**Insert type**>.
13. Drain: [**Not part of faucet**] <**Insert type**>.

G. Lavatory Supply Fittings:

1. NSF Standards: Comply with NSF 61 and NSF 372 for supply-fitting materials that will be in contact with potable water.
2. Standard: ASME A112.18.1/CSA B125.1.
3. Supply Piping: Chrome-plated-brass pipe or chrome-plated copper tube matching water-supply piping size. Include chrome-plated-brass or stainless steel wall flange.
4. Supply Stops: Chrome-plated-brass, one-quarter-turn, ball-type or compression valve with inlet connection matching supply piping.

Retain second option in "Operation" Subparagraph below for one-quarter-turn, ball-type stops.

5. Operation: [**Loose key**] [**Wheel handle**] <**Insert type**>.

- a. Risers Size: **[NPS 3/8 (DN 10)] [NPS 1/2 (DN 15)]**.
- b. Risers Material: **[Chrome-plated, rigid-copper-pipe and brass straight or offset tailpieces] [Chrome-plated, soft-copper flexible tube] [ASME A112.18.6/CSA B125.6, braided or corrugated stainless steel, flexible hose]**.

H. Lavatory Waste Fittings:

- 1. Standard: ASME A112.18.2/CSA B125.2.
- 2. Drain: Grid type with **NPS 1-1/4 (DN 32)** offset and straight tailpiece.
- 3. Trap:
 - a. Size: **[NPS 1-1/2 by NPS 1-1/4 (DN 40 by DN 32)] [NPS 1-1/4 (DN 32)]**.
 - b. Material:

Retain one of two subparagraphs below.

- 1) Chrome-plated, **[two-piece, cast-brass trap and swivel elbow with 0.032-inch- (0.83-mm-) thick brass tube to wall] [two-piece, cast-brass trap and ground-joint swivel elbow with 0.032-inch- (0.83-mm-) thick brass tube to wall] [one-piece, cast-brass trap with swivel 0.029-inch- (0.73-mm-) thick tubular brass wall bend] <Insert trap type>**; and chrome-plated, brass or steel wall flange.
- 2) Stainless steel, two-piece trap and swivel elbow with **0.012-inch (0.30-mm-)** thick stainless steel tube to wall, and stainless steel wall flange.

2.3 COMMERCIAL SHOWERS

Do not use same shower designation as is used for another shower in Section 224100 "Residential Plumbing Fixtures," Section 224300 "Healthcare Plumbing Fixtures," Section 224500 "Emergency Plumbing Fixtures," and Section 224600 "Security Plumbing Fixtures."

A. Showers, Individual:

Copy "Showers, Individual - Cast Polymer" Subparagraph below and re-edit for each type of cast-polymer shower required.

Insert drawing designation. Use these designations on Drawings to identify each individual cast-polymer shower.

- 1. Showers, Individual - Cast Polymer **<Insert drawing designation>**:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) International Marble Industries.
 - 2) Mincey Marble.

- 3) MPL Co.
 - 4) WingIts.
 - 5) **<Insert manufacturer's name>**.
- b. Source Limitations: Obtain cast-polymer showers from single manufacturer.
- c. Description: Molded and pre-cut cast-polymer (cultured marble) shower surround panels and accessories consisting of various choices of panel styles, textures, colors, and configurations, assembled in place in accordance with approved Shop Drawings.
- d. Fire Hazard Classification:

Retain one of first two subparagraphs below.

- 1) Standard, non-Class A.
 - 2) Class A, tested to ASTM E84[; **with ASTM E84 compliance certified by an NRTL**].
- e. Accessories Material: Cast polymer, except where stainless steel is indicated in "Accessories" Subparagraph.

In "Accessories" Subparagraph below, not all manufacturers offer each type of accessory. Some accessory options are only offered by a single manufacturer. Consult manufacturers.

- f. Accessories:
- 1) Ledge.
 - 2) Panel trim strips.
 - 3) Seam cover.
 - 4) Soap dish[- **wall mount with drainage ridges**].
 - 5) Corner soap dish[- **smooth**] [- **drainage ridges**] [- **stainless steel grid**] [- **stainless steel slotted plate**].
 - 6) Shampoo shelf.
 - 7) Accessory shelf.
 - 8) Footrest[- **chrome, wall mount**] [- **chrome, corner mount**] [- **black, corner mount**].
 - 9) Threshold.
 - 10) Door jamb.
 - 11) Niche.
 - 12) Nook.
 - 13) Window sill.

Delete "Shower Basin" Subparagraph below if shower basin is specified separately.

- g. Shower Basin:
- 1) Coordinating cast-polymer (cultured marble) shower basin.
 - 2) Standard: CSA B45.5/IAPMO Z124.
 - 3) Type: [**Standard**] [**Accessible in accordance with ICC A117.1**].
 - 4) Nominal Size and Shape: See Drawings.
 - 5) Color: [**White**] **<Insert color>**.

- a) Outlet: Drain with [**NPS 2 (DN 50)**] <Insert pipe size> outlet[; lip drain outside shower in accordance with ADA-ABA].

Do not retain option in first subparagraph below if shower basin is specified separately.

- h. See Drawings for specific panels[, **shower basin,**] and accessory configurations.

Copy "Showers, Individual - FRP, One Piece without Top" Subparagraph below and re-edit for each type of individual FRP shower required.

Insert drawing designation. Use these designations on Drawings to identify each individual FRP shower.

2. Showers, Individual - FRP, One Piece without Top <Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
- 1) Florestone Products Co., Inc.
 - 2) <Insert manufacturer's name>.
- b. Source Limitations: Obtain FRP showers without top from single source from single manufacturer.
- c. Description: FRP shower enclosure with valve and receptor[**and appurtenances**].
- d. Standard: CSA B45.5/IAPMO Z124.
- e. Style: [**Standard**] [**Accessible in accordance with ICC A117**].
- f. Shower Head and Shower Valve: <Insert shower head and shower valve designation from "Shower Valve Assemblies" Paragraph>.
- g. Shower Nominal Size and Shape: [**30 by 30 inches (762 by 762 mm) square**] [**32 by 32 inches (813 by 813 mm) square**] [**34 by 34 inches (865 by 865 mm) square**] [**36 by 36 inches (914 by 914 mm) square**] [**48 by 36 inches (1219 by 914 mm) rectangular**] [**60 by 36 inches (1524 by 914 mm) rectangular**] [**36 inches (914 mm) neo-corner (two walls)**] [**36 inches (914 mm) neo-corner (four walls)**] [**38 inches (965 mm) neo-corner (two walls)**] [**38 inches (965 mm) neo-corner (four walls)**] [**42 inches (1067 mm) neo-corner (two walls)**] [**42 inches (1067 mm) neo-corner (four walls)**] <Insert dimensions>.
- h. Color: [**White**] <Insert color>.
- i. Outlet: Drain with [**NPS 2 (DN 50)**] <Insert pipe size> outlet.

"Shower Rod and Curtain" and "Grab Bar" subparagraphs below are useful appurtenances.

- j. Shower Rod and Curtain: [**Not required**] [**Required**].
- k. Grab Bar: [**ASTM F446, mounted on support area back wall**] [**Not required**].

Copy "Showers, Individual - FRP, Sectional without Top" Subparagraph below and re-edit for each type of individual FRP shower required.

Insert drawing designation. Use these designations on Drawings to identify each individual FRP shower.

3. Showers, Individual - FRP, Sectional without Top <Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) E. L. Mustee & Sons, Inc.
 - 2) Florestone Products Co., Inc.
 - 3) <Insert manufacturer's name>.
- b. Source Limitations: Obtain FRP showers without top from single source from single manufacturer.
- c. Description: FRP shower enclosure with valve and receptor[**and appurtenances**].
- d. Standard: CSA B45.5/IAPMO Z124.
- e. Style: [Standard] [Accessible in accordance with ICC A117.1].
- f. Shower Head and Shower Valve: <Insert shower head and shower valve designation from "Shower Valve Assemblies" Paragraph>.
- g. Shower Nominal Size and Shape: [30 by 30 inches (762 by 762 mm) square] [32 by 32 inches (813 by 813 mm) square] [34 by 34 inches (865 by 865 mm) square] [36 by 36 inches (915 by 915 mm) square] [48 by 36 inches (1219 by 914 mm) rectangular] [60 by 36 inches (1524 by 915 mm) rectangular] [36 inches (915 mm) neo-corner (two walls)] [36 inches (914 mm) neo-corner (four walls)] [38 inches (965 mm) neo-corner (two walls)] [38 inches (965 mm) neo-corner (four walls)] [42 inches (1067 mm) neo-corner (two walls)] [42 inches (1067 mm) neo-corner (four walls)] <Insert dimensions>.
- h. Color: [White] <Insert color>.
- i. Outlet: Drain with [NPS 2 (DN 50)] <Insert pipe size> outlet.

"Shower Rod and Curtain" and "Grab Bar" subparagraphs below are useful appurtenances.

- j. Shower Rod and Curtain: [Not required] [Required].
- k. Grab Bar: [ASTM F446, mounted on support area back wall] [Not required].

Copy "Showers, Individual - PMMA" Subparagraph below and re-edit for each type of individual PMMA shower required.

Insert drawing designation. Use these designations on Drawings to identify each individual PMMA shower.

4. Showers, Individual - PMMA <Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) Aqua Bath Company, Inc.
 - 2) Aquarius Bathware; a Praxis Company.
 - 3) Clarion Bathware.

- 4) <Insert manufacturer's name>.
- b. Source Limitations: Obtain PMMA showers from single source from single manufacturer.
 - c. Description: PMMA shower enclosure with valve and receptor[**and appurtenances**].
 - d. Type: [**One-piece**] [**Sectional**].
 - e. Standard: CSA B45.5/IAPMO Z124.
 - f. Style: [**Standard**] [**Accessible in accordance with ICC A117.1**].
 - g. Shower Head and Shower Valve: <Insert shower head and shower valve designation from "Shower Valve Assemblies" Paragraph>.

Confirm availability of size and shape from selected manufacturer(s).

- h. Shower Nominal Size and Shape: [**30 by 30 inches (762 by 762 mm) square**] [**32 by 32 inches (813 by 813 mm) square**] [**34 by 34 inches (865 by 865 mm) square**] [**36 by 36 inches (914 by 914 mm) square**] [**48 by 36 inches (1219 by 914 mm) rectangular**] [**60 by 36 inches (1524 by 914 mm) rectangular**] [**36 inches (914 mm) neo-corner (two walls)**] [**36 inches (914 mm) neo-corner (four walls)**] [**38 inches (965 mm) neo-corner (two walls)**] [**38 inches (965 mm) neo-corner (four walls)**] [**42 inches (1067 mm) neo-corner (two walls)**] [**42 inches (1067 mm) neo-corner (four walls)**] <Insert dimensions>..
- i. Color: [**White**] <Insert color>.
- j. Outlet: Drain with [**NPS 2 (DN 50)**] <Insert pipe size> outlet.

"Shower Rod and Curtain" and "Grab Bar" subparagraphs below are useful appurtenances.

- k. Shower Rod and Curtain: [**Not required**] [**Required**].
- l. Grab Bar: [**ASTM F446, mounted on support area back wall**] [**Not required**].

Copy "Showers, Individual - Cabinet" Subparagraph below and re-edit for each type of individual-cabinet shower required.

Insert drawing designation. Use these designations on Drawings to identify each individual-cabinet shower.

5. Showers, Individual - Cabinet <Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) Comfort Designs Bathware.
 - 2) E. L. Mustee & Sons, Inc.
 - 3) Stern-Williams Products, LLC.
 - 4) Willoughby Industries, Inc.
 - 5) <Insert manufacturer's name>.
- b. Source Limitations: Obtain cabinet showers from single source from single manufacturer.

- c. Description: Factory-fabricated[, **accessible**] cabinet shower, with valve and receptor.
- d. Nominal Size: [**30 by 30 inches (762 by 762 mm)**] [**32 by 32 inches (813 by 813 mm)**] [**36 by 36 inches (914 by 914 mm)**] [**36 by 39 inches (914 by 990 mm)**] [**45 by 39 inches (1145 by 990 mm)**] <Insert dimensions>.
- e. Material: [**Steel**] [**Stainless steel**] [**Composite**] [**Plastic**].
- f. Access: [**Front**] [**Corner**] [**Front and rear**] access.
- g. Color: [**Not applicable**] <Insert color>.
- h. Accessibility Options: Grab bar and bench.

Coordinate "Shower Head and Shower Valve" Subparagraph below with "Shower Valve Assemblies" Paragraph.

- i. Shower Head and Shower Valve: [**Manufacturer's standard fitting assembly**] <Insert shower head and shower valve designation from "Shower Valve Assemblies" Paragraph>.
- j. Supplies: **NPS 1/2 (DN 15)** copper tubing[**with ball or gate valves**].
- k. Drain: Grid, **NPS 2 (DN 50)**.

B. Shower Valve Assemblies:

Copy "Shower Valve Assemblies - Single-Handle, Pressure-Balanced Mixing Valve with Head" Subparagraph below and re-edit for each type of single-handle, shower valve assembly required.

Insert drawing designation. Use these designations on Drawings to identify each single-handle, shower valve assembly.

- 1. Shower Valve Assemblies - Single-Handle, Pressure-Balanced Mixing Valve with Head <Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) American Standard.
 - 2) Chicago Faucets; Geberit Group.
 - 3) Kohler Co.
 - 4) Moen Incorporated.
 - 5) POWERS; A Watts Water Technologies Company.
 - 6) ProFlo; a Ferguson Enterprises, Inc. brand.
 - 7) Speakman Company.
 - 8) Symmons Industries, Inc.
 - 9) Zurn Industries, LLC.
 - 10) <Insert manufacturer's name>.
- b. Source Limitations: Obtain shower heads and shower valves from single source from single manufacturer.
- c. Description: Single-handle, [**accessible**], pressure-balance mixing valve with hot- and cold-water indicators; [**diverting valve**] check stops; and [**hose with**

handheld shower head] [hose with handheld shower head on sliding rod]
shower head.

d. Shower Valve:

1) Standards:

- a) ASME A112.18.1/CSA B125.1.
- b) ASSE 1016/ASME A112.1016/CSA B125.16.

2) Body Material: Solid brass.

3) Finish: [**Polished chrome plate**] <Insert finish>.

4) Mounting: [**Concealed**] [**Exposed**].

5) Operation: Single-handle, [**push-pull**] [**or**] [**twist or rotate**] [**or**] [**metering**] control.

6) Antiscald Device: [**Integral with mixing valve**] [**Separate unit**] [**Not required**].

7) Check Stops: Check-valve type, integral with or attached to body; on hot- and cold-water supply connections.

e. Supply Connections: **NPS 1/2 (DN 15)**.

f. Shower Head:

1) Standard: ASME A112.18.1/CSA B125.1.

2) Type: [**Ball joint with arm and flange**] [**Without ball joint, but with arm and flange**] [**Ball joint and head integral with mounting flange**] [**Integral with mounting flange**] <Insert type>.

Retain "EPA WaterSense" Subparagraph below if required for Project. WaterSense labeling is required for LEED v4, IgCC/ASHRAE 189.1, and CALGreen.

3) EPA WaterSense: Required.

Shower head flows in usage-based calculations are limited to 2.5 gpm (9.5 L/min.) per shower stall for LEED v4 and 2.0 gpm (7.6 L/min.) for IgCC/ASHRAE 189.1. Shower head flows for Green Globes prescriptive compliance are limited to 2.0 gpm (7.6 L/min.). Shower head flows for CALGreen are limited to 1.8 gpm (6.8 L/min.).

4) Shower Head Maximum Flow Rate: [**1.5 gpm (5.7 L/min.)**] [**1.75 gpm (6.6 L/min.)**] [**2.0 gpm (7.6 L/min.)**] [**2.5 gpm (9.5 L/min.)**].

5) Shower Head Material: Metallic with chrome-plated finish.

6) Spray Pattern: [**Adjustable**] [**Fixed**].

7) Integral Volume Control: [**Not required**] [**Required**].

Verify availability of feature in "Temperature Indicator" Subparagraph below if required.

8) Temperature Indicator: [**Integral with shower valve**] [**Not required**].

Copy "Shower Valve Assemblies - Single-Handle, Thermostatic Mixing Valve with Head" Subparagraph below and re-edit for each type of single-handle, shower valve assembly required.

Insert drawing designation. Use these designations on Drawings to identify each single-handle, shower valve assembly.

2. Shower Valve Assemblies - Single-Handle, Thermostatic Mixing Valve with Head
<Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) Lawler Manufacturing Company, Inc.
 - 2) POWERS; A Watts Water Technologies Company.
 - 3) <Insert manufacturer's name>.
- b. Source Limitations: Obtain shower heads and shower valves from single source from single manufacturer.
- c. Description: Single-handle, [**accessible**,]thermostatic mixing valve with hot- and cold-water indicators; [**diverting valve**] check stops; and [**hose with handheld shower head**] [**hose with handheld shower head on sliding rod**] shower head.
- d. Shower Valve:
 - 1) Standards:
 - a) ASME A112.18.1/CSA B125.1.
 - b) ASSE 1016/ASME A112.1016/CSA B125.16.
 - 2) Body Material: Solid brass.
 - 3) Finish: [**Polished chrome plate**] <Insert finish>.
 - 4) Mounting: [**Concealed**] [**Exposed**].
 - 5) Operation: Single-handle, [**push-pull**] [**or**] [**twist or rotate**] control.
 - 6) Antiscald Device: [**Integral with mixing valve**] [**Separate unit**] [**Not required**].
 - 7) Check Stops: Check-valve type, integral with or attached to body; on hot- and cold-water supply connections.
- e. Supply Connections: **NPS 1/2 (DN 15)**.
- f. Shower Head:
 - 1) Standard: ASME A112.18.1/CSA B125.1.
 - 2) Type: [**Ball joint with arm and flange**] [**Without ball joint, but with arm and flange**] [**Ball joint and head integral with mounting flange**] [**Integral with mounting flange**] <Insert type>.

Retain "EPA WaterSense" Subparagraph below if required for Project. WaterSense labeling is required for LEED v4, IgCC/ASHRAE 189.1, and CALGreen.

- 3) EPA WaterSense: Required.

Shower head flows in usage-based calculations are limited to 2.5 gpm (9.5 L/min.) per shower stall for LEED v4 and 2.0 gpm (7.6 L/min.) for IgCC/ASHRAE 189.1. Shower head flows for Green Globes prescriptive compliance are limited to 2.0 gpm (7.6 L/min.). Shower head flows for CALGreen are limited to 1.8 gpm (6.8 L/min.).

- 4) Shower Head Maximum Flow Rate: [**1.5 gpm (5.7 L/min.)**] [**1.75 gpm (6.6 L/min.)**] [**2.0 gpm (7.6 L/min.)**] [**2.5 gpm (9.5 L/min.)**].
- 5) Shower Head Material: Metallic with chrome-plated finish.
- 6) Spray Pattern: [**Adjustable**] [**Fixed**].
- 7) Integral Volume Control: [**Not required**] [**Required**].

Verify availability of feature in "Temperature Indicator" Subparagraph below if required.

- 8) Temperature Indicator: [**Integral with valve**] [**Not required**].

Copy "Shower Valve Assemblies - Single-Handle, Thermostatic/Pressure-Balancing Mixing Valve with Head" Subparagraph below and re-edit for each type of single-handle, shower valve assembly required.

Insert drawing designation. Use these designations on Drawings to identify each single-handle, shower valve assembly.

3. Shower Valve Assemblies - Single-Handle, Thermostatic/Pressure-Balancing Mixing Valve with Head <**Insert drawing designation**>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) Chicago Faucets; Geberit Group.
 - 2) Lawler Manufacturing Company, Inc.
 - 3) POWERS; A Watts Water Technologies Company.
 - 4) <**Insert manufacturer's name**>.
- b. Source Limitations: Obtain shower heads and shower valves from single source from single manufacturer.
- c. Description: Single-handle, [**accessible**], thermostatic/pressure-balancing mixing valve with hot- and cold-water indicators; [**diverting valve**] check stops; and [**hose with handheld shower head**] [**hose with handheld shower head on sliding rod**] shower head.
- d. Shower Valve:
 - 1) Standards:
 - a) ASME A112.18.1/CSA B125.1.
 - b) ASSE 1016/ASME A112.1016/CSA B125.16.
 - 2) Body Material: Solid brass.
 - 3) Finish: [**Polished chrome plate**] <**Insert finish**>.
 - 4) Mounting: [**Concealed**] [**Exposed**].
 - 5) Operation: Single-handle, [**push-pull**] [**or**] [**twist or rotate**] control.
 - 6) Antiscald Device: [**Integral with mixing valve**] [**Separate unit**] [**Not required**].
 - 7) Check Stops: Check-valve type, integral with or attached to body; on hot- and cold-water supply connections.

- e. Supply Connections: **NPS 1/2 (DN 15)**.
- f. Shower Head:
 - 1) Standard: ASME A112.18.1/CSA B125.1.
 - 2) Type: [**Ball joint with arm and flange**] [**Without ball joint, but with arm and flange**] [**Ball joint and head integral with mounting flange**] [**Integral with mounting flange**] <Insert type>.

Retain "EPA WaterSense" Subparagraph below if required for Project. WaterSense labeling is required for LEED v4, IgCC/ASHRAE 189.1, and CALGreen.

- 3) EPA WaterSense: Required.

Shower head flows in usage-based calculations are limited to 2.5 gpm (9.5 L/min.) per shower stall for LEED v4 and 2.0 gpm (7.6 L/min.) for IgCC/ASHRAE 189.1. Shower head flows for Green Globes prescriptive compliance are limited to 2.0 gpm (7.6 L/min.). Shower head flows for CALGreen are limited to 1.8 gpm (6.8 L/min.).

- 4) Shower Head Maximum Flow Rate: [**1.5 gpm (5.7 L/min.)**] [**1.75 gpm (6.6 L/min.)**] [**2.0 gpm (7.6 L/min.)**] [**2.5 gpm (9.5 L/min.)**].
- 5) Shower Head Material: Metallic with chrome-plated finish.
- 6) Spray Pattern: [**Adjustable**] [**Fixed**].
- 7) Integral Volume Control: [**Not required**] [**Required**].

Verify availability of feature in "Temperature Indicator" Subparagraph below if required.

- 8) Temperature Indicator: [**Integral with valve**] [**Not required**].

C. Shower Basins:

Copy "Shower Basins - Cast Polymer" Subparagraph below and re-edit for each type of cast-polymer shower basin required.

Insert drawing designation. Use these designations on Drawings to identify each cast-polymer shower basin.

- 1. Shower Basins - Cast Polymer <Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) International Marble Industries.
 - 2) Mincey Marble.
 - 3) MPL Co.
 - 4) WingIts.
 - 5) <Insert manufacturer's name>.
- b. Source Limitations: Obtain shower basins from single source from single manufacturer.
- c. Description: Cast-polymer base for built-up-type shower fixture.
- d. Standard: CSA B45.5/IAPMO Z124.

- e. Type: [Standard] [Accessible in accordance with ICC A117.1].
- f. Nominal Size and Shape: [30 by 30 inches (762 by 762 mm) square] [32 by 32 inches (813 by 813 mm) square] [34 by 34 inches (865 by 865 mm) square] [36 by 36 inches (914 by 914 mm) square] [42 by 34 to 36 inches (1067 by 865 to 914 mm) rectangular] [48 by 34 to 36 inches (1219 by 865 to 914 mm) rectangular] [36 inches (914 mm) neo-corner] [42 inches (1067 mm) neo-corner] <Insert dimensions>.
- g. Color: [White] <Insert color>.
- h. Outlet: Drain with [NPS 2 (DN 50)] <Insert pipe size> outlet[; lip drain outside shower in accordance with ADA-ABA].

Copy "Shower Basins - FRP" Subparagraph below and re-edit for each type of FRP shower basin required.

Insert drawing designation. Use these designations on Drawings to identify each FRP shower basin.

2. Shower Basins - FRP <Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) E. L. Mustee & Sons, Inc.
 - 2) Sterling; a Kohler Company.
 - 3) <Insert manufacturer's name>.
- b. Source Limitations: Obtain shower basins from single source from single manufacturer.
- c. Description: FRP base for built-up-type shower fixture.
- d. Standard: CSA B45.5/IAPMO Z124.
- e. Type: [Standard] [Accessible in accordance with ICC A117.1].
- f. Nominal Size and Shape: [30 by 30 inches (762 by 762 mm) square] [32 by 32 inches (813 by 813 mm) square] [34 by 34 inches (865 by 865 mm) square] [36 by 36 inches (914 by 914 mm) square] [42 by 34 to 36 inches (1067 by 864 to 914 mm) rectangular] [48 by 34 to 36 inches (1219 by 864 to 914 mm) rectangular] [36 inches (914 mm) neo-corner] [42 inches (1067 mm) neo-corner] <Insert dimensions>.
- g. Color: [White] <Insert color>.
- h. Outlet: Drain with [NPS 2 (DN 50)] <Insert pipe size> outlet[; lip drain outside shower in accordance with ADA-ABA].

Copy "Shower Basins - PMMA" Subparagraph below and re-edit for each type of PMMA shower basin required.

Insert drawing designation. Use these designations on Drawings to identify each PMMA shower basin.

3. Shower Basins - PMMA <Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) Florestone Products Co., Inc.
 - 2) Jason International, Inc.
 - 3) MAAX.
 - 4) Royal Baths Manufacturing Co.
 - 5) Sterling; a Kohler Company.
 - 6) Swan Surfaces LLC (Swanstone).
 - 7) <Insert manufacturer's name>.
- b. Source Limitations: Obtain shower basins from single source from single manufacturer.
- c. Description: PMMA base for built-up-type shower fixture.
- d. Standard: CSA B45.5/IAPMO Z124.
- e. Type: [Standard] [Accessible in accordance with ICC A117.1].
- f. Nominal Size and Shape: [30 by 30 inches (762 by 762 mm) square] [32 by 32 inches (813 by 813 mm) square] [36 by 36 inches (914 by 914 mm) square] [42 by 34 to 36 inches (1067 by 865 to 914 mm) rectangular] [48 by 34 to 36 inches (1219 by 865 to 914 mm) rectangular] [36 inches (914 mm) neo-corner] [42 inches (1067 mm) neo-corner] <Insert dimensions>.
- g. Color: [White] <Insert color>.
- h. Outlet: Drain with [NPS 2 (DN 50)] <Insert pipe size> outlet[; lip drain outside shower in accordance with ADA-ABA].

Copy "Shower Basins - Molded Stone" Subparagraph below and re-edit for each type of molded-stone shower basin required.

Insert drawing designation. Use these designations on Drawings to identify each molded-stone shower basin.

4. Shower Basins - Molded Stone <Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) American Bath Factory.
 - 2) Fiat Products.
 - 3) International Marble Industries.
 - 4) <Insert manufacturer's name>.
- b. Source Limitations: Obtain shower basins from single source from single manufacturer.
- c. Description: Molded-stone base for built-up-type shower fixture.
- d. Standard: CSA B45.8/IAPMO Z403.

- e. Type: **[Standard]** **[Accessible in accordance with ICC A117.1]**.
- f. Nominal Size and Shape: **[30 by 30 inches (762 by 762 mm) square]** **[32 by 32 inches (813 by 813 mm) square]** **[36 by 36 inches (914 by 914 mm) square]** **[42 by 34 to 36 inches (1067 by 865 to 914 mm) rectangular]** **[48 by 34 to 36 inches (1219 by 864 to 915 mm) rectangular]** **[36 inches (914 mm) neo-corner]** **[42 inches (1067 mm) neo-corner]** **<Insert dimensions>**.
- g. Color: **[White]** **<Insert color>**.
- h. Outlet: Drain with **[NPS 2 (DN 50)]** **<Insert pipe size>** outlet[; lip drain outside shower in accordance with ADA-ABA].

Copy "Shower Basins - Precast Terrazzo" Subparagraph below and re-edit for each type of precast-terrazzo shower basin required.

Insert drawing designation. Use these designations on Drawings to identify each precast-terrazzo shower basin.

5. Shower Basins - Precast Terrazzo **<Insert drawing designation>**:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) Fiat Products.
 - 2) Florestone Products Co., Inc.
 - 3) Stern-Williams Products, LLC.
 - 4) **<Insert manufacturer's name>**.
- b. Source Limitations: Obtain shower basins from single source from single manufacturer.
- c. Description: Precast-terrazzo base for built-up-type shower fixture.
- d. Standard: CSA B45.8/IAPMO Z403.
- e. Type: **[Standard]** **[Accessible in accordance with ICC A117.1]**.
- f. Nominal Size and Shape: **[30 by 30 inches (762 by 762 mm) square]** **[32 by 32 inches (813 by 813 mm) square]** **[36 by 36 inches (914 by 914 mm) square]** **[42 by 34 to 36 inches (1067 by 865 to 914 mm) rectangular]** **[48 by 34 to 36 inches (1219 by 865 to 914 mm) rectangular]** **[36 inches (914 mm) neo-corner]** **[42 inches (1067 mm) neo-corner]** **<Insert dimensions>**.
- g. Color: **[White]** **<Insert color>**.
- h. Outlet: Drain with **[NPS 2 (DN 50)]** **<Insert pipe size>** outlet[; lip drain outside shower in accordance with ADA-ABA].

Copy "Shower Basins - Solid Surface" Subparagraph below and re-edit for each type of solid-surface shower basin required.

Insert drawing designation. Use these designations on Drawings to identify each solid-surface shower basin.

6. Shower Basins - Solid Surface <Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) American Standard.
 - 2) Comfort Designs Bathware.
 - 3) inpro Corporation.
 - 4) International Marble Industries.
 - 5) Swan Surfaces LLC (Swanstone).
 - 6) Tower Industries, Inc.
 - 7) Willoughby Industries, Inc.
 - 8) <Insert manufacturer's name>.
- b. Source Limitations: Obtain shower basins from single source from single manufacturer.
- c. Description: Solid-surface base for built-up-type shower fixture.
- d. Standard: CSA B45.5/IAPMO Z124.
- e. Type: [Standard] [Accessible in accordance with ICC A117.1].
- f. Nominal Size and Shape: [30 by 30 inches (762 by 762 mm) square] [32 by 32 inches (813 by 813 mm) square] [36 by 36 inches (914 by 914 mm) square] [42 by 34 to 36 inches (1067 by 865 to 914 mm) rectangular] [48 by 34 to 36 inches (1219 by 865 to 914 mm) rectangular] [36 inches (914 mm) neo-corner] [42 inches (1067 mm) neo-corner] <Insert dimensions>.
- g. Color: [White] <Insert color>.
- h. Outlet: Drain with [NPS 2 (DN 50)] <Insert pipe size> outlet[; lip drain outside shower in accordance with ADA-ABA].

D. Showers, Group:

Copy "Showers, Group - Column" Subparagraph below and re-edit for each type of group-column shower required.

Insert drawing designation. Use these designations on Drawings to identify each group-column shower.

1. Showers, Group - Column <Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) Acorn Engineering Company; a Division of Morris Group International.
 - 2) Bradley Corporation.
 - 3) Willoughby Industries, Inc.
 - 4) <Insert manufacturer's name>.

- b. Source Limitations: Obtain showers from single source from single manufacturer.

Caution: These fixtures require a trap with waste and vent connections for installation in the base and must have vertical vent piping through the top of unit, or they may be installed with trap and vent under the floor below the fixture.

- c. Description: Stainless steel, column shower fixture with individual nozzles.
 d. Standards:
- 1) ASME A112.18.1/CSA B125.1.
 - 2) ASSE 1016/ASME A112.1016/CSA B125.16.
- e. Metal Nominal Thickness: [0.050 inch (1.3 mm) minimum] [0.063 inch (1.6 mm)].
 f. Number of Shower Nozzles: [Two] [Three] [Four] [Five] [Six].
 g. Height to Nozzles: [66 inches (1675 mm)] [72 inches (1829 mm)] [78 inches (1981 mm)] <Insert dimension>.
 h. Control:

Retain one of first two subparagraphs below. Many option combinations exist besides those below.

- 1) [Thermostatic] [Pressure-balance] mixing valve with hot and cold-water operation.
- 2) Thermostatic mixing valve with individual, tempered-water supply and push-button operation.

Shower head flows in usage-based calculations are limited to 2.5 gpm (9.5 L/min.) per shower stall for LEED v4 and 2.0 gpm (7.6 L/min.) for IgCC/ASHRAE 189.1. Shower head flows for Green Globes prescriptive compliance are limited to 2.0 gpm (7.6 L/min.). Shower head flows for CALGreen are limited to 1.8 gpm (6.8 L/min.).

- i. Shower-Arm, Flow-Control Fitting: [Not required] [1.5 gpm (5.7 L/min.)] [2.0 gpm (7.6 L/min.)] [2.5 gpm (9.5 L/min.)] for each shower head.

Retain "EPA WaterSense" Subparagraph below if required for Project. WaterSense labeling is required for LEED v4, IgCC/ASHRAE 189.1, and CALGreen.

- j. EPA WaterSense: Required.
- k. Liquid Soap Dispenser: [Not required] [Required] for each shower head.
- l. Soap Dish: [Not required] [Required] for each shower head.
- m. Mounting: Floor flange.
- n. Supplies: [NPS 3/4 (DN 20)] [NPS 1 (DN 25)] copper tubing with shutoff valve from [bottom] [top].
- o. Shroud: [Not required] [Stainless steel of size to cover supplies and vent piping].
- p. Drain Fitting: [NPS 3 (DN 80)] [NPS 4 (DN 100)] outlet with NPS 2 (DN 50) vent, integral with base of column.

Copy "Showers, Group - Wall Mounted" Subparagraph below and re-edit for each type of group wall-mounted shower required.

Insert drawing designation. Use these designations on Drawings to identify each group wall-mounted shower.

2. Showers, Group - Wall Mounted <Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following: Bradley Corporation.
 - 1) Willoughby Industries, Inc.
 - 2) Zurn Industries, LLC.
 - 3) <Insert manufacturer's name>.
- b. Source Limitations: Obtain showers from single source from single manufacturer.
- c. Description: Stainless steel, wall-mounted, surface-enclosure shower fixture with individual nozzles.
- d. Standards:
 - 1) ASME A112.18.1/CSA B125.1.
 - 2) ASSE 1016/ASME A112.1016/CSA B125.16.
- e. Metal Nominal Thickness: [0.050 inch (1.3 mm) minimum] [0.063 inch (1.6 mm)].
- f. Number of Shower Nozzles: [Two] [Three].
- g. Height to Nozzles: [66 inches (1675 mm)] [72 inches (1830 mm)] <Insert dimension>.
- h. Control:

Retain one of first two subparagraphs below. Many option combinations exist besides those below.

- 1) [Thermostatic] [Pressure-balance] valve with individual hot- and cold-water mixing-valve operation.
- 2) Thermostatic valve with individual, tempered-water supply and push-button operation.

Shower head flows in usage-based calculations are limited to 2.5 gpm (9.5 L/min.) per shower stall for LEED v4 and 2.0 gpm (7.6 L/min.) for IgCC/ASHRAE 189.1. Shower head flows for Green Globes prescriptive compliance limited to 2.0 gpm (7.6 L/min.). Shower head flows for CALGreen are limited to 1.8 gpm (6.8 L/min.).

- i. Flow-Control Fitting: [Not required] [1.5 gpm (5.7 L/min.)] [2.0 gpm (7.6 L/min.)] [2.5 gpm (9.5 L/min.)] for each shower head.

Retain "EPA WaterSense" Subparagraph below if required for Project. WaterSense labeling required for LEED v4, IgCC/ASHRAE 189.1, and CALGreen.

- j. EPA WaterSense: Required.
- k. Liquid Soap Dispenser: [Not required] [Required] for each shower head.
- l. Soap Dish: [Not required] [Required] for each shower head.
- m. Mounting: Wall bracket.

- n. Supplies: NPS 3/4 (DN 20) copper tubing with valves.

E. Showers, Outdoor:

Copy "Showers, Outdoor - Plastic" Subparagraph below and re-edit for each type of outdoor plastic shower required.

Insert drawing designation. Use these designations on Drawings to identify each outdoor plastic shower.

1. Showers, Outdoor - Plastic <Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) ShowerTower Inc.
 - 2) <Insert manufacturer's name>.
- b. Source Limitations: Obtain showers from single source from single manufacturer.
- c. Description: Freestanding, plastic group-shower fixture.

Number retained in "Number of Shower Stations" Subparagraph below must be limited to a combined total of six.

- d. Number of Shower Stations: [One] [Two] [Three] [Four] <Insert number up to six> with individual, self-closing control valve(s).
- e. Nozzles: With adjustable spray pattern; fixed, on column.
- f. Control: Push button and timer.
- g. Maximum Flow: 2.5 gpm (9.5 L/min.) for each shower head.
- h. Number of Foot-Wash Stations: [One] [Two] <Insert number> with individual, self-closing control valve(s).
- i. Hose Bibb: [Not] [One] required.
- j. Control-Valve Mounting Height: [50 inches (1270 mm)] [48 inches (1219 mm)].
- k. Material: Cast-filled-polymer plastic.
- l. Color: [Gray] <Insert color>.
- m. Internal Piping: Factory installed.
- n. Mounting: Base flange with bolt holes.

Copy "Showers, Outdoor - Steel" Subparagraph below and re-edit for each type of outdoor steel shower required.

Insert drawing designation. Use these designations on Drawings to identify each outdoor steel shower.

2. Showers, Outdoor - Steel <Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

- 1) Bradley Corporation.
 - 2) Most Dependable Fountains, Inc.
 - 3) <Insert manufacturer's name>.
- b. Source Limitations: Obtain showers from single source from single manufacturer.
 - c. Description: Freestanding, steel, group-shower fixture.
 - d. Number of Shower Stations: [**Four or more**] <Insert value> with individual, self-closing control valve(s).
 - e. Nozzles: Fixed, on column.
 - f. Control: Push button and timer.
 - g. Maximum Flow: **2.5 gpm (9.5 L/min.)** for each shower head.

Shower head flows in usage-based calculations are limited to 2.5 gpm (9.5 L/min.) per shower stall for LEED v4 and 2.0 gpm (7.6 L/min.) for IgCC/ASHRAE 189.1. Shower head flows for Green Globes prescriptive compliance limited to 2.0 gpm (7.6 L/min.). Shower head flows for CALGreen are limited to 1.8 gpm (6.8 L/min.).

- h. Flow-Control Fitting: [**Not required**] [**1.5 gpm (5.7 L/min.)**] [**2.0 gpm (7.6 L/min.)**] [**2.5 gpm (9.5 L/min.)**] for each shower head.

Retain "EPA WaterSense" Subparagraph below if required for Project. WaterSense labeling required for LEED v4, IgCC/ASHRAE 189.1, and CALGreen.

- i. EPA WaterSense: Required.
- j. Number of Foot-Wash Stations: [**Not required**] [**One**] [**Two**] with individual, self-closing control valve(s).
- k. Material: [**Powder-coated steel**] [**Stainless steel**].
- l. Color: [**Blue**] <Insert color>.
- m. Internal Piping: Factory installed.
- n. Mounting: Base flange with bolt holes.

F. Grout:

1. Standard: ASTM C1107/C1107M, Grade B, post-hardening and volume-adjusting, dry, hydraulic-cement grout.
2. Characteristics: Nonshrink; recommended for interior and exterior applications.
3. Design Mix: **5000 psi (34.5 MPa)**, 28-day compressive strength.
4. Packaging: Premixed and factory packaged.

2.4 COMMERCIAL SINKS

A. Service Sinks, Floor Mounted:

Caution: Service sinks in "Service Sinks, Floor Mounted - Terrazzo" Subparagraph below require a drainage piping trap under the fixture. Trap is not part of the fixture fittings.

Copy "Service Sinks, Floor Mounted - Terrazzo" Subparagraph and re-edit for each type of terrazzo, floor-mounted service sink required.

Insert drawing designation. Use these designations on Drawings to identify each terrazzo, floor-mounted service sink.

1. Service Sinks, Floor Mounted - Terrazzo <Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) Acorn Engineering Company; a Division of Morris Group International.
 - 2) Fiat Products.
 - 3) Florestone Products Co., Inc.
 - 4) Stern-Williams Products, LLC.
 - 5) <Insert manufacturer's name>.
- b. Source Limitations: Obtain sinks from single source from single manufacturer.
- c. Fixture:
 - 1) Material: Marble chips cast in portland cement to produce a compressive strength of not less than 3000 psi (20.7 MPa), seven days after casting.
 - 2) Shape: [Square] [Rectangular] [Five sided] [Radial front] <Insert shape>.
 - 3) Nominal Size: [24 by 24 inches (610 by 610 mm)] [30 by 30 inches (762 by 762 mm)] [24 by 36 inches (610 by 914 mm)] [32 by 32 inches (813 by 813 mm)] [36 by 36 inches (914 by 914 mm)] <Insert dimensions>.
 - 4) Height: [6 inches (150 mm)] [10 inches (254 mm)] [12 inches (305 mm)] [12 inches (305 mm) with dropped front] <Insert dimensions>.

In "Tiling Flange" Subparagraph below, verify availability if required and indicate side(s) if sink is rectangular.

- 5) Tiling Flange: [Not required] [On one side] [On two sides] [On three sides].

Indicate front dimension on rectangular sink if rim guard is to be only on one side.

- 6) Rim Guard: On [front] [all] top surfaces.
 - 7) Color: [Not applicable] <Insert color>.
 - 8) Drain: Grid with [NPS 2 (DN 50)] [NPS 3 (DN 80)] outlet.
- d. Mounting: On floor and flush to wall.
 - e. Faucet: <Insert service sink faucet designation from "Sink Faucets, Manually Operated" Paragraph>.

Caution: Service sinks in "Service Sinks, Floor Mounted - Plastic" Subparagraph below require a drainage piping trap under the fixture. Trap is not part of the fixture fittings.

Copy "Service Sinks, Floor Mounted - Plastic" Subparagraph and re-edit for each type of plastic, floor-mounted service sink required.

Insert drawing designation. Use these designations on Drawings to identify each plastic, floor-mounted service sink.

2. Service Sinks, Floor Mounted - Plastic <Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) ProFlo; a Ferguson Enterprises, Inc. brand.
 - 2) Zurn Industries, LLC.
 - 3) <Insert manufacturer's name>.
- b. Source Limitations: Obtain sinks from single source from single manufacturer.
- c. Fixture:
 - 1) Standard: CSA B45.5/IAPMO Z124.
 - 2) Material: [Molded polymer] <Insert material>.
 - 3) Nominal Size: [24 by 36 by 10 inches (610 by 914 mm by 255 mm)] [36 by 36 by 10 inches (914 by 914 by 255 mm)] <Insert dimensions>.

Indicate front dimension on rectangular sink if rim guard is to be only on one side.

- 4) Rim Guard: On [front] [all] top surfaces.
 - 5) Color: [Not applicable] <Insert color>.
 - 6) Drain: Grid with [NPS 2 (DN 50)] [NPS 3 (DN 80)] outlet.
- d. Mounting: On floor and flush to wall.
 - e. Faucet: <Insert service sink faucet designation from "Sink Faucets, Manually Operated" Paragraph>.

Caution: Service sinks in "Service Sinks, Floor Mounted - Molded Stone" Subparagraph below require a drainage piping trap under the fixture. Trap is not part of the fixture fittings.

Copy "Service Sinks, Floor Mounted - Molded Stone" Subparagraph and re-edit for each type of molded-stone, floor-mounted service sink required.

Insert drawing designation. Use these designations on Drawings to identify each molded-stone, floor-mounted service sink.

3. Service Sinks, Floor Mounted - Molded Stone <Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) Fiat Products.
 - 2) Florestone Products Co., Inc.
 - 3) <Insert manufacturer's name>.
- b. Source Limitations: Obtain sinks from single source from single manufacturer.
- c. Fixture:

- 1) Standard: ASME A112.18.2/CSA B125.2.
- 2) Shape: [Square] [Rectangular] <Insert shape>.
- 3) Nominal Size: [24 by 24 inches (610 by 610 mm)] [24 by 36 inches (610 by 914 mm)] <Insert dimensions>.
- 4) Height: [10 inches (255 mm)] <Insert dimensions>.

Indicate front dimension on rectangular sink if rim guard is to be only on one side.

- 5) Rim Guard: On [front] [all] top surfaces.
 - 6) Color: [Not applicable] <Insert color>.
 - 7) Drain: Grid with [NPS 2 (DN 50)] [NPS 3 (DN 80)] outlet.
- d. Mounting: On floor and flush to wall.
- e. Faucet: <Insert service sink faucet designation from "Sink Faucets, Manually Operated" Paragraph>.

Caution: Service sinks in "Service Sinks, Floor Mounted - Enameled Cast Iron" Subparagraph below require a drainage piping trap under the fixture. Trap is not part of the fixture fittings.

Copy "Service Sinks, Floor Mounted - Enameled Cast Iron" Subparagraph and re-edit for each type of enameled cast-iron, floor-mounted service sink required.

Insert drawing designation. Use these designations on Drawings to identify each enameled cast-iron, floor-mounted service sink.

4. Service Sinks, Floor Mounted - Enameled Cast Iron <Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) Commercial Enameling Company.
 - 2) Zurn Industries, LLC.
 - 3) <Insert manufacturer's name>.
- b. Source Limitations: Obtain sinks from single source from single manufacturer.
- c. Fixture:
 - 1) Standard: ASME A112.19.1/CSA B45.2.
 - 2) Style: With front apron and raised back.
 - 3) Nominal Size: 28 by 28 inches (710 by 710 mm).
 - 4) Color: White.
 - 5) Drain: Grid with [NPS 2 (DN 50)] [NPS 3 (DN 80)] outlet.
 - 6) Rim Guard: Coated wire.
- d. Faucet: <Insert service sink faucet designation from "Sink Faucets, Manually Operated" Subparagraph>.

- B. Service Sinks, Trap Standard Mounted:

Copy "Service Sinks, Trap Standard Mounted - Enameled Cast Iron" Subparagraph below and re-edit for each type of enameled cast-iron, trap-standard-mounted service sink required.

Insert drawing designation. Use these designations on Drawings to identify each enameled cast-iron, trap-standard-mounted service sink.

1. Service Sinks, Trap Standard Mounted - Enameled Cast Iron **<Insert drawing designation>**:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) American Standard.
 - 2) Commercial Enameling Company.
 - 3) Kohler Co.
 - 4) Zurn Industries, LLC.
 - 5) **<Insert manufacturer's name>**.
- b. Source Limitations: Obtain sinks from single source from single manufacturer.
- c. Fixture:
 - 1) Standard: ASME A112.19.1/CSA B45.2.
 - 2) Type: Service sink with back.
 - 3) Back: **[Two faucet holes] [Plain]**.
 - 4) Nominal Size: **[22 by 18 inches (559 by 457 mm)] [24 by 20 inches (610 by 508 mm)]**.
 - 5) Color: White.
 - 6) Mounting: **[NPS 2 (DN 50)] [NPS 3 (DN 80)]** P-trap standard with grid strainer inlet, cleanout, and floor flange.
 - 7) Rim Guard: On front and sides.
- d. Faucet: **<Insert service sink faucet designation from "Sink Faucets, Manually Operated" Paragraph>**.

Coordinate "Support" Subparagraph below with "Fixture Carriers - Sink" Paragraph in "Fixture Carriers" Article.

- e. Support: **[Sink carrier] <Insert carrier>**.

C. Kitchen/Utility Sinks:

Caution: Sinks in this article are unsuitable for food preparation or for use as scullery sinks.

Copy "Kitchen/Utility Sinks" Paragraph below and re-edit for each type of stainless steel, counter-mounted or undermounted utility sink required.

Insert number to complete drawing designation. Use these designations on Drawings to identify each utility sink.

1. Utility Sinks <Insert drawing designation>: Stainless steel, counter mounted, self-rimming, single bowl; kitchen, classroom.

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

- a. Basis-of-Design Product: Subject to compliance with requirements, provide Acorn Engineering; Morris Group International, Base Model [CD-2220] [CD-2517] [CD-3120] [CDADA-2220] [CDADA-2517] [CDADA-3120] [CDADALB-2220] [CDADARB-2220] [CDLB-2220] [CDRB-2220] [SDB-1515] [SD-1518] [SD-1716] [SD-1722] [SD-1918] [SD-2019] [SD-2220] [SD-2522] [SD-3322] [SDADA-1518] [SDADA-1716] [SDADA-1722] [SDADA-1918] [SDADA-2019] [SDADA-2220] [SDADA-2522] [SDADA-3322] <Insert product name or designation> or comparable product by one of the following:
 - 1) Advance Tabco.
 - 2) Elkay Manufacturing Co.
 - 3) Just Manufacturing.
 - 4) <Insert manufacturer's name>.
- b. Fixture:
 - 1) Standard: ASME A112.19.3/CSA B45.4
 - 2) Third Party Certification: Product shall be certified by IAPMO for compliance with:
 - a) ASME A112.19.3/CSA B45.4
 - b) UPC Uniform Plumbing Code
 - c) IPC International Plumbing Code
 - d) NPC National Plumbing Code of Canada

Retain one of the ledge styles listed in Sub-paragraph below to indicate sink type and application to correspond with model selected and countertop detail on Drawings: Utility sinks (Basis-of-Design manufacturers SD and SDADA series) retain ledge [Back]. Classroom sinks (Basis-of-Design manufacturers CD and CDADA series) retain side ledges [left and right], and CDADA series which retain one of each [back faucet and left bubbler], [back faucet and right bubbler].

- 3) Type: Stainless steel, self-rimming, sound-deadened unit with ledge [**back**] [**left and right**] [**back faucet and left bubbler**] [**back faucet and right bubbler**].
- 4) Number of Compartments: One.
- 5) Overall Dimensions: <Insert dimensions>.
- 6) Metal Thickness: 0.050 inch (1.3 mm).
- 7) Metal Finish: No. 4 Satin.
- 8) Compartment:
 - a) Dimensions: <Insert dimensions>.

For "Drain" Subparagraph below retain 3-1/2 inch (90 mm) with the exception of Basis-of-Design manufacturer SDB-1515 bar sink which receives a 2 inch (51 mm) opening.

- 9) Drain opening: [3-1/2 inch (90 mm)] [2 inch (51 mm)].

Coordinate “Bowl depth” and “Drain location” Subparagraphs below when needed for ADA compliance. Basis-of-design Manufacturers sinks with 4-1/2 inch, 5-1/2 inch. 6-1/2 inch sink depth are designed to conform with ADA requirements.

- 10) Bowl depth:
- a) Standard: [**8 inch (203 mm)**] [**10 inch (254 mm)**]
 - b) ADA Compliant: [**4-1/2 inch (114 mm)**] [**5-1/2 inch (140 mm)**] [**6-1/2 inch (165 mm)**]
- 11) Drain location: [**Centered in compartment**] [**Near back of compartment for ADA clearance**].

Coordinate “Faucet drilling” with designation from “Faucet” Article. Basis-of-Design manufacture faucet requires “Single hole centered”.

- 12) Faucet drilling: [**Single hole centered**] [**Two holes 4-inch (102 mm) centers, 4 inch centerset**] [**Three holes 4 inch (102 mm) centers, 8 inch centerset**].

Retain “Auxiliary drilling” Subparagraph below for supplemental devices such as dishwasher air gap or hot-water dispenser etc. Verify sink ledge width accommodates designated drilling.

- 13) Auxiliary drilling: Locate [**one**] [**two**] additional drilled openings 4 inches (102 mm) to [**left**] [**right**] [**left and right**] of faucet drilling.

Retain "Faucet" subparagraph below when faucet is furnished by basis-of-design manufacturer; Retain “Drilling” subparagraph “single hole centered”. For faucets from other manufacturers insert sink-faucet designation from “Sink Faucets” Article and coordinate “drilling” to suit specified faucet.

a. Faucet:

- 1) Standard:
- a) ASME A112.18.1/CSA B125.1
 - b) NSF/ANSI/CAN 61
 - c) NSF/ANSI 372
 - d) AB1953/S152/HB372
 - e) ICC/ANSI A117.1
- 2) Control: Single lever handle, ceramic cartridge, pull out style with dual control for aerator or jet spray, swiveling base.
- 3) Finish: Brushed nickel.
- 4) Flow rate: 1.8 GPM (3.78 l/min)
- 5) Number Required: One.
- 6) Mounting: On ledge [**back**] [**left**] [**right**].
- 7) Deck plate cover: Brushed nickel.
- 8) Supply: NPS 3/8 (DN 10).

d. Drinking Bubbler:

- 1) Standard:
 - a) ASME A112.18.1/CSA B125.1
 - b) NSF/ANSI/CAN 61
 - c) NSF/ANSI 372
 - d) AB1953/S152/HB372
 - e) ICC/ANSI A117.1
- 2) Control: ADA compliant pushbutton with adjustable metering and replaceable seat.
- 3) Finish: Chrome.
- 4) Number Required: One.
- 5) Drilling: Slotted anti-rotational [**left**] [**right**] opening.
- 6) Supply inlet: NPS 1/2 (DN 15) Male Threaded.

e. Supply Fittings:

- 1) Standard: ASME A112.18.1/CSA B125.1.
- 2) Supplies: Chrome-plated brass compression stop with inlet connection matching water-supply piping type and size.
 - a) Operation: [Loose key] [Wheel handle] <Insert type>.

Risers: NPS 1/2 (DN 15), [chrome-plated, rigid-copper pipe] [chrome-plated, soft-copper flexible tube] [ASME A112.18.6/CSA B125.6, braided or corrugated stainless steel flexible hose].

f. Waste Fittings:

- 1) Standard: ASME A112.18.2/CSA B125.2.
- 2) Trap(s):
 - a) Size: [**NPS 1-1/2 (DN 40)**] [**NPS 2 (DN 50)**].
 - b) Material: Chrome-plated, [two-piece, cast-brass trap and swivel elbow with **0.032-inch- (0.83-mm-)** thick brass tube to wall] [two-piece, cast-brass trap and ground-joint swivel elbow with **0.032-inch- (0.83-mm-)** thick brass tube to wall] <Insert trap type>; and chrome-plated brass or steel wall flange.
 - c) Material: Stainless steel, two-piece trap and swivel elbow with 0.012-inch- (0.30-mm-) thick stainless-steel tube to wall; and stainless steel wall flange.
- 3) Strainer: [3-1/2 inch (89 mm) basket strainer] [2 inch (51 mm) basket strainer] <Insert strainer designation>.
- 4) Disposer: <Insert disposer designation from “Disposers” Article>.
- 5) Hot-water dispenser: <Insert hot-water dispenser designation from “Hot-water dispenser” Article>.

g. Mounting: On counter with sealant.

h. Installation: Per manufacturers recommended method using undermount “U” channel and spring clip assemblies provided.

Insert number to complete drawing designation. Use these designations on Drawings to identify each utility sink.

2. Utility Sinks <Insert drawing designation>: Stainless steel, counter mounted, self-rimming, double bowl; kitchen, classroom.

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

- a. Basis-of-Design Product: Subject to compliance with requirements, provide Acorn Engineering; Morris Group International, Acorn-Sinks Model [CDDLB-3717] [CDDR-3717] [CDDALB-3717] [CDDARB-3717] [DD-3320] [DD-3322] [DDADA-3320] [DDADA-3322] <Insert product name or designation> or comparable product by one of the following:
 - 1) Advance Tabco.
 - 2) Elkay Manufacturing Co.
 - 3) Just Manufacturing.
 - 4) <Insert manufacturer's name>.
- b. Fixture:
 - 1) Standard: ASME A112.19.3/CSA B45.4.
 - 2) Third Party Certification: Product shall be certified by IAPMO for compliance with:
 - a) ASME A112.19.3/CSA B45.4
 - b) UPC Uniform Plumbing Code
 - c) IPC International Plumbing Code
 - d) NPC National Plumbing Code of Canada
 - 3) Type: Stainless steel, self-rimming, sound-deadened unit with ledge [back] [back faucet and right bubbler] [back faucet and left bubbler] .
 - 4) Number of Compartments: [Two] [Left sink bowl and right bubbler basin] [Right sink bowl and left bubbler basin].
 - 5) Overall Dimensions: <Insert dimensions>.
 - 6) Metal Thickness: 0.050 inch (1.3 mm).
 - 7) Metal Finish: No. 4 Satin.
 - 8) Compartment:
 - a) Dimensions: <Insert dimensions>.
 - b) Drain: 3-1/2 inch (311) opening
 - 9) Bowl depth:
 - a) Standard: [8 inch (203 mm)] [10 inch (254 mm)].
 - b) ADA Compliant: [5-1/2 inch (140 mm)] [6-1/2 inch (165 mm)]
 - c) Double bowl classroom: 3-1/2 inch bubbler basin, [5-1/2 inch (140 mm)] [6-1/2 inch (165 mm)] sink basin.

- 10) Drain Location: [**Centered in compartment**] [**Near back of compartment for ADA clearance**]
- 11) Faucet drilling: [**Single hole centered**] [**Two holes 4 inch (102 mm) centers, 4 inch centerset**] [**Three holes 4 inch (102 mm) centers, 8 inch centerset**].

Retain "Auxiliary drilling" Subparagraph below for supplemental devices such as dishwasher air gap or hot-water dispenser. Verify sink ledge width accommodates designated drilling.

- 12) Auxiliary drilling: Locate [**one**] [**two**] additional drilled openings 4 inches (102 mm) to [**left**] [**right**] [**left and right**] of faucet drilling.

c. **Faucet:**

- 1) Standard:
 - a) ASME A112.18.1/CSA B125.1
 - b) NSF/ANSI/CAN 61
 - c) NSF/ANSI 372
 - d) AB1953/S152/HB372
 - e) ICC/ANSI A117.1
- 2) Control: Single lever handle, ceramic cartridge, pull out style with dual control for aerator or jet spray, swiveling base.
- 3) Finish: Brushed nickel.
- 4) Flow rate: 1.8 GPM (3.78 l/min)
- 5) Number Required: One.
- 6) Mounting: On ledge [**back**] [**left**] [**right**].
- 7) Drilling: [**Single hole centered**] [**Two holes 4 inch (102 mm) centers**] [**Three holes 4 inch (102 mm) centers**] <Insert drilling>.

Retain "Deck plate cover" Subparagraph below for Basis-of-design manufacturers faucet as required to cover pre-existing sink drilling or aesthetics.

- 8) Deck plate cover: Brushed nickel.
- 9) Supply: NPS 3/8 (DN 10).

For Basis-of-Design manufacture CDD-3717 series classroom sink: Retain "Drinking bubbler" subparagraph below when drinking bubbler is to be furnished by Basis-of-Design manufacturer.

d. **Drinking Bubbler:**

- 1) Standard:
 - a) ASME A112.18.1/CSA B125.1
 - b) NSF/ANSI/CAN 61
 - c) NSF/ANSI 372
 - d) AB1953/S152/HB372
 - e) ICC/ANSI A117.1
- 2) Control: ADA compliant pushbutton with adjustable metering and replaceable seat.
- 3) Finish: Chrome.

- 4) Number Required: One.
- 5) Drilling: Slotted anti-rotational left opening.
- 6) Supply inlet: NPS 1/2 (DN 15) Male Threaded.

e. Supply Fittings:

- 1) Standard: ASME A112.18.1/CSA B125.1.
- 2) Supplies: Chrome-plated brass compression stop with inlet connection matching water-supply piping type and size.
 - a) Operation: [Loose key] [Wheel handle] <Insert type>.
 - b) Risers: NPS 1/2 (DN 15), [chrome-plated, rigid-copper pipe] [chrome-plated, soft-copper flexible tube] [ASME A112.18.6/CSA B125.6, braided or corrugated stainless steel flexible hose].

f. Waste Fittings:

- 1) Standard: ASME A112.18.2/CSA B125.2.
- 2) Trap(s):
 - a) Size: [NPS 1-1/2 (DN 40)] [NPS 2 (DN 50)].

Retain one of two "Material" subparagraphs below. First subparagraph is for NPS 1-1/2 or NPS 2 (DN 40 or DN 50) traps.

- b) Material: Chrome-plated, [two-piece, cast-brass trap and swivel elbow with **0.032-inch- (0.83-mm-)** thick brass tube to wall] [two-piece, cast-brass trap and ground-joint swivel elbow with **0.032-inch- (0.83-mm-)** thick brass tube to wall] <Insert trap type>; and chrome-plated brass or steel wall flange.

Retain "Material" Subparagraph below only for NPS 1-1/2 (DN 40) traps.

- c) Material: Stainless steel, two-piece trap and swivel elbow with 0.012-inch- (0.30-mm-) thick stainless steel tube to wall; and stainless steel wall flange.

If retaining "Continuous Waste" Subparagraph below, show arrangement on Drawings.

- 3) Continuous Waste:
 - a) Size: [NPS 1-1/2 (DN 40)] [NPS 2 (DN 50)].
 - b) Material: Chrome-plated, 0.032-inch- (0.83-mm-) thick brass tube.
- 4) Strainer: [3-1/2 inch (89 mm) basket strainer] <Insert strainer designation>.

Retain "Disposer" Subparagraph for applications that include waste disposer.

- 5) Disposer: <Insert disposer designation from "Disposers" Article>.

Retain "Hot-Water Dispenser" Subparagraph for applications that include hot-water dispenser.

- 6) Hot-water dispenser: <Insert hot-water dispenser designation from "Hot-water dispenser" Article>.

- g. Mounting: On counter with sealant.
- h. Installation: Per manufacturers recommended method using undermount "U" channel and spring clip assemblies provided.

Insert number to complete drawing designation. Use these designations on Drawings to identify each utility sink.

- 3. Utility Sinks **<Insert drawing designation>**: Stainless steel, undermount, single bowl.

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

- a. Basis-of-Design Product: Subject to compliance with requirements, provide Acorn Engineering; Morris Group International, Acorn-Sinks Model [SU-1416] [SU-1916] [SU-2116] [SU-2416] [SU-2816] [SUADA-1416] [SUADA-1916] [SUADA-2116] [SUADA-2816] **<Insert product name or designation>** or comparable product by one of the following:
 - 1) Advance Tabco.
 - 2) Elkay Manufacturing Co.
 - 3) Just Manufacturing.
 - 4) **<Insert manufacturer's name>**.
- b. Fixture:
 - 1) Standard: ASME A112.19.3/CSA B45.4.
 - 2) Type: Stainless steel, self-rimming, sound-deadened unit with ledge back.
 - 3) Number of Compartments: One.
 - 4) Overall Dimensions: **<Insert dimensions>**.
 - 5) Metal Thickness: 0.050 inch (1.3 mm).
 - 6) Metal Finish: No. 4 Satin.
 - 7) Compartment:
 - a) Dimensions: **<Insert dimensions>**.
 - b) Drain: 3-1/2 inch opening
- c. Faucet:
 - 1) Standard:
 - a) ASME A112.18.1/CSA B125.1
 - b) NSF/ANSI/CAN 61
 - c) NSF/ANSI 372
 - d) AB1953/S152/HB372
 - e) ICC/ANSI A117.1
 - 2) Control: Single lever handle, ceramic cartridge, pull out style with dual control for aerator or jet spray, swiveling base.
 - 3) Finish: Brushed nickel.
 - 4) Flow rate: 1.8 GPM (3.78 l/min)

- 5) Number Required: One.
- 6) Mounting: On countertop.

Retain "Deck plate cover" Subparagraph below for Basis-of-Design manufacturers faucet as required.

- 7) Deck plate cover: Brushed nickel.
- 8) Supply: NPS 3/8 (DN 10).

d. Supply Fittings:

- 1) Standard: ASME A112.18.1/CSA B125.1.
- 2) Supplies: Chrome-plated brass compression stop with inlet connection matching water-supply piping type and size.
 - a) Operation: [Loose key] [Wheel handle] <Insert type>.
 - b) Risers: NPS 1/2 (DN 15), [chrome-plated, rigid-copper pipe] [chrome-plated, soft-copper flexible tube] [ASME A112.18.6/CSA B125.6, braided or corrugated stainless steel flexible hose].

e. Waste Fittings:

- 1) Standard: ASME A112.18.2/CSA B125.2.
- 2) Trap(s):
 - a) Size: [NPS 1-1/2 (DN 40)] [NPS 2 (DN 50)].

Retain one of two "Material" subparagraphs below. First subparagraph is for NPS 1-1/2 or NPS 2 (DN 40 or DN 50) traps.

- b) Material: Chrome-plated, [two-piece, cast-brass trap and swivel elbow with **0.032-inch- (0.83-mm-)** thick brass tube to wall] [two-piece, cast-brass trap and ground-joint swivel elbow with **0.032-inch- (0.83-mm-)** thick brass tube to wall] <Insert trap type>; and chrome-plated brass or steel wall flange.

Retain "Material" Subparagraph below only for NPS 1-1/2 (DN 40) traps.

- c) Material: Stainless steel, two-piece trap and swivel elbow with 0.012-inch- (0.30-mm-) thick stainless steel tube to wall; and stainless steel wall flange.
- 3) Strainer: [3-1/2 inch (89 mm) basket strainer] <Insert strainer designation>.

Retain "Disposer" Subparagraph for applications that include waste disposer.

- 4) Disposer: <Insert disposer designation from "Disposers" Article>.

Retain "Hot-Water Dispenser" Subparagraph for applications that include hot-water dispenser.

- 5) Hot-water dispenser: <Insert hot-water dispenser designation from "Hot-water dispenser" Article>.
- f. Mounting: Under counter with sealant. Provide counter with [no reveal edge] [1/2 inch (13 mm) reveal edge].
- g. Installation: Steel mounting brackets.

Insert number to complete drawing designation. Use these designations on Drawings to identify each utility sink.

4. Utility Sinks <Insert drawing designation>: Stainless steel, undermount, double bowl.
- a. Basis-of-Design Product: Subject to compliance with requirements, provide Acorn Engineering; Morris Group International, Acorn-Sinks Model [DU-3118] [DUADA-3118-55] <Insert product name or designation> or comparable product by one of the following:
- 1) Advance Tabco.
 - 2) Elkay Manufacturing Co.
 - 3) Just Manufacturing.
 - 4) <Insert manufacturer's name>.
- b. Fixture:
- 1) Standard: ASME A112.19.3/CSA B45.4.
 - 2) Type: Stainless steel, self-rimming, sound-deadened unit with ledge back.
 - 3) Number of Compartments: One.
 - 4) Overall Dimensions: <Insert dimensions>.
 - 5) Metal Thickness: 0.050 inch (1.3 mm).
 - 6) Metal Finish: No. 4 Satin.
 - 7) Compartment:
 - a) Dimensions: <Insert dimensions>.
 - b) Drain: 3-1/2 inch opening.
- c. Faucet:
- 1) Standard:
 - a) ASME A112.18.1/CSA B125.1
 - b) NSF/ANSI/CAN 61
 - c) NSF/ANSI 372
 - d) AB1953/S152/HB372
 - e) ICC/ANSI A117.1
 - 2) Control: Single lever handle, ceramic cartridge, pull out style with dual control for aerator or jet spray, swiveling base.
 - 3) Finish: Brushed nickel.
 - 4) Flow rate: 1.8 GPM (3.78 l/min)
 - 5) Number Required: One.
 - 6) Mounting: On countertop.
 - 7) Deck plate cover: Brushed nickel.
 - 8) Supply: NPS 3/8 (DN 10).
- d. Supply Fittings:
- 1) Standard: ASME A112.18.1/CSA B125.1.
 - 2) Supplies: Chrome-plated brass compression stop with inlet connection matching water-supply piping type and size.

- a) Operation: [Loose key] [Wheel handle] <Insert type>.
 - b) Risers: NPS 1/2 (DN 15), [chrome-plated, rigid-copper pipe] [chrome-plated, soft-copper flexible tube] [ASME A112.18.6/CSA B125.6, braided or corrugated stainless steel flexible hose].
- e. Waste Fittings:
- 1) Standard: ASME A112.18.2/CSA B125.2.
 - 2) Trap(s):
 - a) Size: [NPS 1-1/2 (DN 40)] [NPS 2 (DN 50)].
 - b) Material: Chrome-plated, [two-piece, cast-brass trap and swivel elbow with **0.032-inch- (0.83-mm-)** thick brass tube to wall] [two-piece, cast-brass trap and ground-joint swivel elbow with **0.032-inch- (0.83-mm-)** thick brass tube to wall] <Insert trap type>; and chrome-plated brass or steel wall flange.
 - c) Material: Stainless steel, two-piece trap and swivel elbow with 0.012-inch- (0.30-mm-) thick stainless steel tube to wall; and stainless steel wall flange.
 - 3) Continuous Waste:
 - a) Size: [NPS 1-1/2 (DN 40)] [NPS 2 (DN 50)].
 - 4) Strainer: [3-1/2 inch (89 mm) basket strainer] <Insert strainer designation>.
 - 5) Disposer: <Insert disposer designation from "Disposers" Article>.
 - 6) Hot-water dispenser: <Insert hot-water dispenser designation from "Hot-water dispenser" Article>.
- f. Mounting: Under counter with sealant. Provide counter with [no reveal edge] [1/2 inch (13 mm) reveal edge].
- g. Installation: Steel mounting brackets.

Copy "Kitchen/Utility Sinks, Counter Mounted - Stainless Steel" Subparagraph below and re-edit for each type of stainless steel, counter-mounted kitchen/utility sink required.

Insert drawing designation. Use these designations on Drawings to identify each stainless steel, counter-mounted kitchen/utility sink.

5. Kitchen/Utility Sinks, Counter Mounted - Stainless Steel <Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following: Advance Tabco.
 - 1) Amerisink Inc.
 - 2) Eagle Group.
 - 3) Elkay.
 - 4) Just Manufacturing.

- 5) Krowne.
 - 6) **<Insert manufacturer's name>**.
- b. Source Limitations: Obtain sinks from single source from single manufacturer.
- c. Fixture:
- 1) Standard: ASME A112.19.3/CSA B45.4.
 - 2) Type: Stainless steel, self-rimming, sound-deadened unit **[less ledge back]** **[with ledge back]**.
 - 3) Number of Compartments: **[One]** **[Two]** **[Three]**.
 - 4) Overall Dimensions: **<Insert dimensions>**.
 - 5) Material: 18 gauge, Type 304 stainless steel.

Retain "Compartment" Subparagraph below for single-compartment sinks.

- 6) Compartment:
 - a) Dimensions: **<Insert dimensions>**.
 - b) Drain: **[Grid with NPS 1-1/2 (DN 40) tailpiece and twist drain]** **[Grid with NPS 2 (DN 50) tailpiece and twist drain]** **[NPS 1-1/2 (DN 40) tailpiece with stopper]** **<Insert drain>**.
 - c) Drain Location: **[Centered in compartment]** **[Near back of compartment]** **[Near left side of compartment]** **[Near right side of compartment]** **<Insert location>**.
 - d) Depth: **[Standard]** **[Accessible in accordance with ICC A117.1]**.

Retain "Each Compartment" Subparagraph below for multiple-compartment sinks.

- 7) Each Compartment:
 - a) Dimensions: **<Insert dimensions>**.
 - b) Drains: **[Grid with NPS 1-1/2 (DN 40) tailpiece and twist drain]** **[Grid with NPS 2 (DN 50) tailpiece and twist drain]** **[NPS 1-1/2 (DN 40) tailpiece with stopper]** **<Insert drain>**.
 - c) Drain Location: **[Centered in compartment]** **[Near back of compartment]** **<Insert location>**.
 - d) Depth: **[Standard]** **[Accessible in accordance with ICC A117.1]**.
- d. Faucet(s): **<Insert sink faucet designation from "Sink Faucets, Manually Operated" or "Sink Faucets, Automatically Operated" Subparagraph>**.
- 1) Number Required: **[One]** **[Two]**.
 - 2) Mounting: On ledge.
- e. Supply Fittings:
- 1) Standard: ASME A112.18.1/CSA B125.1.
 - 2) Supplies: Chrome-plated brass compression stop with inlet connection matching water-supply piping type and size.
 - a) Operation: **[Loose key]** **[Wheel handle]** **<Insert type>**.

- b) Risers: **NPS 1/2 (DN 15)**, [**chrome-plated, rigid-copper pipe**] [**chrome-plated, soft-copper flexible tube**] [**ASME A112.18.6/CSA B125.6, braided or corrugated stainless steel flexible hose**].

f. Waste Fittings:

- 1) Standard: ASME A112.18.2/CSA B125.2.
- 2) Trap(s) Size: [**NPS 1-1/2 (DN 40)**] [**NPS 2 (DN 50)**].
- 3) Trap(s) Material:

Retain one of first two subparagraphs below. First subparagraph is for NPS 1-1/2 or NPS 2 (DN 40 or DN 50) traps.

- a) Chrome-plated, [**two-piece, cast-brass trap and swivel elbow with 17-gauge brass tube to wall**] [**two-piece, cast-brass trap and ground-joint swivel elbow with 17-gauge brass tube to wall**] **<Insert trap type>**; and chrome-plated brass or steel wall flange.
- b) Stainless steel, two-piece trap and swivel elbow with **0.012-inch-(0.30-mm-)** thick stainless steel tube to wall; and stainless steel wall flange.

If retaining "Continuous Waste" Subparagraph below, indicate arrangement on Drawings.

- 4) Continuous Waste:
 - a) Size: [**NPS 1-1/2 (DN 40)**] [**NPS 2 (DN 50)**].
 - b) Material: Chrome-plated, 17-gauge brass tube.

g. Mounting: On counter with sealant.

Caution: Sinks in "Kitchen/Utility Sinks, Freestanding - Stainless Steel" Subparagraph below are unsuitable for commercial foodservice applications unless they have optional NSF 2 certification as a requirement. Freestanding sinks for commercial foodservice applications are generally specified in Section 114000 "Foodservice Equipment." In projects that do not have Section 114000 "Foodservice Equipment" included, subparagraph can be used with inclusion of NSF 2 certification requirement.

Copy "Kitchen/Utility Sinks, Freestanding - Stainless Steel" Subparagraph and re-edit for each type of stainless steel, freestanding, kitchen/utility sink required.

Insert drawing designation. Use these designations on Drawings to identify each stainless steel, freestanding, kitchen/utility sink.

6. Kitchen/Utility Sinks, Freestanding - Stainless Steel **<Insert drawing designation>**:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

- 1) Advance Tabco.
- 2) AERO Manufacturing Company.
- 3) Amtekco Industries, Inc; a Wasserstrom Company.
- 4) Eagle Group.
- 5) Elkay.
- 6) Griffin Products, Inc.
- 7) Just Manufacturing.
- 8) <Insert manufacturer's name>.

- b. Source Limitations: Obtain sinks from single source from single manufacturer.
- c. Fixture:

- 1) Standards:
 - a) ASME A112.19.3/CSA B45.4.

Retain first subparagraph below only for sinks used in commercial foodservice applications.

- b) NSF 2.
 - 2) Type: Stainless steel, freestanding, sound-deadened unit with backsplash.
 - 3) Number of Compartments: [One] [Two] [Three] [Four].
 - 4) Overall Dimensions: <Insert dimensions>.
 - 5) Material: [14] [16] gauge, Type 304 stainless steel.

Retain "Compartment" Subparagraph below for single-compartment sinks.

- 6) Compartment:
 - a) Dimensions: <Insert dimensions>.
 - b) Drain: [Grid with NPS 1-1/2 (DN 40) tailpiece and twist drain] [Grid with NPS 2 (DN 50) tailpiece and twist drain] [NPS 1-1/2 (DN 40) tailpiece with stopper] <Insert drain>.
 - c) Drain Location: [Centered in compartment] [Near back of compartment] [Near left side of compartment] [Near right side of compartment] <Insert location>.

Retain "Each Compartment" Subparagraph below for multiple-compartment sinks.

- 7) Each Compartment:
 - a) Dimensions: <Insert dimensions>.
 - b) Drains: [Grid with NPS 1-1/2 (DN 40) tailpiece and twist drain] [Grid with NPS 2 (DN 50) tailpiece and twist drain] [NPS 1-1/2 (DN 40) tailpiece with stopper] <Insert drain>.
 - c) Drain Location: [Centered in compartment] [Near back of compartment] <Insert location>.
- 8) Integral Drainboard(s): [Not required] [Both] [Left] [Right] side(s).
 - a) Dimensions Each: [Not applicable] <Insert dimensions>.

- d. Legs and Feet: Stainless steel tubing legs with adjustable bullet feet.
- e. Faucet(s): <Insert sink faucet designation from "Sink Faucets, Manually Operated" or "Sink Faucets, Automatically Operated" Paragraph>.
 - 1) Number Required: [One] [Two].
 - 2) Mounting: On backsplash.
- f. Supply Fittings:
 - 1) Standard: ASME A112.18.1/CSA B125.1.
 - 2) Supplies: Chrome-plated brass compression stop with inlet connection matching water-supply piping type and size.
 - a) Operation: [Loose key] [Wheel handle] <Insert type>.
 - b) Risers: NPS 1/2 (DN 15), [chrome-plated, rigid-copper pipe] [chrome-plated, soft-copper flexible tube] [ASME A112.18.6/CSA B125.6, braided or corrugated stainless steel flexible hose].
- g. Waste Fittings:
 - 1) Standard: ASME A112.18.2/CSA B125.2.
 - 2) Trap(s) Size: [NPS 1-1/2 (DN 40)] [NPS 2 (DN 50)].
 - 3) Trap(s) Material:

Retain one of first two subparagraphs below. First subparagraph is for NPS 1-1/2 or NPS 2 (DN 40 or DN 50) traps.

- a) Chrome-plated, [two-piece, cast-brass trap and swivel elbow with 17-gauge brass tube to wall] [two-piece, cast-brass trap and ground-joint swivel elbow with 17-gauge brass tube to wall] <Insert trap type>; and chrome-plated brass or steel wall flange.
- b) Stainless steel, two-piece trap and swivel elbow with 0.012-inch-(0.30-mm-) thick stainless steel tube to wall; and stainless steel wall flange.

If retaining "Continuous Waste" Subparagraph below, indicate arrangement on Drawings.

- 4) Continuous Waste:
 - a) Size: [NPS 1-1/2 (DN 40)] [NPS 2 (DN 50)].
 - b) Material: Chrome-plated, 17-gauge brass tube.

D. Handwash Sinks:

Retain this paragraph only if handwash/hand sinks are not specified in Section 114000 "Foodservice Equipment."

Copy "Handwash Sinks - Stainless Steel" Subparagraph below and re-edit for each type of stainless steel handwash sink required.

Insert drawing designation. Use these designations on Drawings to identify each stainless steel handwash sink.

1. Handwash Sinks - Stainless Steel <Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

- 1) Advance Tabco.
- 2) AERO Manufacturing Company.
- 3) Amtekco Industries, Inc; a Wasserstrom Company.
- 4) Eagle Group.
- 5) Elkay.
- 6) Griffin Products, Inc.
- 7) Just Manufacturing.
- 8) Krowne.
- 9) Sloan Valve Company.
- 10) <Insert manufacturer's name>.

b. Source Limitations: Obtain sinks from single source from single manufacturer.

c. Fixture:

1) Standards:

- a) ASME A112.19.3/CSA B45.4.
- b) NSF 61.

2) Type: [Wall-mounted] [Pedestal-base] stainless steel basin with radius corners, back for faucet, and support brackets.

3) Overall Dimensions: [17 by 16 by 5 inches (430 by 406 by 127 mm)] <Insert dimensions>.

Caution: Other gauges may be available from manufacturers. Confirm availability prior to selection.

4) Material: [18 gauge] [20 gauge] <Insert gauge>, Type 304 stainless steel.

d. Faucet: <Insert sink faucet designation from "Sink Faucets, Manually Operated" or "Sink Faucets, Automatically Operated" Paragraph>.

e. Supply Fittings: Comply with requirements in "Sink Supply Fittings" Paragraph.

f. Waste Fittings: Comply with requirements in "Sink Waste Fittings" Paragraph.

Retain "Support" Subparagraph below for wall-mounted sinks and coordinate with "Fixture Carriers - Sink" Paragraph in "Fixture Carriers" Article.

g. Support: [Sink carrier, framing affixed] [Sink carrier, floor affixed with steel uprights] <Insert carrier>.

h. Mounting Height: [Standard] [Juvenile] [Accessible in accordance with ICC A117.1].

Sacristy sinks are custom-made products. Fixtures specified below are typical.

E. Sacristy Sinks:

Copy "Sacristy Sinks - Stainless Steel, Wall Hung" Subparagraph below and re-edit for each type of stainless steel, wall-hung sacristy sink required.

Insert drawing designation. Use these designations on Drawings to identify each stainless steel, wall-hung sacristy sink.

1. Sacristy Sinks - Stainless Steel, Wall Hung <Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

- 1) Just Manufacturing.
- 2) <Insert manufacturer's name>.

b. Source Limitations: Obtain sinks from single source from single manufacturer.

c. Fixture:

- 1) Standard: ASME A112.19.3/CSA B45.4.
- 2) Type: [Single] [Double] bowl.
- 3) Material: Bowl and hinged cover, 18 gauge, Type 304, 18-8 stainless steel.
- 4) Nominal Size: Approximately [20 by 23 inches (508 by 584 mm)] [21 by 42 inches (533 by 1067 mm)] <Insert dimensions>.
- 5) Cover: Hinged with lock on [left] [right] bowl.

d. Faucet: <Insert sink faucet designation from "Sink Faucets, Manually Operated" or "Sink Faucets, Automatically Operated" Paragraph>.

- 1) Location: On [left] [right] bowl.

e. Supply Fittings: Comply with requirements in "Sink Supply Fittings" Paragraph.

f. Waste Fittings:

- 1) Standard: ASME A112.18.2/CSA B125.2.
- 2) Bowl:
 - a) Orientation: [Left] [Right].
 - b) Drain: Cup with stopper and NPS 1-1/2 (DN 40) tailpiece.

Retain "Opposite Bowl" Subparagraph only if "Double Bowl" type is retained in "Type" Subparagraph above.

- 3) Opposite Bowl:
 - a) Drain: Grid with stopper and NPS 1-1/2 (DN 40) tailpiece.
- 4) Trap Size: NPS 1-1/2 (DN 40).

- 5) Trap Material: Comply with requirements in "Waste Fittings" Article.
- 6) Drain Piping: **NPS 1-1/2 (DN 40)** chrome-plated, tubular-brass direct waste without trap, separate waste piping, and wall flange.

Copy "Sacristory Sinks - Stainless Steel, Drop In, Two Bowl" Subparagraph below and re-edit for each type of stainless steel, two-bowl, drop-in sacristory sink required.

Insert drawing designation. Use these designations on Drawings to identify each stainless steel, two-bowl, drop-in sacristory sink.

2. Sacristory Sinks - Stainless Steel, Drop In, Two Bowl **<Insert drawing designation>**:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) Just Manufacturing.
 - 2) **<Insert manufacturer's name>**.
- b. Source Limitations: Obtain sinks from single source from single manufacturer.
- c. Fixture:
 - 1) Standard: ASME A112.19.3/CSA B45.4.
 - 2) Type: Self-rimming.
 - 3) Material: Bowl and hinged cover, 18 gauge, Type 304, 18-8 stainless steel.
 - 4) Nominal Size: Approximately [**17-1/2 by 37 inches (445 by 940 mm)**] [**18 by 29 inches (460 by 740 mm)**] [**22 by 28 inches (560 by 712 mm)**] [**22 by 33 inches (560 by 0 mm)**] [**22 by 42 inches (560 by 1070 mm)**] **<Insert dimensions>**.
 - 5) Cover: Hinged with lock on [**left**] [**right**] bowl.
- d. Faucet: **<Insert sink faucet designation from "Sink Faucets, Manually Operated" or "Sink Faucets, Automatically Operated" Paragraph>**.
 - 1) Location: On [**left**] [**right**] bowl.
- e. Supply Fittings: Comply with requirements in "Sink Supply Fittings" Paragraph.
- f. Waste Fittings:
 - 1) Standard: ASME A112.18.2/CSA B125.2.
 - 2) Bowl:
 - a) Orientation: [**Left**] [**Right**].
 - b) Drain: Cup with stopper and **NPS 1-1/2 (DN 40)** tailpiece.
 - 3) Opposite Bowl:
 - a) Drain: Grid with stopper and **NPS 1-1/2 (DN 40)** tailpiece.

- 4) Trap Size: **NPS 1-1/2 (DN 40)**.
- 5) Trap Material: Comply with requirements in "Waste Fittings" Article.
- 6) Drain Piping: **NPS 1-1/2 (DN 40)** chrome-plated, tubular-brass direct waste without trap, separate waste piping, and wall flange.

Caution: Shampoo bowls in this article can be counter mounted, wall mounted using a manufacturer-supplied bracket, or mounted in a base unit. Wall-mounted bowls may require additional under bowl or other support.

F. Shampoo Bowls:

Copy "Shampoo Bowls - Enameled Cast Iron" Subparagraph below and re-edit for each type of enameled cast-iron shampoo bowl required.

Insert drawing designation. Use these designations on Drawings to identify each enameled cast-iron shampoo bowl.

1. Shampoo Bowls - Enameled Cast Iron **<Insert drawing designation>**:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) Belvedere, LLC.
 - 2) Takara Belmont.
 - 3) **<Insert manufacturer's name>**.
- b. Source Limitations: Obtain bowls from single source from single manufacturer.
- c. Fixture:
 - 1) Standard: ASME A112.19.2/CSA B45.1.
 - 2) Bowl: Shaped for head rest.
 - 3) Nominal Size: [**19 by 19 by 10 inches (480 by 480 by 254 mm)**] **<Insert dimensions>**.
 - 4) Color: [**White**] **<Insert color>**.
- d. Faucet: Manufacturer's standard with vacuum breaker complying with ASME A112.18.3 and with hose spray head.
- e. Waste Fittings: Comply with requirements in "Sink Waste Fittings" Paragraph except as follows:
 - 1) Drain: Cup type with hair basket and **NPS 1-1/2 (DN 40)** tailpiece.
 - 2) Trap Size: **NPS 1-1/2 (DN 40)**.
- f. Mounting Material: [**Bracket or devices for attaching to counter**] [**Wall bracket**].

Copy "Shampoo Bowls - Plastic" Subparagraph below and re-edit for each type of plastic shampoo bowl required.

Insert drawing designation. Use these designations on Drawings to identify each plastic shampoo bowl.

2. Shampoo Bowls - Plastic <Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) Buy-Rite Beauty.
 - 2) Collins.
 - 3) Pibbs Industries.
 - 4) <Insert manufacturer's name>.
- b. Source Limitations: Obtain bowls from single source from single manufacturer.
- c. Fixture:
 - 1) Standard: CSA B45.5/IAPMO Z124.

For selection of options in "Material" Subparagraph below, verify specific availability with each retained manufacturer.

- 2) Material: [ABS] [FRP] [PMMA] <Insert material>.
 - 3) Bowl: Shaped for head rest.
 - 4) Nominal Size: [19 by 19 by 10 inches (483 by 483 by 250 mm)] <Insert dimensions>.
 - 5) Color: [White] <Insert color>.
 - 6) Mounting Material: [Bracket or devices for attaching to counter] [Wall bracket].
- d. Faucet: Manufacturer's standard with vacuum breaker complying with ASME A112.18.3 and with hose spray head.
 - e. Waste Fittings: Comply with requirements in "Sink Waste Fittings" Paragraph except as follows:
 - 1) Drain: Cup type with hair basket and NPS 1-1/2 (DN 40) tailpiece.
 - 2) Trap Size: NPS 1-1/2 (DN 40).

Copy "Shampoo Bowls - Solid-Surface Material" Subparagraph below and re-edit for each type of solid-surface-material shampoo bowl required.

Insert drawing designation. Use these designations on Drawings to identify each solid-surface-material shampoo bowl.

3. Shampoo Bowls - Solid-Surface Material <Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

- 1) Willoughby Industries, Inc.
 - 2) <Insert manufacturer's name>.
- b. Source Limitations: Obtain bowls from single source from single manufacturer.
- c. Fixture:
- 1) Material: Molded, cast polymer.
 - 2) Bowl: Shaped for head rest.
 - 3) Nominal Size: [19 by 19 by 9 inches (483 by 483 by 230 mm)] [22 by 18 by 9 inches (560 by 469 by 230 mm)] <Insert dimensions>.
 - 4) Color: [Gray granite] [Sandstone] [White granite] <Insert color>.
 - 5) Mounting Material: [Bracket or devices for attaching to counter] [Wall bracket].
- d. Faucet: Manufacturer's standard with vacuum breaker complying with ASME A112.18.3 and with hose spray head.
- e. Waste Fittings: Comply with requirements in "Sink Waste Fittings" Paragraph except as follows:
- 1) Drain: Cup type with hair basket and NPS 1-1/2 (DN 40) tailpiece.
 - 2) Trap Size: NPS 1-1/2 (DN 40).

G. Sink Faucets, Manually Operated:

Copy "Sink Faucets, Manually Operated" Subparagraph below and re-edit for each manually operated sink faucet required.

Insert designation. Use these designations in sink description to identify each manually operated sink faucet.

1. Sink Faucets, Manually Operated <Insert drawing designation>: [Single control, mixing] [Single control, nonmixing] [Two handle, mixing] [Pre-rinse] <Insert type>.

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) American Standard.
 - 2) Central Brass Company; a Pioneer Industries, Inc. brand.
 - 3) Chicago Faucets; Geberit Group.
 - 4) Elkay.
 - 5) Gerber Plumbing Fixtures LLC.
 - 6) Just Manufacturing.
 - 7) Kohler Co.
 - 8) Krowne.
 - 9) ProFlo; a Ferguson Enterprises, Inc. brand.
 - 10) Speakman Company.
 - 11) T&S Brass and Bronze Works, Inc.
 - 12) Wolverine Brass, Inc.

- 13) Zurn Industries, LLC.
 - 14) <Insert manufacturer's name>.
- b. Source Limitations: Obtain sink faucets from single source from single manufacturer.
 - c. Standards:
 - 1) ASME A112.18.1/CSA B125.1.
 - 2) NSF 61.
 - 3) NSF 372.
 - d. Description: Include hot- and cold-water indicators; coordinate faucet inlets with supplies and fixture hole punchings; coordinate outlet with spout and sink receptor.

Retained option in "Body Type" Subparagraph below must match fixture hole punching.

- e. Body Type: [Centerset] [Widespread] [Single hole] <Insert type>.
- f. Body Material: Commercial, solid-brass, or die-cast housing with brazed copper and brass waterway.
- g. Finish: [Chrome plated] [Polished chrome plate] <Insert finish>.

Retain first option in "Maximum Flow Rate" Subparagraph below for pre-rinse units. Retain second option for sinks.

- h. Maximum Flow Rate: [1.0 to 1.28 gpm (3.8 to 4.8 L/min)] [1.5 gpm (5.7 L/min)] <Insert value>.
- i. Mounting Type: [Deck, concealed] [Deck, exposed] [Back/wall, exposed].
- j. Valve Handle(s): [Lever] [Cross, four arm] [4-inch (102-mm) wrist blade] [6-inch (150-mm) wrist blade] [Not applicable] <Insert handles>.
- k. Spout Type: [Rigid] [Rigid with wall brace] [Swing] [Rigid, gooseneck] [Swivel, gooseneck] <Insert type>.

Retain first option in "Vacuum Breaker" Subparagraph below for faucets with hose-thread outlet.

- l. Vacuum Breaker: [Required] [Not required] for hose outlet.
- m. Spout Outlet: [Aerator] [Laminar flow] [Hose thread in accordance with ASME B1.20.7] [Plain end] [Spray] <Insert type>.
- n. Pre-Rinse Unit:

Retain and insert appropriate features in subparagraphs below based on pre-rinse unit application such as pre-rinsing only, rinsing produce or meats, or filling glasses, kettles, or pots.

- 1) Style: [Flexible hose] [Rigid] [Combination rigid/flexible] <Insert type>.
- 2) Riser: [18-inch (457-mm) rigid riser] <Insert type>.
- 3) Hose: [44-inch (1117-mm) flexible stainless steel with heat-resistant handle] <Insert type>.
- 4) Spray valve: <Insert type>.
- 5) Wall bracket.

Copy "Sink Faucets, Manually Operated - Service Sink" Subparagraph below and re-edit for each manually operated service sink faucet required.

Insert designation. Use these designations in sink description to identify each manually operated service sink faucet.

2. Sink Faucets, Manually Operated - Service Sink <Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) Acorn Engineering Company; a Division of Morris Group International.
 - 2) Central Brass Company; a Pioneer Industries, Inc. brand.
 - 3) Chicago Faucets; Geberit Group.
 - 4) Fiat Products.
 - 5) Just Manufacturing.
 - 6) Kohler Co.
 - 7) Krowne.
 - 8) Speakman Company.
 - 9) Stern-Williams Products, LLC.
 - 10) T&S Brass and Bronze Works, Inc.
 - 11) Zurn Industries, LLC.
 - 12) <Insert manufacturer's name>.
- b. Source Limitations: Obtain sink faucets from single source from single manufacturer.
- c. Description: Wall/back mounted, brass body, with integral service stops, checks, spout with bucket/pail hook, 3/4-inch (20-mm) hose thread end, integral vacuum breaker, inlets 8 inches (203 mm) o.c., and two-handle mixing.
- d. Faucet:
 - 1) Standards:
 - a) ASME A112.18.1/CSA B125.1.
 - b) NSF 61 and NSF 372.
 - c) ICC A117.1.
 - d) ASSE 1001 (VB).
 - 2) Finish: [Rough chrome plated] [Polished chrome plated] <Insert finish>.
 - 3) Handles: [Lever] [6-inch (152-mm) wrist blade] [4-inch (102-mm) wrist blade] [four arms] <Insert type>.
 - 4) Cartridges: [One-fourth turn compression] [Ceramic] <Insert type>.
 - 5) Brace: [Adjustable top brace] [Adjustable bottom brace] <Insert type>.
- e. Vacuum Breaker: [Required] [Not required] for hose outlet.
- f. Spout Outlet: [Aerator] [Laminar flow] [Hose thread in accordance with ASME B1.20.7] [Plain end] [Spray] <Insert type>.

H. Sink Faucets, Automatically Operated:

Copy "Sink Faucets, Automatically Operated" Subparagraph below and re-edit for each automatically operated sink faucet required.

Insert designation. Use these designations in sink description to identify each automatically operated sink faucet.

1. Sink Faucets, Automatically Operated <Insert drawing designation>: [Battery powered,] [Hardwired,] electronic sensor operated, [mixing] [nonmixing].

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) Chicago Faucets; Geberit Group.
 - 2) Hydrotek International, Inc.
 - 3) Kohler Co.
 - 4) Krowne.
 - 5) Moen Incorporated.
 - 6) Sloan Valve Company.
 - 7) Speakman Company.
 - 8) T&S Brass and Bronze Works, Inc.
 - 9) Zurn Industries, LLC.
 - 10) <Insert manufacturer's name>.
- b. Source Limitations: Obtain sink faucets from single source from single manufacturer.
- c. Standards:
 - 1) ASME A112.18.1/CSA B125.1.
 - 2) UL 1951.
- d. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- e. General: Include hot- and cold-water indicators; coordinate faucet inlets with supplies and fixture hole punchings; coordinate outlet with spout and fixture receptor.

Retained option in "Body Type" Subparagraph below must match fixture hole punching.

- f. Body Type: [Centerset] [Single hole] <Insert type>.
- g. Body Material: Commercial, solid-brass, or die-cast housing with brazed copper and brass waterway.
- h. Finish: [Chrome plated] [Polished chrome1 plate] <Insert finish>.
- i. Maximum Flow Rate: [0.5 gpm (1.9 L/min)] <Insert value>.
- j. Mounting Type: [Deck] [Back/wall].
- k. Spout Type: [Rigid] [Swing] [Rigid, gooseneck] [Swivel, gooseneck] <Insert type>.

Retain "Laminar flow" option in "Spout Outlet" Subparagraph below when non-aerating, laminar stream is required.

- l. Spout Outlet: [**Aerator**] [**Laminar flow**] [**Spray**] <Insert type>.
- m. Thermostatic Mixing Valve: [**Above deck,**] [**Below deck,**] [**Single temperature**] [**adjustable temperature manual side handle, with hot/cold water indicators**], with check valves.
- n. Control Module: [**Above deck,**] [**Below deck,**] water-resistant module with internal flow setting switches.
- o. Drain: [**Not part of faucet**] <Insert type>.

I. Sink Supply Fittings:

1. NSF Standards: Comply with NSF 61 and NSF 372 for supply-fitting materials that will be in contact with potable water.
2. Standard: ASME A112.18.1/CSA B125.1.
3. Supply Piping: Chrome-plated brass pipe or chrome-plated copper tube matching water-supply piping size. Include chrome-plated brass or stainless steel wall flange.
4. Supply Stops: Chrome-plated brass, one-quarter-turn, ball-type or compression valve with inlet connection matching supply piping.

Retain "Wheel handle" option in "Operation" Subparagraph below for one-quarter-turn, ball-type stops.

5. Operation: [**Loose key**] [**Wheel handle**] <Insert type>.
 - a. Risers Sizes: [**NPS 3/8 (DN 10)**] [**NPS 1/2 (DN 15)**].
 - b. Risers Material: [**Chrome-plated, rigid-copper pipe**] [**Chrome-plated, soft-copper flexible tube**] [**ASME A112.18.6/CSA B125.6, braided or corrugated stainless steel flexible hose**].

J. Sink Waste Fittings:

1. Standard: ASME A112.18.2/CSA B125.2.
2. Drain: Grid type with **NPS 1-1/2 (DN 40)** offset and straight tailpiece.
3. Trap:
 - a. Size: **NPS 1-1/2 (DN 40)**.
 - b. Material: Chrome-plated, [**two-piece, cast-brass trap and swivel elbow with 17-gauge brass tube to wall**] [**two-piece, cast-brass trap and ground-joint swivel elbow with 17-gauge brass tube to wall**] [**one-piece, cast-brass trap with swivel 17-gauge tubular brass wall bend**] <Insert trap type>; and chrome-plated brass or steel wall flange.

Retain "Grout" Paragraph below if floor-mounted service sinks are included.

K. Grout:

1. Standard: ASTM C1107/C1107M, Grade B, post-hardening and volume-adjusting, dry, hydraulic-cement grout.
2. Characteristics: Nonshrink; recommended for interior and exterior applications.
3. Design Mix: **5000 psi (34.5 MPa)**, 28-day compressive strength.
4. Packaging: Premixed and factory packaged.

2.5 COMMERCIAL URINALS

A. Urinals, Stall:

Copy "Urinals, Stall - Washout Type" Subparagraph below and re-edit for each type of washout-type urinal stall required.

Insert drawing designation. Use these designations on Drawings to identify each washout-type urinal stall.

1. Urinals, Stall - Washout Type <Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

- 1) American Standard.
- 2) Kohler Co.
- 3) <Insert manufacturer's name>.

Caution: This urinal type requires a drainage piping trap under the urinal. This trap is not part of the urinal fittings.

b. Fixture:

- 1) Standards:
 - a) ASME A112.19.2/CSA B45.1.
 - b) ASME A112.19.5/CSA B45.15.
- 2) Material: Vitreous china.
- 3) Type: [Straight or sloped] <Insert type> front.

Retain "Seam Covers" Subparagraph below if installing two or more stall urinals side by side.

- 4) Seam Covers: For [21-inch (533-mm)] [24-inch (610-mm)] urinal centers.
- 5) Strainer: Separate; removable.

In "Water Consumption" Subparagraph below, not all manufacturers offer each option. Consult manufacturers.

- 6) Water Consumption: [0.5 gpf (1.9 Lpf)] [1.0 gpf (3.8 Lpf)].
- 7) Spud Size and Location: NPS 3/4 (DN 20); [top] [back].
- 8) Outlet Size and Location: NPS 2 (DN 50); bottom for separate trap.
- 9) Color: [White] <Insert color>.

c. Flushometer Valve: <Insert urinal flushometer-valve designation from "Flushometer Valves" Article>.

B. Urinals, Wall Hung:

Copy "Urinals, Wall Hung - Back Outlet, Blowout" Subparagraph below and re-edit for each type of wall-hung, back-outlet, blowout urinal required.

Insert drawing designation. Use these designations on Drawings to identify each wall-hung, back-outlet, blowout urinal.

1. Urinals, Wall Hung - Back Outlet, Blowout <Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) American Standard.
 - 2) Kohler Co.
 - 3) <Insert manufacturer's name>.
- b. Fixture:
 - 1) Standards:
 - a) ASME A112.19.2/CSA B45.1.
 - b) ASME A112.19.5/CSA B45.15.
 - 2) Material: Vitreous china.

Second option in "Strainer or Trapway" Subparagraph below may not be available from some manufacturers. Extended shields vary in shape and dimensions. Verify availability and suitability if required.

- 3) Strainer or Trapway: [Manufacturer's standard strainer] [Open trapway] with integral trap.

In "Water Consumption" Subparagraph below, not all manufacturers offer each option. Consult manufacturers.

- 4) Water Consumption: [0.5 gpf (1.9 Lpf)] [1.0 gpf (3.8 Lpf)].

First option in "Spud Size and Location" Subparagraph below is available from some manufacturers. Back spud is used with a remote hardwired, solenoid-actuator, electronic-sensor flushometer valve. Verify availability if required.

- 5) Spud Size and Location: NPS 1-1/4 (DN 32); [back] [top].
- 6) Outlet Size and Location: NPS 2 (DN 50); back.
- 7) Color: [White] <Insert color>.

- c. Flushometer Valve: <Insert urinal-flushometer-valve designation from "Flushometer Valves" Article>.
- d. Waste Fitting:
 - 1) Standard: ASME A112.18.2/CSA B125.2 for coupling.
 - 2) Size: NPS 2 (DN 50).

Coordinate "Support" Subparagraph below with "Fixture Carriers - Urinal" Paragraph in "Fixture Carriers" Article.

- e. Support: [**Urinal carrier, floor affixed with steel uprights**] <Insert carrier> with fixture support plates and coupling with seal and fixture bolts and hardware matching fixture.
- f. Urinal Mounting Height: [**Standard**] [**Juvenile**] [**Accessible in accordance with ICC A117.1**].

Copy "Urinals, Wall Hung - Back Outlet, Siphon Jet" Subparagraph below and re-edit for each type of wall-hung, back-outlet, siphon-jet urinal required.

Insert drawing designation. Use these designations on Drawings to identify each wall-hung, back-outlet, siphon-jet urinal.

- 2. Urinals, Wall Hung - Back Outlet, Siphon Jet <Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) American Standard.
 - 2) Briggs Plumbing Products, Inc.
 - 3) Duravit USA, Inc.
 - 4) Gerber Plumbing Fixtures LLC.
 - 5) Kohler Co.
 - 6) Mansfield Plumbing Products LLC.
 - 7) ProFlo; a Ferguson Enterprises, Inc. brand.
 - 8) Zurn Industries, LLC.
 - 9) <Insert manufacturer's name>.
- b. Fixture:
 - 1) Standards:
 - a) ASME A112.19.2/CSA B45.1.
 - b) ASME A112.19.5/CSA B45.15.
 - 2) Material: Vitreous china.

Option in "Type" Subparagraph below may not be available from some manufacturers. Extended shields vary in shape and dimensions. Verify availability and suitability if required.

- 3) Type: Siphon jet[**with extended shields**].
- 4) Strainer or Trapway: [**Manufacturer's standard strainer**] <Insert strainer> with integral trap.

In "Water Consumption" Subparagraph below, not all manufacturers offer each option. Consult manufacturers.

- 5) Water Consumption: [0.125 gpf (0.5 Lpf)] [0.25 gpf (1.0 Lpf)] [0.5 gpf (1.9 Lpf)] [1.0 gpf (3.8 Lpf)].

First option in "Spud Size and Location" Subparagraph below is available from some manufacturers. Back spud is used with a remote hardwired, solenoid-actuator, electronic-sensor flushometer valve. Verify availability if required.

- 6) Spud Size and Location: NPS 3/4 (DN 20); [back] [top].
 - 7) Outlet Size and Location: NPS 2 (DN 50); back.
 - 8) Color: [White] <Insert color>.
- c. Flushometer Valve: <Insert urinal flushometer-valve designation from "Flushometer Valves" Article>.
 - d. Waste Fitting:
 - 1) Standard: ASME A112.18.2/CSA B125.2 for coupling.
 - 2) Size: NPS 2 (DN 50).

Coordinate "Support" Subparagraph below with "Fixture Carriers - Urinal" Paragraph in "Fixture Carriers" Article.

- e. Support: [Urinal carrier, floor affixed with steel uprights] <Insert carrier> with fixture support plates and coupling with seal and fixture bolts and hardware matching fixture.
- f. Urinal Mounting Height: [Standard] [Juvenile] [Accessible in accordance with ICC A117.1].

Copy "Urinals, Wall Hung - Back Outlet, Washout" Subparagraph below and re-edit for each type of wall-hung, back-outlet, washout urinal required.

Insert drawing designation. Use these designations on Drawings to identify each wall-hung, back-outlet, washout urinal.

3. Urinals, Wall Hung - Back Outlet, Washout <Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) Advanced Modern Technologies Corporation - AMTC.
 - 2) American Standard.
 - 3) Briggs Plumbing Products, Inc.
 - 4) Gerber Plumbing Fixtures LLC.
 - 5) Kohler Co.
 - 6) Mansfield Plumbing Products LLC.
 - 7) ProFlo; a Ferguson Enterprises, Inc. brand.
 - 8) TOTO USA, INC.
 - 9) Zurn Industries, LLC.
 - 10) <Insert manufacturer's name>.

b. Fixture:

1) Standards:

- a) ASME A112.19.2/CSA B45.1.
- b) ASME A112.19.5/CSA B45.15.

2) Material: Vitreous china.

3) Type: Washout with extended shields.

4) Strainer or Trapway: [**Manufacturer's standard strainer**] <Insert **strainer**> with integral trap.

In "Water Consumption" Subparagraph below, not all manufacturers offer each option. Consult manufacturers.

- 5) Water Consumption: [**0.125 gpf (0.5 Lpf)**] [**0.25 gpf (1.0 Lpf)**] [**0.5 gpf (1.9 Lpf)**] [**1.0 gpf (3.8 Lpf)**].

First option in "Spud Size and Location" Subparagraph below is available from some manufacturers. Back spud is used with a remote hardwired, solenoid-actuator, electronic-sensor flushometer valve. Verify availability if required.

6) Spud Size and Location: **NPS 3/4 (DN 20)**, [**back**] [**top**].7) Outlet Size and Location: **NPS 2 (DN 50)**, back.8) Color: [**White**] <Insert **color**>.c. Flushometer Valve: <Insert **urinal flushometer-valve designation from "Flushometer Valves" Article**>.

d. Waste Fitting:

1) Standard: ASME A112.18.2/CSA B125.2 for coupling.

2) Size: **NPS 2 (DN 50)**.

Coordinate "Support" Subparagraph below with "Fixture Carriers - Urinal" Paragraph in "Fixture Carriers" Article.

e. Support: [**Urinal carrier, floor affixed with steel uprights**] <Insert **carrier**> with fixture support plates and coupling with seal and fixture bolts and hardware matching fixture.f. Urinal Mounting Height: [**Standard**] [**Juvenile**] [**Accessible in accordance with ICC A117.1**].

Copy "Urinals, Wall Hung - Bottom Outlet, Washout" Subparagraph below and re-edit for each type of wall-hung, bottom-outlet, washout urinal required.

Insert drawing designation. Use these designations on Drawings to identify each wall-hung, bottom-outlet, washout urinal.

4. Urinals, Wall Hung - Bottom Outlet, Washout <Insert **drawing designation**>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) American Standard.
 - 2) ProFlo; a Ferguson Enterprises, Inc. brand.
 - 3) **<Insert manufacturer's name>**.
- b. Fixture:
 - 1) Standards:
 - a) ASME A112.19.2/CSA B45.1.
 - b) ASME A112.19.5/CSA B45.15.
 - 2) Material: Vitreous china.
 - 3) Drain: Separate removable chrome-plated dome strainer with chrome-plated, **NPS 1-1/2 (DN 40)** tailpiece.
 - 4) Strainer or Trapway: Manufacturer's standard strainer and **NPS 1-1/2 (DN 40)** tailpiece.
 - 5) Inlet Spud Size and Location: **NPS 3/4 (DN 20)**; top.
 - 6) Outlet Size and Location: **NPS 1-1/2 (DN 40)**; bottom.
 - 7) Color: [**White**] **<Insert color>**.

In "Water Consumption" Subparagraph below, not all manufacturers offer each option. Consult manufacturers.

- 8) Water Consumption: [**0.125 gpf (0.5 Lpf)**] [**0.25 gpf (1.0 Lpf)**] [**0.5 gpf (1.9 Lpf)**] [**1.0 gpf (3.8 Lpf)**].
- c. Flushometer Valve: **<Insert urinal flushometer-valve designation from "Flushometer Valves" Article>**.
- d. Waste Fitting:
 - 1) Standard: ASME A112.18.2/CSA B125.2.
 - 2) Trap:
 - a) Size: **NPS 1-1/2 (DN 50)**.

Retain "Material, Chrome Plated" or "Material, Stainless Steel" Subparagraph below.

- b) Material, Chrome Plated: [**Two-piece, cast-brass trap and swivel elbow with 0.032-inch- (0.83-mm-) thick brass tube to wall**] [**two-piece, cast-brass trap and ground-joint swivel elbow with 0.032-inch- (0.83-mm-) thick brass tube to wall**] [**one-piece, cast-brass trap with swivel 0.029-inch- (73-mm-) thick tubular brass wall bend**] **<Insert trap type>**; and chrome-plated brass or steel wall flange.
- c) Material, Stainless Steel: Two-piece trap and swivel elbow with **0.012-inch- (0.30-mm-) thick, stainless steel tube to wall**; and stainless steel wall flange.

Coordinate "Support" Subparagraph below with "Fixture Carriers - Urinal" Paragraph in "Fixture Carriers" Article.

- e. Support: [**Urinal carrier, floor affixed with steel uprights**] <Insert carrier> with hanger and bearing plates.
- f. Urinal Mounting Height: [**Standard**] [**Juvenile**] [**Accessible in accordance with ICC A117.1**].

Copy "Urinals, Wall Hung - Back Outlet, Washdown" Subparagraph below and re-edit for each type of wall-hung, back-outlet, washdown urinal required.

Insert drawing designation. Use these designations on Drawings to identify each wall-hung, back-outlet, washdown urinal.

- 5. Urinals, Wall Hung - Back Outlet, Washdown <Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) Sloan Valve Company.
 - 2) <Insert manufacturer's name>.
- b. Fixture:
 - 1) Standards:
 - a) ASME A112.19.2/CSA B45.1.
 - b) ASME A112.19.5/CSA B45.15.
 - 2) Material: Vitreous china.
 - 3) Type: Washdown with extended shields.
 - 4) Strainer or Trapway: [**Manufacturer's standard strainer**] <Insert strainer> with integral trap.

In "Water Consumption" Subparagraph below, not all manufacturers offer each option. Consult manufacturers.

- 5) Water Consumption: [**0.125 gpf (0.5 Lpf)**] [**0.25 gpf (1.0 Lpf)**] [**0.5 gpf (1.9 Lpf)**] [**1.0 gpf (3.8 Lpf)**].

First option in "Spud Size and Location" Subparagraph below is available from some manufacturers. Back spud is used with a remote hardwired, solenoid-actuator, electronic-sensor flushometer valve. Verify availability if required.

- 6) Spud Size and Location: **NPS 3/4 (DN 20)**, [**back**] [**top**].
- 7) Outlet Size and Location: **NPS 2 (DN 50)**, back.
- 8) Color: [**White**] <Insert color>.
- c. Flushometer Valve: <Insert urinal flushometer-valve designation from "Flushometer Valves" Article>.

d. Waste Fitting:

- 1) Standard: ASME A112.18.2/CSA B125.2 for coupling.
- 2) Size: **NPS 2 (DN 50)**.

Coordinate "Support" Subparagraph below with "Fixture Carriers - Urinal" Paragraph in "Fixture Carriers" Article.

- e. Support: [**Urinal carrier, floor affixed with steel uprights**] <Insert carrier> with fixture support plates and coupling with seal and fixture bolts and hardware matching fixture.
- f. Urinal Mounting Height: [**Standard**] [**Juvenile**] [**Accessible in accordance with ICC A117.1**].

C. Urinals, Waterless:

Copy "Urinals, Waterless - Vitreous China, Wall Hung, Back Outlet" Subparagraph below and re-edit for each type of wall-hung, back-outlet, waterless, vitreous-china urinal required.

Insert drawing designation. Use these designations on Drawings to identify each wall-hung, back-outlet, waterless, vitreous-china urinal.

1. Urinals, Waterless - Vitreous China, Wall Hung, Back Outlet <**Insert drawing designation**>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) Duravit USA, Inc.
 - 2) Falcon Waterfree Technologies.
 - 3) Kohler Co.
 - 4) Sloan Valve Company.
 - 5) Waterless Co.
 - 6) Zero Flush.
 - 7) Zurn Industries, LLC.
 - 8) <**Insert manufacturer's name**>.
- b. Fixture:
 - 1) Standard: ASME A112.19.2/CSA B45.1, except without water supply.
 - 2) Designed for liquid-trap-seal operation.
 - 3) Trap-Seal Method: Proprietary cartridge with liquid seal.
 - 4) Outlet Size and Location: [**NPS 2 (DN 50)**] <**Insert pipe size**> flange; back.
 - 5) Trap-Sealing Liquid: Proprietary.
 - 6) Color: [**White**] <**Insert color**>.
- c. Waste Fitting:

- 1) Standard: ASME A112.18.2/CSA B125.2 for transition coupling, trap, and waste pipe.
- 2) Size: [**NPS 2 (DN 50)**] <Insert pipe size>.

Coordinate "Support" Subparagraph below with "Fixture Carriers - Urinal" Paragraph in "Fixture Carriers" Article.

- d. Support: [**Urinal carrier, floor affixed with steel uprights**] <Insert carrier> with fixture support plates and coupling with seal and fixture bolts and hardware matching fixture.
- e. Urinal Mounting Height: [**Standard**] [**Juvenile**] [**Accessible in accordance with ICC A117.1**].

Copy "Urinals, Waterless - Plastic, Wall Hung, Back Outlet" Subparagraph below and re-edit for each type of wall-hung, back-outlet, waterless, plastic urinal required.

Insert drawing designation. Use these designations on Drawings to identify each wall-hung, back-outlet, waterless, plastic urinal.

2. Urinals, Waterless - Plastic, Wall Hung, Back Outlet <Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) Waterless Co.
 - 2) <Insert manufacturer's name>.
- b. Fixture:
 - 1) Standard: CSA B45.5/IAPMO Z124, except without water supply.
 - 2) Designed for liquid-trap-seal operation.
 - 3) Material: [**FRP**] <Insert material>.
 - 4) Trap-Seal Method: Proprietary cartridge or trap system.
 - 5) Outlet Size and Location: **NPS 2 (DN 50)**; back. Include transition coupling.
 - 6) Trap-Sealing Liquid: Proprietary.
 - 7) Color: [**White**] <Insert color>.
- c. Waste Fitting:
 - 1) Standard: ASME A112.18.2/CSA B125.2 for transition coupling, trap, and waste pipe.
 - 2) Size: [**NPS 2 (DN 50)**] <Insert pipe size>.

Coordinate "Support" Subparagraph below with "Fixture Carriers - Urinal" Paragraph in "Fixture Carriers" Article.

- d. Support: [**Metal plate in wall**] [**Wood blocking in wall**] [**Urinal carrier, floor affixed with steel uprights**] <Insert carrier> [**with fixture support plates and coupling with seal and fixture bolts and hardware matching fixture**].
- e. Urinal Mounting Height: [**Standard**] [**Juvenile**] [**Accessible in accordance with ICC A117.1**].

2.6 COMMERCIAL WATER CLOSETS

A. Water Closets, Floor Mounted:

Copy "Water Closets, Floor Mounted - Bottom Outlet, Top Spud" Subparagraph below and re-edit for each type of floor-mounted, bottom-outlet, top-spud water closet required.

Insert drawing designation. Use these designations on Drawings to identify each floor-mounted, bottom-outlet, top-spud water closet.

- 1. Water Closets, Floor Mounted - Bottom Outlet, Top Spud <Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) Advanced Modern Technologies Corporation - AMTC.
 - 2) American Standard.
 - 3) Briggs Plumbing Products, Inc.
 - 4) Gerber Plumbing Fixtures LLC.
 - 5) Kohler Co.
 - 6) Mansfield Plumbing Products LLC.
 - 7) Sloan Valve Company.
 - 8) TOTO USA, INC.
 - 9) Zurn Industries, LLC.
 - 10) <Insert manufacturer's name>.
- b. Source Limitations: Obtain water closets from single source from single manufacturer.
- c. Standard: ASME A112.19.2/CSA B45.1.
- d. Bowl:
 - 1) Material: Vitreous china.
 - 2) Type: Siphon jet.
 - 3) Style: Flushometer valve.
 - 4) Height: [**Standard**] [**Accessible in accordance with ICC A117.1**].
 - 5) Rim Contour: Elongated.
 - 6) Water Consumption: [**1.1 gal. (4.2 L)**] [**1.28 gal. (4.8 L)**] [**1.6 gal. (6 L)**] [**Dual flush 1.1 gal. (4.2 L)/1.28 gal. (4.8 L)**] [**Dual flush 1.1 gal. (4.2 L)/1.6 gal. (6 L)**] per flush.
 - 7) Spud Size and Location: **NPS 1-1/2 (DN 40)**; top.

- 8) Color: **[White]** <Insert color>.

Coordinate "Flushometer Valve" Subparagraph below with "Flushometer Valves" Article.

- e. Flushometer Valve: <Insert flushometer-valve designation>.

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

- f. Toilet Seat: <Insert toilet-seat designation>.

Copy "Water Closets, Floor Mounted - Bottom Outlet, Back Spud" Subparagraph below and re-edit for each type of floor-mounted, bottom-outlet, back-spud water closet required.

Insert drawing designation. Use these designations on Drawings to identify each floor-mounted, bottom-outlet, back-spud water closet.

2. Water Closets, Floor Mounted - Bottom Outlet, Back Spud <Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) American Standard.
 - 2) Kohler Co.
 - 3) Mansfield Plumbing Products LLC.
 - 4) ProFlo; a Ferguson Enterprises, Inc. brand.
 - 5) Sloan Valve Company.
 - 6) <Insert manufacturer's name>.
- b. Source Limitations: Obtain water closets from single source from single manufacturer.
- c. Standard: ASME A112.19.2/CSA B45.1
- d. Bowl:
 - 1) Material: Vitreous china.
 - 2) Type: Siphon jet.
 - 3) Style: Flushometer valve.
 - 4) Height: **[Standard]** **[Accessible in accordance with ICC A117.1]**.
 - 5) Rim Contour: Elongated.
 - 6) Water Consumption: **[1.1 gal. (4.2 L)] [1.28 gal. (4.8 L)] [1.6 gal. (6 L)]**
[Dual flush 1.1gal. (4.2 L)/1.28 gal. (4.8 L)] [Dual flush 1.1 gal. (4.2 L)/1.6 gal. (6 L)] per flush.
 - 7) Spud Size and Location: **NPS 1-1/2 (DN 40)**; back.
 - 8) Color: **[White]** <Insert color>.

Coordinate "Flushometer Valve" Subparagraph below with "Flushometer Valves" Article.

- e. Flushometer Valve: <Insert flushometer-valve designation>.

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

- f. Toilet Seat: <Insert toilet-seat designation>.

Copy "Water Closets, Floor Mounted - Bottom Outlet, Close-Coupled Flushometer Tank" Subparagraph below and re-edit for each type of floor-mounted, bottom-outlet, close-coupled flushometer-tank water closet required.

Insert drawing designation. Use these designations on Drawings to identify each floor-mounted, bottom-outlet, close-coupled flushometer-tank water closet.

3. Water Closets, Floor Mounted - Bottom Outlet, Close-Coupled Flushometer Tank <Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

- 1) American Standard.
- 2) Briggs Plumbing Products, Inc.
- 3) Kohler Co.
- 4) Sloan Valve Company.
- 5) Zurn Industries, LLC.
- 6) <Insert manufacturer's name>.

- b. Source Limitations: Obtain water closets from single source from single manufacturer.

- c. Standard: ASME A112.19.2/CSA B45.1.

- d. Bowl:

- 1) Material: Vitreous china.
- 2) Type: Siphon jet.
- 3) Style: Flushometer tank, [gravity] [pressure assisted].
- 4) Height: [Standard] [Accessible in accordance with ICC A117.1].
- 5) Rim Contour: Elongated.
- 6) Water Consumption: [1.1 gal. (4.2 L)] [1.28 gal. (4.8 L)] [1.6 gal. (6 L)] [Dual flush 1.1 gal. (4.2 L)/1.6 gal. (6 L)] per flush.
- 7) Color: [White] <Insert color>.

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

- e. Toilet Seat: <Insert toilet-seat designation>.

Copy "Water Closets, Floor Mounted - Bottom Outlet, Juvenile" Subparagraph below and re-edit for each type of floor-mounted, bottom-outlet, juvenile water closet required.

Insert drawing designation. Use these designations on Drawings to identify each floor-mounted, bottom-outlet, juvenile water closet.

4. Water Closets, Floor Mounted - Bottom Outlet, Juvenile <Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) American Standard.
 - 2) Kohler Co.
 - 3) ProFlo; a Ferguson Enterprises, Inc. brand.
 - 4) Sloan Valve Company.
 - 5) Zurn Industries, LLC.
 - 6) **<Insert manufacturer's name>**.
- b. Source Limitations: Obtain water closets from single source from single manufacturer.
- c. Standard: ASME A112.19.2/CSA B45.1.
- d. Bowl:
 - 1) Material: Vitreous china.
 - 2) Type: Siphon jet.
 - 3) Style: Flushometer valve.

Juvenile toilets are generally available in two heights: approximately 10 inches (254 mm) for small children, and approximately 14 inches (356 mm) for older children. Confirm that manufacturer has the desired height prior to including in Project.

- 4) Height: [**10 inches (254 mm)**] [**14 inches (356 mm)**] **<Insert height>**.
- 5) Rim Contour: Elongated.
- 6) Water Consumption: [**1.1 gal. (4.2 L)**] [**1.28 gal. (4.8 L)**] [**1.6 gal. (6 L)**] per flush.
- 7) Spud Size and Location: **NPS 1-1/2 (DN 40)**; top.
- 8) Color: [**White**] **<Insert color>**.

Coordinate "Flushometer Valve" Subparagraph below with "Flushometer Valves" Article.

- e. Flushometer Valve: **<Insert flushometer-valve designation>**.

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

- f. Toilet Seat: **<Insert toilet-seat designation>**.

Copy "Water Closets, Floor Mounted - Back Outlet, Top Spud" Subparagraph below and re-edit for each type of floor-mounted, back-outlet, top-spud water closet required.

Insert drawing designation. Use these designations on Drawings to identify each floor-mounted, back-outlet, top-spud water closet.

5. Water Closets, Floor Mounted - Back Outlet, Top Spud **<Insert drawing designation>**:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

- 1) American Standard.
 - 2) Kohler Co.
 - 3) Mansfield Plumbing Products LLC.
 - 4) ProFlo; a Ferguson Enterprises, Inc. brand.
 - 5) Sloan Valve Company.
 - 6) Zurn Industries, LLC.
 - 7) <Insert manufacturer's name>.
- b. Source Limitations: Obtain water closets from single source from single manufacturer.
- c. Standard: ASME A112.19.2/CSA B45.1
- d. Bowl:
- 1) Material: Vitreous china.
 - 2) Type: Siphon jet.
 - 3) Style: Flushometer valve.
 - 4) Height: [Standard] [Accessible in accordance with ICC A117.1].
 - 5) Rim Contour: Elongated.
 - 6) Water Consumption: [1.1 gal. (4.2 L)] [1.28 gal. (4.8 L)] [1.6 gal. (6 L)] [Dual flush 1.1 gal. (4.2 L)/1.28 gal. (4.8 L)] [Dual flush 1.1 gal. (4.2 L)/1.6 gal. (6 L)] per flush.
 - 7) Spud Size and Location: NPS 1-1/2 (DN 40); top.
 - 8) Color: [White] <Insert color>.

Coordinate "Flushometer Valve" Subparagraph below with "Flushometer Valves" Article.

- e. Flushometer Valve: <Insert flushometer-valve designation>.

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

- f. Toilet Seat: <Insert toilet-seat designation>.

Coordinate "Support" Subparagraph below with "Fixture Carriers - Water Closet" Paragraph in "Fixture Carriers" Article.

- g. Support: [Water-closet carrier, floor affixed] <Insert carrier>.

Copy "Water Closets, Floor Mounted - Back Outlet, Back Spud" Subparagraph below and re-edit for each type of floor-mounted, back-outlet, back-spud water closet required.

Insert drawing designation. Use these designations on Drawings to identify each floor-mounted, back-outlet, back-spud water closet.

6. Water Closets, Floor Mounted - Back Outlet, Back Spud <Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
- 1) Kohler Co.
 - 2) Sloan Valve Company.

- 3) Zurn Industries, LLC.
 - 4) **<Insert manufacturer's name>**.
- b. Source Limitations: Obtain water closets from single source from single manufacturer.
 - c. Standard: ASME A112.19.2/CSA B45.1.
 - d. Bowl:
 - 1) Material: Vitreous china.
 - 2) Type: Siphon jet.
 - 3) Style: Flushometer valve.
 - 4) Height: [**Standard**] [**Accessible in accordance with ICC A117.1**].
 - 5) Rim Contour: Elongated.
 - 6) Water Consumption: [**1.1 gal. (4.2 L)**] [**1.28 gal. (4.8 L)**] [**1.6 gal. (6 L)**] [**Dual flush 1.1 gal. (4.2 L)/1.28 gal. (4.8 L)**] [**Dual flush 1.1 gal. (4.2 L)/1.6 gal. (6 L)**] per flush.
 - 7) Spud Size and Location: **NPS 1-1/2 (DN 40)**; back.
 - 8) Color: [**White**] **<Insert color>**.

Coordinate "Flushometer Valve" Subparagraph below with "Flushometer Valves" Article.

- e. Flushometer Valve: **<Insert flushometer-valve designation>**.

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

- f. Toilet Seat: **<Insert toilet-seat designation>**.

Coordinate "Support" Subparagraph below with "Fixture Carriers - Water Closet" Paragraph in "Fixture Carriers" Article.

- g. Support: [**Water-closet carrier, floor affixed**] **<Insert carrier>**.

Copy "Water Closets, Floor Mounted - Back Outlet, Close-Coupled Flushometer Tank" Subparagraph below and re-edit for each type of floor-mounted, back-outlet, close-coupled flushometer-tank water closet required.

Insert drawing designation. Use these designations on Drawings to identify each floor-mounted, back-outlet, close-coupled flushometer-tank water closet.

7. Water Closets, Floor Mounted - Back Outlet, Close-Coupled Flushometer Tank **<Insert drawing designation>**:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) American Standard.
 - 2) Kohler Co.
 - 3) Mansfield Plumbing Products LLC.
 - 4) **<Insert manufacturer's name>**.

- b. Source Limitations: Obtain water closets from single source from single manufacturer.
- c. Standard: ASME A112.19.2/CSA B45.1.
- d. Bowl:
 - 1) Material: Vitreous china.
 - 2) Type: Siphon jet.
 - 3) Style: Flushometer tank, [gravity] [pressure assisted].
 - 4) Height: [Standard] [Accessible in accordance with ICC A117.1].
 - 5) Rim Contour: Elongated.
 - 6) Water Consumption: [1.1 gal. (4.2 L)] [1.28 gal. (4.8 L)] [1.6 gal. (6 L)] per flush.
 - 7) Color: [White] <Insert color>.

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

- e. Toilet Seat: <Insert toilet-seat designation>.

Coordinate "Support" Subparagraph below with "Fixture Carriers - Water Closet" Paragraph in "Fixture Carriers" Article.

- f. Support: [Water-closet carrier, floor affixed] <Insert carrier>.

B. Water Closets, Wall Mounted:

Copy "Water Closets, Wall Mounted - Top Spud" Subparagraph below and re-edit for each type of wall-mounted, top-spud water closet required.

Insert drawing designation. Use these designations on Drawings to identify each wall-mounted, top-spud water closet.

- 1. Water Closets, Wall Mounted - Top Spud <Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) Advanced Modern Technologies Corporation - AMTC.
 - 2) American Standard.
 - 3) Briggs Plumbing Products, Inc.
 - 4) Gerber Plumbing Fixtures LLC.
 - 5) Kohler Co.
 - 6) Mansfield Plumbing Products LLC.
 - 7) ProFlo; a Ferguson Enterprises, Inc. brand.
 - 8) Sloan Valve Company.
 - 9) TOTO USA, INC.
 - 10) Zurn Industries, LLC.
 - 11) <Insert manufacturer's name>.

- b. Source Limitations: Obtain water closets from single source from single manufacturer.
- c. Standard: ASME A112.19.2/CSA B45.1.
- d. Bowl:
 - 1) Material: Vitreous china.
 - 2) Type: Siphon jet.
 - 3) Style: Flushometer valve.
 - 4) Mounting Height: [Standard] [Juvenile] [Accessible in accordance with ICC A117.1].
 - 5) Rim Contour: Elongated.
 - 6) Water Consumption: [1.1 gal. (4.2 L)] [1.28 gal. (4.8 L)] [1.6 gal. (6 L)] [Dual flush 1.1 gal. (4.2 L)/1.28 gal. (4.8 L)] [Dual flush 1.1 gal. (4.2 L)/1.6 gal. (6 L)] per flush.
 - 7) Spud Size and Location: NPS 1-1/2 (DN 40); top.
 - 8) Color: [White] <Insert color>.

Coordinate "Flushometer Valve" Subparagraph below with "Flushometer Valves" Article.

- e. Flushometer Valve: <Insert flushometer-valve designation>.

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

- f. Toilet Seat: <Insert toilet-seat designation>.

Coordinate "Support" Subparagraph below with "Fixture Carriers - Water Closet" Paragraph in "Fixture Carriers" Article.

- g. Support: [Water-closet carrier, floor affixed] <Insert carrier>.

Copy "Water Closets, Wall Mounted - Back Spud" Subparagraph below and re-edit for each type of wall-mounted, back-spud water closet required.

Insert drawing designation. Use these designations on Drawings to identify each wall-mounted, back-spud water closet.

- 2. Water Closets, Wall Mounted - Back Spud <Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) American Standard.
 - 2) Kohler Co.
 - 3) ProFlo; a Ferguson Enterprises, Inc. brand.
 - 4) Sloan Valve Company.
 - 5) TOTO USA, INC.
 - 6) Zurn Industries, LLC.
 - 7) <Insert manufacturer's name>.

- b. Source Limitations: Obtain water closets from single source from single manufacturer.
- c. Standard: ASME A112.19.2/CSA B45.1.
- d. Bowl:
 - 1) Material: Vitreous china.
 - 2) Type: Siphon jet.
 - 3) Style: Flushometer valve.
 - 4) Mounting Height: [Standard] [Juvenile] [Accessible in accordance with ICC A117.1].
 - 5) Rim Contour: Elongated.
 - 6) Water Consumption: [1.1 gal. (4.2 L)] [1.28 gal. (4.8 L)] [1.6 gal. (6 L)] [Dual flush 1.1 gal. (4.2 L)/1.28 gal. (4.8 L)] [Dual flush 1.1 gal. (4.2 L)/1.6 gal. (6 L)] per flush.
 - 7) Spud Size and Location: NPS 1-1/2 (DN 40); back.
 - 8) Color: [White] <Insert color>.

Coordinate "Flushometer Valve" Subparagraph below with "Flushometer Valves" Article.

- e. Flushometer Valve: <Insert flushometer-valve designation>.

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

- f. Toilet Seat: <Insert toilet-seat designation>.

Coordinate "Support" Subparagraph below with "Fixture Carriers - Water Closet" Paragraph in "Fixture Carriers" Article.

- g. Support: [Water-closet carrier, floor affixed] <Insert carrier>.

Copy "Water Closets, Wall Mounted - Back Outlet, Close-Coupled Flushometer Tank" Subparagraph below and re-edit for each type of wall-mounted, back-outlet, close-coupled flushometer-tank water closet required.

Insert drawing designation. Use these designations on Drawings to identify each wall-mounted, back-outlet, close-coupled flushometer-tank water closet.

- 3. Water Closets, Wall Mounted - Back Outlet, Close-Coupled Flushometer Tank <Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) American Standard.
 - 2) Mansfield Plumbing Products LLC.
 - 3) TOTO USA, INC.
 - 4) <Insert manufacturer's name>.

- b. Source Limitations: Obtain water closets from single source from single manufacturer.

- c. Standard: ASME A112.19.2/CSA B45.1.
- d. Bowl:
 - 1) Material: Vitreous china.
 - 2) Type: Siphon jet.
 - 3) Style: Flushometer tank, [gravity] [pressure assisted].
 - 4) Height: [Standard] [Accessible in accordance with ICC A117.1].
 - 5) Rim Contour: Elongated.
 - 6) Water Consumption: [1.1 gal. (4.2 L)] [1.28 gal. (4.8 L)] [1.6 gal. (6 L)] per flush.
 - 7) Color: [White] <Insert color>.

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

- e. Toilet Seat: <Insert toilet-seat designation>.

Coordinate "Support" Subparagraph below with "Fixture Carriers - Water Closet" Paragraph in "Fixture Carriers" Article.

- f. Support: [Water-closet carrier, floor affixed] <Insert carrier>.

2.7 COMMERCIAL WASH FOUNTAINS

Caution: These fixtures require a trap with waste and vent connections for installation in the base and vertical vent piping through top of unit, or they may be installed with trap and vent under the floor below the fixture.

A. Wash Fountains, Circular Receptor:

Copy "Wash Fountains, Circular Receptor - Solid Surface" Subparagraph below and re-edit for each type of solid-surface, circular-receptor wash fountain required.

Insert drawing designation. Use these designations on Drawings to identify each solid-surface, circular-receptor wash fountain.

- 1. Wash Fountains, Circular Receptor - Solid Surface <Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) Aqua Design Manufacturing.
 - 2) Bradley Corporation.
 - 3) Willoughby Industries, Inc.
 - 4) <Insert manufacturer's name>.
- b. Source Limitations: Obtain wash fountains from single source from single manufacturer.
- c. Standards:

- 1) IAPMO IGC 156.
- 2) CSA B45.5/IAPMO Z124.
- 3) ASME A112.18.1/CSA B125.1.

d. Receptor:

Verify that option retained in "Nominal Diameter" Subparagraph below is available from listed manufacturers for wash fountain required.

- 1) Nominal Diameter: [**36 inches (914 mm)**] [or] [**39 inches (990 mm)**] [**54 inches (1370 mm)**].

Caution: Retaining "Accessible in accordance with ICC A117.1" option in "Height to Rim" Subparagraph below may restrict selection in "Control" Subparagraph. Consult manufacturers.

- 2) Height to Rim: [**Standard**] [**Juvenile**] [**Accessible in accordance with ICC A117.1**].
- 3) Color or Finish: [**Not applicable**] <Insert if required>.
- 4) Drain: Grid with [**NPS 2 (DN 50)**] <Insert pipe size> tailpiece.

e. Spray Head:

- 1) Material: Stainless steel.
- 2) Number of User Stations: <Insert number>.

Verify that option retained in "Control" Subparagraph below is available from listed manufacturers and for type of wash fountain required.

- 3) Control: [**Collective,**] [**Individual,**] [**foot-control**] [**pneumatic push-button**] [**infrared sensor**] [**low-voltage, mechanical metering**] actuation with [**pressure-balancing**] [**thermostatic**] mixing valve, and having check stops.

f. Soap Dispensers: [**Not required**] [**Bracket only**] [**Foam**] [**Powdered**] [**Liquid**] <Insert type>, for each user station.

g. Pedestal: [**Manufacturer's standard**] [**Painted or coated steel**] [**Stainless steel**] with access panel.

h. Supply Fittings:

- 1) Piping: [**NPS 3/4 (DN 20)**] [**NPS 1 (DN 25)**] copper tubing.
- 2) Valves: Shutoff valve on each supply.
- 3) Supply Piping: From [**bottom**] [**top**].

i. Waste Fittings:

- 1) Trap and Drain Piping: [**NPS 2 (DN 50)**] <Insert size>.
- 2) Vent Piping: [**Not required**] [**NPS 1-1/2 (DN 40) to ceiling**].

Retain "Shroud" Subparagraph below if required to conceal vertical supply and vent piping.

- j. Shroud: [**Not required**] [**Stainless steel of size to cover supply and vent piping**].
- k. Mounting: Manufacturer's standard floor bracket.

Copy "Wash Fountains, Circular Receptor - Stainless Steel" Subparagraph below and re-edit for each type of stainless steel, circular-receptor wash fountain required.

Insert drawing designation. Use these designations on Drawings to identify each stainless steel, circular-receptor wash fountain.

2. Wash Fountains, Circular Receptor - Stainless Steel <Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) Acorn Engineering Company; a Division of Morris Group International.
 - 2) Aqua Design Manufacturing.
 - 3) Bradley Corporation.
 - 4) Willoughby Industries, Inc.
 - 5) <Insert manufacturer's name>.
- b. Source Limitations: Obtain wash fountains from single source from single manufacturer.
- c. Standards:
 - 1) IAPMO IGC 156.
 - 2) ASME A112.18.1/CSA B125.1
 - 3) ASME A112.19.3/CSA B45.4.
- d. Receptor:

Verify that option retained in "Nominal Diameter" Subparagraph below is available from listed manufacturers for wash fountain required.

- 1) Nominal Diameter: [36 inches (914 mm)] [or] [39 inches (990 mm)] [42 inches (1067 mm)] [54 inches (1372 mm)].

Caution: Retaining "Accessible in accordance with ICC A117.1" option in "Height to Rim" Subparagraph below may restrict selection in "Control" Subparagraph. Consult manufacturers.

- 2) Height to Rim: [Standard] [Juvenile] [Accessible in accordance with ICC A117.1].
 - 3) Color or Finish: [Not applicable] <Insert if required>.
 - 4) Drain: Grid with [NPS 2 (DN 50)] <Insert pipe size> tailpiece.
- e. Spray Head:
- 1) Material: Stainless steel.
 - 2) Number of User Stations: <Insert number>.

Verify that option retained in "Control" Subparagraph below is available from listed manufacturers and for type of wash fountain required.

- 3) Control: [**Collective,**] [**Individual,**] [**foot-control**] [**pneumatic push-button**] [**infrared sensor**] [**low-voltage, mechanical metering**] actuation with [**pressure-balancing**] [**thermostatic**] mixing valve, and having check stops.
- f. Soap Dispensers: [**Not required**] [**Bracket only**] [**Foam**] [**Powdered**] [**Liquid**] <Insert type> for each user station.
- g. Pedestal: Stainless steel with access panel.
- h. Supply Fittings:
 - 1) Piping: [**NPS 3/4 (DN 20)**] [**NPS 1 (DN 25)**] copper tubing.
 - 2) Valves: Shutoff valve on each supply.
 - 3) Supply Piping: From [**bottom**] [**top**].
- i. Waste Fittings:
 - 1) Trap and Drain Piping: [**NPS 2 (DN 50)**] <Insert size>.
 - 2) Vent Piping: [**Not required**] [**NPS 1-1/2 (DN 40) to ceiling**].

Retain "Shroud" Subparagraph below if required to conceal vertical supply and vent piping.

- j. Shroud: [**Not required**] [**Stainless steel of size to cover supply and vent piping**].
- k. Mounting: Manufacturer's standard floor bracket.

B. Wash Fountains, Semicircular Receptor:

Copy "Wash Fountains, Semicircular Receptor - Solid Surface, Floor or Wall Mounted" Subparagraph below and re-edit for each type of solid-surface, semicircular-receptor wash fountain required.

Insert drawing designation. Use these designations on Drawings to identify each solid-surface, semicircular-receptor wash fountain.

- 1. Wash Fountains, Semicircular Receptor - Solid Surface, Floor or Wall Mounted <Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) Acorn Engineering Company; a Division of Morris Group International.
 - 2) Aqua Design Manufacturing.
 - 3) Bradley Corporation.
 - 4) Sloan Valve Company.
 - 5) Willoughby Industries, Inc.
 - 6) <Insert manufacturer's name>.
- b. Source Limitations: Obtain wash fountains from single source from single manufacturer.
- c. Standards:

- 1) IAPMO IGC 156.
- 2) ASME A112.18.1/CSA B125.1.
- 3) CSA B45.5/IAPMO Z124.

d. Receptor:

Verify that option retained in "Nominal Diameter" Subparagraph below is available from listed manufacturers for wash fountain required.

- 1) Nominal Diameter: [**36 inches (914 mm)**] [or] [**39 inches (990 mm)**] [**46 inches (1168 mm)**] [**54 inches (1372 mm)**].

Caution: Retaining "Accessible in accordance with ICC A117.1" option in "Height to Rim" Subparagraph below may restrict selection in "Control" Subparagraph. Consult manufacturers.

- 2) Height to Rim: [**Standard**] [**Juvenile**] [**Accessible in accordance with ICC A117.1**].
- 3) Color or Finish: [**Not applicable**] <Insert if required>.
- 4) Drain: Grid with [**NPS 1-1/2 (DN 40)**] [**NPS 2 (DN 50)**] tailpiece.

e. Spray Head:

- 1) Material: Stainless steel or integral part of receptor back.
- 2) Number of User Stations: <Insert number>.

Verify that option retained in "Control" Subparagraph below is available from listed manufacturers and for type of wash fountain required.

- 3) Control: [**Collective,**] [**Individual,**] [**foot-control**] [**pneumatic push-button**] [**infrared sensor**] [**low-voltage, mechanical metering**] <Insert type> actuation with [**pressure-balancing**] [**thermostatic**] mixing valve, and having check stops.

f. Soap Dispensers: [**Not required**] [**Bracket only**] [**Foam**] [**Powdered**] [**Liquid**] <Insert type>, for each user station.

g. Supply Fittings:

- 1) Piping: [**NPS 1/2 (DN 15)**] [**NPS 3/4 (DN 20)**] copper tubing.
- 2) Valves: Shutoff valve on each supply.
- 3) Supply Piping: From [**bottom**] [**top**] [**wall**].

h. Waste Fittings:

- 1) Trap and Drain Piping: [**NPS 1-1/2 (DN 40)**] [**NPS 2 (DN 50)**].
- 2) Vent Piping: [**Not required**] [**NPS 1-1/2 (DN 40) to ceiling**].

Retain "Shroud" Subparagraph below if required to conceal vertical supply and vent piping.

- i. Shroud: [**Not required**] [**Stainless steel of size to cover supply and vent piping**].

Retain "Wall Mounting" Subparagraph below for wall-mounted wash fountains.

- j. Wall Mounting: [**Manufacturer's wall-mounting bracket**] [**and/or**] [**wash fountain carrier**] <Insert type>.

Retain "Floor Mounting" Subparagraph below for floor-mounted wash fountains.

- k. Floor Mounting: Manufacturer's floor bracket and wall bracket attached to [**reinforcement in**] [**concrete or block**] wall.

Copy "Wash Fountains, Semicircular Receptor - Stainless Steel, Floor or Wall Mounted" Subparagraph below and re-edit for each type of stainless steel, semicircular-receptor wash fountain required.

Insert drawing designation. Use these designations on Drawings to identify each stainless steel, semicircular-receptor wash fountain.

2. Wash Fountains, Semicircular Receptor - Stainless Steel, Floor or Wall Mounted <Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
- 1) Acorn Engineering Company; a Division of Morris Group International.
 - 2) Aqua Design Manufacturing.
 - 3) Bradley Corporation.
 - 4) Willoughby Industries, Inc.
 - 5) <Insert manufacturer's name>.
- b. Source Limitations: Obtain wash fountains from single source from single manufacturer.
- c. Standards:
- 1) IAPMO IGC 156.
 - 2) ASME A112.18.1/CSA B125.1.
 - 3) ASME A112.19.3/CSA B45.4.
- d. Receptor:

Verify that option retained in "Nominal Diameter" Subparagraph below is available from listed manufacturers for wash fountain required.

- 1) Nominal Diameter: [**36 inches (914 mm)**] [**or**] [**39 inches (990 mm)**] [**42 inches (1067 mm)**] [**54 inches (1372 mm)**].

Caution: Retaining "Accessible in accordance with ICC A117.1" option in "Height to Rim" Subparagraph below may restrict selection in "Control" Subparagraph. Consult manufacturers.

- 2) Height to Rim: [**Standard**] [**Juvenile**] [**Accessible in accordance with ICC A117.1**].
- 3) Color or Finish: [**Not applicable**] <Insert if required>.
- 4) Drain: Grid with [**NPS 1-1/2 (DN 40)**] [**NPS 2 (DN 50)**] tailpiece.

e. Spray Head:

- 1) Material: Stainless steel or integral part of receptor back.
- 2) Number of User Stations: <Insert number>.

Verify that option retained in "Control" Subparagraph below is available from listed manufacturers and for type of wash fountain required.

- 3) Control: [Collective,] [Individual,] [foot-control] [pneumatic push-button] [infrared sensor] [low-voltage, mechanical metering] <Insert type> actuation with [pressure-balancing] [thermostatic] mixing valve, and having check stops.

f. Soap Dispensers: [Not required] [Bracket only] [Foam] [Powdered] [Liquid] <Insert type>, for each user station.

g. Supply Fittings:

- 1) Piping: [NPS 1/2 (DN 15)] [NPS 3/4 (DN 20)] copper tubing.
- 2) Valves: Shutoff valve on each supply.
- 3) Supply Piping: From [bottom] [top] [wall].

h. Waste Fittings:

- 1) Trap and Drain Piping: [NPS 1-1/2 (DN 40)] [NPS 2 (DN 50)].
- 2) Vent Piping: [Not required] [NPS 1-1/2 (DN 40) to ceiling].

Retain "Shroud" Subparagraph below if required to conceal vertical supply and vent piping.

- i. Shroud: [Not required] [Stainless steel of size to cover supply and vent piping].

Retain "Wall Mounting" Subparagraph below for wall-mounted wash fountains.

- j. Wall Mounting: [Manufacturer's wall-mounting bracket] [and/or] [wash fountain carrier] <Insert type>.

Retain "Floor Mounting" Subparagraph below for floor-mounted wash fountains.

- k. Floor Mounting: Manufacturer's floor bracket and wall bracket attached to [reinforcement in] [concrete or block] wall.

C. Wash Fountains, Corner Receptor:

Copy "Wash Fountains, Corner Receptor - Precast Terrazzo" Subparagraph below and re-edit for each precast-terrazzo, corner-receptor wash fountain required.

Insert drawing designation. Use these designations on Drawings to identify each precast-terrazzo, corner-receptor wash fountain.

1. Wash Fountains, Corner Receptor - Precast Terrazzo <Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) Acorn Engineering Company; a Division of Morris Group International.
 - 2) Bradley Corporation.
 - 3) <Insert manufacturer's name>.
- b. Source Limitations: Obtain wash fountains from single source from single manufacturer.
- c. Standards:
 - 1) IAPMO IGC 156.
 - 2) ASME A112.18.1/CSA B125.1.
 - 3) CSA B45.8/IAPMO Z403.
- d. Receptor:

Verify that option retained in "Nominal Side Width" Subparagraph below is available from listed manufacturers for wash fountain required.

- 1) Nominal Side Width: [27 inches (685 mm)] [37 inches (940 mm)].
 - 2) Height to Rim: [Standard] [Juvenile].
 - 3) Color or Finish: [Not applicable] <Insert if required>.
 - 4) Drain: Grid with NPS 1-1/2 (DN 40) tailpiece.
- e. Spray Head:
 - 1) Material: Stainless steel or integral part of receptor back.
 - 2) Number of User Stations: <Insert number>.

Verify that option retained in "Control" Subparagraph below is available from listed manufacturers and for type of wash fountain required.

- 3) Control: [Foot-control] [Pneumatic push-button] [Infrared sensor] [Low-voltage, mechanical metering] <Insert type> actuation with [pressure-balancing] [thermostatic] mixing valve, and having check stops.
- f. Soap Dispensers: [Not required] [Bracket only] [Foam] [Powdered] [Liquid] <Insert type>, for each user station.
 - g. Supply Fittings:
 - 1) Piping: [NPS 1/2 (DN 15)] [NPS 3/4 (DN 20)] copper tubing.
 - 2) Valves: Shutoff valve on each supply.
 - 3) Supply Piping: From wall.
 - h. Waste Fittings:
 - 1) Trap and Drain Piping: NPS 1-1/2 (DN 40).
 - i. Mounting: Manufacturer's standard floor and wall bracket.

Copy "Wash Fountains, Corner Receptor - Solid Surface, Floor or Wall Mounted" Subparagraph below and re-edit for each type of solid-surface, corner-receptor wash fountain required.

Insert drawing designation. Use these designations on Drawings to identify each solid-surface, corner-receptor wash fountain.

2. Wash Fountains, Corner Receptor - Solid Surface, Floor or Wall Mounted **<Insert drawing designation>**:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) Acorn Engineering Company; a Division of Morris Group International.
 - 2) Bradley Corporation.
 - 3) Willoughby Industries, Inc.
 - 4) **<Insert manufacturer's name>**.
- b. Source Limitations: Obtain wash fountains from single source from single manufacturer.
- c. Standards:
 - 1) IAPMO IGC 156.
 - 2) ASME A112.18.1/CSA B125.1.
 - 3) CSA B45.5/IAPMO Z124.
- d. Receptor:

Verify that option retained in "Nominal Side Width" Subparagraph below is available from listed manufacturers for wash fountain required.

- 1) Nominal Side Width: [**27 inches (685 mm)**] [**37 inches (940 mm)**].

Caution: Retaining "Accessible in accordance with ICC A117.1" option in "Height to Rim" Subparagraph below may restrict selection in "Control" Subparagraph.

- 2) Height to Rim: [**Standard**] [**Juvenile**] [**Accessible in accordance with ICC A117.1**].
 - 3) Color or Finish: [**Not applicable**] **<Insert if required>**.
 - 4) Drain: Grid with **NPS 1-1/2 (DN 40)** tailpiece.
- e. Spray Head:
 - 1) Material: Stainless steel or integral part of receptor back.
 - 2) Number of User Stations: **<Insert number>**.

Verify that option retained in "Control" Subparagraph below is available from listed manufacturers and for type of wash fountain required.

- 3) Control: [**Collective,**] [**Individual,**] [**foot-control**] [**pneumatic push-button**] [**infrared sensor**] [**low-voltage, mechanical metering**] **<Insert**

type> actuation with [**pressure-balancing**] [**thermostatic**] mixing valve, and having check stops.

- f. Soap Dispensers: [**Not required**] [**Bracket only**] [**Foam**] [**Powdered**] [**Liquid**] <**Insert type**>, for each user station.
- g. Supply Fittings:
 - 1) Piping: [**NPS 1/2 (DN 15)**] [**NPS 3/4 (DN 20)**] copper tubing.
 - 2) Valves: Shutoff valve on each supply.
 - 3) Supply Piping: From wall.
- h. Waste Fittings:
 - 1) Trap and Drain Piping: **NPS 1-1/2 (DN 40)**.

Retain "Wall Mounting" Subparagraph below for wall-mounted wash fountains.

- i. Wall Mounting: [**Manufacturer's wall-mounting bracket**] [**and/or**] [**wash fountain carrier**] <**Insert type**>.

Retain "Floor Mounting" Subparagraph below for floor-mounted wash fountains.

- j. Floor Mounting: Manufacturer's floor bracket and wall bracket attached to [**reinforcement in**] [**concrete or block**] wall.

Copy "Wash Fountains, Corner Receptor - Stainless Steel, Floor or Wall Mounted" Subparagraph below and re-edit for each type of floor- or wall-mounted, stainless steel, corner-receptor wash fountain required.

Insert drawing designation. Use these designations on Drawings to identify each floor- or wall-mounted, stainless steel, corner-receptor wash fountain.

- 3. Wash Fountains, Corner Receptor - Stainless Steel, Floor or Wall Mounted <**Insert drawing designation**>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) Acorn Engineering Company; a Division of Morris Group International.
 - 2) Bradley Corporation.
 - 3) <**Insert manufacturer's name**>.
- b. Source Limitations: Obtain wash fountains from single source from single manufacturer.
- c. Standards:
 - 1) IAPMO IGC 156.
 - 2) ASME A112.18.1/CSA B125.1
 - 3) ASME A112.19.3/CSA 45.4.

d. Receptor:

Verify that option retained in "Nominal Side Width" Subparagraph below is available from listed manufacturers for wash fountain required.

- 1) Nominal Side Width: [**37 inches (940 mm)**] [**38 inches (965 mm)**] [**44 inches (1118 mm)**].

Caution: Retaining "Accessible in accordance with ICC A117.1" option in "Height to Rim" Subparagraph below may restrict selection in "Control" Subparagraph.

- 2) Height to Rim: [**Standard**] [**Juvenile**] [**Accessible in accordance with ICC A117.1**].
- 3) Color or Finish: [**Not applicable**] <Insert if required>.
- 4) Drain: Grid with **NPS 1-1/2 (DN 40)** tailpiece.

e. Spray Head:

- 1) Material: Stainless steel or integral part of receptor back.
- 2) Number of User Stations: <Insert number>.

Verify that option retained in "Control" Subparagraph below is available from listed manufacturers and for type of wash fountain required.

- 3) Control: [**Collective,**] [**Individual,**] [**foot-control**] [**pneumatic push-button**] [**infrared sensor**] [**low-voltage, mechanical metering**] <Insert type> actuation with [**pressure-balancing**] [**thermostatic**] mixing valve, and having check stops.

- f. Soap Dispensers: [**Not required**] [**Bracket only**] [**Foam**] [**Powdered**] [**Liquid**] <Insert type>, for each user station.

g. Supply Fittings:

- 1) Piping: [**NPS 1/2 (DN 15)**] [**NPS 3/4 (DN 20)**] copper tubing.
- 2) Valves: Shutoff valve on each supply.
- 3) Supply Piping: From wall.

h. Waste Fittings:

- 1) Trap and Drain Piping: **NPS 1-1/2 (DN 40)**.

Retain "Wall Mounting" Subparagraph below for wall-mounted wash fountains.

- i. Wall Mounting: [**Manufacturer's wall-mounting bracket**] [**and/or**] [**wash fountain carrier**] <Insert type>.

Retain "Floor Mounting" Subparagraph below for floor-mounted wash fountains.

- j. Floor Mounting: Manufacturer's floor bracket and wall bracket attached to [**reinforcement in**] [**concrete or block**] wall.

Caution: Although included in this Section, this product type may be found in "Lavatory Systems" Paragraph rather than "Commercial Wash Fountains" Article, depending on manufacturer. Lavatory

systems are completely integrated products that usually include sensor-operated faucets, sensor-operated soap dispensers, and electric deck-mounted hand dryers. Coordinate with "Commercial Lavatories" Article if a complete lavatory system is required. Linear wash fountains included below may have some of the same features as lavatory systems, but generally do not include deck-mounted hand dryers.

D. Wash Fountains, Linear Receptor:

Copy "Wash Fountains, Linear Receptor - Solid Surface" Subparagraph below and re-edit for each type of solid-surface, linear-receptor wash fountain required.

Insert drawing designation. Use these designations on Drawings to identify each solid-surface, linear-receptor wash fountain.

1. Wash Fountains, Linear Receptor - Solid Surface <Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) Acorn Engineering Company; a Division of Morris Group International.
 - 2) Aqua Design Manufacturing.
 - 3) Bradley Corporation.
 - 4) Sloan Valve Company.
 - 5) Willoughby Industries, Inc.
 - 6) <Insert manufacturer's name>.
- b. Source Limitations: Obtain wash fountains from single source from single manufacturer.
- c. Standards:
 - 1) ASME A112.18.1/CSA B125.1.
 - 2) CSA B45.5/IAPMO Z124.
 - 3) NSF 61.
 - 4) NSF 372.
 - 5) Uniform Plumbing Code, International Plumbing Code, and UL GREENGUARD certified.
- d. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- e. Bowl(s) and Counter:
 - 1) Material: Solid-surface or natural quartz surface.
 - 2) Height to Rim: [Standard] [Accessible in accordance with ICC A117.1] <Insert height>.
 - 3) Color or Finish: [Not applicable] <Insert if required>.
 - 4) Number of Bowls or User Stations: [One] [Two] [Three] [Four] <Insert number>.

- 5) Bowl Shape: [**Trough**] [**Edge**] [**Oval**] [**Round**] [**Square**] [**Rectangular**] <Insert shape>.
 - 6) Drain: Grid with **NPS 1-1/2 (DN 40)** tailpiece, each bowl.
- f. Apron: [**Not required**] [**Required, with access panel**].
- g. Faucets:
- 1) Type: Manufacturer's standard, chrome-plated solid brass, each bowl/station.

Verify option retained in "Control" Subparagraph below is available from listed manufacturers and for type of wash fountain required.

- 2) Control: [**Manual, push-button**] [**Hardwired, control-voltage, sensor-actuated**] [**Battery-powered, sensor-actuated**] <Insert type> actuation with [**pressure-balancing**] [**thermostatic**] mixing valve, and having check stops for each bowl or user station.
- h. Soap Dispensers: [**Not required**] [**Bracket only**] [**Manual**] [**Hardwired, control-voltage, sensor-actuated**] [**Battery-powered, sensor-actuated**] [, **liquid**] [, **foam**] [, **powdered**] <Insert type> dispenser for each user station.
- i. Mounting: [**Manufacturer's wall-mounting bracket**] [**and/or**] [**commercial floor-mounted carrier**] <Insert type>.
- j. Supply Fittings:
- 1) Piping: **NPS 1/2 (DN 15)** copper tubing, each bowl.
 - 2) Valves: Shutoff valve on each supply.
 - 3) Supply Piping: From wall.
- k. Waste Fittings:
- 1) Standard: ASME A112.18.2/CSA B125.2.
 - 2) Trap and Drain Piping: **NPS 1-1/2 (DN 40)**, each bowl.

Copy "Wash Fountains, Linear Receptor - Stainless Steel" Subparagraph below and re-edit for each type of stainless steel, linear-receptor wash fountain required.

Insert drawing designation. Use these designations on Drawings to identify each stainless steel, linear-receptor wash fountain.

2. Wash Fountains, Linear Receptor - Stainless Steel <Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) Acorn Engineering Company; a Division of Morris Group International.
 - 2) Aqua Design Manufacturing.
 - 3) Bradley Corporation.
 - 4) Willoughby Industries, Inc.

- 5) **<Insert manufacturer's name>**.
- b. Source Limitations: Obtain wash fountains from single source from single manufacturer.
- c. Standards:
 - 1) ASME A112.18.1/CSA B125.1.
 - 2) ASME A112.19.3/CSA B45.4.
 - 3) NSF 61.
 - 4) NSF 372.
 - 5) Uniform Plumbing Code, International Plumbing Code, and UL GREENGUARD certified.
- d. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- e. Bowl(s) and Counter:
 - 1) Material: Stainless steel.
 - 2) Height to Rim: [Standard] [Accessible in accordance with ICC A117.1] **<Insert height>**.
 - 3) Color or Finish: [Not applicable] **<Insert if required>**.
 - 4) Number of Bowls or User Stations: [One] [Two] [Three] [Four] **<Insert number>**.
 - 5) Bowl Shape: [Trough] [Oval] [Round] **<Insert shape>**.
 - 6) Drain: Grid with **NPS 1-1/2 (DN 40)** tailpiece, each bowl.
- f. Apron: [Not required] [Required, with access panel].
- g. Faucets:
 - 1) Type: Manufacturer's standard, chrome-plated solid brass, each bowl/station.

Verify option retained in "Control" Subparagraph below is available from listed manufacturers and for type of wash fountain required.

- 2) Control: [Manual, push-button] [Hardwired, control-voltage, sensor-actuated] [Battery-powered, sensor-actuated] **<Insert type>** actuation with [pressure-balancing] [thermostatic] mixing valve, and having check stops for each bowl or user station.
- h. Soap Dispensers: [Not required] [Bracket only] [Manual] [Hardwired, control-voltage, sensor-actuated] [Battery-powered, sensor-actuated] [, liquid] [, foam] [, powered] **<Insert type>** dispenser for each user station.
- i. Mounting: [Manufacturer's wall-mounting bracket] [and/or] [commercial floor-mounted carrier] **<Insert type>**.
- j. Supply Fittings:
 - 1) Piping: **NPS 1/2 (DN 15)** copper tubing, each bowl.
 - 2) Valves: Shutoff valve on each supply.
 - 3) Supply Piping: From wall.

k. Waste Fittings:

- 1) Standard: ASME A112.18.2/CSA B125.2.
- 2) Trap and Drain Piping: **NPS 1-1/2 (DN 40)**, each bowl.

2.8 FLUSHOMETER VALVES

Caution: Flushometer valve consumption must match the water consumption of the urinal or water closet to which it is paired.

Verify that manufacturer has specific flushometer valve feature(s) prior to including in Project.

A. Flushometer Valves, Manually Operated:

Copy "Flushometer Valves, Manually Operated - Diaphragm, Lever Handle" Subparagraph below and reedit for each type of manually operated, diaphragm, lever-handle flushometer valve required.

Insert designation. Use these designations on Drawings to identify each manually operated, diaphragm, lever-handle flushometer valve.

1. Flushometer Valves, Manually Operated - Diaphragm, Lever Handle **<Insert drawing designation>**:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) Advanced Modern Technologies Corporation - AMTC.
 - 2) American Standard.
 - 3) Delany Products.
 - 4) I-Con Systems, Inc.
 - 5) Sloan Valve Company.
 - 6) Zurn Industries, LLC.
 - 7) **<Insert manufacturer's name>**.
- b. Source Limitations: Obtain flushometer valve from single source from single manufacturer.
- c. Standard: ASSE 1037/ASME 112.1037/CSA B125.37.
- d. Minimum Pressure Rating: **125 psig (860 kPa)**.
- e. Features: Include integral check stop and backflow-prevention device.
- f. Material: Brass body with corrosion-resistant components.
- g. Style: Exposed.
- h. Flushometer-Valve Finish: Chrome-plated.
- i. Handle Finish: [**Chrome plated**] [**Antimicrobial**].
- j. Consumption: [**0.125 gal. (0.5 L)**] [**0.5 gal. (1.9 L)**] [**1.0 gal. (3.8 L)**] [**1.1 gal. (4.2 L)**] [**1.28 gal. (4.8 L)**] [**1.6 gal. (6 L)**] [**Dual flush 1.1 gal. (4.2 L)/1.28 gal. (4.8 L)**] [**Dual flush 1.1 gal. (4.2 L)/1.6 gal. (6 L)**] **<Insert value>** per flush.
- k. Minimum Inlet: [**NPS 3/4 (DN 20)**] [**NPS 1 (DN 25)**].

1. Minimum Outlet: [NPS 3/4 (DN 20)] [NPS 1-1/4 (DN 32)].

Copy "Flushometer Valves, Manually Operated - Piston, Lever Handle" Subparagraph below and re-edit for each type of manually operated, piston, lever-handle flushometer valve required.

Insert designation. Use these designations on Drawings to identify each manually operated, piston, lever-handle flushometer valve.

2. Flushometer Valves, Manually Operated - Piston, Lever Handle <Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1) American Standard.
 - 2) Delany Products.
 - 3) I-Con Systems, Inc.
 - 4) Kohler Co.
 - 5) Sloan Valve Company.
 - 6) TOTO USA, INC.
 - 7) Zurn Industries, LLC.
 - 8) <Insert manufacturer's name>.
- b. Source Limitations: Obtain flushometer valve from single source from single manufacturer.
- c. Standard: ASSE 1037/ASME 112.1037/CSA B125.37.
- d. Minimum Pressure Rating: 125 psig (860 kPa).
- e. Features: Include integral check stop and backflow-prevention device.
- f. Material: Brass body with corrosion-resistant components.
- g. Style: Exposed.
- h. Flushometer-Valve Finish: Chrome-plated.
- i. Handle Finish: [Chrome-plated] [Antimicrobial].
- j. Consumption: [0.125 gal. (0.5 L)] [0.5 gal. (1.9 L)] [1.0 gal. (3.8 L)] [1.1 gal. (4.2 L)] [1.28 gal. (4.8 L)] [1.6 gal. (6 L)] <Insert value> per flush.
- k. Minimum Inlet: [NPS 3/4 (DN 20)] [NPS 1 (DN 25)].
- l. Minimum Outlet: [NPS 3/4 (DN 20)] [NPS 1-1/4 (DN 32)].

- B. Flushometer Valves, Sensor Operated:

Copy "Flushometer Valves, Sensor Operated - Diaphragm" Subparagraph below and re-edit for each type of diaphragm, sensor-operated flushometer valve required.

Insert designation. Use these designations on Drawings to identify each diaphragm, sensor-operated flushometer valve.

1. Flushometer Valves, Sensor Operated - Diaphragm <Insert drawing designation>:

- a. [<Double click here to find, evaluate, and insert list of manufacturers and products.>](#)

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- b. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
- 1) Advanced Modern Technologies Corporation - AMTC.
 - 2) Delany Products.
 - 3) I-Con Systems, Inc.
 - 4) Sloan Valve Company.
 - 5) Zurn Industries, LLC.
 - 6) **<Insert manufacturer's name>**.
- c. Source Limitations: Obtain flushometer valve from single source from single manufacturer.
- d. Standard: ASSE 1037/ASME 112.1037/CSA B125.37.
- e. Minimum Pressure Rating: **125 psig (860 kPa)**.
- f. Features: Include integral check stop and backflow-prevention device.
- g. Material: Brass body with corrosion-resistant components.
- h. Style: [**Exposed**] [**Concealed**].

Retain "Exposed Flushometer-Valve Finish" Subparagraph below for exposed flushometer valves.

- i. Exposed Flushometer-Valve Finish: Chrome-plated.

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

- j. Panel Finish: Chrome-plated or stainless steel.
- k. Actuator: Side or top mounted; listed and labeled as defined in NFPA 70, by qualified testing agency, and marked for intended location and application.
- l. Trip Mechanism: [**Battery-powered**] [**Hardwired, control-voltage**] electronic sensor; listed and labeled as defined in NFPA 70, by qualified testing agency, and marked for intended location and application.
- m. Consumption: [**0.125 gal. (0.5 L)**] [**0.5 gal. (1.9 L)**] [**1.0 gal. (3.8 L)**] [**1.1 gal. (4.2 L)**] [**1.28 gal. (4.8 L)**] [**1.6 gal. (6 L)**] **<Insert value>** per flush.
- n. Minimum Inlet: [**NPS 3/4 (DN 20)**] [**NPS 1 (DN 25)**].
- o. Minimum Outlet: [**NPS 3/4 (DN 20)**] [**NPS 1-1/4 (DN 32)**].

Copy "Flushometer Valves, Sensor Operated - Piston, Hardwired" Subparagraph below and re-edit for each type of piston, sensor-operated, hardwired flushometer valve required.

Insert designation. Use these designations on Drawings to identify each piston, sensor-operated, hardwired flushometer valve.

2. Flushometer Valves, Sensor Operated - Piston, Hardwired **<Insert drawing designation>**:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

- a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
- 1) American Standard.
 - 2) Hydrotek International, Inc.
 - 3) I-Con Systems, Inc.
 - 4) Moen Incorporated.
 - 5) Sloan Valve Company.
 - 6) Stern Engineering Ltd.
 - 7) Zurn Industries, LLC.
 - 8) <Insert manufacturer's name>.
- b. Source Limitations: Obtain flushometer valve from single source from single manufacturer.
- c. Standard: ASSE 1037/ASME 112.1037/CSA B125.37.
- d. Minimum Pressure Rating: **125 psig (860 kPa)**.
- e. Features: Include integral check stop and backflow-prevention device.
- f. Material: Brass body with corrosion-resistant components.

Confirm retained manufacturers have the desired combination of exposed/concealed flush valve and associated exposed/concealed trip mechanism.

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

Retain "Exposed Flushometer-Valve Finish" Subparagraph below for exposed, flushometer valves.

- h. Exposed Flushometer-Valve Finish: Chrome-plated.

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

- i. Panel Finish: Chrome-plated or stainless steel.
- j. Trip Mechanism: Hardwired, control-voltage electronic sensor; listed and labeled as defined in NFPA 70, by qualified testing agency, and marked for intended location and application.

Retain one of last two options in "Consumption" Subparagraph below only if valve style is exposed.

- k. Consumption: [**0.125 gal. (0.5 L)**] [**0.5 gal. (1.9 L)**] [**1.0 gal. (3.8 L)**] [**1.1 gal. (4.2 L)**] [**1.28 gal. (4.8 L)**] [**1.6 gal. (6 L)**] [**Dual flush 1.1 gal. (4.2 L)/1.28 gal. (4.8 L)**] [**Dual flush 1.1 gal. (4.2 L)/1.6 gal. (6 L)**] <Insert value> per flush.
- l. Minimum Inlet: [**NPS 3/4 (DN 20)**] [**NPS 1 (DN 25)**].
- m. Minimum Outlet: [**NPS 3/4 (DN 20)**] [**NPS 1-1/4 (DN 32)**].

Copy "Flushometer Valves, Sensor Operated - Piston, Battery Powered" Paragraph below and re-edit for each type of battery-powered, piston, sensor-operated flushometer valve required.

Insert designation. Use these designations on Drawings to identify each battery-powered, piston, sensor-operated flushometer valve.

- C. Flushometer Valves, Sensor Operated - Piston, Battery Powered <Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. American Standard.
 - b. Hydrotek International, Inc.
 - c. I-Con Systems, Inc.
 - d. Kohler Co.
 - e. Moen Incorporated.
 - f. Sloan Valve Company.
 - g. Stern Engineering Ltd.
 - h. TOTO USA, INC.
 - i. Zurn Industries, LLC.
 - j. <Insert manufacturer's name>.
2. Source Limitations: Obtain flushometer valve from single source from single manufacturer.
3. Standard: ASSE 1037/ASME 112.1037/CSA B125.37.
4. Minimum Pressure Rating: 125 psig (860 kPa).
5. Features: Include integral check stop and backflow-prevention device.
6. Material: Brass body with corrosion-resistant components.

Confirm retained manufacturers have the desired combination of exposed/concealed flush valve and associated exposed/concealed trip mechanism.

7. Style: [Exposed] [Concealed].

Retain "Exposed Flushometer-Valve Finish" Subparagraph below for exposed, flushometer valves.

8. Exposed Flushometer-Valve Finish: Chrome plated.

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

9. Panel Finish: Chrome-plated or stainless steel.
10. Trip Mechanism: Battery-powered electronic sensor; listed and labeled as defined in NFPA 70, by qualified testing agency, and marked for intended location and application.
11. Consumption: [0.125 gal. (0.5 L)] [0.5 gal. (1.9 L)] [1.0 gal. (3.8 L)] [1.1 gal. (4.2 L)] [1.28 gal. (4.8 L)] [1.6 gal. (6 L)] [Dual flush 1.1 gal. (4.2 L)/1.28 gal. (4.8 L)] [Dual flush 1.1 gal. (4.2 L)/1.6 gal. (6 L)] <Insert value> per flush.
12. Minimum Inlet: [NPS 3/4 (DN 20)] [NPS 1 (DN 25)].
13. Minimum Outlet: [NPS 3/4 (DN 20)] [NPS 1-1/4 (DN 32)].

2.9 TOILET SEATS

Copy "Toilet Seats - Commercial" Paragraph below and re-edit for each type of toilet seat required.

Insert drawing designation. Use these designations to identify each toilet seat.

- A. Toilet Seats - Commercial <Insert drawing designation>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. American Standard.
 - b. Bemis Manufacturing Company.
 - c. Centoco Manufacturing Corporation.
 - d. Church Seats; Bemis Manufacturing Company.
 - e. Jones Stephens Corp.
 - f. Kohler Co.
 - g. ProFlo; a Ferguson Enterprises, Inc. brand.
 - h. TOTO USA, INC.
 - i. Zurn Industries, LLC.
 - j. **<Insert manufacturer's name>**.
2. Source Limitations: Obtain toilet seat from single source from single manufacturer.
3. Standard: IAPMO/ANSI Z124.5.
4. Material: Plastic.
5. Type: Commercial (heavy duty).
6. Shape: [**Elongated rim, open front**] [**Elongated rim, closed front**] **<Insert shape>**.
7. Hinge: [**Check**] [**Self-sustaining, check**].
8. Hinge Material: Noncorroding metal.
9. Seat Cover: [**Required**] [**Not required**].
10. Color: [**White**] **<Insert color>**.
11. Surface Treatment: [**Antimicrobial**] [**Not required**].

2.10 FIXTURE CARRIERS

Copy "Fixture Carriers - Lavatory" Paragraph below and re-edit for each type of lavatory fixture carrier required.

Insert drawing designation. Use these designations to identify each lavatory fixture carrier.

A. Fixture Carriers - Lavatory **<Insert drawing designation>**:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Jay R. Smith Mfg Co; a division of Morris Group International.
 - b. Josam Company.
 - c. MIFAB, Inc.
 - d. Wade; a subsidiary of McWane Inc.
 - e. WATTS; A Watts Water Technologies Company.
 - f. Zurn Industries, LLC.
 - g. **<Insert manufacturer's name>**!
2. Source Limitations: Obtain lavatory carriers from single source from single manufacturer.

3. Standards:
 - a. ASME A112.6.1M.
 - b. ASME A112.6.2.

Copy "Fixture Carriers - Sink" Paragraph below and re-edit for each type of sink carrier required.

B. Fixture Carriers - Sink **<Insert drawing designation>**:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Jay R. Smith Mfg Co; a division of Morris Group International.
 - b. Josam Company.
 - c. MIFAB, Inc.
 - d. Wade; a subsidiary of McWane Inc.
 - e. WATTS; A Watts Water Technologies Company.
 - f. Zurn Industries, LLC.
 - g. **<Insert manufacturer's name>**.
2. Source Limitations: Obtain sink carriers from single source from single manufacturer.
3. Standards:
 - a. ASME A112.6.1M.
 - b. ASME A112.6.2.

Copy "Fixture Carriers - Urinal" Paragraph below and re-edit for each type of urinal carrier required.

C. Fixture Carriers - Urinal **<Insert drawing designation>**:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Jay R. Smith Mfg Co; a division of Morris Group International.
 - b. Josam Company.
 - c. MIFAB, Inc.
 - d. Wade; a subsidiary of McWane Inc.
 - e. WATTS; A Watts Water Technologies Company.
 - f. Zurn Industries, LLC.
 - g. **<Insert manufacturer's name>**.
2. Source Limitations: Obtain urinal carriers from single source from single manufacturer.
3. Standard: ASME A112.6.1M.
4. Description: Waste-fitting assembly, as required to match drainage piping material and arrangement with faceplates, couplings, gaskets, and feet; bolts and hardware matching

fixture.[**Include additional extension coupling, faceplate, and feet for installation in wide pipe space.**]

Copy "Fixture Carriers - Water Closet" Paragraph below and re-edit for each type of water closet carrier required.

D. Fixture Carriers - Water Closet <**Insert drawing designation**>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Jay R. Smith Mfg Co; a division of Morris Group International.
 - b. MIFAB, Inc.
 - c. Wade; a subsidiary of McWane Inc.
 - d. WATTS; A Watts Water Technologies Company.
 - e. Zurn Industries, LLC.
 - f. <**Insert manufacturer's name**>.
2. Source Limitations: Obtain water closet carriers from single source from single manufacturer.
3. Standard: ASME A112.6.1M.
4. Description: Waste-fitting assembly, as required to match drainage piping material and arrangement with faceplates, couplings, gaskets, and feet; bolts and hardware matching fixture.[**Include additional extension coupling, faceplate, and feet for installation in wide pipe space.**]

Copy "Fixture Carriers - Wash Fountain" Paragraph below and re-edit for each type of wash fountain carrier required.

E. Fixture Carriers - Wash Fountain <**Insert drawing designation**>:

Retain "Manufacturers" Subparagraph and list of manufacturers below to require products from manufacturers listed or a comparable product from other manufacturers.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Jay R. Smith Mfg Co; a division of Morris Group International.
 - b. Josam Company.
 - c. MIFAB, Inc.
 - d. Wade; a subsidiary of McWane Inc.
 - e. WATTS; A Watts Water Technologies Company.
 - f. Zurn Industries, LLC.
 - g. <**Insert manufacturer's name**>.
2. Source Limitations: Obtain wash fountain carriers from single source from single manufacturer.
3. Standard: ASME A112.6.1M.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine roughing-in of water-supply piping and sanitary drainage and vent piping systems to verify actual locations of piping connections before plumbing fixture installation.
- B. Examine walls and floors for suitable conditions where plumbing fixtures will be installed.
- C. Examine counters for suitable conditions where lavatories and sinks will be installed.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION OF COMMERCIAL PLUMBING FIXTURES

Retain "Lavatory Installation" Paragraph below if lavatories are included in Project.

A. Lavatory Installation:

- 1. Install lavatories level and plumb in accordance with roughing-in drawings.
- 2. Install supports, affixed to building substrate, for wall-mounted lavatories.

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

- 3. Install accessible, wall-mounted lavatories at mounting height in accordance with ICC A117.1.
- 4. Install water-supply piping with stop on each supply to each lavatory faucet. Install stops in locations that are accessible for ease of operation.
- 5. Install trap and waste piping on each drain outlet of each lavatory to be connected to sanitary drainage system.
- 6. 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 220500 "Common Work Results for Plumbing."
- 7. Seal joints between lavatories, counters, 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."
- 8. Install protective shielding pipe covers and enclosures on exposed supplies and waste piping of accessible lavatories. Comply with requirements in Section 220719 "Plumbing Piping Insulation."

Retain "Shower Installation" Paragraph below if showers are included in Project.

B. Shower Installation:

- 1. Assemble shower components in accordance with manufacturers' written instructions.
- 2. Install showers level and plumb in accordance with roughing-in drawings.
- 3. Install ball[**or gate**] valves in water-supply piping to the shower if supply stops are specified with the shower valve. Comply with ball[**or gate**] valve requirements specified

in Section 220523 "General Duty Valves for Plumbing Piping." Install valves in locations that are accessible for ease of operation.

4. Install shower flow-control fittings with specified maximum flow rates in shower arms.
5. Set [**shower receptors**] [**and**] [**shower basins**] in leveling bed of cement grout.
6. 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 220500 "Common Work Results for Plumbing."
7. Showers, except Cast-Polymer Showers: Seal joints between showers, 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."
8. Cast-Polymer Showers: Adhere panels to drywall using shower manufacturer's recommended adhesive. Seal joints, between panels and between panels and adjacent drywall, using shower manufacturer's recommended caulking specific for each application. Match sealant to fixture color.

Retain "Sink Installation" Paragraph below if sinks are included in Project.

C. Sink Installation:

1. Install sinks level and plumb in accordance with roughing-in drawings.
2. Install supports, affixed to building substrate, for wall-mounted sinks.

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

3. Install accessible, wall-mounted sinks at mounting height in accordance with ICC A117.1.
4. Set floor-mounted sinks in leveling bed of cement grout.
5. Install water-supply piping with stop on each supply to each sink faucet.
 - a. Exception: Use ball or gate valves if supply stops are not specified with sink. Comply with valve requirements specified in Section 220523 "General Duty Valves for Plumbing Piping."
 - b. Install stops/valves in locations that are accessible for ease of operation.
6. Install trap and waste piping on each drain outlet of each sink to be connected to sanitary drainage system.
7. 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 220500 "Common Work Results for Plumbing."
8. Seal joints between sinks, 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."
9. 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."

Retain "Urinal Installation" Paragraph below if urinals are included in Project.

D. Urinal Installation:

1. Install urinals level and plumb in accordance with roughing-in drawings.
2. Install wall-hung, back-outlet urinals onto waste-fitting seals and attached to supports.
3. Install wall-hung, bottom-outlet urinals with tubular waste piping attached to supports.

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

4. Install accessible, wall-mounted urinals at mounting height in accordance with ICC A117.1.
5. Install trap-seal liquid in waterless urinals.
6. Install supports, affixed to building substrate, for wall-hung urinals.
7. Use off-floor carriers with waste fitting and seal for back-outlet urinals.
8. Use carriers without waste fitting for urinals with tubular waste piping.
9. Use chair-type carrier supports with rectangular steel uprights for accessible urinals.
10. Measure support height installation from finished floor, not structural floor.
11. Install flushometer-valve, water-supply fitting on each supply to each urinal.
12. Attach supply piping to supports or substrate within pipe spaces behind fixtures.
13. Install lever-handle flushometer valves for accessible urinals with handle mounted on open side of compartment.
14. Install actuators in locations easily reachable for people with disabilities.
15. Install new batteries in battery-powered, electronic-sensor mechanisms.
16. 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."
17. Seal joints between urinals, 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."

Retain "Water Closet Installation" Paragraph below if water closets are included in Project.**E. Water Closet Installation:**

1. Install water closets level and plumb in accordance with roughing-in drawings.
2. Install floor-mounted water closets on bowl-to-drain connecting fitting attachments to piping or building substrate.

Indicate on Drawings those water closets that are required to be accessible.

3. Install accessible, wall-mounted water closets at mounting height in accordance with ICC A117.1.
4. Install supports, affixed to building substrate, for floor-mounted, back-outlet water closets.
5. Use carrier supports with waste-fitting assembly and seal.
6. Install floor-mounted, back-outlet water closets, attached to building floor substrate, onto waste-fitting seals; and attach to support.
7. Install wall-mounted, back-outlet water-closet supports with waste-fitting assembly and waste-fitting seals, and affix to building substrate.
8. Measure support height installation from finished floor, not structural floor.
9. Install flushometer-valve, water-supply fitting on each supply to each water closet.
10. Attach supply piping to supports or substrate within pipe spaces behind fixtures.

11. Install lever-handle flushometer valves for accessible water closets with handle mounted on open side of water closet.
12. Install actuators in locations easily reachable for people with disabilities.
13. Install new batteries in battery-powered, electronic-sensor mechanisms.
14. Install toilet seats on water closets.
15. 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."
16. Seal joints between water closets, walls, and floors using sanitary-type, one-part, mildew-resistant silicone sealant. Match sealant color to water-closet color. Comply with sealant requirements specified in Section 079200 "Joint Sealants."

Retain "Wash Fountain Installation" Paragraph below if wash fountains are included in Project.

F. Wash Fountain Installation:

1. Install wash fountains level and plumb in accordance with roughing-in drawings.
2. Set freestanding wash fountains on floor.
3. Install off-floor carrier supports, affixed to building substrate, for wall-mounted wash fountains.

Indicate on Drawings those wash fountains that are required to be accessible.

4. Install accessible, wall-mounted wash fountains at mounting height in accordance with ICC A117.1.
5. Install water-supply piping with shutoff valve on each supply to each wash fountain faucet. Use ball or gate valves if supply stops are not specified with wash fountain. Comply with valve requirements specified in Section 220523 "General Duty Valves for Plumbing Piping." Install stops/valves in locations that are accessible for ease of operation.
6. Install trap and waste piping on each drain outlet of each wash fountain to be connected to sanitary drainage system.
7. 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 220500 "Common Work Results for Plumbing."
8. Seal joints between wash fountains, 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."
9. 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."

3.3 INSTALLATION OF 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.

- A. Connect plumbing fixtures with water supplies and soil, waste, and vent piping. Use size fittings required to match plumbing fixtures.
- B. Comply with water piping requirements specified in Section 221116 "Domestic Water Piping."
- C. Comply with soil, waste, and vent piping requirements specified in Section 221316 "Sanitary Waste and Vent Piping."
- D. Install protective-shielding pipe covers and enclosures on exposed supplies and waste piping of accessible plumbing fixtures. Comply with requirements in Section 220719 "Plumbing Piping Insulation."
- E. Where installing piping adjacent to water closets and urinals, allow space for service and maintenance.

3.4 INSTALLATION OF ELECTRICAL CONNECTIONS

- A. Connect wiring in accordance with Section 260519 "Low-Voltage Electrical Power Conductors and Cables."
- B. Ground equipment in accordance with Section 260526 "Grounding and Bonding for Electrical Systems."
- C. Install electrical devices furnished by manufacturer, but not factory mounted in accordance with NFPA 70 and NECA 1.
- D. Install nameplate for each electrical connection, indicating electrical equipment designation and circuit number feeding connection.

Retain one of two subparagraphs below. First subparagraph cross-references Section 260553 "Identification for Electrical Systems" and should be retained for consistent electrical identification. Second subparagraph is an abbreviated version of the product specified in Section 260553 "Identification for Electrical Systems."

- 1. Nameplate to be laminated acrylic or melamine plastic signs, as specified in Section 260553 "Identification for Electrical Systems."
- 2. Nameplate to be laminated acrylic or melamine plastic signs with a black background and engraved white letters at least [**1/2 inch (13 mm)**] <Insert dimensions> high.

3.5 INSTALLATION OF CONTROL CONNECTIONS

- A. Install control and electrical power wiring to field-mounted control devices.
- B. Connect control wiring in accordance with Section 260523 "Control-Voltage Electrical Power Cables."

3.6 ADJUSTING

- A. Operate and adjust plumbing fixtures and controls. Replace damaged and malfunctioning plumbing fixtures, fittings, and controls.
- B. Adjust water pressure at faucets to produce proper flow.
- C. Adjust water pressure at shower valves to produce proper flow.
- D. Adjust water pressure at flushometer valves to produce proper flow.
- E. Install new batteries in battery-powered, electronic-sensor mechanisms.

3.7 CLEANING AND PROTECTION

- A. After completing installation of plumbing fixtures, inspect and repair damage to finishes. Replace any fixtures unable to be repaired to the satisfaction of the [Architect] [Owner].
- B. Clean plumbing fixtures and associated faucets, valves, flushometer valves, and fittings with manufacturers' recommended cleaning methods and materials.
- C. Provide protective covering for installed plumbing fixtures and associated faucets, valves, flushometer valves, and fittings.
- D. Do not allow use of plumbing fixtures for temporary facilities unless approved in writing by Owner.

END OF SECTION 224200