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Bradley Plumbing Fixtures

Bradley is the industry's leading manufacturer of premium-quality commercial plumbing fixtures and washroom accessories. Bradley serves a diverse customer base ranging from small local facilities to international corporations such as WalMart, General Motors, U.S. Postal Service, W.W. Grainger, and AMC Theaters Corp. The company boasts the greatest breadth of commercial plumbing products in the world. Architects and specifiers look to Bradley for innovative products in categories such as:

[Washfountains](#)

[Multi-Station Lavatory Systems](#)

[Patient Care Lavatory Units](#)

[Commercial & Group Showers](#)

[Solid Plastic Locker Systems](#)

[Emergency Eyewash Fixtures and Drench Showers](#)

[Security Plumbing Fixtures](#)

[Terreon® Solid Surface Products](#)

[Commercial Faucets](#)

[Washroom Accessories](#)

[Washroom Partitions](#)

Bradley makes it easy to specify these products through a seasoned customer service staff and the best informational tools in the industry. Bradley is proud to be an AIA CES Registered Provider. For information on Bradley education programs, [click here](#). We recommend you consult with your regional Bradley representative, who can be contacted through: Bradley Corporation, Menomonee Falls, WI, 800-BRADLEY (800-272-3539), Email: info@bradleycorp.com, Website: www.bradleycorp.com.

Bradley is committed to the continuous improvement of our environmental management system and performance including resource conservation and pollution prevention. We are a member of the USGBC and have implemented many internal procedures to reduce waste and conserve resources in our manufacturing processes as well as continue to introduce products that support LEED credits.

Bradley products appear in the following CSI MasterFormat 2004™ Sections:

- Section 10 21 13 – Toilet Compartments
- Section 10 51 26 – Plastic Lockers
- Section 10 28 00 – Toilet, Bath, and Laundry Accessories
- Section 10 28 14 – Detention Toilet Accessories
- Section 22 11 19 – Domestic Water Piping Specialties
- Section 22 40 00 – Plumbing Fixtures
- Section 22 43 00 – Healthcare Plumbing Fixtures
- Section 22 45 00 – Emergency Plumbing Fixtures
- Section 22 46 00 – Security Plumbing Fixtures

Specifier: The specifier may select CSI MasterFormat 95 or MasterFormat 2004 section numbering as required.

SECTION 22 40 00 – PLUMBING FIXTURES

SECTION 15400 – PLUMBING FIXTURES

PART 1 - GENERAL

Specifier: Edit paragraphs below to correspond to scope of project.

1.1 SECTION INCLUDES

- A. Lavatories.

- B. Sinks.
- C. Washfountains.
- D. Showers.
- E. Faucets.
- F. Water closets.
- G. Urinals.

Specifier: Edit paragraphs below to correspond to project. Delete Article if not required.

1.2 RELATED SECTIONS

- A. Division 22 Section "Domestic Water Piping Specialties."
- B. Division 22 Section "Healthcare Plumbing Fixtures."
- C. Division 22 Section "Emergency Plumbing Fixtures."
- D. Division 22 Section "Security Plumbing Fixtures."

Specifier: Retain references below remaining in section following editing. For projects of limited scope, delete Article.

1.3 REFERENCES

- A. American National Standards Institute (ANSI):
 1. ANSI Z 124.3 - Plastic Lavatories.
 2. ANSI Z 124.6 - Plastic Sinks.
 3. ANSI/ICPA SS-1-2001 - Performance Standard for Solid Surface Materials.
- B. American Society of Sanitary Engineering (ASSE):
 1. ASSE 1014 - Hand-Held Showers.
 2. ASSE 1016 - Individual Thermostatic, Pressure Balancing and Combination Pressure.
- C. ASME International (ASME):
 1. ASME A112.18.1 - Plumbing Fixture Fittings.
 2. ASME A112.18.2 - Plumbing Fixture Waste Fittings.
 3. ASME A112.18.3M - Performance Requirements for Backflow Protection Devices and Systems in Plumbing Fixture Fittings.
 4. ASME A112.19.1M - Enameled Cast Iron Plumbing Fixtures.
 5. ASME A112.19.2M - Vitreous China Plumbing Fixtures.
 6. ASME A112.19.4M - Porcelain Enameled Formed Steel Plumbing Fixtures.
- D. ASTM International (ASTM):
 1. ASTM E 84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
 2. ASTM D 570 - Standard Test Method for Water Absorption of Plastics.
 3. ASTM D 638 - Standard Test Method for Tensile Properties of Plastics.
 4. ASTM D 696 - Standard Test Method for Coefficient of Linear Thermal Expansion of Plastics Between -30 degrees C and 30 degrees C With a Vitreous Silica Dilatometer.
 5. ASTM D 785 - Standard Test Method for Rockwell Hardness of Plastics and Electrical Insulating Materials.

- E. Canadian Standards Association (CSA):
 - 1. CSA B125 - (See ASME A112.18.1 - Plumbing Fixture Fittings).
- F. International Association of Plumbing and Mechanical Officials (IAPMO):
 - 1. Uniform Plumbing Code (UPC).
- G. International Code Council (ICC):
 - 1. ICC/ANSI A117.1 – Accessible and Usable Buildings and Facilities.
- H. National Fire Protection Association (NFPA):
 - 1. NFPA 70 - National Electrical Code.
- I. NSF International (NSF):
 - 1. NSF 61 - Drinking Water System Components - Health Effects.
- J. State of Texas:
 - 1. Texan Accessibility Standards (TAS).
- K. Underwriters Laboratories, Inc.
 - 1. UL 723 - Test For Surface Burning Characteristics of Building Materials.
 - 2. UL 1951 - Electric Plumbing Accessories.
- L. United States Green Building Council (USGBC):
 - 1. LEED Green Building Rating System (LEED).
- M. US Federal Government:
 - 1. Public Law 90-480 - Architectural Barriers Act. 1968 (ABA).
 - 2. Public Law 101-336 - Americans with Disabilities Act. 1990.
 - 3. Public Law 102-486 - Energy Policy Act. 1992.
 - 4. U.S. Architectural & Transportation Barriers Compliance Board. Americans with Disabilities Act (ADA), Accessibility Guidelines for Buildings and Facilities (ADAAG).

1.4 SUBMITTALS

- A. Product Data: Manufacturer’s data sheets, installation instructions, and maintenance recommendations.
- B. Product Test Reports: Indicating compliance of products with requirements, from a qualified independent testing agency, when requested by Architect.
- C. Shop Drawings: Prepared by manufacturer. Include rough-in requirements and power, signal, and control wiring diagrams.
- D. Operation and Maintenance Data.

Specifier: Retain applicable paragraphs below for projects intended to be LEED-certified. Verify credits required.

- E. LEED Submittals:
 - 1. Credits WE 3.1/3.2: Provide product data and site inspection reports verifying plumbing fixture water flow performance meets design requirements.
 - 2. Credit ID 1: Provide product data and test results documenting performance of photovoltaic cell-powered sensor-controlled faucet system.

1.5 QUALITY ASSURANCE

- A. **Manufacturer Qualifications:** Approved manufacturer listed in this section, with minimum [5] years experience in the manufacture of plumbing fixtures. Manufacturers seeking approval must submit the following:
 - 1. Product data, including test data from qualified independent testing agency indicating compliance with requirements.
 - 2. Samples of each component of product specified.
 - 3. List of successful installations of similar products available for evaluation by Architect.
 - 4. Submit substitution request not less than 15 days prior to bid date.
- B. **Source Limitations:** Obtain each type of plumbing fixture and compatible accessories through one source from a single approved manufacturer.

Specifier: Bradley offers handicapped-accessible fixtures meeting requirements of ADA, ICC A117.1, and Texas Accessibility Standards.

- C. **Accessibility Requirements:** Comply with requirements of ADA/ABA and with requirements of authorities having jurisdiction.
- D. **Water Flow and Consumption Requirements:** Comply with Public Law 102-486 "Energy Policy Act."
- E. **Drinking Water Standard:** Comply with NSF 61, "Drinking Water System Components – Health Effects," where applicable.
- F. **Electrical Components:** Listed and labeled per NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle components of sound-conditioned practice rooms in accordance with manufacturer's recommendations. Ship to jobsite only after roughing-in, painting work, and other related finish work has been completed and installation areas are ready to accept units and recommended temperature and humidity levels will be maintained during the remainder of construction.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. **Basis of Design:** Plumbing fixture selections are based upon the manufacturer below. Provide basis of design products[, or comparable product of a listed manufacturer approved by the Architect prior to bid].
 - 1. Bradley Corporation, Menomonee Falls, WI; Telephone: (800)272-3539; Email: info@bradleycorp.com, Website: www.bradleycorp.com.
 - 2. [Specifier: Insert comparable manufacturers if required.]

2.2 MATERIALS

Specifier: Below describes Terreon®, Bradley's densified solid surface vandal-resistant material, noted for its resistance to chemicals, stains, burns and impacts. Surface damage can be easily repaired with everyday cleansers or fine grit abrasives.

- A. **Solid Surface Material:** Where indicated as constructed of solid surface material, fabricate plumbing fixtures from thermoset acrylic modified polyester resin certified by approved

independent testing agency as complying with ANSI/ICPA-SS-1-2001, ANSI Z124.3, and ANSI Z124.6, with the following minimum properties:

1. Thickness: 1/2 inch (13 mm), minimum.
2. Liquid Absorption: 0.025 percent in 24 hours, per ASTM D 570.
3. Tensile Strength: 5000 psi (34 MPa), minimum, per ASTM D 638.
4. Thermal Expansion: 2.30, per ASTM D 696.
5. Hardness: 55-60, per ASTM D 785.
6. Fire Resistance: Class 1, per ASTM E 84.
7. Basis of Design Product: **Bradley, Terreon®**, or a comparable product fabricated from one of the following materials:
 - a. DuPont™, Corian® Products.
 - b. Wilsonart® International, Inc., Gibraltar® Products.

2.3 LAVATORIES, SINGLE-STATION

- A. Wall-mounted, Accessible, Single-Station Lavatory Fixture LAV#_: Constructed of solid surface material with circular bowl [and soap dispenser]. Unit includes waste and supply connections to wall with stop, strainer, and check valves [, concealed by ABS plastic access panel/trap cover] [, concealed by stainless steel access panel/trap cover].
1. Faucet: Sensor-operated, vandal-resistant low profile faucet, with 110/24 VAC plug-in transformer. Basis of Design Manufacturer/Model: Bradley, Aerada™ 900 Series Futura [specifier insert other faucet selection]

Specifier: Faucet above is standard. See Faucet Article in this specification for other Bradley faucet options. Delete above and edit and retain below if spray head option is required

2. Spray Head: Independent water stream former with flow rate of 0.5 gpm (0.032 L/s) at operating range of 20 to 80 psi (138 to 552 kPa).

Specifier: Select one of three spray head valve operation options below. Select power source option for infrared sensing module.

- a. Spray Head Valve Operation: Infrared sensing module and solenoid with adjustable turn off delay and automatic shut-off, [with 110/24 VAC plug-in transformer] [battery operated].
 - b. Spray Head Valve Operation: Pushbutton air valve metering with adjustable timing.
 - c. Spray Head Valve Operation: Light-touch, 10 second auto shutoff.
3. Water Supply: [Single tempered line] [Thermostatic mixing valve assembly].
 4. Color: As selected by Architect from manufacturer's full line.
 5. Basis of Design Manufacturer/Model: **Bradley, Express Model SS-1N.**

Specifier: **Bradley Frequency® lavatory systems** described below feature a concave or convex shape that creates a contemporary "wave" design when mounted side by side, the concave unit meeting accessibility requirements while the convex unit providing ergonomically-correct wash station height for other adult users. Frequency lavatories come in 26 colors and are equipped with sensor-controlled faucets, with optional soap dispensers, thermostatic mixing valves, and point-of-use hot water heaters. Bradley also offers towel dispensers, mirrors, and waste receptacles with coordinated Frequency design features – specified in Division 10 Section "Toilet, Bath, and Laundry Accessories."

- B. Wall-mounted, Accessible, Single-Station Lavatory LAV#_: Constructed of solid surface material with [convex] [concave] contoured deck, integral ergonomic bowl, and coved integral

backsplash, with sensor faucets, [and liquid soap dispensers]. Unit includes waste and supply connections to wall with stop, strainer, and check valves, and heavy-gage stainless steel support brackets, concealed by textured polystyrene trap enclosure.

1. Overall Unit Size: 30 by 22 inches (762 by 559 mm).
2. Bowl Size: Rectangular with rounded front: 17 by 13 inches (432 by 330 mm) on 30 inch (762 mm) center.

Bowl Height (Standard): Overall unit height adjustable to meet juvenile height requirements and to comply with accessibility requirements of authorities having jurisdiction. Specifier: Faucet below is standard. See Faucet Article in this specification for other Bradley faucet options.

3. Faucet: With Infrared Sensor Metering Control[, with 110/24 VAC plug-in transformer] [battery operated]: Basis of Design Manufacturer/Model: Bradley, [Aerada 1100 Series Low Arc] [specifier insert other faucet selection].
 4. Liquid Soap Dispenser: Vandal-resistant, deck-mounted infrared-controlled dispenser with removable filler collar: Basis of Design Manufacturer/Model: Bradley, Model No. 6334.
 5. Water Supply: [Single tempered line] [Thermostatic mixing valve assembly].
 6. Hot Water Heater: Thermostatic electric tankless water heater with micro-processing temperature control providing temperature accuracy of +/- 1 deg. F (0.56 deg. C), flow switch activated, with replacement cartridge element, providing minimum temperature rise of 65 deg. F at 1 gpm (36 deg. C at 3.8 l/m).
 - a. Basis of Design Manufacturer/Model: Bradley, Model [EX55TMLB, 23A/240VAC] [EX60TMLB, 22A/277VAC].
 7. Bowl/deck Color: As selected by Architect from manufacturer's full line.
 8. Trap Enclosure Color: As selected by Architect from manufacturer's full line.
 9. Basis of Design Manufacturer/Model: **Bradley, Frequency Lavatory System.**
- C. Wall-mounted, Accessible, Single-Station Lavatory Fixture LAV#_: Constructed of solid surface material with water overflow and ledged back, drain, strainer, and tailpiece.
1. Fixture Size: 21 by 18 inch (533 by 457 mm).
 2. Faucet: Low-Profile Faucet with Infrared Sensor Metering Control[, with 110/24 VAC plug-in transformer] [battery operated] . Basis of Design Manufacturer/Model: Bradley, Aerada 900 Series Futura [specifier insert other faucet selection].
 3. Water Supply: [Single tempered line] [Thermostatic mixing valve assembly].
 4. Color: As selected by Architect from manufacturer's full line.
 5. Basis of Design Manufacturer/Model: **Bradley, Terreon Imperial Lavatory TL-18.**
- D. Wall-mounted, Single-Station Stainless Steel Food Service Lavatory Fixture LAV#_: Constructed of 300 stainless steel with safety angled corners, 8 inch (203 mm) backsplash, fast-install wall bracket, drain, strainer, and tailpiece.
1. Fixture Size: 18 by 17 3/16 inch (458 by 437 mm).
 2. Faucet: Sensor-Operated, Gooseneck Metering Faucet with Infrared Control [, with 120/24 VAC plug-in transformer] [battery operated]. Basis of Design Manufacturer/Model: Bradley, Aerada 1000 Series Gooseneck.
 3. Water Supply: [Single tempered line] [Thermostatic mixing valve assembly].
 4. Basis of Design Manufacturer/Model: **Bradley, Stainless Steel Food Service Lavatory.**

Specifier: Retain and edit below for other types of single-station lavatory products when required by project.

- E. [Wall-mounted] [Wall-and-pedestal-mounted] [, Accessible] Lavatory LAV#_: [Enameled cast-iron, ASME A112.19.1M] [Vitreous china, ASME A112.19.2M]; Size: 20 by 18 inches (508 by 457 mm); Color: White.
1. Basis of Design Manufacturer/Model: [Specifier: insert manufacturer/model].

Specifier: Bradley multiple-user lavatory systems described below are constructed of Terreon solid-surface material. The lavatories serve up to 3 users at a time, handling washroom traffic quickly and economically while providing each user with their own space. Lavatory bowls are positioned on 30 inch centers. The preassembled spray head modules are equipped with independent stream formers, each served by a separate infrared sensor or push-button. Standard flow rate of .5 GPM meets industry standard for water conservation while providing enough water to rinse hands quickly and efficiently. Operating range is 20-80 PSI.

Bradley multi-user lavatory decks are supported by a fully-enclosed stainless steel frame that houses the lavatory P-trap and tailpiece, flexible stainless steel supply connections, optional Bradley Vernatherm thermostatic mixing valve with integral strainers and external checkstops, and optional transformer for infrared sensor control.

2.4 LAVATORIES, MULTIPLE USER SYSTEMS

Specifier: **Bradley Express® SS-Series lavatory systems** described below feature a Terreon continuous bowl with semi-circular wash stations. Express SS-Series lavatory systems are now available powered by Bradley's innovative **ndite™** sustainable technology – see note below.

Select floor supported option when wall supported installation is not available.

- A. [Wall-mounted, Floor-supported,] [Wall-mounted,] Accessible, [2] [3] Station Lavatory LAV#_: Constructed of solid surface material with integral semi-circular continuous bowls, deck, and ledge containing concealed, vandal-resistant spray head [and liquid soap dispenser]. Unit includes waste and supply connections to wall with stop, strainer, and check valves, and stainless steel support frame, concealed by acrylic laminate pedestal enclosure. ADA/ABA, ANSI A117.1, and TAS compliant. IPC/cUPC-certified by IAPMO.
1. Overall Unit Size: [50 by 21-1/8 inch (1270 by 537 mm) with 2 bowls] [80 by 21-1/8 inch (2032 by 537 mm) with 3 bowls].
 2. Bowl Size: 16 inch (406 mm) diameter.
 3. Spray Head: Independent water stream former with flow rate of 0.5 gpm (0.032 L/s) at operating range of 20 to 80 psi (138 to 552 kPa).

Specifier: Select one of three spray head valve operation options below. Select power source option for infrared sensing module.

- a. Spray Head Valve Operation: Infrared sensing module and solenoid with adjustable turn off delay and automatic shut-off, [with 110/24 VAC plug-in transformer] [battery operated] [with battery-free integral photovoltaic power cell].
 - b. Spray Head Valve Operation: Pushbutton air valve metering with adjustable timing.
 - c. Spray Head Valve Operation: Light-touch, 10 second auto shutoff.
4. Water Supply: [Single tempered line] [Single thermostatic mixing valve]

Specifier: If including point-of-use hot water heater option below, select 95 series for 2-bowl units and 110 series for 3-bowl units.

5. Hot Water Heater: Thermostatic electric tankless water heater with micro-processing temperature control providing temperature accuracy of +/- 1 deg. F (0.56 deg. C), flow

switch activated, with replacement cartridge element, providing minimum temperature rise of 65 deg. F at 1 gpm (36 deg. C at 3.8 l/m).

- a. Basis of Design Manufacturer/Model: Bradley, Model [EX95TMLB, 40A/240VAC] [EX100TMLB, 36A/277VAC][EX110TMLB, 46A/240VAC] [EX110TMLB, 40A/277VAC].
6. Bowl/Spray Head Color: As selected by Architect from manufacturer's full line.
7. Pedestal Enclosure Color: As selected by Architect from manufacturer's full line.
8. Accessories: Matching solid surface material: [Extensions] [Purse Shelves] [Waste Receptacles] [Splashes and Aprons] as indicated.
9. Basis of Design Manufacturer/Model: **Bradley, Express Lavatory System, SS-series.**

Specifier: **Bradley Express® MG-Series lavatory systems** described below feature a continuous bowl with contemporary flowing "wave" design wash stations and a matching contoured spray head shelf. The angle-formed wall mount pedestal completes the contemporary design of the MG-series.

Express MG-Series lavatory systems are now available powered by Bradley's innovative **ndite™** sustainable technology – see note below.

- B. Wall-mounted, Accessible, [2] [3] Station Lavatory LAV#_: Constructed of solid surface material with integral wave-formed continuous bowl, contoured deck, and ledge containing concealed, vandal-resistant spray head [and liquid soap dispenser]. Unit includes waste and supply connections to wall with stop, strainer, and check valves, and stainless steel support frame, concealed by acrylic laminate pedestal enclosure. ADA/ABA, ANSI A117.1, and TAS compliant. IPC/cUPC-certified by IAPMO.
 1. Overall Unit Size: [54 by 22 inch (1372 by 559 mm) with 2 bowls] [84 by 21-1/8 inch (2134 by 537 mm) with 3 bowls].
 2. Bowl Size: 16-inch (406 mm) diameter.
 3. Spray Head: Independent water stream former with flow rate of 0.5 gpm (0.032 L/s) at operating range of 20 to 80 psi (138 to 552 kPa).

Specifier: Select one of three spray head valve operation options below.

Select power source type for infrared option. Third IR power source type is Bradley's patented **ndite™** sustainable technology using daylight or room lighting to eliminate need for batteries or separate electrical power source for spray head sensors.

- a. Spray Head Valve Operation: Infrared sensing module and solenoid with adjustable turn off delay and automatic shut-off, [with 110/24 VAC plug-in transformer] [battery operated] [with battery-free integral photovoltaic power cell].
- b. Spray Head Valve Operation: Pushbutton air valve metering with adjustable timing.
- c. Spray Head Valve Operation: Light-touch, 10 second auto shutoff.
4. Water Supply: [Single tempered line] [Single thermostatic mixing valve]

Specifier: If including point-of-use hot water heater option below, select 95 series for 2-bowl units and 110 series for 3-bowl units.

5. Hot Water Heater: Thermostatic electric tankless water heater with micro-processing temperature control providing temperature accuracy of +/- 1 deg. F (0.56 deg. C), flow switch activated, with replacement cartridge element, providing minimum temperature rise of 65 deg. F at 1 gpm (36 deg. C at 3.8 l/m).

- a. Basis of Design Manufacturer/Model: Bradley, Model [EX95TMLB, 40A/240VAC] [EX100TMLB, 36A/277VAC][EX110TMLB, 46A/240VAC] [EX110TMLB, 40A/277VAC].
6. Bowl/Spray Head Color: As selected by Architect from manufacturer's full line.
7. Pedestal Enclosure Color: As selected by Architect from manufacturer's full line.
8. Accessories: Matching solid surface material: [Extensions] [Purse Shelves] [Waste Receptacles] [Splashes and Aprons] as indicated.
9. Basis of Design Manufacturer/Model: **Bradley, Express Lavatory System, MG-series.**

Specifier: **Bradley Frequency® lavatory systems** described below feature two or three individual multi-height bowls in a continuous, contemporary "wave" design deck, meeting accessibility requirements while providing ergonomically-correct wash station height for other adult users. Frequency lavatories come in 20 colors and are equipped with sensor-controlled faucets, with optional soap dispensers, thermostatic mixing valves, and point-of-use hot water heaters. Bradley also offers towel dispensers, mirrors, and waste receptacles with coordinated Frequency design features – specified in Division 10 Section "Toilet, Bath, and Laundry Accessories."

- C. Wall-mounted, Multi-Level, Accessible, [2] [3] Station Lavatory LAV#_: Constructed of solid surface material with wave-formed contoured deck, integral ergonomic multi-height bowls, and coved integral backsplash, with sensor faucets, [and liquid soap dispensers]. Unit includes waste and supply connections to wall with stop, strainer, and check valves, and heavy-gage stainless steel support brackets, concealed by textured polystyrene trap enclosure.
 1. Overall Unit Size: [60 by 22 inches (1524 by 559 mm) with 2 bowls] [90 by 22 inches (2286 by 559 mm) with 3 bowls].
 2. Bowl Size: Rectangular with rounded front: 17 by 13 inches (432 by 330 mm) on 30 inch (762 mm) centers.
 3. Bowl Height (Standard): Low bowl: 32 inch (813 mm); High bowl: 36 inch (914 mm), with overall unit height adjustable to meet juvenile height requirements and to comply with accessibility requirements of authorities having jurisdiction.

Specifier: Faucet below is standard. See Faucet Article in this specification for other Bradley faucet options.

4. Faucet: With Infrared Sensor Metering Control[, with 110/24 VAC plug-in transformer] [battery operated]: Basis of Design Manufacturer/Model: Bradley, [Aerada 1100 Series Low Arc] [specifier insert other faucet selection].
5. Liquid Soap Dispenser: Vandal-resistant, deck-mounted infrared-controlled dispenser with removable filler collar: Basis of Design Manufacturer/Model: Bradley, Model No. 6334.
6. Water Supply: [Single tempered line] [Thermostatic mixing valve assembly].

Specifier: If including point-of-use hot water heater option below, select 95 or 100 series for 2-bowl units and 110 series for 3-bowl units.

7. Hot Water Heater: Thermostatic electric tankless water heater with micro-processing temperature control providing temperature accuracy of +/- 1 deg. F (0.56 deg. C), flow switch activated, with replacement cartridge element, providing minimum temperature rise of 65 deg. F at 1 gpm (36 deg. C at 3.8 l/m).
 - a. Basis of Design Manufacturer/Model: Bradley, Model [EX95TMLB, 40A/240VAC] [EX100TMLB, 36A/277VAC][EX110TMLB, 46A/240VAC] [EX110TMLB, 40A/277VAC].
8. Bowl/deck Color: As selected by Architect from manufacturer's full line.

9. Trap Enclosure Color: As selected by Architect from manufacturer's full line.
10. Basis of Design Manufacturer/Model: **Bradley, Frequency Lavatory System.**

Specifier: **Bradley Express Crescent lavatory system** described below features a space-saving, crescent-shaped bowl with semi-circular wash station and integral concealed spray heads serving multiple users, a low-profile flush deck for accepting an optional soap dispenser, and an optional contoured pedestal enclosure concealing supply connections, optional transformer, and trap. ADA and TAS compliant.

- D. Wall-mounted, Accessible, [2] [3] Station Lavatory LAV#__: Constructed of solid surface material with compact, crescent-shaped, low-profile deck and ledge containing concealed, vandal-resistant spray heads [and soap dispenser]. Unit includes waste and supply connections to wall with stop, strainer, and check valves [concealed by ABS plastic access panel/trap cover].
 1. Spray Heads: Independent water stream former with flow rate of 0.5 gpm (0.032 L/s) at operating range of 20 to 80 psi (138 to 552 kPa).
 2. Spray Head Valve Operation: Infrared sensing module and solenoid with adjustable turn off delay and automatic shut-off, [with 110/24 VAC plug-in transformer] [battery operated].
 3. Water Supply: [Tempered line] [Thermostatic mixing valve assembly] [Manual mixing valve].
 4. Bowl/deck Color: As selected by Architect from manufacturer's full line.
 5. Pedestal enclosure color: As selected by Architect from manufacturer's full line.
 6. Basis of Design Manufacturer/Model: **Bradley, Express Crescent Lavatory System, CRS-series.**

Specifier: **Bradley Express Deck lavatory systems** described below feature a continuous bowl with semi-circular wash stations, a flush deck for accepting individual wash station faucets and optional soap dispensers, and an angled pedestal enclosure concealing frame, supply connections, and trap.

- E. [Wall-mounted, Floor-supported,] [Wall-mounted,] Accessible, [2] [3] Station Lavatory LAV#__: Constructed of solid surface material with integral semi-circular continuous bowls and deck, with deck mounted faucets [and liquid soap dispensers]. Unit includes waste and supply connections to wall with stop, strainer, and check valves, and heavy-gage stainless steel support frame, concealed by acrylic laminate pedestal enclosure [and scuff base].

Specifier: Faucet below is standard. See Faucet Article in this specification for other Bradley faucet options.

1. Faucet: Low-Profile Faucet with Infrared Sensor Metering Control [with 110/24 VAC plug-in transformer] : Basis of Design Manufacturer/Model: Bradley, Aerada 900 Series Futura [specifier insert other faucet selection].
2. Water Supply: [Single tempered line] [Thermostatic mixing valve assembly].
3. Soap Dispenser: [16 oz. (473 mL)] [32 oz. (946 mL)] [stainless steel] [plastic] globe, with 4 inch (102 mm) spout.
4. Bowl/deck Color: As selected by Architect from manufacturer's full line.
5. Pedestal Enclosure Color: As selected by Architect from manufacturer's full line.
6. Basis of Design Manufacturer/Model: **Bradley, Express Deck Lavatory System, EXD-series.**

Specifier: **Bradley Terreon Lavatory Deck** described below features two integral bowls, contoured deck accepting individual wash station faucets and optional soap dispensers, and an optional trap cover concealing supply connections and trap. Deck extensions with or without waste receptacles are optional.

Terreon Lavatory Deck may be supported by wall mount brackets (supplied), or by using in-wall carriers or wall cleats (supplied by others).

- F. Wall-mounted, Accessible, 2-Station Lavatory Deck LAV#_: Constructed of solid surface material with integral oval bowls, contoured front apron, covered backsplash[, and side splashes], with deck mounted faucets[and liquid soap dispensers]. Unit includes waste and supply connections to wall[, concealed by acrylic laminate trap cover].

Specifier: Faucet below is standard. See Faucet Article in this specification for other Bradley faucet options.

1. Configuration: [2-bowl] [, with extended deck as indicated] [, with 21 gal. (78 L) stainless steel waste receptacle in extended deck as indicated].
2. Overall Unit Size: 60 by 24 inches (1524 by 610 mm) with 2 bowls.
3. Bowl Size: 16 by 13 by 5 3/4 inches (406 by 330 by 145 mm) on 30-inch (762 mm) centers.
4. Faucet: Low-Profile Faucet with Infrared Sensor Metering Control[, with 110/24 VAC plug-in transformer] : Basis of Design Manufacturer/Model: Bradley, Aerada 900 Series Futura [specifier insert other faucet selection].
5. Water Supply: [Single tempered line] [Thermostatic mixing valve assembly].
6. Soap Dispenser: 2: [16 oz. (473 mL)] [32 oz. (946 mL)] [stainless steel] [plastic] globe, with 4 inch (102 mm) spout.
7. Deck Support: [Stainless steel mounting brackets] [In-wall carriers] [Wall cleats] [Casework specified elsewhere].
8. Deck Color: As selected by Architect from manufacturer's full line.
9. Bowl Color: [Match deck color] [As selected by Architect from manufacturer's full line].
10. Pedestal Enclosure Color: As selected by Architect from manufacturer's full line.
11. Basis of Design Manufacturer/Model: **Bradley, Terreon Lav Deck, 3060-series.**

Specifier: **Bradley Terreon Lavatory Deck** described below features integral bowls, deck accepting individual wash station faucets and optional soap dispensers, and an optional trap cover concealing supply connections and trap. Deck extensions with or without waste receptacles are optional. Terreon Lavatory Deck may be supported by wall mount brackets (supplied), or by using in-wall carriers or wall cleats (supplied by others).

- G. Wall-mounted, Accessible, Lavatory Deck LAV#_: Constructed of solid surface material with integral oval bowls, covered backsplash[, and side splashes], with deck mounted faucets[and liquid soap dispensers]. Unit includes waste and supply connections to wall[, concealed by acrylic laminate trap cover].

1. Configuration: [1] [2] [3] [4] [5] station deck, [with extended deck as indicated].
2. Bowl Size: 16 by 13 by 5 3/4 inches (406 by 330 by 145 mm) on 30-inch (762 mm) centers.

Specifier: Faucet below is standard. See Faucet Article in this specification for other Bradley faucet options.

3. Faucet: Low-Profile Faucet with Infrared Sensor Metering Control[, with 110/24 VAC plug-in transformer]: Basis of Design Manufacturer/Model: Bradley, Aerada 900 Series Futura [specifier insert other faucet selection].
4. Water Supply: [Single tempered line] [Thermostatic mixing valve assembly].
5. Soap Dispenser: [16 oz. (473 mL)] [32 oz. (946 mL)] [stainless steel] [plastic] globe, with 4 inch (102 mm) spout[, sensor-operated].

6. Deck Support: [Stainless steel mounting brackets] [In-wall carriers] [Wall cleats] [Casework specified elsewhere].
7. Deck Color: As selected by Architect from manufacturer's full line.
8. Bowl Color: [Match deck color] [As selected by Architect from manufacturer's full line].
9. Pedestal Enclosure Color: As selected by Architect from manufacturer's full line.
10. Basis of Design Manufacturer/Model: **Bradley, Terreon Lav Deck, 3010-series.**

2.5 SINKS, INTEGRAL WITH COUNTERTOPS

Specifier: **Bradley Terreon Classroom Sink** described below features Terreon deck including one or two integral classroom sink(s), accepting faucets and optional soap dispenser, drinking fountain, and waste receptacle openings. Terreon Lav Deck is supported by casework supplied by others. Complies with accessibility requirements when mounted at required height on accessible casework.

- A. Casework-Mounted Sink SNK#_: Constructed of solid surface material with integral bowl, contoured front apron, coved backplash[, and side splashes], [, and perimeter drip ledge], with deck mounted faucets[, liquid soap dispensers] [, and waste receptacle openings]. Unit includes waste and supply connections to wall[, concealed by acrylic laminate trap cover].
 1. Bowl Size: [16 by 21 inch (406 by 533 mm)], [3-1/2 inch (89 mm)] [5-1/2 inch (140 mm)] [8 inch (203 mm)] deep [Deck less bowl].
 2. Bowl Size: [10 by 14 inch (254 by 356 mm)], 8 inch (203 mm) deep.
 3. Deck Color: As selected by Architect from manufacturer's full line.
 4. Bowl Color: [Match deck color] [As selected by Architect from manufacturer's full line].

Specifier: Faucet below is standard. See Faucet Article in this specification for other Bradley faucet options.

5. Faucet: Gooseneck, 10 inch (254 mm) high, with infrared sensor metering control[, with 110/24 VAC plug-in transformer] [battery operated]: Basis of Design Manufacturer/Model: Bradley, Aerada 1000 Series Gooseneck [specifier insert other faucet selection].
6. Drinking Fountain: [Lever activated] [Push button activated].
7. Soap Dispenser: 2: [16 oz. (473 mL)] [32 oz. (946 mL)] [stainless steel] [plastic] globe, with 4 inch (102 mm) spout.
8. Basis of Design Manufacturer/Model: **Bradley, Terreon Classroom Sink.**

Specifier: Retain and edit below for sink products when required by project.

2.6 SINKS

- A. Kitchen Sinks SNK#_: [One] [Two] [Three]-bowl, [stainless-steel] [enameled, cast-iron] [porcelain-enameled, formed-steel] [solid-surface] residential kitchen sink, counter-mounted, with [disposer fitting] [dishwasher air gap fitting] [hot water dispenser]. Size: 33 by 22 by 8-1/4 inch (838 by 559 by 209 mm). Color: [Insert color if required].
 1. Faucet: Kitchen sink [Insert faucet description].
 2. Basis of Design Manufacturer/Model: [Specifier: insert manufacturer/model for sink and faucet].
- B. Service Sinks SNK#_: [Enameled, cast-iron] [Vitreous china] trap standard service sink, wall-mounting. Size: 22 by 18 inches (560 by 460 mm). Color: White.
 1. Faucet: Sink [Insert faucet description].

2. Basis of Design Manufacturer/Model: [Specifier: insert manufacturer/model for sink and faucet].
- C. Laundry Trays SNK#_: Plastic, stand-mounted laundry tray. Size: 25 by 22 inches (635 by 560 mm).
1. Faucet: Sink, fixture ledge-mounted.
 2. Basis of Design Manufacturer/Model: [Specifier: insert manufacturer/model for sink and faucet].

2.7 WASHFOUNTAINS

Specifier: **Bradley Classic Washfountains** described below are designed for efficient, heavy-duty hand washing requirements in institutional and manufacturing environments. Selected units are available meeting accessibility and juvenile height requirements.

2500 Series are preassembled with Terreon solid surface material bowls in semi-circular and circular configurations, with stainless steel pedestal panels.

2600 Series consist of precast terrazzo bowls in semi-circular and circular configurations with stainless steel pedestal units.

2700 Series consist of stainless steel bowls in semi-circular and circular configurations with stainless steel pedestal units.

2800 Series are preassembled with Bradstone reinforced thermoset polyester bowls in semi-circular and circular configurations with ABS tapered pedestal panels.

3100 Series units consist of Terreon solid surface material bowls in circular configurations, with reinforced gel-coated fiberglass pedestal panels and stainless steel kick plate.

3200 Series extra height units consist of Terreon solid surface material bowls in semi-circular and circular configurations, with reinforced gel-coated fiberglass pedestal panels and stainless steel kick plate.

Select model and configuration, and edit below for options that are available for the series and configuration desired. We recommend editing with assistance of Bradley representative.

- A. Floor-supported, [3] [4] [5] [8]-User [Accessible] Washfountain WFN#_: Bowl constructed of [solid surface material] [reinforced thermoset polyester] [precast terrazzo] [stainless steel] with steel legs and [stainless steel] [ABS] [fiberglass] pedestal panels [in preassembled unit]. Include spray ring with stainless steel support tube, mixing valve, volume control valve, waste and supply connections with stop, strainer, and check valves. IPC/cUPC-certified by IAPMO.
1. Bowl: [Semi-circular] [Circular] [Corner], [36 inch (914 mm)] [54 inch (1372 mm)] diameter, [7-1/2 inch (191 mm) deep] [8-1/2 inch (216 mm) deep] [9 inch (229 mm) deep] [, with backsplash].
 2. Unit Height: [28 inch (711 mm)] [29 inch (737 mm)] [29-1/4 inch (743 mm)] [29-1/2 inch (749 mm)] [34 inch (864 mm)]
 3. Spray Ring: Non-sectional, with operating range of 20 to 80 psi (138 to 552 kPa), flow rate as required by fixture size.

Specifier: Select one of four spray head valve activation options below.

- a. Foot Control Operation: Operation of foot rail activates hold-open valve with slow closing upon release of rail.
- b. Hand Control Operation: Operation of pushbutton activates an air-metering valve with field-adjustable timing.
- c. Infrared Sensor Operation: Infrared sensing module and solenoid with adjustable turn off delay and automatic shut-off, with 110/24 VAC plug-in transformer.

- d. Electronic Pushbutton/Timer Operation: Electronic Pushbutton metering valve with 110/24 VAC plug-in transformer.

Specifier: Manual mixing valve below is standard with unit.

4. Water Supply: [Manual mixing valve] [Single tempered line] [Single adjustable thermostatic mixing valve].
 5. Drain and Supply Configuration: [Off-line vent with supplies from below] [Centrally rising vent with supplies from above] [Centrally rising vent with supplies from below] [Off-line vent with supplies from above] [with stainless steel overhead piping shroud].
 6. Accessories:
 - a. Soap Dispenser: [Powdered soap] [Liquid soap] [, with metal cladding].
 - b. Paper Towel Dispenser: Stainless steel, with tie pipe assembly, [single-fold] [c-fold].
 - c. Tie Pipe Assembly: Vandal-resistant support tube reinforcement: bracket for accepting 1-1/2 inch diameter pipe.
 - d. Hose Bibb: Loose key, threaded, solid brass, with polished chrome finish.
 7. Bowl Color: As selected by Architect from manufacturer's full line.
 8. Basis of Design Manufacturer/Model: **Bradley, Classic Washfountain**, [2500] [2600] [2700] [2800] [3100] [3200] series.
- B. [Wall-Mounted] [Floor-supported], [3] [4] [5] [8]-User [Accessible,] Vandal-Resistant Shallow Bowl Washfountain WFN#__: Preassembled bowl and pedestal unit constructed of stainless steel with chrome plated exposed fittings. Includes individual spray heads per station with stainless steel support tube, mixing valve, volume control valve, waste and supply connections with stops, strainers, and check valves. Vandal-resistant construction with concealed spray heads and connections, with support tube integrally welded to bowl. IPC/cUPC-certified by IAPMO.
1. Bowl: [Semi-circular] [Circular] [Corner], [36 inch (914 mm)] [54 inch (1372 mm)] diameter, [5 inch (127 mm)] deep [, with backsplash].
 2. Unit Height: [34 inch (864 mm)]
 3. Individual Spray Heads: with operating range of 20 to 80 psi (138 to 552 kPa), flow rate is .5 GPM per station.

Specifier: Select one of four spray head valve activation options below.

- a. Foot Control Operation: Operation of foot pushbutton activates hold-open valve with slow closing upon release of pushbutton.
- b. Hand Control Pushbutton Operation: Operation of pushbutton activates an air metering valve with field-adjustable timing.
- c. Infrared Sensor Operation: Infrared sensing module and solenoid with automatic shut-off, with 110/24 VAC plug-in transformer.
- d. Electronic Pushbutton/Timer Operation: Electronic Pushbutton metering valve, with 110/24 VAC plug-in transformer.

Specifier: Manual mixing valve below is standard with unit.

4. Water Supply: [Single tempered line] [Single adjustable thermostatic mixing valve] [Pressure balance mixing valve].
5. Drain and Supply Configuration: [Off-line vent with supplies from below] [Centrally rising vent with supplies from above] [Centrally rising vent with supplies from below] [Off-line vent with supplies from above] [with stainless steel overhead piping shroud].
6. Accessories:

- a. Soap Dispenser: [Liquid soap].
 - b. Paper Towel Dispenser: Stainless steel, with tie pipe assembly, [single-fold] [c-fold].
 - c. Hose Bibb: Loose key, threaded, solid brass, with polished chrome finish.
7. Basis of Design Manufacturer/Model: **Bradley, Sentry Washfountain**, SN2000 series.

Specifier: **Bradley Multi-Fount units** described below feature a continuous Terreon or terrazzo bowl with a matching spray head shelf. These easily-cleaned, highly vandal-resistant units provide an efficient space-saving solution for heavy-duty hand washing in commercial and industrial facilities.

- C. [Wall-mounted] [Wall-Mounted and Floor-Supported], Accessible, [2] [3] [4] User Washfountain WFN#__: Constructed of [solid surface material] [terrazzo] with integral continuous bowl, compact deck, and backsplash ledge containing concealed, vandal-resistant spray head [and liquid soap dispenser]. Unit includes waste and supply connections to wall with stop, strainer, and check valves, and steel support frame, concealed by tamper-resistant stainless steel access panel. ADA/ABA, and ANSI A117.1 compliant. IPC/cUPC-certified by IAPMO.
 - 1. Unit Size: [36 by 26 inch (914 by 660 mm)] [46 by 26 inch (1168 by 680 mm)] [26-3/4 by 26-3/4 inch (679 by 679 mm) corner unit].
 - 2. Spray Head: Independent water stream former with flow rate of 0.5 gpm (0.032 L/s) at operating range of 20 to 80 psi (138 to 552 kPa).

Specifier: Select one of three spray head valve operation options below.

- a. Spray Head Valve Operation: Infrared sensing module and solenoid with adjustable turn off delay and automatic shut-off, with 110/24 VAC plug-in transformer
 - b. Spray Head Valve Operation: Pushbutton air metering valve with field-adjustable timing.
 - c. Spray Head Valve Operation: Electronic pushbutton metering valve with 110/24VAC plug-in transformer.
- 3. Water Supply: [Single tempered line] [Single adjustable thermostatic mixing valve].
 - 4. Bowl/Spray Head/Pedestal Color: As selected by Architect from manufacturer's full line.
 - 5. Basis of Design Manufacturer/Model: **Bradley, Multi-Fount Washfountain System, MF 2900 series.**
- D. Wall-Mounted, Accessible, Vandal-Resistant 2-User Washfountain WFN#__: Constructed of stainless steel with compact, crescent-shaped low-profile deck and backsplash ledge containing concealed, vandal-resistant spray heads. Preassembled unit includes waste and supply connections to wall with stop, strainer, and check valves, concealed by stainless steel access panel/trap cover. IPC/cUPC-certified by IAPMO.
 - 1. Overall Unit Size: 27-3/8 by 18-1/2 inches (695 by 470 mm).
 - 2. Spray Head: Independent water stream former with flow rate of 0.5 gpm (0.032 L/s) at operating range of 20 to 80 psi (138 to 552 kPa).

Specifier: Select one of three spray head valve operation options below.

- a. Spray Head Valve Operation: Infrared sensing module and solenoid with adjustable turn off delay and automatic shut-off, with 110/24 VAC plug-in transformer
- b. Spray Head Valve Operation: Pushbutton air metering valve with field-adjustable timing.

- c. Spray Head Valve Operation: Electronic pushbutton metering valve with 110/24VAC plug-in transformer.

Specifier: Manual mixing valve below is standard with unit.

3. Water Supply: [Adjustable Thermostatic mixing valve assembly].
 4. Basis of Design Manufacturer/Model: **Bradley, Bradmate Washfountain, S93-570 series.**
- E. Multi-Station, [2] [3] [4] [5]-User Vandal-Resistant Wall Sink WFN#__: Constructed of 14 ga. Type 304 stainless steel with reinforcing channels. Frame constructed of 1-1/2 inch (38 mm) stainless steel tubing with adjustable height floor flanges. Preassembled unit includes drain spud and dome grate strainer and 1-1/2 (38 mm) inch diameter tailpiece.
1. Fixture Size: [48 by 18 inch (1219 by 457 mm)] [62 by 18 inch (1575 by 457 mm)] [80 by 18 inch (2032 by 457 mm)] [102 by 18 inch (2591 by 457 mm)].
 2. Faucet: [Pushbutton Metering Faucet. Basis of Design Manufacturer/Model: Bradley, Model 90-75] [Specifier insert faucet selection].
 3. Basis of Design Manufacturer/Model: **Bradley, Multistation Wall Sink.**
- F. Multi-Station, 8-User Vandal-Resistant Island Sink WFN#__: Constructed of 14 ga. Type 304 stainless steel with reinforcing channels and sound deadening material on underside. Frame constructed of 1-1/2 inch (38 mm) stainless steel tubing with adjustable height floor flanges. Column-mounted stainless steel valve manifold housing. Preassembled unit includes drain spud and dome grate strainer and 1-1/2 (38 mm) inch diameter tailpiece.
1. Fixture Size: [30 by 72 inch (762 by 1829 mm)] [40 by 72 inch (1016 by 1829 mm)].
 2. Faucet: [Pushbutton Metering Faucet. Basis of Design Manufacturer/Model: Bradley, Model 90-75] [Specifier insert faucet selection].
 3. Basis of Design Manufacturer/Model: **Bradley, Multistation Island Sink.**

2.8 SHOWERS

- A. Prefabricated Modular Shower System SH#__: No. 304 Stainless steel [wall mounted] [and] [back-to-back] housing concealing piping and controls, with multiple shower heads and accessories, copper supply piping [with stops] sized for number of shower heads indicated, with end caps, fillers, access panels, and stanchions where required, with flow rate of 2.0 - 2.5 gpm (0.128 to 0.160 L/s) at operating range of 20 to 80 psi (138 to 552 kPa), and including the following:
1. Valve for Hot/Tempered and Cold Supply: [Washerless mixing valve] [Pressure balancing valve] [Heavy-duty pressure balancing valve] [Thermostatic mixing valve] [Hot and cold compression valve].

Specifier: Select water supply type and option for valve type above or below.

2. Valve for Single Tempered/Cold Supply: [Infrared metering valve with 24VAC transformer] [Mechanical metering valve] [Air metering valve] [Single compression valve] [Touch Time® metering valve with 24VAC transformer].

Specifier: Review details of accessible module and requirements of authorities having jurisdiction.

3. Accessible Module: Equip with diverter valve, backflow preventer, hand-held shower spray with 60 inch (1524 mm) steel flexible hose and mounting post, 24 inch (610 mm) grab bar, and molded plastic folding shower seat, 250 lb. (113 kg) capacity.
4. Shower Head: [Low-flow fixed] [Ball joint] [Ball joint with volume control] [Severe service].
5. Recessed soap dishes, one per showerhead.

Specifier: Select above or below.

6. Liquid Soap Dispensers: Valves with containers recessed in enclosure, one per pair of showerheads.
 7. Basis of Design Manufacturer/Model: **Bradley, Panelon Prefabricated Modular Shower System.**
- B. Wall Showers SW#__: Preassembled 18 ga. 304 stainless steel housing with all stainless steel or chrome plated exposed fittings, with [1] [2] [3] shower heads and accessories, cast brass valve bodies, and [flexible stainless steel] [rigid copper] supply inlets. Unit delivers flow rate of 2.0 - 2.5 gpm (0.128 to 0.160 L/s) at operating range of 20 to 80 psi (138 to 552 kPa), and including the following:
1. Housing Mounting: [Surface mounted] [Surface mounted, hinged] [Surface mounted, corner unit] [Recessed (flush) mounted].
 2. Valve for Hot/Tempered and Cold Supply: [Washerless mixing valve] [Pressure balancing valve] [Heavy-duty pressure balancing valve] [Thermostatic mixing valve] [Hot and cold compression valve].

Specifier: Select water supply type and option for valve type above or below.

3. Valve for Single Tempered/Cold Supply: [Infrared metering valve with 24VAC transformer] [Mechanical metering valve] [Air metering valve] [Single compression valve] [Touch Time metering valve with 24VAC transformer].
4. Shower Head: [Low-flow fixed] [Ball joint] [Ball-joint with volume control] [Severe service].

Specifier: Retain below for installations requiring handicapped accessible units. Indicate location on drawings. Review details of accessible module and requirements of authorities having jurisdiction.

5. Accessible Unit: Equip one station or shower with diverter valve, backflow preventer, hand-held shower spray with 60 inch (1524 mm) steel flexible hose and mounting post, 24 inch (610 mm) grab bar, and molded plastic folding shower seat, 250 lb. (113 kg) capacity.
6. Soap dishes, one per showerhead.

Specifier: Select above or below.

7. Liquid Soap Dispensers: Valves with containers recessed in enclosure, one per pair of shower heads.
8. Optional equipment: [vertical] [horizontal] shroud

Specifier: Select appropriate Bradley product below based upon requirements and options above. We recommend editing with assistance of Bradley representative.

9. Basis of Design Manufacturer/Model: **Bradley, Wall Shower, WS-Series.**
- C. Column Showers SH#__: Preassembled 16 ga. 304 stainless steel housing with all stainless steel or chrome plated brass exposed fittings, with shower heads and accessories, cast brass valve bodies and manifold, copper tubing supply inlets, and cast iron drain fitting. Unit delivers flow rate of 2.0 - 2.5 gpm (0.128 to 0.160 L/s) at operating range of 20 to 80 psi (138 to 552 kPa), and includes the following:
1. Shower Stations: [2] [3] [4] [5] [6].
 2. Shower Height: [Standard height 72 inch (1829 mm)] [Juvenile height 66 inch (1676 mm)].

3. Drain and Supply Configuration: [Off-line vent with supply from below] [Off-line vent with supply from above] [Centrally rising vent with supplies from below] [Centrally rising vent with supplies from above].
4. Valve for Hot/Tempered and Cold Supply: [Washerless mixing valve] [Pressure balancing valve] [Heavy-duty pressure balancing valve] [Thermostatic mixing valve] [Hot and cold compression valve].

Specifier: Select water supply type and option for valve type above or below.

5. Valve for Single Tempered/Cold Supply: [Infrared metering valve with 24VAC transformer] [Mechanical metering valve] [Air metering valve] [Single compression valve] [Touch Time metering valve with 24VAC transformer].
6. Shower Head: [Low-flow fixed] [Ball joint] [Ball-joint with volume control] [Severe service].

Specifier: Retain below for installations requiring handicapped accessible units. Indicate location on drawings. Review details of accessible module and requirements of authorities having jurisdiction.

7. Accessible Unit: Equip one station with diverter valve, backflow preventer, hand-held shower spray with 60 inch (1524 mm) steel flexible hose and mounting post, 24 inch (610 mm) grab bar, and molded plastic folding shower seat, 250 lb. (113 kg) capacity.
8. Soap dish, one per showerhead.

Specifier: Select above or below.

9. Liquid Soap Dispensers: Valves with containers recessed in enclosure, one per pair of shower heads.
10. Optional Equipment: : Vertical shroud
11. Basis of Design Manufacturer/Model: **Bradley, Column Shower, COL-Series.**

Specifier: Items below may be combined for multiple configurations of individual and group stalls and compartments. Select required wall or column shower units above. Consult Bradley product literature for common configurations of conventional and accessible shower compartments.

D. Shower Compartments [, Accessible]:

1. Partitions: 300 stainless steel sheets with No. 4 finish, laminated to honeycomb core with waterproof adhesives, with stirrup brackets.
2. Shower Base Receptor: [Solid surface material] , with slip-resistant surface and integral drain, strainer, and outlet.
3. Posts: 1 1/4 by 1 1/4 inch (32 mm by 32 mm) by 18 ga. thick stainless steel tube with adjustable floor anchor.
4. Curtain Rail: 300 stainless steel tubing with No. 4 finish, with zinc chromate finish [wire curtain hooks] [roller curtain hooks] [and robe hooks].
5. Curtain: Herculite vinyl, translucent, with hemmed edges and aluminum grommet reinforced eyelets.
6. Shower Seat: Folding unit, molded plastic, 250 lb. (113 kg) capacity.

E. Shower Faucet/Mixing Valve: Single-lever [thermostatic] [pressure-balance] [thermostatic and pressure-balance] [air metering] [Touch Time electronic] [infrared electronic] [hot and cold compression] [single compression] [washerless mixing], commercial solid cast brass with polished chrome finish, flow rate 2.5-gpm (0.16-L/s) maximum.

1. [Fixed vandal-resistant shower arm] [Fixed bent arm] fitting.
2. [Low flow fixed] [Ball joint] [Ball joint w/ volume control] [Severe service] showerhead.

3. [Hand-held fitting with 60 inch (1524 mm) flexible hose and hook] [Hand-held fitting with 60-inch (1524 mm) flexible hose and slide bar].
 4. Basis of Design Manufacturer/Model: **Bradley, Model 1C Built-in Shower.**
- F. Shower Drain: Corrosion-resistant-metal drain with removable strainer and NPS 2 (DN 50) bottom outlet [included with enclosure] [included with base receptor].

2.9 FAUCETS

A. Electronic Lavatory Faucets:

1. Sensor-Operated, Low Profile Metering Faucet with Infrared Control FCT#_: Vandal-resistant accessible faucet meeting ASME A112.18.1/CSA B125. ADA/ANSI A117.1 compliant.
 - a. Body: Polished chrome plated commercial solid cast brass, with [centershank] [4 inch (102 mm) centerset] [8 inch (203 mm) centerset] mounting [with trim plate].
 - b. Aerator: Flow rate 0.5 gpm (0.032 L/s) at operating range of 20 to 80 psi (138 to 552 kPa).
 - c. Water Supply: [Single tempered line] [Manual mixing valve, deck-mounted] [Single thermostatic mixing valve] [Remote thermostatic mixing valve assembly for [4] [8] [12] faucets [with surface-mounted] [with recessed] cabinet].
 - d. Sensor Module: Water-conserving, vandal-resistant [adjustable dual sensor unit] [adaptive single sensor unit] with timing turn-off delay and stationary object automatic timed cutoff.
 - e. Power Supply: [Single faucet 110VAC/24VDC, 50/60Hz plug-in transformer with anti-theft bracket] [Remote transformer for [4] [8] [12] faucets] [Existing supply].
 - f. Basis of Design Manufacturer/Model: **Bradley, Aerada 900 Series Futura.**
2. Sensor-Operated, Gooseneck Metering Faucet with Infrared Control FCT#_: Vandal-resistant accessible faucet, meeting ASME A112.18.1/CSA B125. ADA/ANSI A117.1 compliant.
 - a. Body: Polished chrome plated commercial solid forged brass spout base, with [centershank] [4 inch (102 mm) centerset] mounting [with trim plate].
 - b. Aerator: Flow rate 0.5 gpm (0.032 L/s) at operating range of 20 to 80 psi (138 to 552 kPa). Provide installer-optional 1.6 gpm (0.100 L/s) laminar flow insert with plain spray ring and 2.2 gpm (0.139 L/s) aerator insert.
 - c. Water Supply: [Single tempered line] [Manual mixing valve, deck-mounted] [Single thermostatic mixing valve].
 - d. Sensor Module: Water-conserving, vandal-resistant sensor unit with programmable sensor range, with field-configurable timing turn-off delay and stationary object automatic timed cutoff.
 - e. Power Supply: [Battery operated] [Single faucet 110VAC/6VDC, 50/60Hz plug-in transformer with anti-theft bracket] [Existing supply].
 - f. Basis of Design Manufacturer/Model: **Bradley, Aerada 1000 Series Gooseneck.**
3. Sensor-Operated, Low Profile Metering Faucet with Infrared Control FCT#_: Vandal-resistant accessible faucet meeting ASME A112.18.1/CSA B125. IPC/cUPC-certified by IAPMO. ADA/ANSI A117.1 compliant.
 - a. Body: Polished chrome plated commercial solid cast brass, with [centershank] [4 inch (102 mm) centerset] mounting with anti-rotation trim plate].

- b. Aerator: Flow rate 0.5 gpm (0.032 L/s) at operating range of 20 to 80 psi (138 to 552 kPa).
 - c. Water Supply: [Single tempered line] [Manual mixing valve, deck-mounted] [Single thermostatic mixing valve].
 - d. Sensor Module: Water-conserving, vandal-resistant adjustable sensor unit with timing turn-off delay and stationary object automatic timed cutoff.
 - e. Power Supply: Battery-operated single faucet with 100/240VAC plug-in adapter.
 - f. Basis of Design Manufacturer/Model: **Bradley, Aerada 1100 Series Low Arc.**
4. Sensor-Operated, High Profile Metering Faucet with Infrared Control and External Temperature Control FCT#_: Vandal-resistant accessible faucet meeting ASME A112.18.1/CSA B125. ADA/ANSI A117.1 compliant.
- a. Body: Polished chrome plated commercial solid cast brass, with [centershank] [4 inch (102 mm) centerset mounting with anti-rotation trim plate].
 - b. Temperature Control: ADA-compliant lever on faucet body.
 - c. Aerator: Flow rate 0.5 gpm (0.032 L/s) at operating range of 20 to 80 psi (138 to 552 kPa).
 - d. Sensor Module: Water-conserving, vandal-resistant adjustable sensor unit with timing turn-off delay and stationary object automatic timed cutoff, with battery diagnostic light, serviceable from above deck.
 - e. Power Supply: Battery-operated single faucet with 6V lithium battery [and single 115VAC plug-in adapter] [and multiple unit 115VAC plug-in adapter].
 - f. Basis of Design Manufacturer/Model: **Bradley, Aerada 1100 Series High Arc.**
5. Capacitive-Sensor-Operated, Low Profile Metering Faucet with Infrared Control FCT#_: Vandal-resistant accessible faucet meeting ASME A112.18.1/CSA B125. IPC/cUPC-certified by IAPMO. ADA/ANSI A117.1 compliant.
- a. Body: Polished chrome plated commercial solid cast brass, with [centershank] [4 inch (102 mm) centerset] [8 inch (203 mm) centerset] mounting [with trim plate].
 - b. Aerator: Laminar Flow rate 0.5 gpm (0.032 L/s) at operating range of 20 to 80 psi (138 to 552 kPa).
 - c. Water Supply: [Single tempered line] [Manual mixing valve, deck-mounted] [Single thermostatic mixing valve].
 - d. Sensor Module: Water-conserving, vandal-resistant capacitive-sensing [adjustable sensor unit] with omni-directional sensing zone, timing turn-off delay and stationary object automatic timed cutoff.
 - e. Power Supply: Battery-operated with below-deck-mounted battery box [and single faucet 100/120VAC/6VDC plug-in adapter] [and 6-faucet 100/120VAC/6VDC plug-in adapter].
 - f. Basis of Design Manufacturer/Model: **Bradley, Aerada 1200 Series CS.**
- B. Mechanical Lavatory Faucets:
- 1. Low Profile Metering Faucet with Touch Operation FCT#_: Vandal-resistant, accessible faucet meeting ASME A112.18.1/CSA B125. ADA/ANSI A117.1 compliant.
 - a. Body: Polished chrome plated commercial solid cast brass, with [centershank] [4 inch (102 mm) centerset] [8 inch (203 mm) centerset mounting with trim plate].
 - b. Aerator: Flow rate 0.5 gpm (0.032 L/s) at operating range of 20 to 80 psi (138 to 552 kPa).

- c. Metering Valve: Light-touch, 10 second auto shutoff, with replaceable valve cartridge.
 - d. Water Supply: [Single tempered line] [Manual mixing valve, deck-mounted] [Single thermostatic mixing valve].
 - e. Basis of Design Manufacturer/Model: **Bradley, Aerada 90-75 Series Metering Faucet.**
2. Low Profile, Mixing Faucet with Wrist Blade Operation FCT#_: Vandal-resistant, accessible faucet meeting ASME A112.18.1/CSA B125. ADA/ANSI A117.1 compliant.
- a. Body: Polished chrome plated commercial solid cast brass, with 4-inch (102 mm) centerset.
 - b. Aerator: Flow rate 0.5 gpm (0.032 L/s) at operating range of 20 to 80 psi (138 to 552 kPa).
 - c. Operation: One-quarter turn, ADA-compliant wrist blade handles.
 - d. Basis of Design Manufacturer/Model: **Bradley, Aerada 90-80 Series Wristblade Faucet.**

2.10 WATER CLOSETS

- A. Water Closet WC#_: Vitreous china, siphon-jet type, [accessible,] [elongated] [round front], [floor mounted, floor outlet] [floor mounted, back outlet] [wall hung, back outlet] with [gravity tank] [flushometer tank] [one-piece bowl and tank] [flushometer], [1 gal./flush (3.8 L/flush)] [1.6 gal./flush (6 L/flush)] design.
 - 1. Basis of Design Manufacturer/Model: [Specifier insert manufacturer/model].
- B. Toilet Seat: Commercial heavy-duty class solid plastic, [open] [closed] front, with [cover,] bumpers and hardware.
- C. Flushometer Valve: Commercial solid cast brass body with polished chrome exposed metal parts, [1 gal./flush (3.8 L/flush)] [1.6 gal./flush (6 L/flush)].
 - 1. Basis of Design Manufacturer/Model: [Specifier insert manufacturer/model].
- D. Fixture Support: Combination carrier matched to required fixture mounting height, with faceplate and coupling as required by pipe space and construction indicated.

2.11 URINALS

- A. Urinal UR#_: Vitreous china, siphon-jet type, [accessible,] wall hung, back outlet, [0.5 gal./flush (1.9 L/flush)] [1 gal./flush (3.8 L/flush)] design.
 - 1. Basis of Design Manufacturer/Model: [Specifier insert manufacturer/model].
- B. Flushometer Valve: Commercial solid cast brass body with polished chrome exposed metal parts, [0.5 gal./flush (1.9 L/flush)] [1 gal./flush (3.8 L/flush)].
 - 1. Basis of Design Manufacturer/Model: [Specifier insert manufacturer/model].
- C. Waterless Urinal UR#_: [Vitreous china,] [Plastic,] [accessible,] wall hung, back outlet, designed to operate with liquid trap seal.
 - 1. Basis of Design Manufacturer/Model: [Specifier insert manufacturer/model].
- D. Fixture Support: Combination carrier matched to required fixture mounting height, with faceplate and coupling as required by pipe space and construction indicated.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Assemble fixtures and associated fittings and trim in accordance with manufacturer's instructions.
- B. Install fixture supports attached to building structure for fixtures requiring supports.
- C. Install fixtures onto waste-fitting seals or flanges and attach to supports or building structure.
- D. Install fixtures level, plumb, and firmly in place in accordance with manufacturer's rough-in drawings.
- E. Install water supply piping to each fixture requiring water supply connection. Provide stop on each supply in readily-serviced location. Fasten supply piping to supports or substrate.
- F. Install trap and waste piping to each fixture requiring sanitary system connection.
- G. Install flushometer valve handles and flush handles for accessible water closets located on wide side of accessible toilet compartment.
- H. Install escutcheons at exposed piping penetrations in finished locations and within cabinets.
- I. Seal joints between fixtures and walls, floors, and countertops with mildew-resistant silicone sealant.

3.2 FIELD QUALITY CONTROL

- A. Verify fixtures are correct categories and types specified at locations where installed. Verify installed heights and clearances meet requirements of authorities having jurisdiction.

3.3 CLEANING AND PROTECTION

- A. Repair or replace defective work, including damaged fixtures and components.
- B. Clean unit surfaces, test fixtures, and leave in ready-to-use condition.
- C. Install new batteries in battery-operated devices at time of Substantial Completion.
- D. Turn over keys, tools, maintenance instructions, and maintenance stock to Owner.
- E. Protect units with water-resistant temporary covering. Do not allow temporary use of plumbing fixtures unless approved in writing by Architect. Remove protection at Substantial Completion and dispose.

[END OF SECTION 22 40 00]

[END OF SECTION 15400]