



BRADLEY ADVOCATE® ALL-IN-ONE LAVATORY SYSTEMS Guide Specification

Bradley Corporation, the industry's leading manufacturer of premium quality commercial lavatories, presents The Advocate Lavatory System. The Advocate Lavatory System's unique all-in-one design allows users to access soap, water and hand dryer without leaving the hand washing station. The water supply, soap dispenser, and hand dryer are located above the bowl. GFI protection assures the safety of the hand dryer equipment. The Bradley Advocate Lavatory System is perfect for commercial lavatories, movie theaters, auditoriums, retail, travel plazas, airports and convenience shops.

- Soap, water and hand dryer, unique all-in-one patent pending design
- Includes infrared, high speed, dual-sided hand dryer at each hand washing station
- Includes large capacity, top-fill, infrared soap dispenser, with low level indicator and overflow protection
- Includes hygienic hands-free infrared, .38 gpm faucet
- ADA- and ANSI- compliant: Can be mounted at different heights to accommodate hand washing for range of users

Advocate lavatory decks and integral bowls are made from Terreon, Bradley's premium, high-density solid surface material; they are now also available in TerreonRE, a sustainable formulation of pre-consumer recycled polymers and bio-based resins resistant to chemicals, stains, burns and impact; surface damage can be easily repaired with everyday cleansers or fine grit abrasives

Architects, engineers, and specifiers look to Bradley Corporation for innovation in design and leadership in the development of environmentally conscious products. Bradley Corporation, a member of the U.S. Green Building Council, the Wisconsin Green Building Alliance, has several products earning certification by Greenguard Environmental Institute, and Greenguard Children and Schools program.

Bradley eases the specifying process with a seasoned customer service staff and a range of helpful information tools on an advanced website. For example, easy-to-use sizing software, available on Bradley's website, allows engineers to quickly determine the correct size Thermostatic Mixing Valves.

Bradley is the industry leader in the manufacture of premium quality commercial plumbing fixtures, valves, TMVs and washroom accessories that appear in the following CSI MasterFormat 2012™ Sections:

Section 10 21 13 – TOILET COMPARTMENTS (Mills® Metal, Plastic-laminate, Phenolic, and Plastic units)

Section 10 28 13.13 – COMMERCIAL TOILET ACCESSORIES (Institutional and commercial accessories)

Section 10 28 13.14 – COMMERCIAL TOILET ACCESSORIES – Diplomat Series

Section 10 28 13.19 – HEALTHCARE TOILET ACCESSORIES (Patient care accessories)

Section 10 28 13.21 – WARM AIR DRYERS (Aerix® hand dryers)

Section 10 28 13.63 – DETENTION TOILET ACCESSORIES

Section 10 28 16 – BATH ACCESSORIES (Hospitality and commercial bath accessories)

Section 10 51 26 – PLASTIC LOCKERS (Lenox® Plastic Lockers)

Section 22 11 19 – DOMESTIC WATER PIPING SPECIALTIES (Thermostatic mixing valves)

Section 22 42 16.01 – COMMERCIAL LAVATORIES AND FAUCETS (Express® and Frequency® Single and multi-station lavatories)

Section 22 42 16.02 – COMMERCIAL LAVATORIES AND FAUCETS (Advocate® lavatories)

Section 22 42 16.03 – COMMERCIAL LAVATORIES AND FAUCETS (Verge™ lavatories)

Section 22 42 16.04 – COMMERCIAL LAVATORIES AND FAUCETS (OmniDecks™ lavatories)

Section 22 42 16.11 – COMMERCIAL SINKS AND FAUCETS

Section 22 42 23 – COMMERCIAL SHOWERS AND SHOWER VALVES

Section 22 42 33 – WASHFOUNTAINS (Sentry™, BradMate™, and Classic washfountains)

Section 22 43 00 – HEALTHCARE PLUMBING FIXTURES (Patient care lavatory units)

Section 22 45 00 – EMERGENCY PLUMBING FIXTURES (Halo™ Emergency eyewash fixtures and showers)

Section 22 46 00 – SECURITY PLUMBING FIXTURES

Contact Bradley Corporation, Menomonee Falls, WI 53051; Phone: 800-BRADLEY ((800)272-3539) Fax: (262)251-5817, or visit the Bradley web site www.bradleycorp.com. Bradley Corporation is an AIA/CES registered provider currently offering five programs earning one (1) HS&W Learning Unit each; several qualify for sustainable design (SD) credit. All active AIA members must successfully complete 18 learning unit (LU) hours each year.

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**SECTION 22 42 16
COMMERCIAL LAVATORIES AND FAUCETS**

PART 1 - GENERAL

1.1 SECTION INCLUDES

1. Commercial lavatory units with integrated faucet, soap dispenser, and hand dryer components.

1.2 RELATED SECTIONS

Specifier: Delete any paragraphs below that do not apply to this project.

1. Division 22 Section "Domestic Water Piping Specialties" for thermostatic mixing valves.
2. Division 22 Section "Commercial Lavatories and Faucets" for single- and multiple- station lavatory systems.
3. Division 22 Section "Commercial Lavatory Decks and Faucets" for single- and multiple- station lavatory decks.
4. Division 22 Section "Healthcare Plumbing Fixtures" for healthcare lavatories.
5. Division 22 Section "Emergency Plumbing Fixtures" for emergency fixtures.
6. Division 22 Section "Security Plumbing Fixtures" for security lavatories.

1.3 REFERENCES:

A. American Society of Sanitary Engineering (ASSE):

1. ASSE 1070 – Water Temperature Limiting Devices.

B. American National Standards Institute (ANSI):

1. ANSI Z124.3 - Plastic Lavatories.
2. ANSI Z124.6 - Plastic Sinks.
3. ANSI/ICPA SS-1-2001 - Performance Standard for Solid Surface Materials.

C. American Society of Mechanical Engineers (ASME):

1. ASME A112.18.1 - Plumbing Supply Fittings.
2. ASME A112.18.2 - Plumbing Waste Fittings.
3. ASME A112.18.3M - Performance Requirements for Backflow Protection Devices and Systems in Plumbing Fixture Fittings.

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 B45 – Plastic Lavatories and Sinks.
2. CSA B125.1 - Plumbing Supply Fittings.
3. CSA B125.2 – Plumbing Waste Fittings.

GREENGUARD Environment Institute is an ANSI Authorized Standards Developer that oversees the GREENGUARD certification program. GEI establishes acceptable indoor air standards for indoor products, environments, and buildings.

F. GREENGUARD Environmental Institute (GEI):

1. GREENGUARD certified low emitting products.

G. International Code Council (ICC):

1. ICC/ANSI A117.1 – Accessible and Usable Buildings and Facilities.

H. NSF International (NSF):

1. ANSI/NSF 61 - Drinking Water System Components - Health Effects (California AB1953 Compliance).

I. Public Law 102-486, *Energy Policy Act*, requires that public lavatories have flow rate or consumption not greater than 0.5 gpm (1.5 L/min.) or 0.25 gal. (0.95 L) per metering cycle.

J. State of Texas:

1. Texas Accessibility Standards (TAS).

K. Underwriters Laboratories, Inc.

1. UL 723 - Test For Surface Burning Characteristics of Building Materials.
2. UL 1951 - Electric Plumbing Accessories.
3. UL 507 – Electric Fans

L. United States Green Building Council (USGBC):

1. LEED Green Building Rating System (LEED).

M. US Federal Government:

1. Public Law 102-486 - Energy Policy Act. 1992.
2. U.S. Architectural & Transportation Barriers Compliance Board. Americans with Disabilities Act (ADA), Accessibility Guidelines for Buildings and Facilities (ADAAG).

1.4 ACTION SUBMITTALS

- A. Product Data: Manufacturer’s data sheets for each type of lavatory fixture. Include rough-in requirements and power, signal, and control wiring diagrams

- B. Product Test Reports: Indicating compliance of products with requirements, from a qualified independent testing agency, when requested by Architect.

Bradley Corporation's TerreonRE recycled solid surface material contains 25 percent preconsumer recycled content and 8 percent rapidly renewable material. LEED WE Credit 2 is for 50 percent reduction in water use for building sewer, based on use of water-conserving fixtures documented under Credit WE 3. LEED WE Credit 3 is for 30, 35, or 40 percent reduction in water usage.

- C. LEED Submittals:

- 1. Product Data for [Credit WE 2 Innovative Wastewater Technologies] [and] [Credit WE 3 Water Use Reduction]: Documentation indicating compliance with requirements.

1.5 INFORMATION SUBMITTALS

- A. Sample manufacturer warranty.
- B. Manufacturer's Product Certificates: Indicating compliance with requirements.

1.6 MAINTENANCE SUBMITTALS

- A. Operation and Maintenance Data.

1.7 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Approved manufacturer listed in this section, with minimum [5] years experience in the manufacture of plumbing fixtures of similar type. Manufacturers seeking approval must submit the following in accordance with Instructions to Bidders and Division 01 substitution requirements:
 - 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, with contact information.
- B. Source Limitations: Obtain each type of plumbing fixture and compatible accessories through one source from a single approved manufacturer.
- 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.

G. Low-Emissivity Material Certificate: Provide certificate indicated that solid surface material has been certified under the following GREENGUARD programs, or a comparable certification acceptable to Owner:

1. Indoor Air Quality Certified.
2. Certified for Children and Schools.

1.8 WARRANTY

A. Special Manufacturer's Warranty: Provide manufacturer's standard form in which manufacturer agrees to repair or replace products that fail in materials or manufacturer workmanship within the following periods:

1. Solid surfacing material: 10 years.
2. All other components: 1 year.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Basis-of-Design Product: Subject to compliance with requirements, provide all-in-one commercial lavatory units manufactured by Bradley Corporation, Menomonee Falls, WI 53051, Phone (800) 272-3539; Fax (262) 251-5817; Email info@BradleyCorp.com; Website www.bradleycorp.com.

Specifier: Retain one of two paragraphs below based upon Project requirements. The manufacturer is not aware of comparable manufactured products.

1. Submit requests for substitution in accordance with Instructions to Bidders and Division 01 General Requirements.
2. Provide specified product; Owner will not consider substitution requests.

B. MATERIALS

Specifier: Bradley's Advocate lavatories are formed from Bradley's own premium vandal-resistant densified solid surface material noted for its resistance to chemicals, stains, burns and impacts. Surface damage can be easily repaired with everyday cleansers or fine grit abrasives. First option below describes Bradley Terreon, and second describes Terreon RE Terreon RE, a densified solid surface material composed of a bio-based resin and preconsumer recycled granules.

C. Lavatory Deck and Bowl Material: Fabricate lavatory units from [thermoset acrylic modified polyester resin] [bio-based resin and preconsumer recycled granules with minimum 25 percent preconsumer recycled content and 8 percent bio-based resins] certified by approved independent testing agency as complying with ANSI/ICPA-SS-1-2001, ANSI Z124.3/CSA B45, and ANSI Z124.6/CSA B45, with the following minimum properties:

1. Basis of Design Product: **Bradley, [Terreon] [Terreon RE]**.
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.

2.2 LAVATORY UNITS

- A. Lavatory: Wall-mounted integrated lavatory unit formed from molded solid surface material with integral bowl, with wall mounting frame, built-in faucet, built-in soap dispenser, and hand dryer.
 1. Basis of Design Manufacturer/Model: **Bradley, Advocate Lavatory System AV-Series.**
 2. Bowl and Deck Material: Solid surface material.
 3. Cabinet Construction: Type 300 stainless steel end panels with No. 3 finish, with high impact polymer front enclosure, mounted to wall with stainless steel mounting frame and basin support.
 4. Fittings: Includes drain, P-trap, and flexible stainless steel supply connections.
 5. Faucet: Built-in vandal-resistant low profile faucet formed from composite fiberglass-reinforced polymer with painted, clear-coat finish, with low-voltage sensor using a zone-focused hand-detecting infrared transmitting beam and timed turn-off delay.
 - a. Flow Rate: Not greater than **0.38 gpm (1.44 L/min).**
 - b. Solenoid Valve: 24 V, 50/60 Hz, 3/8 inch NPT, electronically-activated, flow regulator equipped, with plug-in transformer.

Specifier: Retain thermostatic mixing valve if required for Project; coordinate with Schedule below.

- c. Thermostatic Mixing Valve: Thermostatic mixing valve, ASSE 1070 listed and CA AB 1953 compliant, with stop/strainer/check valves, and flexible stainless steel connectors.
 - 1) Basis of Design Manufacturer/Model: **Bradley, Navigator, S59-4000 series.**
6. Hand Dryer: Energy-efficient dryer unit with low-voltage hand-detecting infrared sensor, integrated into lavatory deck, with LED-illuminated dryer cavity and anti-microbial dryer nozzles. UL-listed.
 - a. Noise Level: 80 db at 69 - 70 cfm.
 - b. Run Time: Variable.
 - c. Typical Hand Drying Time: 15 seconds.
 - d. Power Supply: [120/60 volts, 1150 watts, 12 Amps] [230/50 volts, 1150 watts, 8.6 Amps] with **36 inch (914 mm)** power cord with plug end.
 - e. Long life brushless motor
7. Liquid Soap Dispenser: Built-in vandal-resistant low profile electronic dispenser formed from composite fiberglass-reinforced polymer with painted, clear-coat finish, with low-voltage hand-detecting infrared sensor, activation rate control, and overflow fill protection. Top filled from tamper-resistant cover. **64 oz (1.89 L)** capacity.

Specifier: When specifying multiple installations, especially when options vary, you may elect to use the schedule below; copy paragraph and edit to describe units required. Coordinate with designations used on Drawings.

2.3 LAVATORY SCHEDULE

A. Lavatory Fixture **LAV#**____:

1. Basis of Design Manufacturer/Model: **Bradley, Advocate Lavatory System [AV-30] [AV-60] [AV-90]**.
2. Unit Length: [Single unit at 30 by 22-3/4 inch (762 by 578 mm)] [Double unit at 60 by 22-3/4 inch (1524 by 578 mm)] [Triple unit at 90 by 22-3/4 inch (2286 by 578 mm)].
3. Bowl and Deck Construction: [Solid surface material] [Recycled solid surface material].
4. Water Supply: [Single tempered line] [Thermostatic mixing valve assembly].
5. Color: [As selected by Architect from manufacturer's full line] <Insert color selection>.
6. Lavatory, Rim Mounting Height: [34 inch (864 mm)] [31 inch (787 mm)] [28 inch (711 mm)] <insert mounting height>.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Assemble fixtures and associated fittings and trim in accordance with manufacturer's instructions.
- B. Install fixture supports firmly attached to building structure.
- C. Install fixtures level, plumb, and in accordance with manufacturer's rough-in instructions and height requirements of authorities having jurisdiction.
- D. Install water supply piping connections. Provide stop on each supply in readily-serviceable location. Fasten supply piping to supports or substrate.
- E. Install trap and waste piping to each fixture.
- F. Install escutcheons at exposed piping penetrations in finished locations and within cabinets.
- G. Seal joints between fixtures and walls, floors, and countertops with mildew-resistant silicone sealant meeting requirements in Division 07 Section "Joint Sealants."

3.2 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. Turn over keys, tools, maintenance instructions, and maintenance stock to Owner.
- D. Protect units with water-resistant temporary covering. Do not allow temporary use of plumbing fixtures. Remove protection at Substantial Completion and dispose.

3.3 TESTING AND ADJUSTING

- A. Set field-adjustable temperature set points of temperature-actuated water mixing valves. Adjust set point within allowable temperature range.

B. Test and adjust installation.

END OF SECTION