

ASME A112.6.2-2017

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Framing-Affixed Supports (Carriers) for Off-the-Floor Plumbing Fixtures

AN AMERICAN NATIONAL STANDARD



**The American Society of
Mechanical Engineers**

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FOREWORD

In 1990, The American Society of Mechanical Engineers (ASME) was solicited to develop a standard for carriers that are used in frame construction. At the time, a standard existed for the evaluation of floor-affixed carriers and supports that are typically installed in commercial, industrial, and institutional buildings with concrete floors. The standard for floor-affixed carriers and supports is ASME A112.6.1M.

This Standard complements ASME A112.6.1M. Some of the specifications and tests are similar and appropriately referenced in this Standard. However, due to differences in assembly of these framing-affixed products from the floor-affixed products, some criteria are different.

The basis for this Standard was an Interim Guide Criteria document prepared by the International Association of Plumbing and Mechanical Officials (IAPMO).

ASME A112.6.2-2017 was approved as an American National Standard on November 1, 2017.

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Edition:	Cite the applicable edition of the Standard for which the interpretation is being requested.
Question:	Phrase the question as a request for an interpretation of a specific requirement suitable for general understanding and use, not as a request for an approval of a proprietary design or situation. Please provide a condensed and precise question, composed in such a way that a "yes" or "no" reply is acceptable.
Proposed Reply(ies):	Provide a proposed reply(ies) in the form of "Yes" or "No," with explanation as needed. If entering replies to more than one question, please number the questions and replies.
Background Information:	Provide the Committee with any background information that will assist the Committee in understanding the inquiry. The Inquirer may also include any plans or drawings that are necessary to explain the question; however, they should not contain proprietary names or information.

Requests that are not in the format described above may be rewritten in the appropriate format by the Committee prior to being answered, which may inadvertently change the intent of the original request.

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FRAMING-AFFIXED SUPPORTS (CARRIERS) FOR OFF-THE-FLOOR PLUMBING FIXTURES

1 GENERAL

1.1 Scope

This Standard covers framing-affixed supports (i.e., carriers), with or without concealed tanks, including combination carriers and fittings, for off-the-floor plumbing fixtures (i.e., water closets, urinals, bidets, lavatories, and sinks). This Standard specifies definitions, materials, general requirements, strength and deflection requirements, and marking requirements. It is not intended to limit the use of other materials and designs that comply with the requirements of this Standard.

1.2 Units of Measurement

SI units are the units of record in Canada. In this Standard, the inch/pound units are shown in parentheses. The values stated in each measurement system are equivalent in application; however, each system is to be used independently. Combining values from the two measurement systems can result in nonconformance with this Standard. All references to gallons are in U.S. gallons.

1.3 References

The following documents form a part of this Standard to the extent specified herein. Unless otherwise specified, the latest edition shall apply.

ASME A112.6.1M, Floor-Affixed Supports for Off-the-Floor Plumbing Fixtures for Public Use

ASME A112.19.2/CSA B45.1, Ceramic plumbing fixtures

ASME A112.19.5/CSA B45.15, Flush valves and spuds for water closets, urinals, and tanks

ASSE 1002/ASME A112.1002/CSA B125.12, Anti-siphon fill valves for water closet tanks

ASSE 1037/ASME A112.1037/CSA B125.37, Performance requirements for pressurized flushing devices for plumbing fixtures

Publisher: The American Society of Mechanical Engineers (ASME), Two Park Avenue, New York, NY 10016-5990 (www.asme.org)

CSA B45.5/IAPMO Z124, Plastic plumbing fixtures

Publisher: Canadian Standards Association (CSA), 178 Rexdale Boulevard, Toronto, Ontario M9W 1R3, Canada (www.csagroup.org)

IAPMO PS 50, Flush Valves with Dual Flush Device for Water Closets or Water Closet Tank with an Integral Flush Valves with a Dual Flush Device

Publisher: International Association of Plumbing and Mechanical Officials (IAPMO), 4755 East Philadelphia Street, Ontario, CA 91761 (www.iapmo.org)

1.4 Definitions

A number of special terms that are specific to the carriers covered by this Standard are defined in this section. For additional terms pertinent to support and carrier nomenclature, see ASME A112.6.1M.

carrier: a concealed structural support.

combination carrier and fitting: an assembly for supporting off-the-floor fixtures, which includes a structural support, waste-fitting components, and a flushing device. See [Figure 1](#).

off-the-floor fixture: a plumbing fixture, located adjacent to a wall, which has no visible contact with the floor in front of the wall.

structural support: a concealed support for an off-the-floor fixture, intended to be affixed to the structural portion of a wall.

NOTE: Structural portion of a wall includes wood and steel wall framing, concrete blocks, and poured concrete.

2 MATERIALS

2.1 Carriers

Materials used in supports and carrier assemblies shall be made of materials that comply with the material requirements specified in ASME A112.6.1M.

2.2 Waste Fittings

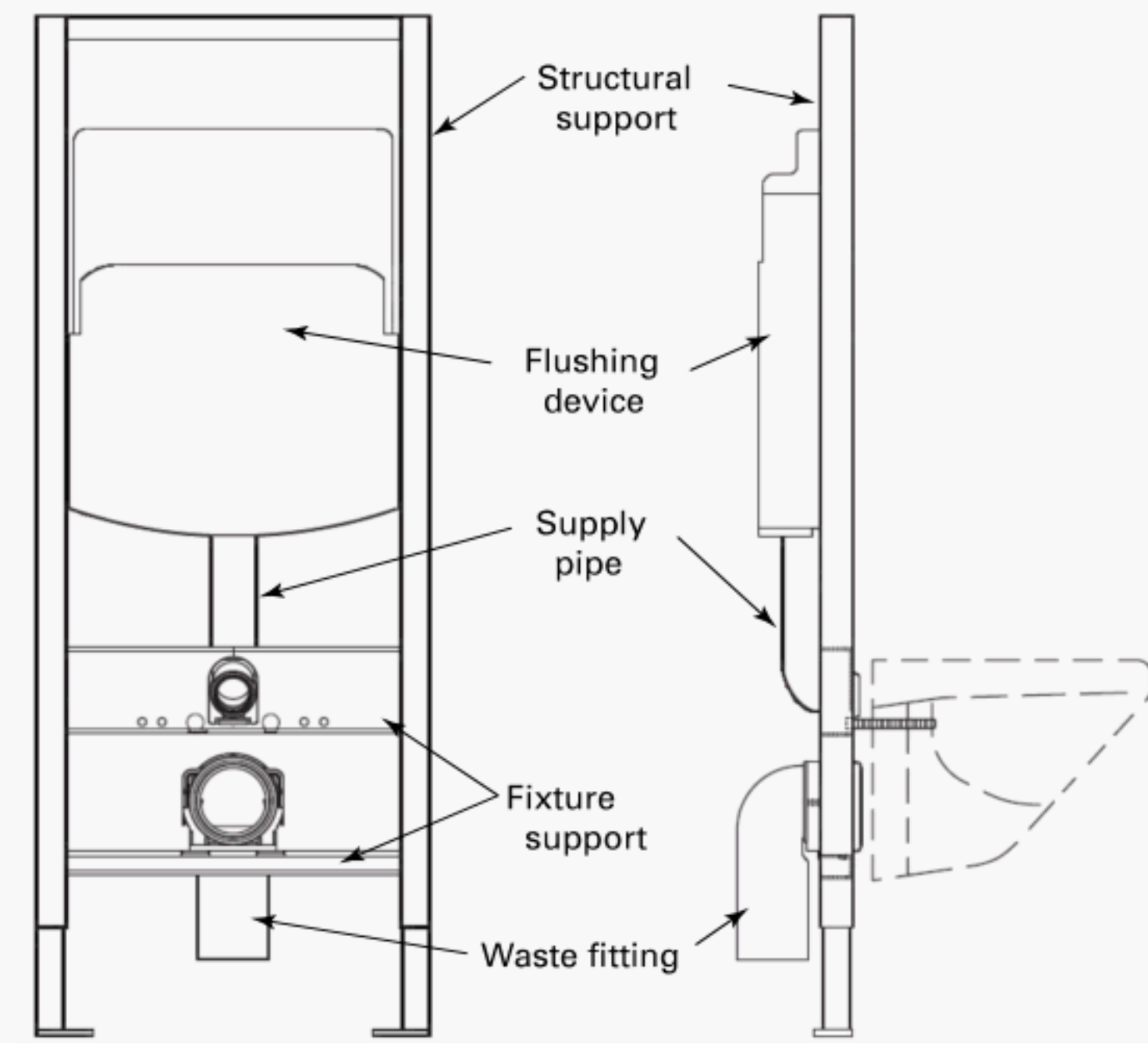
Waste fittings shall be made of cast iron, bronze, plastic, or other materials suitable for the intended applications and comply with the requirements of this Standard.

3 REQUIREMENTS

3.1 General

3.1.1 Carriers. Carriers for off-the-floor plumbing fixtures shall consist of, at a minimum, the following:

- (a) the (plumbing) fixture support

Figure 1 Combination Carrier and Fittings

(b) means to affix the support to the structural framing wall

(c) fixture bolts and hardware on which the plumbing fixture is mounted and that connect directly to the support

(d) means to adjust the elevation of the fixture to desired height

3.1.2 Foot Supports. Carriers may have members (i.e., foot supports) designed to rest on the floor in a concealed location for anchoring and supporting purposes. When provided, foot supports shall be capable of extending downward from the carrier to contact the floor or other framing structure to provide added support.

3.2 Combination Carriers for Water Closet and Urinals

In addition to the components of a carrier defined in [para. 3.1.1](#), a combination carrier (see [Figure 1](#)) for water closets and urinals shall include the following:

- (a) flushing device
- (b) supply piping to fixture
- (c) waste fitting from the fixture piping to carry the waste from the fixture into the waste line
- (d) gaskets and hardware necessary to connect all components (e.g., inlet and outlet pipes)

3.3 Carriers for Water Closets and Urinals

When provided

(a) flush tanks shall comply with para. 4.5.2 of CSA B45.5/IAPMO Z124

(b) flush valves shall comply with ASME A112.19.5/CSA B45.15 or IAPMO PS 50

(c) fill valves shall comply with ASSE 1002/ASME A112.1002/CSA B125.12

(d) pressurized flushing devices shall comply with ASSE 1037/ASME A112.1037/CSA B125.37

3.4 Waste Fittings

3.4.1 When provided, waste fittings shall have the following:

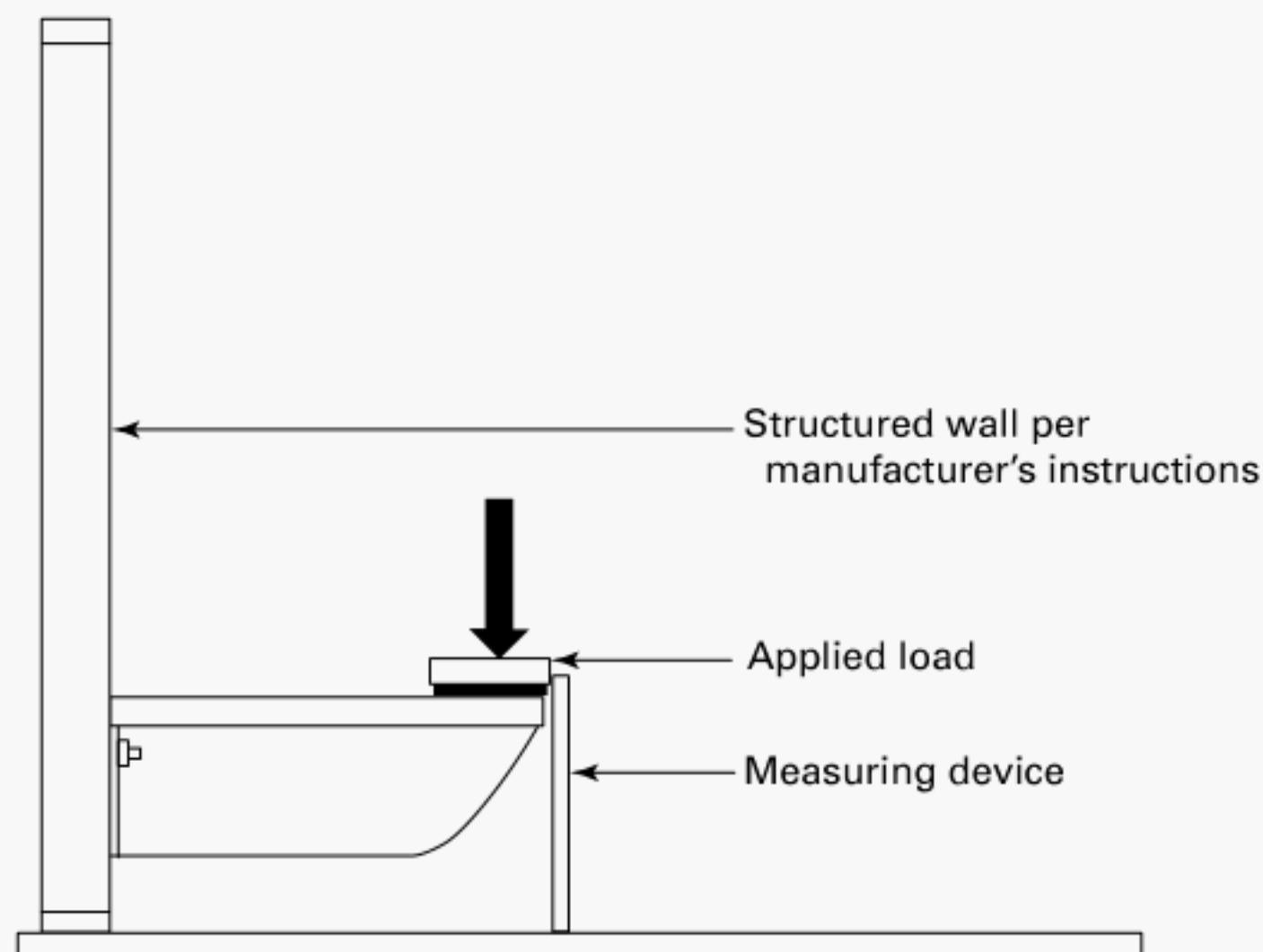
- (a) watertight seal at their joints
- (b) means of withstanding the pressure specified in [para. 4.1.2](#)

3.4.2 Waste fittings for

(a) water closet carriers shall be capable of passing a ball with a 54 mm (2.13 in.) diameter

(b) urinal carriers shall be capable of passing a ball with a 23 mm (0.88 in.) diameter

(c) lavatory and bidet carriers shall have an outlet with a minimum 31.75 mm (1¼ in.) nominal outside diameter (O.D.)

Figure 2 Load Test on Off-the-Floor Plumbing Fixtures

3.5 Installation Instructions

Manufacturers shall provide installation instructions.

4 TEST REQUIREMENTS

4.1 Waste Fittings

4.1.1 Performance Requirements. The drainage envelope parts of waste fittings shall show no signs of leakage, cracking, or permanent deformation when tested in accordance with [para. 4.1.2](#).

4.1.2 Test Method. Joints shall be made in accordance with the manufacturer's instructions and subjected to air pressure of $35 \text{ kPa} \pm 4 \text{ kPa}$ ($5.0 \text{ psi} \pm 0.5 \text{ psi}$) for 1 min.

4.2 Load Test

See [Figure 2](#).

4.2.1 Test Method. The carrier shall be affixed to framing members in accordance with the manufacturer's installation instructions, and the plumbing fixture shall be assembled to the carrier. The elevation of the top edge of the plumbing fixture at its outermost edge shall be measured and recorded. A load as specified in [para. 4.2.2](#) shall be applied to the center of the front edge of

the fixture for 5 min. The load shall be applied using a 76 mm (3 in.) diameter by 6 mm (0.25 in.) minimum thick, metal load-distribution disk resting on a 13 mm (0.5 in.) thick sponge rubber or equivalent pad. With the load in place, the top edge elevation of the fixture shall be measured and recorded. Ten minutes after removal of the load, the elevation shall be measured and recorded again.

4.2.2 Loads. Test loads shall be as follows:

- (a) 2 225 N (500 lbf) for water closets and bidets
- (b) 1 112 N (250 lbf) for lavatories and sinks
- (c) 222 N (50 lbf) for urinals

4.2.3 Performance Requirements. The maximum deflection, while the load is in place, shall not exceed 6.3 mm (0.25 in.) and the residual deflection after removal of the load shall not exceed 3.2 mm (0.125 in.).

5 MARKING

Carriers complying with this Standard shall be marked with the manufacturer's name or trademark. Markings shall be permanent, legible, and visible after installation, but made before installing the finished wall.

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A112 ASME STANDARDS RELATED TO PLUMBING

A112.1.2-2012 (R2017)	Air Gaps in Plumbing Systems (For Plumbing Fixtures and Water-Connected Receptors)
A112.1.3-2000 (R2015)	Air Gap Fittings for Use With Plumbing Fixtures, Appliances, and Appurtenances
A112.3.1-2007 (R2017)	Stainless Steel Drainage Systems for Sanitary, DWV, Storm, and Vacuum Applications, Above- and Below-Ground
A112.3.4-2000 (R2004)	Macerating Toilet Systems and Related Components
A112.4.1-2009 (R2014)	Water Heater Relief Valve Drain Tubes
A112.4.2-2009 (R2014)	Water Closet Personal Hygiene Devices
A112.4.3-1999 (R2015)	Plastic Fittings for Connecting Water Closets to the Sanitary Drainage System
A112.4.4-2017	Plastic Push-Fit Drain, Waste, and Vent (DWV) Fittings
A112.4.7-2002 (R2008)	Point of Use and Branch Water Submetering Systems
A112.4.14-2004 (R2010)	Manually Operated, Quarter-Turn Shutoff Valves for Use in Plumbing Systems
A112.6.1M-1997 (R2017)	Floor-Affixed Supports for Off-the-Floor Plumbing Fixtures for Public Use
A112.6.2-2017	Framing-Affixed Supports (Carriers) for Off-the-Floor Plumbing Fixtures
A112.6.3-2016	Floor and Trench Drains
A112.6.4-2003 (R2008)	Roof, Deck, and Balcony Drains
A112.6.7-2011 (R2015)	Sanitary Floor Sinks
A112.6.9-2010 (R2015)	Siphonic Roof Drains
A112.14.1-2003 (R2017)	Backwater Valves
A112.14.3-2000 (R2004)	Grease Interceptors
A112.14.4-2001 (R2017)	Grease Removal Devices
A112.14.6-2010 (R2015)	FOG (Fats, Oils, and Greases) Disposal Systems
A112.18.1-2011/CSA B125.1-11 (R2017)	Plumbing Supply Fittings
A112.18.2-2011/CSA B125.2-11	Plumbing Waste Fittings
A112.18.3-2002 (R2017)	Performance Requirements for Backflow Protection Devices and Systems in Plumbing Fixture Fittings
A112.18.6-2009/CSA B125.6-09 (R2014)	Flexible Water Connectors
A112.18.8-2009 (R2014)	In-Line Sanitary Waste Valves for Plumbing Drainage Systems
A112.18.9-2011 (R2017)	Protectors/Insulators for Exposed Waste and Supplies on Accessible Fixtures
A112.19.1-2008/CSA B45.2-08	Enamelled Cast Iron and Enamelled Steel Plumbing Fixtures
A112.19.2-2008/CSA B45.1-08	Ceramic Plumbing Fixtures
A112.19.3-2008/CSA B45.4-08	Stainless Steel Plumbing Fixtures
A112.19.4M-1994 (R2004)	Porcelain Enameled Formed Steel Plumbing Fixtures
A112.19.5/CSA B45.15-2011 (R2016)	Flush Valves and Spuds for Water Closets, Urinals, and Tanks
A112.19.6-1995	Hydraulic Performance Requirements for Water Closets and Urinals
A112.19.7/CSA B45.10-2012 (R2017)	Hydromassage Bathtub Appliances
A112.19.9M-1991 (R2008)	Non-Vitreous Ceramic Plumbing Fixtures
A112.19.10-2003 (R2008)	Dual Flush Devices for Water Closets
A112.19.12-2014	Wall Mounted, Pedestal Mounted, Adjustable, Elevating, Tilting, and Pivoting Lavatory, Sink, and Shampoo Bowl Carrier Systems and Drain Waste Systems
A112.19.13-2001 (R2007)	Electrohydraulic Water Closets
A112.19.14-2013	Six-Liter Water Closets Equipped With a Dual Flushing Device
A112.19.15-2012 (R2017)	Bathtubs/Whirlpool Bathtubs With Pressure Sealed Doors
A112.19.17-2010	Manufactured Safety Vacuum Release Systems (SVRS) for Residential and Commercial Swimming Pool, Spa, Hot Tub, and Wading Pool Suction Systems
A112.19.19-2006 (R2011)	Vitreous China Nonwater Urinals
A112.20.1-2004	Qualification of Installers of High Purity Piping Systems
A112.20.2-2004	Qualification of Installers of Firestop Systems and Devices for Piping Systems

A112.21.3M-1985 (R2017)	Hydrants for Utility and Maintenance Use
A112.36.2M-1991 (R2017)	Cleanouts

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