SECTION 22 40 00

PLUMBING FIXTURES

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\*\* NOTE TO SPECIFIER \*\* MIFAB, Inc.; roof and scupper drain grates.
This section is based on the products of MIFAB, Inc., which is located at:1321 W. 119th St.Chicago, IL 60643Toll Free Tel: 800-465-2736Tel: 773.341.3030Fax: 773-341-3047 Email: [request info (sales@mifab.com )](https://arcat.com/rfi?action=email&company=MIFAB%252C%252BInc.&message=RE%253A%2520Spec%2520Question%2520(15410mfb)%253A%2520&coid=38108&spec=15410mfb&rep=&fax=773-341-3047%2520)
Web: <http://www.mifab.com>
 [ [Click Here](https://arcat.com/company/mifab-inc-38108) ] for additional information.
Manufacturer of Commercial and Industrial Plumbing and Drainage Products
Servingall the USA, Canada, Australia, and the Middle East, MIFAB can provide you with the quality, engineered plumbing and drainage solutions you need. Innovative product designs save the installer time and material cost and provides the owner with higher quality cast stainless steel drains and cleanouts for the same cost as the industry standard nickel bronze.

1. GENERAL
	1. SECTION INCLUDES

\*\* NOTE TO SPECIFIER \*\* Delete items below not required for project.

* + 1. Valve boxes.
		2. Acid Neutralization tanks.
		3. Dialysis boxes.
		4. Fixture carriers.
		5. Floor sinks.
	1. RELATED SECTIONS

\*\* NOTE TO SPECIFIER \*\* Delete any sections below not relevant to this project; add others as required.

* + 1. Section 22 05 00 - Common Work Results for Plumbing.
		2. Section 22 10 00 - Plumbing Piping.
	1. SUBMITTALS
		1. Submit under provisions of Section 01 30 00.
		2. Product Data:
			1. Manufacturer's data sheets on each product to be used.
			2. Preparation instructions and recommendations.
			3. Storage and handling requirements and recommendations.
			4. Typical installation methods.

\*\* NOTE TO SPECIFIER \*\* Delete if not applicable to product type.

* + 1. Verification Samples: Two representative units of each type, size, pattern, and color.
		2. Shop Drawings: Include details of materials, construction, and finish. Include relationship with adjacent construction.
	1. QUALITY ASSURANCE
		1. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with a minimum five years documented experience.
		2. Installer Qualifications: Company specializing in performing Work of this section with minimum two years documented experience with projects of similar scope and complexity.
		3. Source Limitations: Provide each type of product from a single manufacturing source to ensure uniformity.

\*\* NOTE TO SPECIFIER \*\* Include mock-up if the project size or quality warrant the expense. The following is one example of how a mock-up on might be specified. When deciding on the extent of the mock-up, consider all the major different types of work on the project.

* + 1. Mock-Up: Construct a mock-up with actual materials in sufficient time for Architect's review and to not delay construction progress. Locate mock-up as acceptable to Architect and provide temporary foundations and support.
			1. Intent of mock-up is to demonstrate quality of workmanship and visual appearance.
			2. If mock-up is not acceptable, rebuild mock-up until satisfactory results are achieved.
			3. Retain mock-up during construction as a standard for comparison with completed work.
			4. Do not alter or remove mock-up until work is completed or removal is authorized.
	1. PRE-INSTALLATION CONFERENCE
		1. Convene a conference approximately two weeks before scheduled commencement of the Work. Attendees shall include Architect, Contractor and trades involved. Agenda shall include schedule, responsibilities, critical path items and approvals.
	2. DELIVERY, STORAGE, AND HANDLING
		1. Store and handle in strict compliance with manufacturer's written instructions and recommendations.
		2. Protect from damage due to weather, excessive temperature, and construction operations.
	3. PROJECT CONDITIONS
		1. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.
	4. WARRANTY
		1. Manufacturer's standard limited warranty unless indicated otherwise.
1. PRODUCTS
	1. MANUFACTURERS
		1. Acceptable Manufacturer: MIFAB, Inc., which is located at:1321 W. 119th St.Chicago, IL 60643Toll Free Tel: 800-465-2736Tel: 773.341.3030Fax: 773-341-3047 Email: [request info (sales@mifab.com )](https://arcat.com/rfi?action=email&company=MIFAB%252C%252BInc.&message=RE%253A%2520Spec%2520Question%2520(15410mfb)%253A%2520&coid=38108&spec=15410mfb&rep=&fax=773-341-3047%2520);Web: <http://www.mifab.com>

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs: coordinate with requirements of Division 1 section on product options and substitutions.

* + 1. Substitutions: Not permitted.
		2. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00.

\*\* NOTE TO SPECIFIER \*\* Delete article if not required.

* 1. VALVE BOXES

\*\* NOTE TO SPECIFIER \*\* Delete paragraph not required.

* + 1. MI-VB Valve Box: For access and protection of valves in a wall.
			1. Material: Satin coat steel. Door and Frame: 16 gauge. Box: 20 gauge. Finish: Primed white.
			2. Material: 305 stainless steel. Door and Frame: 16 gauge. Box: 20 gauge.
				1. Finish: No. 4 brush satin finish on door and frame and a 2B finish on the box.
				2. Door: Flush to frame. Turned back around edges for extra rigidity.

\*\* NOTE TO SPECIFIER \*\* Optional. Delete if not required.

Opening cut out of door to allow installation of glass or plastic window.

Glazing supplied by others.

* + - * 1. Frame: Welded to box. Pre-punched mounting holes for simple installation.
			1. Box Depth: Customizable to meet rough in requirements.
			2. Hinge: Concealed pivot pins.
			3. Latch: Flush mounted, screwdriver operated cam.
			4. Latch: Allen key, cylinder key, or paddle latch. Cylinder key locks are keyed alike.
		1. MI-VB-SM Valve Box: For access and protection of valves extending outside of wall.
			1. Material: Satin coat steel. Door and Frame: 16 gauge. Box: 20 gauge. Finish: Primed white.
			2. Material: 305 stainless steel. Door and Frame: 16 gauge. Box: 20 gauge.
				1. Finish: No. 4 brush satin finish on door and frame and a 2B finish on the box.
				2. Door: Overlaps box, providing a tight secure fit.

\*\* NOTE TO SPECIFIER \*\* Optional. Delete if not required.

Opening cut out of door to allow installation of glass or plastic window.

Glazing supplied by others.

* + - * 1. Frame: Welded to box. Pre-punched mounting holes for simple installation.
			1. Box Depth: Can be customized to meet rough in requirements.
			2. Hinge: Concealed pivot pins.
			3. Latch: Flush mounted, screwdriver operated cam.
			4. Latch: Allen key, cylinder key, or paddle latch. Cylinder key locks are keyed alike.

\*\* NOTE TO SPECIFIER \*\* Delete article if not required.

* 1. ACID NEUTRALIZATION TANKS

\*\* NOTE TO SPECIFIER \*\* Delete paragraph not required.

* + 1. MI-NEUT Acid Neutralization Tank: For laboratories, industrial processes, or other polluting sources to dilute and neutralize harmful discharged wastes. For chemical treatment plants or municipal water treatment facilities for diluting polluted effluent. Tank is filled with neutralization medium lump limestone, 1 to 3 inch diameter size. Water is then added to tank to help dilution.
			1. Body: Solid construction seamless polyethylene with inlet and outlet.
			2. Lid: Acid resistant, epoxy coated, and neoprene gasketed. Secured with stainless steel hardware. Vent Connections: Optional.
			3. Capacity: 2 to 3000 gallons.
			4. Routine Maintenance: Every 1 to 3 months. May be more frequent due to waste going through unit.
		2. MI-NEUT-P Point of Use Application Acid Neutralization Tank: For laboratories, industrial processes to dilute and neutralize harmful discharged wastes. For chemical treatment plants or municipal water treatment facilities for diluting polluted effluent.
			1. Replaces standard P-trap and need for downstream acid waste piping. Max. Flow Rate: 8 GPM. Uses solid alkali non-resin materials to neutralize acids in a self-contained system. Bucket (Pail), Siphon with Tubing, and Support Pipe with Flange.

\*\* NOTE TO SPECIFIER \*\* Delete article if not required.

* 1. DIALYSIS BOXES
		1. MI-DIAL Series: For dialysis machines using reverse osmosis and deionized water, mixed with dialysate saline concentrate. This corrodes steel, some stainless steels, cast iron, copper, and brass metals regularly used in supply/waste systems.

\*\* NOTE TO SPECIFIER \*\* Delete product options not required.

* + - 1. Product: MI-DIAL Dialysis Box with One Valve: 16 gauge, Type 316 stainless steel, satin finish, continuous welded corners, four mounting anchor tabs, removable finishing frame and door, one 1/2 inch NPT PVC supply connection with PVC ball valve and 3/4 inch hose connection. Bracket with grommets for two 3/8 inch diameter hose, and 2 inch stainless steel drain connection with sloped bottom.
			2. Product: MI-DIAL-2 Dialysis Box with Two Valves: 16 gauge, Type 316 stainless steel, satin finish, continuous welded corners, four mounting anchor tabs, removable finishing frame and door, two 1/2 inch NPT PVC supply connections with PVC ball valves and 3/4 inch hose connections. Bracket with grommets for two 3/8 inch diameter hose and 2 inch stainless steel drain connection with sloped bottom.
			3. Product: MI-DIAL-2-LD Dialysis Box with Two Valves: Construction: 16 gauge, Type 316 stainless steel, satin finish, continuous welded corners, four mounting anchor tabs, removable finishing frame and door, two 1/2 inch NPT PVC supply connections with PVC ball valves and 3/4 inch hose connections. Bracket with grommets for two 3/8 inch diameter hose and 2 inch stainless steel drain connection with sloped bottom.
			4. Product: MI-DIAL-BPS: Stainless Steel Dialysis Supply and Separate Waste Box with FRP Valve and Trap Seal Primer: 16 gauge, Type 316 stainless steel, satin finish, continuous welded corners, four mounting anchor tabs, removable 304 stainless steel finishing frame and cover, 1/2 inch sweat supply connection, 3/4 inch hose connection with trap seal primer, shut off valve, reduced pressure zone backflow preventer, and 2 inch NPT stainless steel drain connection. All boxes slope towards outlet.
			5. Product: MI-DIAL-CB Stainless Steel Compartmentalized Dialysis Supply and Waste Box: 16 gauge, Type 316 stainless steel, continuous welded corners, four mounting anchor tabs, and removable 304 stainless steel, finishing frame and cover 1/2 inch NPT supply connection, 3/4 inch hose connection with trap seal primer, shut off valve, reduced pressure zone backflow preventer, and 1-1/2 inch NPT stainless steel drain connection. All boxes slope towards outlet.
			6. Product: MI-DIAL-DB Compartmentalized Dialysis Supply & Waste Box with FRP Valve and Trap Seal Primer: 16 gauge, Type 316 stainless steel, continuous welded corners, four mounting anchor tabs, and removable 304 stainless steel finishing frame and cover 1/2 inch NPT supply connection, 3/4 inch hose connection with trap seal primer, shut off valve, reduced pressure zone backflow preventer, and 1-1/2 inch NPT stainless steel drain connection. All boxes slope towards outlet.
			7. Product: MI-DIAL-LD Dialysis Box with One Valve: 16 gauge, Type 316 stainless steel, satin finish, continuous welded corners, four mounting anchor tabs, one 1/2 inch NPT PVC supply connection with PVC ball valve and 3/4 inch hose connection. Bracket with grommets for two 3/8 inch diameter hose and 2 inch stainless steel drain connection with sloped bottom.

\*\* NOTE TO SPECIFIER \*\* Delete article if not required.

* 1. FIXTURE CARRIERS
		1. Standards compliance: Complies with ASME A112.6.1M applicable requirements.

\*\* NOTE TO SPECIFIER \*\* Delete paragraphs not required.

* + 1. Long Barrel Horizontal Fixture Carriers: For off the floor fixtures. Barrel Fitting: 37 inch long. Auxiliary Inlet: Receives waste from urinals and lavatories beside or opposite the carrier reducing space required in pipe chase. Concealed within wall and supports the fixture load through a faceplate and foot support anchored to the floor.

\*\* NOTE TO SPECIFIER \*\* Delete carrier options not required.

* + - 1. Product: MC-10-27-37 Adjustable Water Closet Carrier with Auxiliary Inlet and Barrel: Horizontal, lacquered, 37 inch long barrel cast iron fitting, 4 inch no hub waste, 2 inch no hub vent connection, 2 inch no hub auxiliary inlet connection, lacquered cast iron gasketed adjustable faceplate, universal floor mounted cast iron foot supports, adjustable 8 inch tapered thread ABS nipple with integral test cap, neoprene bowl gasket, hardware, threaded rod protectors, polished chrome plated finishing cap nuts and rear anchor tie down support.
			2. Product: MC-10-27-37-HS Adjustable Hub and Spigot Water Closet Carrier with Aux. Inlet and Long Barrel: Horizontal, lacquered, 37 inch long barrel cast iron fitting, 2 inch no hub vent connection, 2 inch no hub auxiliary inlet connection, lacquered cast iron gasketed adjustable faceplates, universal floor mounted cast iron foot supports, adjustable 8 inch tapered thread ABS nipples with integral test caps, neoprene bowl gaskets, hardware, threaded rod protectors and polished chrome plated finishing cap nuts.
			3. Product: MC-10D-27-37 Double, Adjustable Water closet Carrier with Aux 2" Inlet and Barrel: Lacquered, 37 inch long barrel cast iron fitting, 4 inch no hub waste, 2 inch no hub vent connection, 2 inch no hub auxiliary inlet connection, lacquered cast iron gasketed adjustable faceplates, universal floor mounted cast iron foot supports, adjustable 8 inch tapered thread ABS nipples with integral test caps, neoprene bowl gaskets, hardware, threaded rod protectors and polished chrome plated finishing cap nuts.
			4. Product: MC-10D-27-37-HS Double, Adjustable Hub and Spigot Water Closet Carrier with Aux Inlet: Lacquered, 37 inch long barrel cast iron fitting, 2 inch no hub vent connection, 2 inch no hub auxiliary inlet connection, lacquered cast iron gasketed adjustable faceplates, universal floor mounted cast iron foot supports, adjustable 8 inch tapered thread ABS nipples with integral test caps, neoprene bowl gaskets, hardware, threaded rod protectors and polished chrome plated finishing cap nuts.
		1. Regular Horizontal Fixture Carriers: For wall mounted, off the floor plumbing fixtures. Auxiliary inlet is designed to receive waste from urinals and lavatories beside or opposite carrier to reduce space in the pipe chase. Carrier concealed within the wall and supports the fixture load through a faceplate and foot support system anchored to the floor.

\*\* NOTE TO SPECIFIER \*\* Delete attributes and product options not required.

* + - 1. Attributes: Lacquered cast iron fitting, 2 inch no hub vent connection: lacquered cast iron gasketed adjustable faceplate, universal floor mounted cast iron foot supports, adjustable 8 inch tapered thread ABS nipple with integral test cap, neoprene bowl gasket, hardware, threaded rod protectors, polished chrome plated finishing cap nuts and rear anchor tie down support.
				1. Product: MC-10-27 Horizontal, Adjustable, Water Closet Carrier with Auxiliary Inlet: 4 inch no hub waste, 2 inch no hub auxiliary inlet connection.
				2. Product: MC-10-3NH 3" Fitting, Horizontal, Adjustable Water Closet Carrier: 3 inch no hub waste
				3. Product: MC-10-EXT Horizontal, Adjustable Water Closet Carrier for ADA in Middle of Battery: 4 inch no hub waste.
				4. Product: MC-10D-27 Double, Horizontal, Adjustable Water Closet Carrier with Auxiliary Inlet: 4 inch no hub waste, 2 inch no hub auxiliary inlet connection,
				5. Product: MC-10D-3NH 3" Fitting, Double, Horizontal Adjustable Water Closet Carrier: 3 inch no hub waste,
				6. Product: MC-10D-EXT Double, Horizontal, Adjustable Water Closet Carrier for ADA in Middle of Battery: 4 inch no hub waste,
				7. Product: MC-10D-HS Double, Horizontal Adjustable Hub and Spigot Water Closet:
			2. Attributes: Lacquered cast iron fitting, 2 inch hub and spigot vent connection, lacquered cast iron gasketed adjustable faceplate, universal floor mounted cast iron foot supports, adjustable 8 inch tapered thread ABS nipple with integral test cap, neoprene bowl gasket, hardware, threaded rod protectors, polished chrome plated finishing cap nuts and rear anchor tie down support.
				1. Product: MC-10-EXT-HS Horizontal, Adjustable Water Closet Carrier for ADA in Middle of Battery with Hub & Spigot Connection: 4 inch hub and spigot waste
				2. Product: MC-10D-EXT-HS Double, Horizontal, Adjustable Water Closet Carrier for ADA in Middle of Battery with Hub & Spigot Connection: 4 inch hub and spigot waste,
		1. Other Horizontal Fixture Carriers:
			1. Attributes: Lacquered cast iron fitting, 2 inch no hub vent connection, lacquered cast iron gasketed adjustable faceplate, universal floor mounted cast iron foot supports, adjustable 8 inch tapered thread ABS nipple with integral test cap, neoprene bowl gasket, hardware, threaded rod protectors, polished chrome plated finishing cap nuts and rear anchor tie down support. 10-1/2 inch front of foot and rear of anchor support. 8 inch wall space back of rear anchor support and back of in wall foot supports. Factory assembled foot supports and faceplate in siphon jet configuration. Reversible for blowout design.

\*\* NOTE TO SPECIFIER \*\* Delete product options not required.

* + - * 1. Product: MC-10 Horizontal, Adjustable Water Closet Carrier: For wall mounted, off floor plumbing fixtures Concealed in wall. Supports fixture load through faceplate and foot support system anchored to floor. 4 inch no hub waste
				2. Product: MC-10-HS Horizontal Adjustable Hub and Spigot Water Closet Carrier: For wall mounted off floor plumbing fixtures. Carrier is concealed in wall and supports fixture load through faceplate and foot support system anchored to the floor. 4 inch hub waste
				3. Product: MC-10D Double, Horizontal Adjustable Water Closet Carrier: For wall mounted back to back off floor plumbing fixtures Concealed in wall; supports fixture load through faceplate and foot supports anchored to floor. 14-1/2 inch space between front of foot supports. 9 inch wall space between back of in wall foot supports. 4 inch no hub waste
				4. Product: MC-10-HDX Extra Heavy Duty 1,000 lbs Load Rated Water Closet Carrier: Adjustable support frame and rear anchor tie-down. Feet and rear anchors are bolted to floor using anchors achieving the specified "pull-out" force of 750 lbs.
		1. Fixed Vertical Fixture Carriers:

\*\* NOTE TO SPECIFIER \*\* Delete attributes and product options not required.

* + - 1. Attributes: For single water closets with waste line below the floor slab. Typical wall mounted off floor plumbing fixtures having no contact with finished floor. Carrier is concealed in the wall and supports fixture load through a faceplate and foot support system anchored to the floor.
				1. Product: MC-14 Fixed On-Stack Water Closet Carrier: Lacquered cast iron fitting, 3 or 4 inch no hub waste, 2 or 4 inch no hub vent connection, lacquered cast iron faceplate, universal floor mounted cast iron foot supports, adjustable 8 inch tapered thread ABS nipple with integral test cap, neoprene bowl gasket, hardware, threaded rod protectors, polished chrome plated finishing cap nuts and rear anchor tie down support.
				2. Product: MC-14-HS Fixed Hub and Spigot on Stack Water Closet Carrier: Lacquered cast iron fitting, 4 inch waste, 2 inch vent connection, lacquered cast iron faceplate, universal floor mounted cast iron foot supports, adjustable 8 inch tapered thread ABS nipple with integral test cap, neoprene bowl gasket, hardware, threaded rod protectors, polished chrome plated finishing cap nuts and rear anchor tie down support.
			2. Attributes: For water closets offset from a common stack by 4 inches in multi-floor installations where minimum pipe space is required. Typical wall mounted off floor plumbing fixtures having no contact with finished floor. Carrier is concealed in the wall and supports fixture load through a faceplate and foot support system that is anchored to the floor.
				1. Product: MC-15 Fixed, Offset from Stack Water Closet Carrier: Offset lacquered cast iron fitting, 4 inch no hub waste, 2 inch no hub vent connection, lacquered cast iron faceplate, universal floor mounted cast iron foot supports, adjustable 8 inch tapered thread ABS nipple with integral test cap, neoprene bowl gasket, hardware, threaded rod protectors, polished chrome plated finishing cap nuts and rear anchor tie down support.
				2. Product: MC-15-HS Fixed Hub & Spigot Water Closet Carrier Offset from Stack: Offset lacquered cast iron fitting, 4 inch waste, 2 inch vent connection, lacquered cast iron faceplate, universal floor mounted cast iron foot supports, adjustable 8 inch tapered thread ABS nipple with integral test cap, neoprene bowl gasket, hardware, threaded rod protectors, polished chrome plated finishing cap nuts and rear anchor tie down support.
				3. Product: MC-15D Double, Fixed, Offset from Stack Water Closet Carrier: Offset lacquered cast iron fitting, 4 inch no hub waste, 2 inch no hub vent connection, lacquered cast iron gasketed adjustable faceplates, universal floor mounted cast iron foot supports, adjustable 8 inch tapered thread ABS nipples with integral test caps, neoprene bowl gaskets, hardware, threaded rod protectors and polished chrome plated finishing cap nuts.
				4. Product: MC-15D-HS Double, Fixed Hub and Spigot Water Closet Carrier Offset from Stack: Offset lacquered cast iron fitting, 4 inch waste, 2 inch vent connection, lacquered cast iron gasketed adjustable faceplates, universal floor mounted cast iron foot supports, adjustable 8 inch tapered thread ABS nipples with integral test caps, neoprene bowl gaskets, hardware, threaded rod protectors and polished chrome plated finishing cap nuts.
		1. Adjustable Vertical Fixture Carriers:

\*\* NOTE TO SPECIFIER \*\* Delete attributes and product options not required.

* + - 1. Attributes: For through slab pipe connection with water closets installed on a common stack. Adjustable faceplate permits installer to set water closet to desired height from finished floor, relative to vertical carrier fitting within the stack. Wall mounted off floor fixtures Carrier is concealed in wall and supports fixture load through faceplate and foot support system anchored to floor.
				1. Product: MC-12 Adjustable Water Closet Carrier: Lacquered cast iron fitting, 4 inch no hub waste, 2 inch no hub vent connection, lacquered cast iron gasketed adjustable faceplate, universal floor mounted cast iron foot supports, adjustable 8 inch tapered thread ABS nipple with integral test cap, neoprene bowl gasket, hardware, threaded rod protectors, polished chrome plated finishing cap nuts and rear anchor tie down support. 11 inch space between front of foot and rear of anchor support. 7-1/4 inch wall space between back of rear anchor support and back of in wall foot supports. Factory assembled foot supports and faceplate in siphon jet configuration. Reversible for blowout design.
				2. Product: MC-12-HS Adjustable Hub and Spigot Water Closet Carrier: Lacquered cast iron fitting, 2 inch no hub vent connection, lacquered cast iron gasketed adjustable faceplate, universal floor mounted cast iron foot supports, adjustable 8 inch tapered thread ABS nipple with integral test cap, neoprene bowl gasket, hardware, threaded rod protectors, polished chrome plated finishing cap nuts and rear anchor tie down support. 11 inch space between front of foot and rear of anchor support. 7-1/4 inch wall space between back of rear anchor support and back of in wall foot supports. Factory assembled foot supports and faceplate in siphon jet configuration. Reversible for the blowout water closet design.
				3. Product: MC-12D Double, Adjustable Back to Back Water Closet Carrier: Lacquered cast iron fitting, 4 inch no hub waste, 2 inch no hub vent connection, lacquered cast iron gasketed adjustable faceplates, universal floor mounted cast iron foot supports, adjustable 8 inch tapered thread ABS nipples with integral test caps, neoprene bowl gaskets, hardware, threaded rod protectors and polished chrome plated finishing cap nuts. 14-1/2 inch space between front of foot supports. 9 inch wall space required between back of in wall foot supports. Factory assembled foot supports and faceplate in siphon jet configuration. Reversible for blowout water closet design.
				4. Product: MC-12D-HS Double, Adjustable Hub and Spigot Water Closet Carrier: Lacquered cast iron fitting, 2 inch no hub vent connection, lacquered cast iron gasketed adjustable faceplates, universal floor mounted cast iron foot supports, adjustable 8 inch tapered thread ABS nipples with integral test caps, neoprene bowl gaskets, hardware, threaded rod protectors and polished chrome plated finishing cap nuts. 14 1/2 inch space required between front of foot supports. 9 inch wall space required between back of in wall foot supports. Factory assembled foot supports and faceplate in siphon jet configuration. Reversible for blowout water closet design.
			2. Attributes: For through slab pipe connection with water closets installed on a common stack, with one or two side inlets receiving waste from horizontal piping or waste from other fixtures with waste lines roughed in above floor slab. Adjustable faceplate permits installer to set water closet to desired height from finished floor, relative to the vertical carrier fitting within the stack and position horizontal waste piping from horizontal carriers within the battery. Wall mounted off floor fixtures. Carrier is concealed in wall and supports fixture load through faceplate and foot support system anchored to floor. Factory assembled foot supports and faceplate in siphon jet water configuration. Reversible for blowout water closet design.
				1. Product: MC-13 Adjustable Water Closet Carrier with Side Inlets: Lacquered cast iron fitting, left, right or both 4 inch side inlets, 4 inch no hub waste, 2 inch no hub vent connection, lacquered cast iron gasketed adjustable faceplate, universal floor mounted cast iron foot supports, adjustable 8 inch tapered thread ABS nipple with integral test cap, neoprene bowl gasket, hardware, threaded rod protectors, polished chrome plated finishing cap nuts and rear anchor tie down support. 11 inches required between front of foot and rear of anchor support. 8 1/2 inch in wall space required between back of rear anchor support and back of in wall foot supports.
				2. Product: MC-13-HS Adjustable Hub and Spigot Water Closet Carrier with Side Inlets: Lacquered cast iron fitting, left, right or both, 4 inch side inlets, 2 inch vent connection, lacquered cast iron gasketed adjustable faceplate, universal floor mounted cast iron foot supports, adjustable 8 inch tapered thread ABS nipple with integral test cap, neoprene bowl gasket, hardware, threaded rod protectors, polished chrome plated finishing cap nuts and rear anchor tie down support. 11 inches required between front of foot and rear of anchor support. 8-1/2 inch minimum in wall space required between back of rear anchor support and back of in wall foot supports.
				3. Product: MC-13D Double, Adjustable Back to Back Water Closet Carrier with Side Inlets: Lacquered cast iron fitting, left, right or both 4 inch side inlets, 4 inch no hub waste, 2 inch no hub vent connection, lacquered cast iron gasketed adjustable faceplates, universal floor mounted cast iron foot supports, adjustable 8 inch tapered thread ABS nipples with integral test caps, neoprene bowl gaskets, hardware, threaded rod protectors and polished chrome plated finishing cap nuts. 14-1/2 inch required between front of foot supports. 9 inch wall space required between back of wall foot supports.
				4. Product: MC-13D-HS Double, Adjustable Back to Back Hub and Spigot Water Closet Carrier with Side Inlets: Lacquered cast iron fitting, left, right or both 4 inch side inlets, 4 inch no hub waste, 2 inch no hub vent connection, lacquered cast iron gasketed adjustable faceplates, universal floor mounted cast iron foot supports, adjustable 8 inch tapered thread ABS nipples with integral test caps, neoprene bowl gaskets, hardware, threaded rod protectors and polished chrome plated finishing cap nuts. 14-1/2 inch minimum space required between front of foot supports. 9 inch minimum in wall space required between back of in wall foot supports.
		1. Plate Type Fixture Carriers: Concealed Arms

\*\* NOTE TO SPECIFIER \*\* Delete attributes and product options not required.

* + - 1. Attributes: For Support off-floor fixture. Vertical load bearing components are concealed within the wall. Fixture carrier has no contact with finished floor inside of the room.
				1. Product: MC-41 Single Carrier with Concealed Arms: Floor mounted concealed arm lavatory carrier. Lacquered, adjustable, ductile iron concealed support arms. Lacquered cast iron invertible and adjustable arm supporting brackets, adjustable steel nipples with locknut and set screws, alignment rod, two lacquered 2 x 1 x 1/8 inch thick structural steel uprights with 3 x 4-1/2 welded steel feet. Fixture leveling and locking hardware.
				2. Product: MC-41-R Single Carrier with Concealed Arms and Round Uprights: Floor mounted concealed arm lavatory carrier. Lacquered, adjustable, ductile iron concealed support arms. Lacquered cast iron invertible and adjustable arm supporting brackets, alignment rod, two lacquered 2 inch diameter x 1/8 inch thick structural steel uprights with 3 x 4-1/2 inch welded steel feet and fixture leveling and locking hardware. The round uprights allow for lateral adjustment to the arms.
				3. Product: MC-41-TR Single Carrier with Concealed Arms and Measuring Plates: Lacquered, adjustable, ductile iron concealed support arms and measuring plates. Complete with lacquered cast iron invertible and adjustable arm supporting brackets, adjustable steel nipples with locknut and set screws, measuring plates, two lacquered 2 x 1 x 1/8 inch thick structural steel uprights with 3 x 4-1/2 inch welded steel feet and fixture leveling and locking hardware.
			2. Attributes: For Supporting back to back off-floor fixtures. Vertical load bearing components are concealed within the wall. Fixture carrier has no contact with the finished floor inside of the room.
				1. Product: MC-41D Double Fixture Carrier with Concealed Arms: Lacquered, adjustable, ductile iron concealed support arms. Lacquered cast iron invertible and adjustable arm supporting brackets, adjustable steel nipples with locknut and set screws, alignment rod, two lacquered 2 x 1 x 1/8 inch thick structural steel uprights with 3 x 4-1/2 inch welded steel feet, fixture leveling and locking hardware.
				2. Product: MC-41D-R Double Fixture Carrier with Concealed Arms and Round Uprights for ADA: Lacquered, adjustable, ductile iron concealed support arms. Lacquered cast iron invertible and adjustable arm supporting brackets, alignment rod, two lacquered 2 inch diameter x 1/8 inch thick structural steel uprights with 3 x 4-1/2 inch welded steel feet and fixture leveling and locking hardware. The round uprights allow for lateral adjustment to the arms.
			3. Attributes: Support off-floor ADA elongated fixtures. Vertical load bearing components are concealed within the wall. Carrier has no contact with finished floor inside of room.
				1. Product: MC-42 Single Carrier with Concealed Arms for ADA Lacquered, adjustable, ductile iron concealed support arms. Lacquered cast iron invertible and adjustable arm supporting brackets, adjustable steel nipples with locknut and set screws, alignment rod, two lacquered 2 x 1 x 1/8 inch thick structural steel uprights with 3 x 4-1/2 inch welded steel feet and fixture leveling and locking hardware.
				2. Product: MC-42-R Single Carrier with Concealed Arms and Round Uprights for ADAL Lacquered, adjustable, ductile iron concealed support arms. Lacquered cast iron invertible and adjustable arm supporting brackets, alignment rod, two lacquered 2 inch diameter x 1/8 inch thick structural steel uprights with 3 x 4-1/2 inch welded steel feet and fixture leveling and locking hardware. The round uprights allow for lateral adjustment to the arms.
				3. Product: MC-42D-R Double Fixture Carrier with Concealed Arms and Round Uprights for ADA Lavatories: Lacquered, adjustable, ductile iron concealed support arms. Lacquered cast iron invertible and adjustable arm supporting brackets, alignment rod, two lacquered 2 inch diameter x 1/8 inch thick structural steel uprights with 3 x 4-1/2 inch welded steel feet and fixture leveling and locking hardware. Round uprights allow for lateral adjustment to the arms.
			4. Attributes: For supporting back to back off-floor ADA elongated fixtures. Vertical load bearing components are concealed within the wall. The fixture carrier has no contact with the finished floor inside of the room.
				1. Product: MC-42D Double Fixture Carrier with Concealed Arms and Round Uprights for ADA Lavatories: Lacquered, adjustable, ductile iron concealed support arms. Lacquered cast iron invertible and adjustable arm supporting brackets, adjustable steel nipples with locknut and set screws, tie rod, two lacquered 2 x 1 x 1/8 inch thick structural steel uprights with 3 x 4-1/2 inch welded steel feet and fixture leveling and locking hardware.
			5. Attributes: For securing fixture to wall in areas where a floor mounted carrier cannot be installed. Wall structure must be strong enough to bear weight of the fixture. Vertical load bearing components are concealed within the wall. Carrier has no contact with finished floor inside of room.
				1. Product: MC-51 Single Carrier Wall Mounted Lavatory Support with Concealed Arms: Lacquered, adjustable, ductile iron concealed support arms. Lacquered cast iron adjustable wall plate, adjustable steel nipples with locknut and set screws, and fixture leveling and locking hardware.
				2. Product: MC-51-LP Single Carrier Concealed Arms for Lavatory Support: Specification: MIFAB Series MC-51-LP lacquered, adjustable, ductile iron concealed support arms with locknut, set screws and fixture leveling and locking hardware. Installer must provide their own mounting plate and hardware.
				3. Product: MC-53 Single Wall Mounted Support with Concealed Arms and Backing Plates: Lacquered, adjustable, ductile iron concealed support arms. Lacquered cast iron adjustable wall plate, backing plates, adjustable steel nipples with locknut and set screws, and fixture leveling, locking, and mounting hardware. Backing plates provide additional rigidity to system.
				4. Product: MC-54 Single Wall Mounted Lavatory Support with Concealed Arms: Lacquered, adjustable, ductile iron concealed support arms. Fabricated steel wall plate, welded steel nipples with set screws, and fixture leveling and locking hardware. Steel wall plate to be mounted to wall structure per site requirements; bolted, welded, anchored, etc.
				5. Product: MC-54-ADJ Wall Mounted Lavatory Support with Concealed Arms: Lacquered, adjustable, ductile iron concealed support arms. Fabricated, horizontal adjustable steel wall plate, welded steel nipples with set screws, and fixture leveling and locking hardware.
			6. Attributes: For securing wall-hung lavatories to wall in areas where a floor mounted carrier cannot be installed. Wall structure must be strong enough to bear weight of fixture. Heavy duty exposed cast iron supports provide extra support for the fixture.
				1. Product: MC-55 Single Wall Mounted Lavatory Support with Exposed Arms and Backing Plates: White, lacquered, adjustable, cast iron exposed support arms. Complete with lacquered cast iron adjustable wall plate with mounting studs, backing plates and fixture leveling hardware. Backing plates provide additional rigidity to system.
				2. Product: MC-56 Single Wall Mounted Lavatory Support with Exposed Arms: White, lacquered, adjustable, cast iron exposed support arms. Lacquered cast iron adjustable wall plate with mounting studs and fixture leveling hardware.
				3. Product: MC-56-LP Single Wall Mounted Support: White, lacquered, adjustable, cast iron exposed support arms. Complete with fixture leveling and mounting hardware. Installer to provide means of mounting exposed arms to the wall.
		1. Plate Type Fixture Carriers: Exposed Arms

\*\* NOTE TO SPECIFIER \*\* Delete attributes and product options not required.

* + - 1. Attributes: Used to support heavy duty wall-hung lavatories that are independent of the wall. Heavy duty cast iron support arms provide extra support for the fixture. Designed for use in conjunction with the fixture hangar plate supplied by the fixture manufacturer.
				1. Product: MC-34 Single Hanger Plate Carrier with Two Uprights: Universal, adjustable, top support plate and white lacquered, adjustable, cast iron exposed support arms assembled to lacquered cast iron invertible and adjustable arm supporting brackets. Complete with two lacquered 2 x 1 x 1/8 inch thick structural steel uprights with 3 x 4-1/2 inch welded steel feet and mounting hardware.
				2. Product: MC-35 Single Hanger Plate Carrier with Three Uprights: Universal, adjustable, top support plate and white lacquered, adjustable, cast iron exposed support arms assembled to lacquered cast iron invertible and adjustable arm supporting brackets. Complete with two lacquered 2 x 1 x 1/8 inch thick structural steel uprights with 3 x 4-1/2 inch welded steel feet and mounting hardware.
			2. Attributes: Used to support back to back heavy duty wall-hung lavatories independent of the wall. Heavy duty cast iron support arms provide extra support for the fixture. For use in conjunction with the fixture hangar plate supplied by the fixture manufacturer.
				1. Product: MC-34D Double Hanger Plate Carrier with Two Uprights: Back to back hanger plate with two universal, adjustable, top support plates and four white, lacquered, adjustable, cast iron exposed support arms assembled to lacquered cast iron invertible and adjustable arm supporting brackets. Complete with two lacquered 2 x 1 x 1/8 inch thick structural steel uprights with 3 x 4-1/2 inch welded steel feet and mounting hardware.
			3. Attributes: Used to support heavy duty lavatories independent of wall. Heavy duty cast iron support arms provide extra support for the fixtures that are unavailable drilled for concealed arms such as semi-countertop lavatories.
				1. Product: MC-40 Fixture Carrier: Floor mounted exposed arm lavatory carrier with white, lacquered, adjustable, cast iron exposed support arms. Lacquered cast iron invertible and adjustable arm supporting brackets, alignment rod, two lacquered 2 x 1 x 1/8 inch thick structural steel uprights with 3 x 4-1/2 inch welded steel feet and mounting hardware.
				2. Product: MC-40D Double Fixture Carrier: Floor mounted exposed arm lavatory carrier with back to back white, lacquered, adjustable, cast iron exposed support arms. Complete with back to back lacquered cast iron invertible and adjustable arm supporting brackets, alignment rod, two lacquered 2 x 1 x 1/8 inch thick structural steel uprights with 3 x 4-1/2 inch welded steel feet and mounting hardware.
		1. Plate Type Fixture Carriers: Regular Plate Type Fixture Carriers

\*\* NOTE TO SPECIFIER \*\* Delete attributes and product options not required.

* + - 1. Attributes: For use with floor mounted, back outlet water closets
				1. Product: MC-26 Single Stack Fitting for Floor Mounted Back Outlet Water Closet: Lacquered cast iron fitting, 4 inch no hub waste, 2 inch no hub vent connection, adjustable 8 inch tapered thread ABS nipple with integral test cap, neoprene bowl gasket, hardware, threaded rod protectors, polished chrome plated finishing cap nuts and side anchor tie down support.
			2. Attributes: For use with floor mounted, back outlet water closets installed at right angles to each other serving two rooms. Optional vent connections are for connection to lavatory waste when required.
				1. Product: MC-27 Single Stack Fitting for Floor Mounted Back Outlet Water Closets: Lacquered cast iron 90 degree double no hub stack fitting with 4 inch no hub waste and anti-crossover baffles for floor mounted back outlet water closets. Complete with adjustable 8 inch ABS nipples with integral test caps, neoprene bowl gaskets, hardware, threaded rod protectors, polished chrome plated finishing cap nuts and side anchor tie down supports.
			3. Attributes: For use in institutions where one stack fitting serves two rooms while providing separate vent hubs. Also typical with floor mounted, back outlet water closets installed at right angles to each other. The optional vent connections are for connection to lavatory waste when required.
				1. Product: MC-28 90 Degree Double No Hub Stack Fitting for Floor Mounted Back Outlet Water Closets: Lacquered cast iron 90 degree double no hub stack fitting with 4 inch no hub waste, 2 inch no hub center vent connection and anti-crossover baffles for floor mounted back outlet water closets.
			4. Attributes: For supporting wall-hung fixtures such as urinals and water coolers that are independent of wall. For use in conjunction with fixture hangar plate supplied by fixture manufacturer.
				1. Product: MC-31 Single Hanger Plate Carrier with Two Uprights: Lacquered 2 x 1 x 1/8 inch thick structural steel uprights with 3 x 4-1/2 inch welded steel feet and mounting hardware
				2. Product: MC-32 Hanger Plate Carrier with Bearing Plate and Uprights: Universal, adjustable, top support plate and bottom bearing plate. Lacquered 2 x 1 x 1/8 inch thick structural steel uprights with 3 x 4-1/2 inch welded steel feet and mounting hardware. Bottom bearing plate provides extra support for the fixture.
				3. Product: MC-33 Hanger Plate Carrier with Uprights: Two universal, adjustable, top support plates. Three lacquered 2 x 1 x 1/8 inch thick structural steel uprights with 3 x 4 -1/2 inch welded steel feet and mounting hardware.
				4. Product: MC-33-2 Hanger Plate Carrier with Uprights and Bottom Bearing Plates: Two universal, adjustable, top support plates, and bottom bearing plate. Three lacquered 2 x 1 x 1/8 inch thick structural steel uprights with 3 x 4-1/2 inch welded steel feet and mounting hardware. Bottom bearing plate provides extra support for the fixture.
			5. Attributes: For supporting back to back wall-hung fixtures such as urinals and water coolers that are independent of wall. For use in conjunction with fixture hangar plate supplied by the fixture manufacturer.
				1. Product: MC-31D Double Hanger Plate Carrier with Two Uprights: Lavatory hanger plate carrier with universal, adjustable, top support plates. Complete with lacquered 2 x 1 x 1/8 inch thick structural steel uprights with 3 x 4-1/2 inch welded steel feet and mounting hardware.
				2. Product: MC-32D Double Hanger Plate Carrier with Bearing Plates and Uprights: Universal, adjustable, top support plates and bottom bearing plates. Complete with lacquered 2 x 1 x 1/8 inch thick structural steel uprights with 3 x 4-1/2 inch welded steel feet and mounting hardware. Bottom bearing plate provides extra support for the fixture.
			6. Attributes: For supporting urinals, lavatories, drinking fountains, water coolers and other off the floor fixtures with the mounting studs and hardware provided. Plates are typically mounted directly onto walls up to 7 inches thick. Universally drilled slots in the mounting plates will suit most fixtures. The fixture hanger plate is supplied by the fixture manufacturer.
				1. Product: MC-36 to MC-39D Wall Supported Fixture Mounting Plates: 22 x 4 inch lacquered steel plate with universal slots and six pieces of 1/4-20 x 8 inch long all threaded plated mounting studs with nuts and washers. MIFAB Series MC-36-2, 22 x 4 inch top lacquered steel plate with universal slots and six pieces of 1/4-20 x 8 inch long all threaded plated mounting studs and 22 x 2 inch bottom bearing plate with slots and two pieces of 5/16 x 10 inch long all threaded plated mounting studs with nuts and washers.
		1. Residential Fixture Carriers

\*\* NOTE TO SPECIFIER \*\* Delete attributes and product options not required.

* + - 1. Attributes: A floor mounted frame assembly with off the floor plumbing fixtures in compact areas with minimum in wall space. Carrier is concealed within wall and supports fixture load through a faceplate and foot support system anchored to floor.
				1. Product: MC-21 Compact Rear Outlet Water Closet Carrier: Floor mounted single, horizontal, adjustable, water closet carrier without fitting, 4 inch back outlet waste connection, no hub or threaded, lacquered cast iron adjustable faceplate, universal floor mounted cast iron foot supports, adjustable 8 inch tapered thread ABS nipple with integral test cap, neoprene bowl gasket, hardware, threaded rod protectors, polished chrome plated finishing cap nuts and rear anchor tie down support.
			2. Attributes: A water closet carrier for floor mounted plumbing fixtures in stud wall construction. The closet carrier is concealed within the wall. The side mounting hardware bolts to the stud walls framing the carrier.
				1. Product: MC-24 Residential Water Closet Carrier: Lacquered cast iron finish, 3 inch PVC adapter, mounting hardware, threaded rod protectors and polished chrome plated finishing cap nuts.
				2. Product: MC-25 Residential Water Closet Carrier: Lacquered cast iron no hub fitting, (specify size and style), lacquered cast iron faceplate, mounting hardware, adjustable 8 inch tapered thread ABS nipple with integral test cap, neoprene bowl gasket, vertical waste fitting, and polished chrome plated finishing cap nuts.
		1. Service sink Carriers:
			1. Attributes: For off floor wall urinals and service sinks having no contact with finished floor. Typically installed in utility, emergency, and clean-up rooms. Carrier and fitting is concealed in wall and supports fixture load through a faceplate and foot support system. Anchored to floor.

\*\* NOTE TO SPECIFIER \*\* Delete product option not required.

* + - * 1. Product: MC-61 Floor Mounted Service Sink Carrier without Fitting: Two lacquered 2 x 1 x 1/8 inch thick structural steel uprights with 3 x 4-1/2 inch welded steel feet, and lacquered cast iron fitting with no hub waste and vent connection (specify size of each). Lacquered cast iron faceplate assembly, adjustable 8 inch tapered thread ABS nipple with integral test cap, neoprene bowl gasket, hardware, threaded rod protectors and polished chrome plated finishing cap nuts. Factory assembled foot supports and faceplate are in siphon jet water closet configuration. Reversible for blowout design.
				2. Product: MC-62 Floor Mounted Service Sink Carrier with Fitting: Two lacquered 2 x 1 x 1/8 inch thick structural steel uprights with 3 x 4-1/2 inch welded steel feet, and lacquered cast iron fitting with no hub waste and vent connection (specify size of each). Lacquered cast iron faceplate assembly, adjustable 8 inch tapered thread ABS nipple with integral test cap, neoprene bowl gasket, hardware, threaded rod protectors and polished chrome plated finishing cap nuts. Factory assembled foot supports and faceplate are in siphon jet water closet configuration. Reversible for blowout design.

\*\* NOTE TO SPECIFIER \*\* Delete article if not required.

* 1. FLOOR SINKS

\*\* NOTE TO SPECIFIER \*\* Delete paragraphs not required.

* + 1. PVC Floor Sinks PVC Floor Sinks

\*\* NOTE TO SPECIFIER \*\* PVC floor sinks are manufactured out of PVC material to provide the ultimate in sanitary design. PVC material has excellent resistance to chemicals such as the acids contained in fruits, vegetables, and fats. The smooth, uniform surface is easy to clean, and the floor sink will not chip or rust. PVC floor sinks are lightweight for easier handling, installation, and transportation.

* + - 1. Attributes: For use in kitchens, restaurants, grocery stores, hospitals, schools, and other areas that require a medium volume sanitary drain. The light duty grate is recommended for foot traffic. The PVC light duty grate is not recommended for vehicle traffic.
				1. Product: FS520-30 Deep PVC Floor Sink: 8 inch square by 6 inches deep. Available with optional dome bottom strainer and with full, three-quarter, or half PVC, nickel bronze or stainless steel grate configurations. Sizes: 2, 3, and 4 inch. Outlet Socket: 4 inch connection body fits into 4 inch PVC pipe and over 3 inch PVC pipe.
		1. Rectangular Floor Sinks:
			1. Attributes: Used in kitchens, restaurants, grocery stores, hospitals, schools, and other areas requiring a small volume sanitary drain. The light duty grate is not suitable for foot traffic. Regular top is for installation under counters and along walls.

\*\* NOTE TO SPECIFIER \*\* Delete product options not required.

* + - * 1. Product: FS1530 Floor Area and Indirect Sanitary Waste Drain 8 x 4 x 4 inches: Deep cast iron floor area and indirect sanitary waste drain with white acid resistant porcelain enamel coated interior and loose set grate. Anti-splash aluminum dome strainer included. Pipe Sizes: 2,3, and 4 inch.
				2. Product: FS1530-FL Floor Area and Indirect Sanitary Waste Drain 8 x 4 x 4 inch: Deep cast iron floor area and indirect sanitary waste drain with white acid resistant porcelain enamel coated interior and loose set grate and Anti-splash aluminum dome strainer included. Anchor flange with weepholes engineered to receive water proofing membrane. Membrane clamps are recommended for use with anchor flange. Pipe Sizes: 2,3, and 4 inch.
		1. Round Floor Sinks:

\*\* NOTE TO SPECIFIER \*\* Delete attributes and product options not required.

* + - 1. Attributes: Used in kitchens, restaurants, grocery stores, hospitals, schools, and other areas that require a small volume sanitary drain. The light duty grate is not recommended for foot traffic.
				1. Product: FS1750 Floor Area and Indirect Sanitary Waste Drain: 8 inch Round x 6 inch deep cast iron floor area and indirect sanitary waste drain with white acid resistant porcelain enamel coated interior and loose set grate. Anti-splash aluminum dome strainer included. Pipe Sizes: 2,3, and 4 inch.
				2. Product: FS1750-FL Floor Area and Indirect Sanitary Waste Drain Anchor Flange: 8 inch Round x 6 inch deep cast iron floor area and indirect sanitary waste drain with white acid resistant porcelain enamel coated interior, loose set grate and anchor flange with weepholes. Anti-splash aluminum dome strainer included. Anchor flange is engineered to receive water proofing membrane. Membrane clamps are recommended for use with the anchor flange. Pipe Sizes: 2,3, and 4 inch.
				3. Product: FS1760 Floor Area and Indirect Sanitary Waste Drain: 12 inch round x 8 inch deep cast iron floor area and indirect sanitary waste drain complete with white acid resistant porcelain enamel coated interior and loose set grate. Anti-splash aluminum dome strainer included. Pipe Sizes: 2,3, and 4 inch.
				4. Product: FS1760-FL Floor Area & Indirect Sanitary Waste Drain with Anchor Flange: 12 inch Round x 8 inch deep cast iron floor area and indirect sanitary waste drain complete with white acid resistant porcelain enamel coated interior, loose set grate and anchor flange with weepholes. Anti-splash aluminum dome strainer included. Anchor flange is engineered to receive water proofing membrane. Membrane clamps are recommended for use with the anchor flange. Pipe Sizes: 2,3, and 4 inch.
			2. Attributes: Used in areas that require a sanitary coated, shallow body for indirect waste applications.
				1. Product: FS1950 Shallow Floor Sink: 9 inch round, shallow, cast iron floor sink with acid resistant electrostatically applied epoxy coated body, grate, and integral sediment bucket. Pipe Sizes: 2,3, 4, 5, and 6 inch.
		1. Square Floor Sinks

\*\* NOTE TO SPECIFIER \*\* Delete attributes and product options not required.

* + - 1. Attributes: Used in kitchens, restaurants, grocery stores, hospitals, schools, and other areas that require a medium volume sanitary drain. The light duty grate is not recommended for foot traffic.
				1. Product: FS1520 Floor Area and Indirect Sanitary Waste Drain. 8 x 8 x 6" deep cast iron floor area and indirect sanitary waste drain complete with white acid resistant porcelain enamel coated interior and loose set grate. Anti-splash aluminum dome strainer included. Pipe Sizes: 2,3, and 4 inch.
				2. Product: FS1520-FL Floor Area and Indirect Sanitary Waste Drain 8 x 8 x 6" with Anchor Flange. Deep cast iron floor area and indirect sanitary waste drain complete with white acid resistant porcelain enamel coated interior and loose set grate and anchor flange with weepholes. Anti-splash aluminum dome strainer included. Anchor flange is engineered to receive water proofing membrane. Membrane clamps are recommended for use with the anchor flange. Pipe Sizes: 2,3, and 4 inch.
			2. Attributes: Used in kitchens, restaurants, grocery stores, hospitals, schools, and other areas that require a large volume sanitary drain. The light duty grate is not recommended for foot traffic.
				1. Product: FS1720 Floor Area and Indirect Sanitary Waste Drain: 12 x 12 x 6" deep cast iron floor area and indirect sanitary waste drain complete with white acid resistant porcelain enamel coated interior and loose set grate. Anti-splash aluminum dome strainer included. Pipe Sizes: 2,3, and 4 inch.
				2. Product: FS1720-FL Floor Area and Indirect Sanitary Waste Drain 12 x 12 x 6" with Anchor Flange: Deep cast iron floor area and indirect sanitary waste drain complete with white acid resistant porcelain enamel coated interior and loose set grate. Anti-splash aluminum dome strainer included. Anchor flange is engineered to receive water proofing membrane. Membrane clamps are recommended for use with the anchor flange. Pipe Sizes: 2,3, and 4 inch.
				3. Product: FS1730 Floor Area and Indirect Sanitary Waste Drain. 12 x 12 x 8 inch deep cast iron floor area and indirect sanitary waste drain complete with white acid resistant porcelain enamel coated interior and loose set grate. Anti-splash aluminum dome strainer included. Pipe Sizes: 2,3, and 4 inch.
				4. Product: FS1730-FL Floor Area and Indirect Sanitary Waste Drain 12 x 12 x 8" with Anchor Flange: Deep cast iron floor area and indirect sanitary waste drain complete with white acid resistant porcelain enamel coated interior, loose set grate and anchor flange with weepholes. Membrane clamps are recommended for use with the anchor flange. Anti-splash aluminum dome strainer included.
				5. Product: FS1740 Floor Area and Indirect Sanitary Waste Drain. 12 x 12 x 10"
				6. deep cast iron floor area and indirect sanitary waste drain complete with white acid resistant porcelain enamel coated interior and loose set grate. Anti-splash aluminum dome strainer included. Pipe Sizes: 2,3, and 4 inch.
				7. Product: FS1740-FL Floor Area and Indirect Sanitary Waste Drain 12 x 12 x 10" with Anchor Flange: Deep cast iron floor area and indirect sanitary waste drain complete with white acid resistant porcelain enamel coated interior, loose set grate and anchor flange with weepholes. Membrane clamps are recommended for use with the anchor flange. Anti-splash aluminum dome strainer included. Pipe Sizes: 2,3, and 4 inch.
				8. Product: FS1770 Deep Floor Area and Indirect Sanitary Waste Drain: 16 x 16 x 9 inch deep floor area and indirect sanitary waste drain complete with white acid resistant coated steel interior and heavy duty ductile iron loose set grate with white acid resistant coating. Anti-splash aluminum dome strainer included. Pipe Sizes: 2,3, and 4 inch.
				9. Product: FS1770-FL Floor Area and Indirect Sanitary Waste Drain 16 x 16 x 9" with Anchor Flange: Deep floor area and indirect sanitary waste drain complete with white acid resistant coated steel interior and heavy duty ductile iron loose set grate with white acid resistant coating and anchor flange. Anti-splash aluminum dome strainer included. Pipe Sizes: 2,3, and 4 inch.
				10. Product: FS1790 - 24 x 24 x 17" Deep Floor Sink with Anchor Flange: Deep floor area and indirect sanitary waste drain complete with white acid resistant coated steel interior and heavy duty fabricated steel loose set grate with white acid resistant coating and anchor flange. Anti-splash aluminum dome strainer included. Pipe Sizes: 2,3, and 4 inch.
		1. Stainless steel floor sinks
			1. Attributes: Used in kitchens, restaurants, breweries, dairies, creameries, food processing locations, nuclear, gas and coal fired power stations, chemical plants, laboratories, and other areas where the corrosion resistance of Type 304 stainless steel is required for superior sanitation. Anchor flange is designed to receive water proofing membrane. A membrane clamp is recommended to secure the water proofing membrane to the anchor flange.

\*\* NOTE TO SPECIFIER \*\* Delete product options not required.

* + - * 1. Product: FS1920-FL Floor Area and Indirect Sanitary Waste Drain 12 x 12 x 6" with Anchor Flange: 16 gauge, Type 304 stainless steel sanitary floor area and indirect waste drain complete with cast stainless steel secured rim and grate with allen key vandal proof stainless steel screws, stainless steel anchor flange with weepholes and anti-splash dome strainer. Pipe Sizes: 2,3, and 4 inch.
				2. Product: FS1930-FL Floor Area & Indirect Sanitary Waste Drain 12 x 12 x 8" with Anchor Flange: 16 gauge, Type 304 stainless steel sanitary floor area and indirect waste drain complete with cast stainless steel secured rim and grate with allen key vandal proof stainless steel screws, stainless steel anchor flange with weepholes and anti-splash dome strainer. Pipe Sizes: 2,3, and 4 inch.
				3. Product: FS1940-FL Floor Area & Indirect Sanitary Waste Drain 12 x 12 x 10" with Anchor Flange: 16 gauge, Type 304 stainless steel sanitary floor area and indirect waste drain complete with cast stainless steel secured rim and grate with allen key vandal proof stainless steel screws, stainless steel anchor flange with weepholes and anti-splash dome strainer. Pipe Sizes: 2,3, and 4 inch.
		1. Other Floor Sinks Other Floor Sinks

\*\* NOTE TO SPECIFIER \*\* Delete attributes and product options not required.

* + - 1. Attributes: Used in areas to support floor sinks off the structural slab.
				1. Product: FS1959 Floor Sink Installation Stabilization Plate: 8 x 8 inch, 16 gauge, steel, electrostatically applied powder epoxy coated floor sink installation stabilization plate. 12-1/2 inch square and 1-1/2 inch high. Complete with four 5/16 inch all threaded rods and adjustable knock outs to accommodate 3 and 4 inch outlet connections. Pipe Sizes: 2,3, and 4 inch.
				2. Product: FS1960 Floor Sink Installation Stabilization Plate: 12 x 12 inch, 16 gauge, steel, electrostatically applied powder epoxy coated floor sink installation stabilization plate. 14-1/2 inch square and 1-1/2 inch high. Complete with four 5/16 inch all threaded rods and adjustable knock outs to accommodate 3 and 4 inch outlet connections. Pipe Sizes: 2,3, and 4 inch.
			2. Attributes: Used in areas where porcelain enamel floor sink has chipped and / or worn off from already installed floor sinks. The stainless steel liner is inserted into existing porcelain enamel floor sink.
				1. Product: FS1970 Replacement Floor Sink Liner 8 x 8 x 6 inches. 16 gauge stainless steel, type 304 floor sink replacement liner with internal dome strainer. External pipe gasket seal and light duty slotted loose set stainless steel grate. Pipe Sizes: 2,3, and 4 inch.
				2. Product: FS1980 Replacement Floor Sink Liner 12 x 12 x 6 inches. 16 gauge stainless steel, type 304 floor sink replacement liner with internal dome strainer. External pipe gasket seal and light duty slotted loose set stainless steel grate. Pipe Sizes: 2,3, and 4 inch.
				3. Product: FS1990 Replacement Floor Sink Liner 12 x 12 x 8 inches. 16 gauge, stainless steel, type 304 floor sink replacement liner with internal dome strainer. External pipe gasket seal and light duty slotted loose set stainless steel grate. Pipe Sizes: 2,3, and 4 inch.
				4. FS2000 Replacement Floor Sink Liner 12 x 12 x 10 inches. 16 gauge, stainless steel, type 304 floor sink replacement liner with internal dome strainer. External pipe gasket seal and light duty slotted loose set stainless steel grate. Pipe Sizes: 2,3, and 4 inch.
1. EXECUTION
	1. EXAMINATION
		1. Do not begin installation until substrates have been properly constructed and prepared.
		2. If substrate preparation is the responsibility of another installer, notify Architect in writing of unsatisfactory preparation before proceeding.
	2. PREPARATION
		1. Clean surfaces thoroughly prior to installation.
		2. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
	3. INSTALLATION
		1. Install in accordance with manufacturer's instructions, approved submittals, and in proper relationship with adjacent construction.
	4. FIELD QUALITY CONTROL
		1. Field Inspection: Coordinate field inspection in accordance with appropriate sections in Division 01.

\*\* NOTE TO SPECIFIER \*\* Include if manufacturer provides field quality control with onsite personnel for instruction or supervision of product installation, application, erection, or construction. Delete if not required.

* + 1. Manufacturer's Services: Coordinate manufacturer's services in accordance with appropriate sections in Division 01.
	1. CLEANING AND PROTECTION
		1. Clean products in accordance with the manufacturer's recommendations.
		2. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION