



Specifying Code-Compliant Toilet Partitions

*An Introduction to Code Compliance
Requirements & Specifying Toilet Partitions*

BOBRICK

BUILDING VALUE SINCE 1906

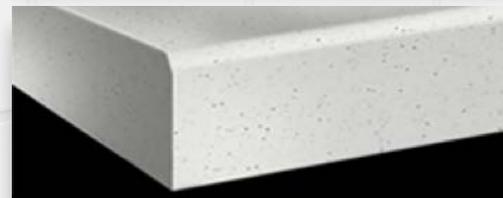
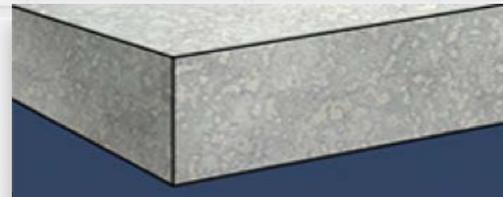
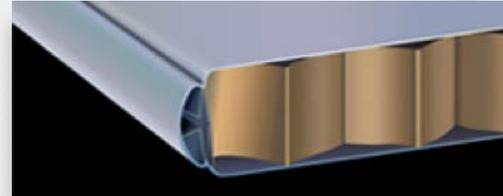
Introduction to Model Fire Codes & Standards

- Model codes and standards related to fire safety and building construction have been developed by:
 - ICC
 - NFPA
- Codes and standards mandatory when adopted by a jurisdiction.
 - 48 states have adopted various ICC (IBC, IFB) and NFPA codes from 2009 or later
- Many major corporations require compliance.



Materials and Construction Methods

- Honeycomb Construction
 - Painted metal
 - Stainless steel
- Bonded Construction
 - High pressure laminate
- Layered Construction
 - Compact laminate
- Homogeneous Construction
 - High-density polyethylene (HDPE)
 - Solid color reinforced composite (SCRC)



Request Test Documentation Confirming Compliancy

Interior finish testing requirements vary by material.

Toilet Partition Material	Required Compliance Tests
High Pressure Laminate (HPL), Compact Laminate (CL), Color-Through-Phenolic, Solid Color Reinforced Composite (SCRC), Stainless Steel, Painted Metal	ASTM E 84 or UL 723 Tunnel Test per Section 803.1.1 Interior Wall and Ceiling Finish Materials, 2015 International Building Code
Polypropylene (PP), High-Density Polyethylene (HDPE)	NFPA 286 Room-Corner Test per Section 803.9 High-Density Polyethylene (HDPE) and Polypropylene (PP), 2015 International Building Code

Building Type Summary

Matching Partition Materials to Building Needs

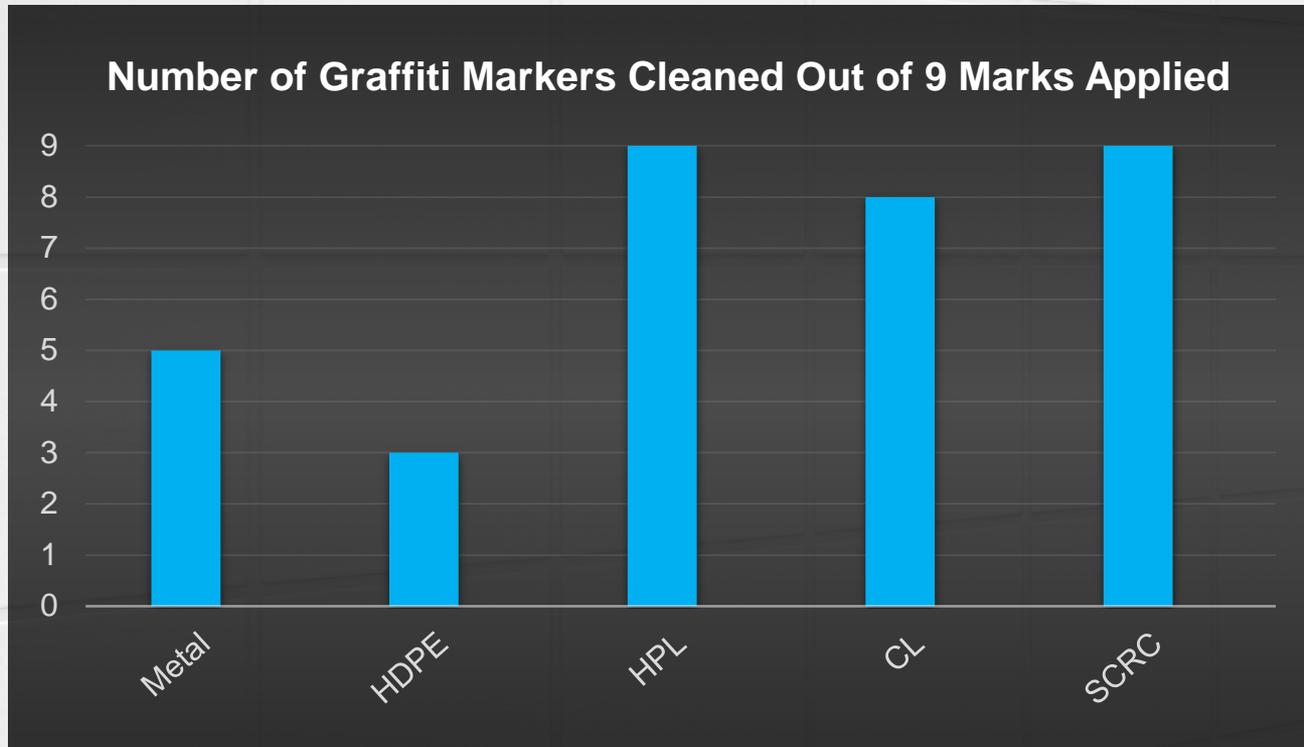
Building Type	Painted Metal	Stainless Steel	HPL	HDPE	Compact Laminate	SCRC
Heavy Traffic						
Standard Use						
Prestige						

 Best Choice

 Good

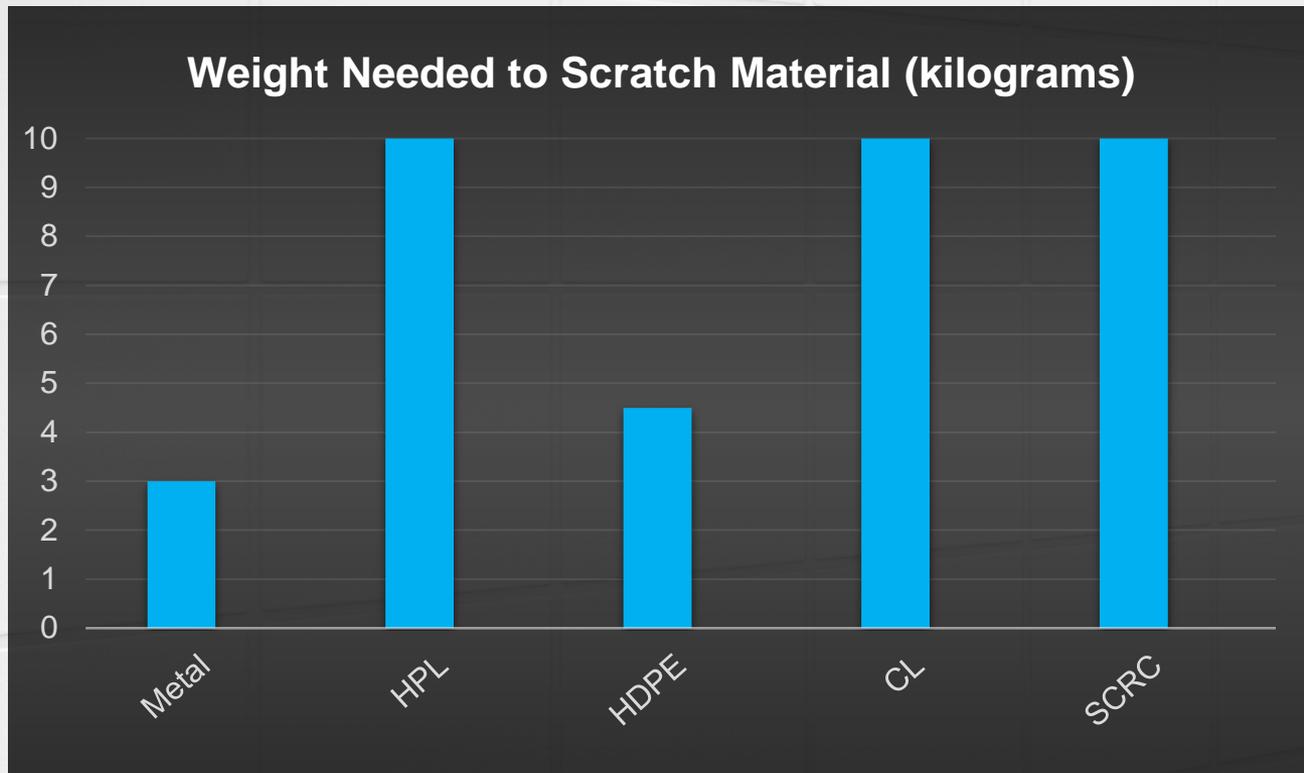
 Poor

Graffiti-Resistance Test: Protocol ASTM D 6578



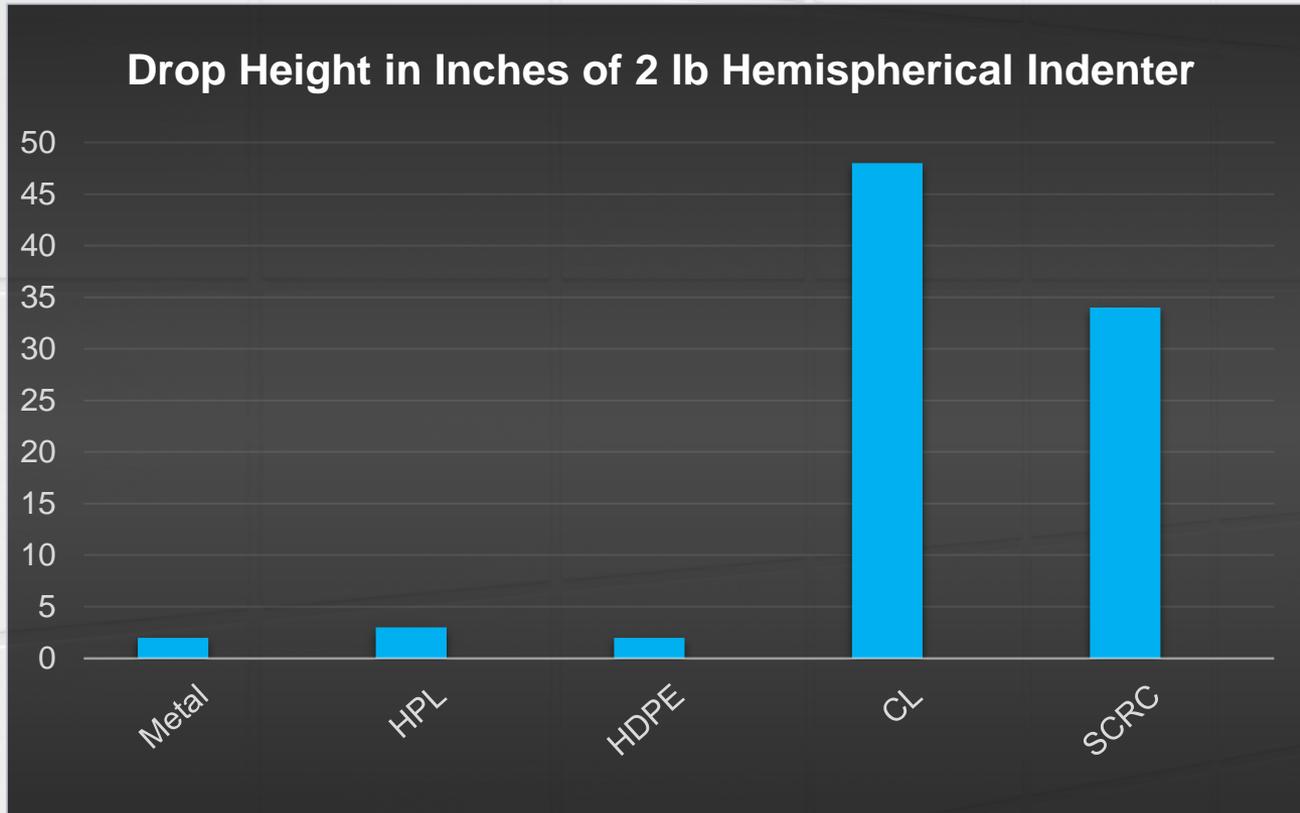
- Higher readings perform better
- High Pressure Laminate (HPL), Compact Laminate (CL) and SCRC are the most graffiti resistant and easiest to clean

Scratch-Resistance Test: Protocol ASTM D 2197



- Higher readings perform better
- High Pressure Laminate (HPL), Compact Laminate (CL) and SCRC are the most scratch resistant

Impact-Resistance Test – Protocol ASTM D 2794



- Higher readings perform better
- Compact Laminate (CL) is the hardest to dent

Surface Burning Characteristics: Protocol ASTM E 84

Material	Flame Spread Index	Smoke Developed Index	Interior Wall & Ceiling Finish Classification
Painted Metal	5	0	Class A
High Pressure Laminate	60	195-300	Class B
Compact Laminate	15/30	20/55	Class A/B
SCRC	45	95-120	Class B

All Bobrick toilet partition materials comply with the relevant fire codes and qualify for at least Class B Interior Wall & Ceiling Finish classification.

Client Needs

Toilet Partition Material Price Comparisons

	Painted Metal	High Pressure Laminate	HDPE (Untreated)	Compact Laminate	SCRC	Stainless Steel
Price Index	1	1.1	1.9	2.4	2.7	2.7

Note: Painted metal prices have increased, closing the price difference with high pressure laminate, which offers more design freedom.

Stainless steel is the most expensive, at about 2.7 times the price of painted metal or high pressure laminate.

Mounting Configurations



Overhead-Braced



Floor-to-Ceiling

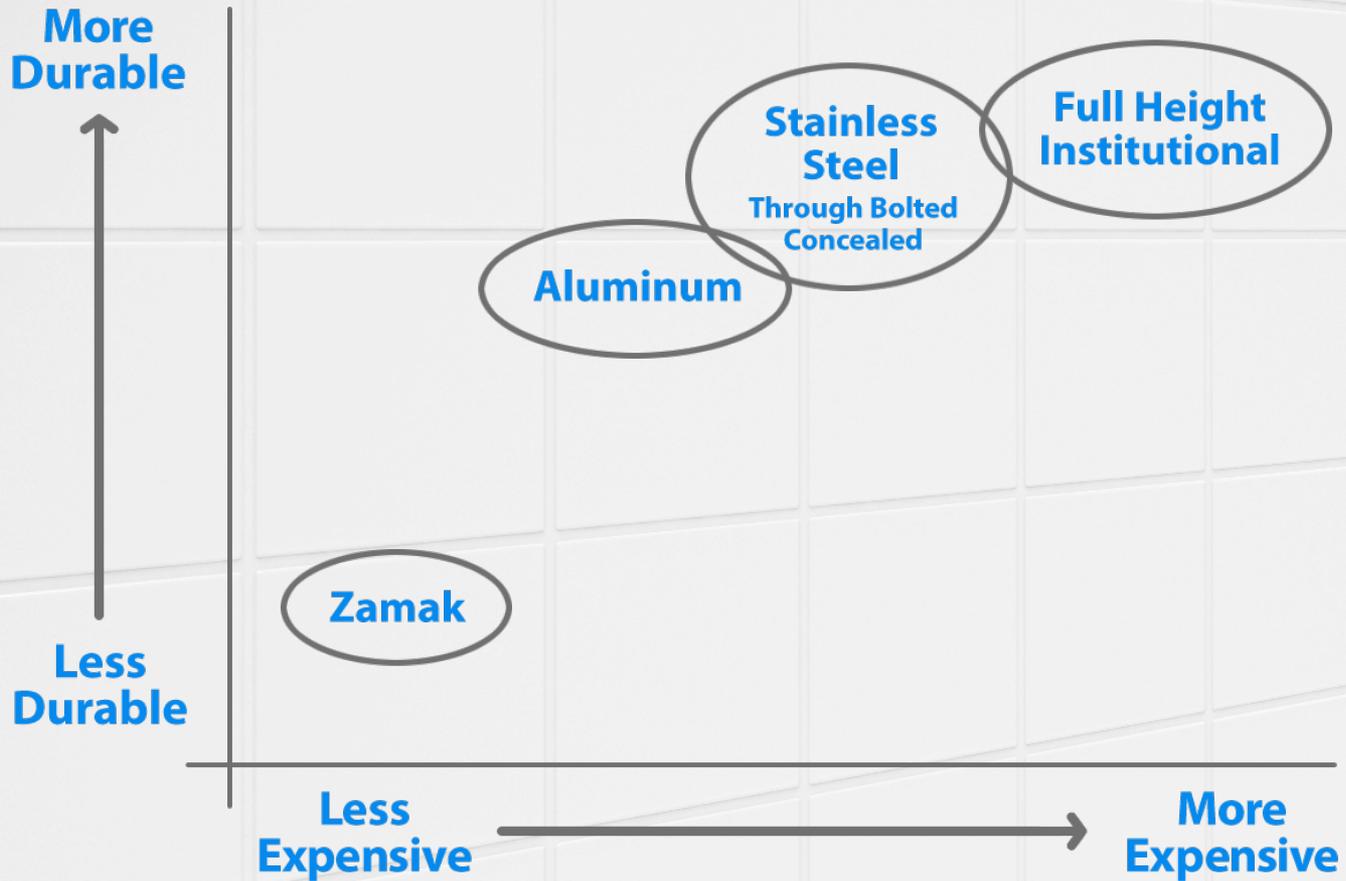


Floor-Anchored



Ceiling-Hung

Hardware Selection

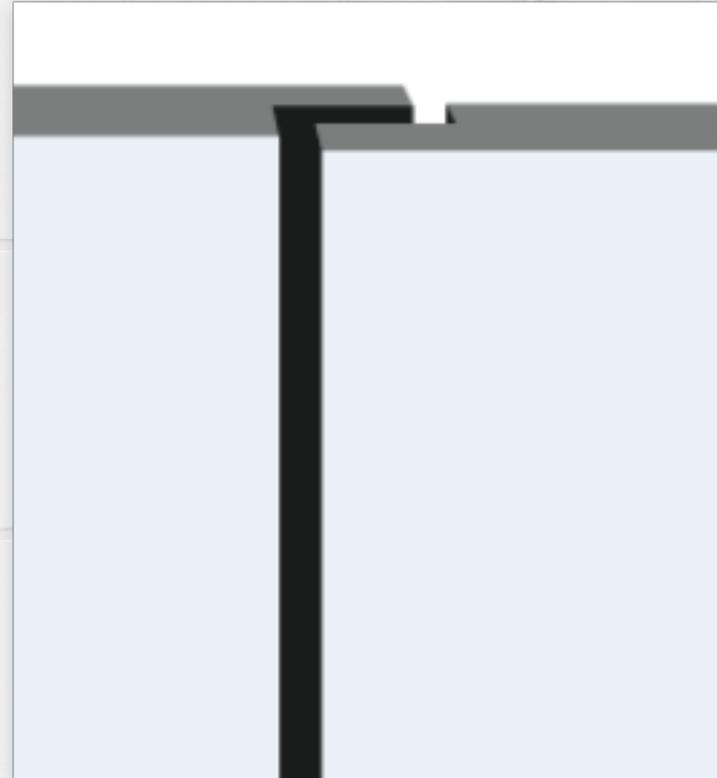
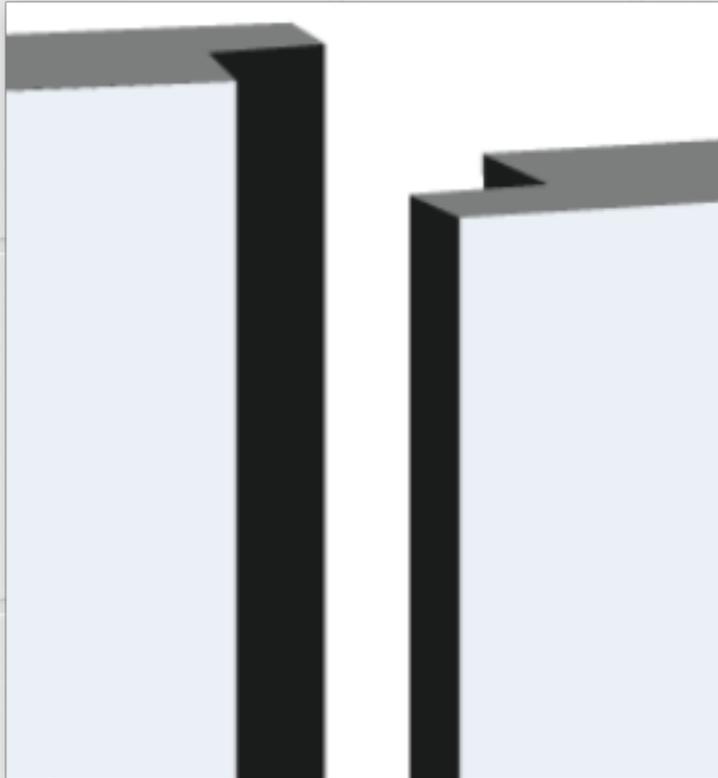


The Privacy Trend

- Influenced by evolving needs and preferences:
 - Health issues
 - Personal preference
 - Transgender population
- Popular in educational and office buildings
- U.S. catching up to international privacy options



Privacy Options



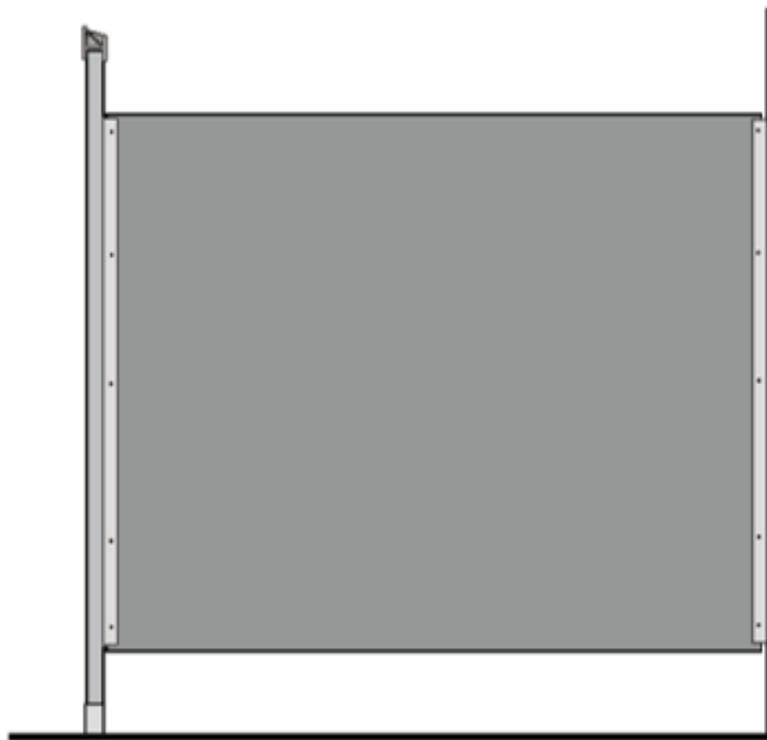
Integrated gap-free privacy doors and stiles

Privacy Options

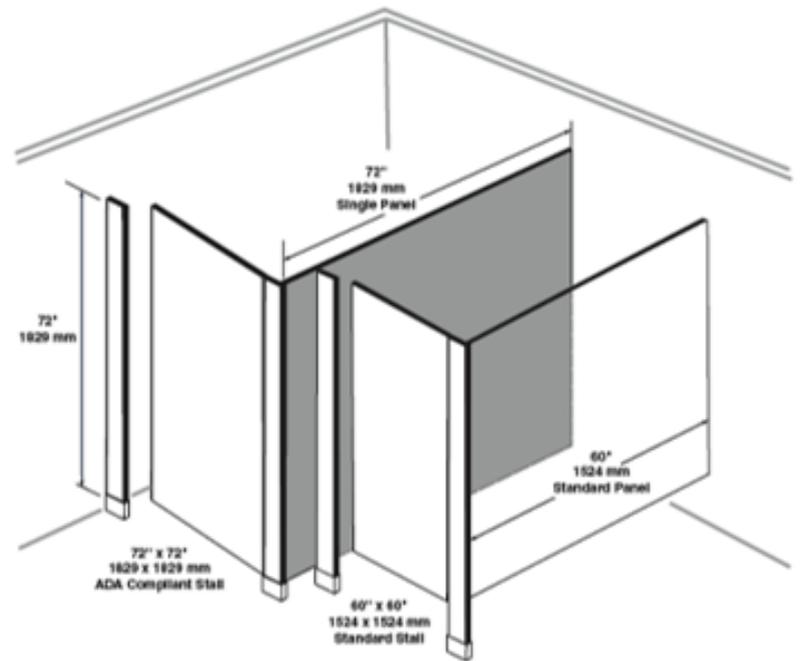


Extended height privacy compartments

(72" doors and panels, compared to standard heights of 55" or 58".)



72" x 72" One Piece Panel



Relative Costs of Privacy Partitions vs. Alternatives

	Standard Toilet Partitions	Increased Privacy Toilet Partitions	Extended Fully Enclosed Toilet Partitions	Fully Enclosed with Drywall
Solutions	58" doors and panels with 85" stiles	72" doors and panels with 85" stiles	Doors, stiles and panels made to fit room height	Drywall to fit room height
Cost of Materials/ Installation*	\$3,750 - \$7,500 (\$650 - \$1,500/stall) 5 stalls	\$7,500 - \$11,000 (\$1,500 - \$2,200/stall) 5 stalls	\$11,000 - \$18,000 (\$2,200 - \$3,600/stall) 5 stalls	\$13,500 - \$20,000+ (\$2,700 - \$4,000/stall) 5 stalls
Infrastructure Implications & Cost	None**	None**	\$900+/stall (For separate ventilation, fire sprinkler, alarms & lighting)	\$900+/stall (For separate ventilation, fire sprinkler, alarms & lighting)
Minimum Number of Trades to Coordinate	2 (P,T)	2 (P,T)	4 (P, T, E, M)	6 (P, F&D, Pa, T, E, M)

* Only the cost of materials and installation for partitions or full walls are shown here

** Assumes 22" or greater distance from top of headrail to ceiling

P = Plumbing, F&D = Framing & Drywall, T = Tile, E = Electrical, M = Mechanical, Pa = Paint

Writing an Enforceable Toilet Compartment Specification

The Importance of Clarity & Specificity

- Always write a clear description.
- Ambiguity can result in the contractor making the specification for you.
- All materials, hardware and compliance standards should be referenced and described completely.



Writing an Enforceable Toilet Compartment Specification

Example: Airport Restroom

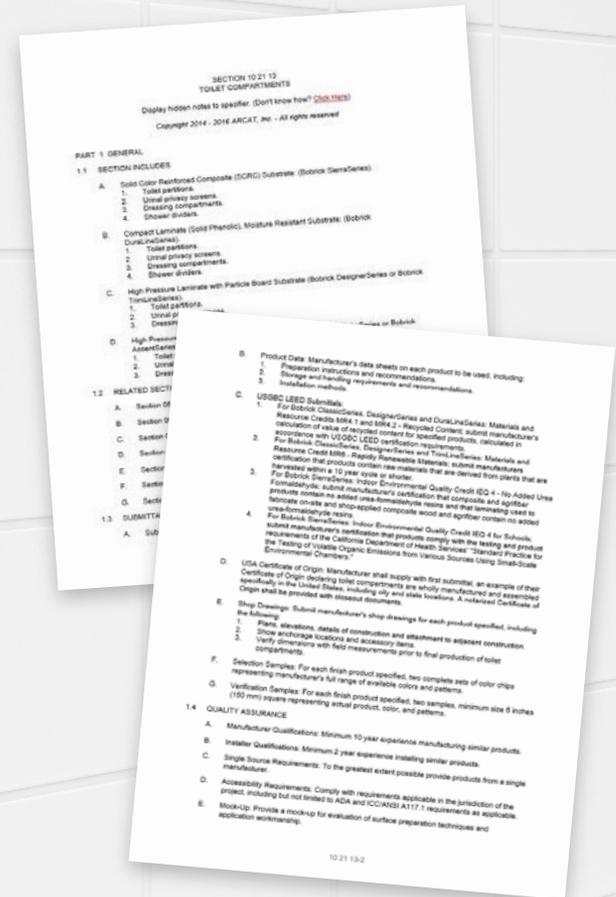
- Specifying Compact Laminate.
- Mounting configuration is floor-anchored, overhead-braced.
- Door hinges and mounting bracket hardware are full-height, heavy-duty, stainless steel.



Writing an Enforceable Toilet Compartment Specification

Writing a Truly Complete Specification

- Ask the following:
 - What is the material?
 - How is it mounted?
 - Which privacy options will be employed?
 - What are the hardware features?
 - Which codes and standards do I intend to comply with?
- Language should specify what you want—and what you **don't** want



Example Toilet Compartment Specification

Material Description

- Stiles, panels, doors and screens: Compact Laminate material. High Pressure Laminate with matte-finish Melamine surfaces and integrally colored face sheets solidly fused with black Phenolic-resin core. Phenolic edges are black; brown edges are not acceptable.
- Finished Thickness: Stiles and doors $\frac{3}{4}$ -inch thick. Uniform thickness of stiles and doors to ensure flush front. Panels and screens $\frac{1}{2}$ -inch thick.
- Privacy: Stiles and doors shall have integrated stile and door no-sightline privacy closing. Doors and panels shall be 72 inches extended height.
- Fire-Resistance: NFPA/IBC Class B Interior Wall and Ceiling Finish Classification.

Example Toilet Compartment Specification

Hardware Features

- Materials: 18-8, Type 304 stainless steel with satin finish. Chrome-plated “Zamak”, aluminum, plastic hardware not acceptable.
- Fastening: Stainless steel machine screws into factory-installed inserts. Fastening directly into material not acceptable.
- Mounting: Door hardware and mounting brackets concealed inside compartment. Exposed hardware and fasteners on exterior of compartment not acceptable except on accessible compartment.
- Latching: Slide latch into keeper, track prevents door from swinging beyond stile. Twist-style door latch not acceptable.

Example Toilet Compartment Specification

Hardware Features (continued)

- Hinges and Mounting Brackets: One-piece, extend full height of door and panel. Hinge shall be self-closing.
- Compliance: Operable with one hand, without tight grasping, pinching or twisting of the wrist; force to operate does not exceed five pounds.
- Emergency Access: Hinges, latch allow door to be lifted over keeper from outside of compartment

Thank You

**Thank you for your interest in specifying
code-compliant toilet partitions.**

**Your Bobrick representative will gladly arrange an
AIA-approved CEU toilet partition presentation for
credit for you and your colleagues.**



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