TECHNICAL DATA
Boreal Compact Laminate
Plastic Laminate Partition Material

CSI/CSC Product Specification
Thermally fused Melamine Decorative Panels

The following document is provided to assist design professionals with product specifications, general information and language standards for paneling, casework, countertops, cabinetry, interior closets, residential and office furniture, shop and job site application of millwork finishes and similar architectural Woodwork.

Appropriate language standards should be formatted and copied from this document into the specification section(s) desired of the project plans and specifications.

Sample language is provided for applicable articles in part 1, General and part 2, Products.
The following section format was jointly published by the Construction Specification Institute («CSI») and Construction Specifications Canada («CSC»). Article and paragraph numbers are used herein for information purposes only and are not relating to any similar articles nor documents.

Green text and notes related to LEED® projects can be deleted if the project is not intended to attain LEED certification.

Product Description
Compact Laminate is a sophisticated high-pressure solid composite material, meticulously designed for use in high-traffic commercial settings including washrooms, dining establishments, retail spaces, offices, healthcare facilities, and other general commercial areas. This composite is characterized by its extraordinary resilience to a multitude of challenges, including impacts, fire, chemicals, and stains, highlighting its robustness and enduring quality in diverse and demanding environments. Notably, the material is renowned for its antimicrobial and antibacterial characteristics, rendering it an excellent option for applications within healthcare environments where hygiene is paramount.

1. PART 1 – GENERAL

1.1. Included section

a. Architectural woodwork

1.2. Related Sections

a. Section 06410 – Custom casework
b. Section 06100 - Rough Carpentry
c. Section 12302 - Wood Casework
d. Section 12360 - Library Shelving and Casework:

1.3. Abbreviation and acronyms

a. ANSI: American National Standards Institute
b. ASTM: American Society for Testing Materials
c. AWMAC: Architectural Woodwork Manufacturers Association of Canada
d. CARB: California Air Resources Board
e. CPA: Composite Panel Association

f. EN: European Norms
g. EPP: Environmental Preferable Product
h. FSC®: Forest Stewardship Council
i. ISO: International Organization for Standardization
j. LEED®: Leadership in Energy and Environmental Design
k. NEMA: National Electrical Manufacturer's Association
l. USGBC: U.S. Green Building Council

1.4. References Standards

a. ANSI A208.1-[1999] – Grade M2. Raw Particle Board for indoor application.
b. ANSI A208.2-[2002] – Grade 130. Medium Density Fiberboard for indoor application.
c. ASTM E 1333-[96] – Standard Test Method to determine the level of formaldehyde of wood products under specific conditions and using a large chamber.
d. AWMAC – Quality Standards for Architectural woodwork – [last edition]
e. CPA Appendix D – From the tree to the finished product – [MDF 1991 / Particles 1996] (Physical and Mechanical Properties Grademark Program and Quality control Manual)
f. EN 438 2.14 - High Pressure Decorative Laminates (HPL). Sheets based on thermally setting resins (usually called laminates. Determination of properties
g. NEMA LD3–95 – Grade VGL-HGJ, Thermally fused Melamine. Performance, Application, Fabrication and Installation of High Pressure Decorative Laminates.
h. USGBC LEED – Green Building Rating SystemTM

1.5. Submittals Procedures

a. Product Data : Thermally fused Melamine Particleboard
b. Sample size: [12" X 12" / 300mm X 300mm] or as per project specifications;
c. Informational:
    i. Material Certificates:
        a) Thermally fused Melamine Particleboard manufacturer and following product certifications:
            i. CARB Compliance: Phase 2 formaldehyde emissions certifications;
            ii. CPA - ECC certification;
            iii. FSC® certification.
    ii. Material Safety Data Sheet for Thermally fused Melamine Particleboard.

For LEED project, include the following as applicable

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d. Sustainable Design Submittals - LEED v4 New Construction:
    i. Materials and Resources Credit 4, Recycled Content: Thermally fused Melamine Particleboard manufacturer's product data indicating percent of pre-consumer and postconsumer recycled content;
    ii. Materials and Resources Credit 5, Regional Materials: Thermally fused Melamine Particleboard manufacturer's product data, indicating harvest source location and location of manufacture;
    iii. Indoor Environmental Quality Credit 4.4, Low Emitting Materials: Thermally fused Melamine Particleboard manufacturer<s product data, indicating compliance with CARB Phase 2 formaldehyde emission requirements;

If FSC panels are specified, credit for Materials and Resources («MR») is available as follows. Refer and coordinate with article 2.1.e

iv. MR Credit 7, Certified Wood: Particleboard manufacturer's product data indicating FSC certificate registration code.

1.6. Quality Assurance

a. Qualifications:

i. Thermally fused Melamine Particle Board manufacturer:

a) FSC® - Mixed Sources accreditation

b) CPA member

c) CPA – ECC

2. PRODUCT

2.1. Properties

Thermally fused Melamine Particleboard manufactured by Boreal Architectural

® Canada Inc.

Standard grade used for most commercial and industrial application in North America is Grade M2. If other grades are specified, please contact Boreal Architectural® for more information.

a. Comply with ANSI A208.1, Grade [M-2];

b. Formaldehyde Emission Requirements: Less than 0.09 ppm (CARB Phase 2);

c. Recycled Content is 100 percent post industrial recovered Wood fiber.

d. Physical characteristics:

i. Wear Resistance NEMA LD 3–2005:

a) Solid Colors: 400 cycles

b) Print: 125 cycles

ii. Stain Resistance:

a) Solid Colors: 1-10 no effect

b) Print: 11-15 moderate

iii. Impact Resistance: NEMA LD-3, 15 inches (381 mm per linear m)

iv. Fire Resistance: ASTM E-84, Class C or III

v. Warping: CPA Appendix D, 3 mm per linear m

vi. Color (Pattern) and texture:

a) Color: [As shown on drawings] [_____]

b) Texture: [as shown on drawings] Aura, Bistro®, Dolomite®, High Gloss, Rio®, Suede, Supermat®, WoodprintTM

e. Complementary products: [High pressure laminates, edge banding, mouldings, cabinet doors] refer to Melamine Brochures at **www.borealarchitectural.com**

f. Particleboard panels may be FSC® certified if required.

2.2. Materials

a. The Thermally fused Melamine panel: Boreal Architectural® melamine is a composite wood-based panel onto which a decorative paper layer is thermally fused (heat and pressure) to the top and bottom surface in order to create a durable and decorative panel. The melamine

resins used to bond the decorative paper and panel together are renowned for their unique physical properties including: durability; hardness; scratch and stain resistance as well as color stability.

b. Edgebanding: exposed edges can be finished with different products including Polyester, thin PVC or 3mm PVC glued and shaped mechanically, solid wood, wood veneer or moulding (plastic, wood or metal).

c. Options:

i. Melamine Particleboard ANSI A208.1 – [2009], Grade M–S [600-650 kg/m3 density] and Grade M–2 [620-670 kg/m3 density];

ii. MDF Excel+ Melamine ANSI A208.2 – [2009], Grade 155, 740–770 kg/m3 density (available as FSC® certified)

iii. NU Green SoyaTM Melamine particleboard ANSI A208.1 – [2009], Grade M–2 [620-670 kg/m3 density] Soya based adhesive technology [Eco-Certified CompositeTM (ECC)], NAF (No Added Formaldehyde);

iv. NU Green® 2 Melamine Particleboard ANSI A208.1 – [2009], Grade M–2 [620-670 kg/m3 density], A ULEF «Ultra Low Emission Formaldehyde» raw particleboard;

Boreal Architectural® Particleboards meet the requirements of ANSI A208.1-2009 as well as CARB Phase 2 standards and are available as FSC® certified. All wood fiber used in Boreal Architectural® panels is postindustrial recovered and recycled.

2.3. Fabrication

The melamine panels should not exposed any clamps or assembly methods. The melamine panels should be glued and assembled with mounting dowels method or screwed with plated finish.

2.4. Delivery, Storage and Handling

a. Products must be unloaded under shelter. If the unloading process is performed outdoor, products must be stored under shelter as soon as possible. Avoid unloading when faced with inclement weather;

b. Always inspect delivered goods upon reception and once unloaded. Verify if products were damaged, soiled or exposed to water;

c. Never store the products outdoor. Avoid watering;

d. Store panels in a dry and well ventilated area, away from production lines;

e. Handle with care to avoid damages;

f. Do not place panels directly on the floor;

g. Maintain the storage area clean;

h. Avoid extreme temperature during the storage and at the time of use of panels;

i. Control the ambient air at 21oC (70 F) and relative humidity between 35% and 45%;

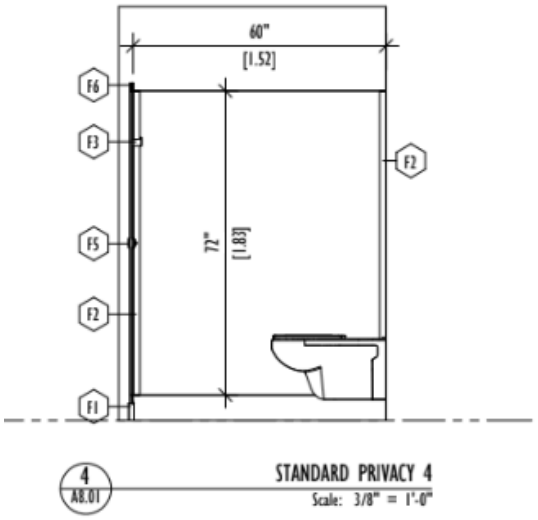
j. Allow time for panels to reach site temperature before use (minimum 1 week, 2 weeks ideally).

TECHNICAL SPECIFICATIONS

Properties	Testing Methods	Meets Testing Requirements
Wear Resistance	NEMA LD 3-2005	400 cycles (solid colours) 125 cycles (prints)
Appearance	NEMA LD 3-2006	No surface defects Type A, B or C
Stain Resistance	NEMA LD 3-2007	1-10 no effect (solid colours) 11-15 moderate (prints)
Cleanbility	NEMA LD 3-2008	Max 20
Light Resistance	NEMA LD 3-2009	Slight
High Temperature Resistance	NEMA LD 3-2010	Slight
Radiant Heat Resistance	NEMA LD 3-2011	No effect after 60 seconds
Boiling Water Resistance	NEMA LD 3-2012	No effect
Impact Resistance	NEMA LD 3-2013	381 mm/m
Fire Resistance	ASTM E-84	Class III or C
Warping	CPA Annexe D	3 mm/m

Technical Data Sheets

Standard Privacy Elevations



4 A8.01 STANDARD PRIVACY 4
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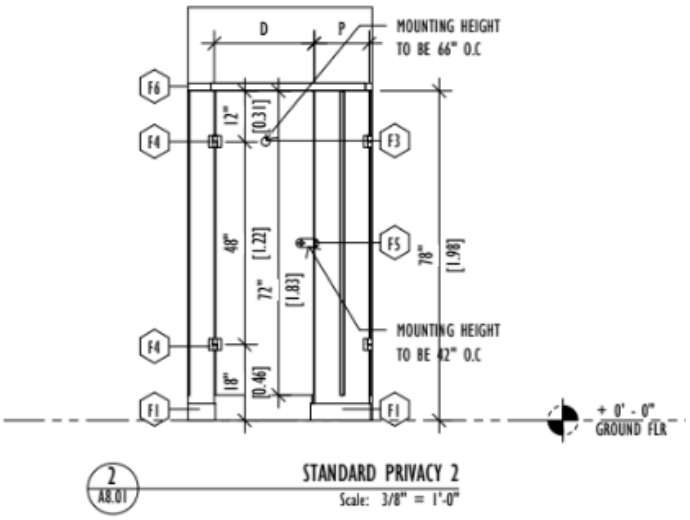

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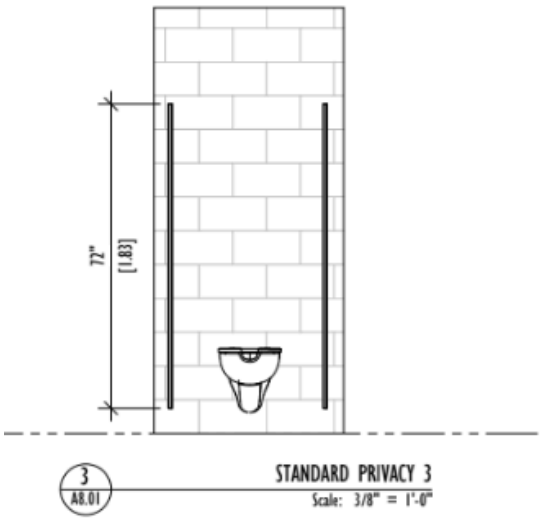

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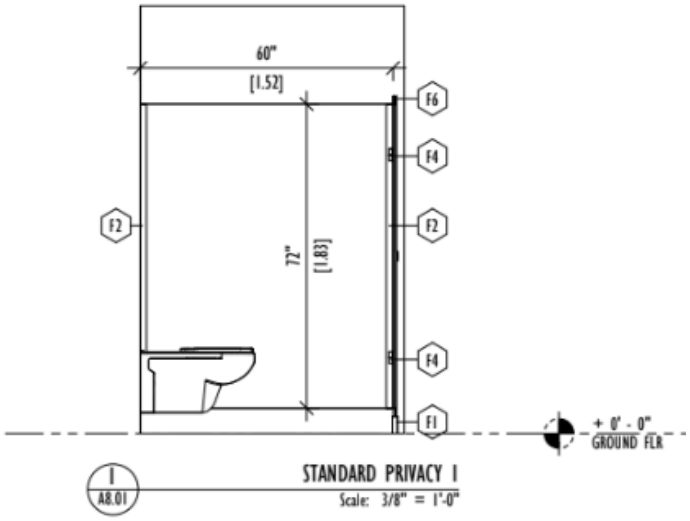

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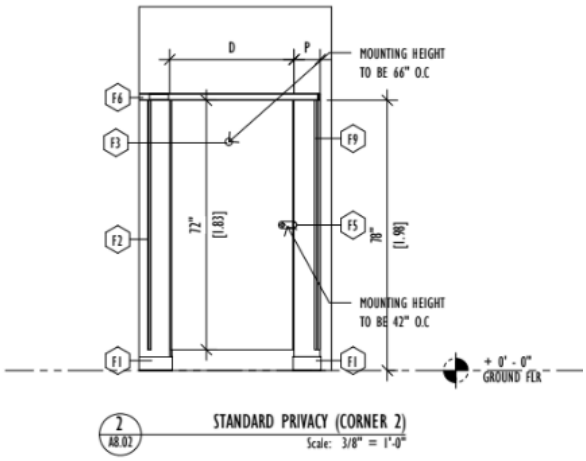

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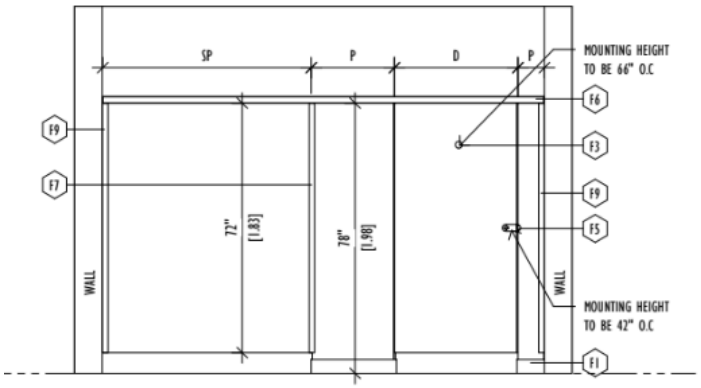

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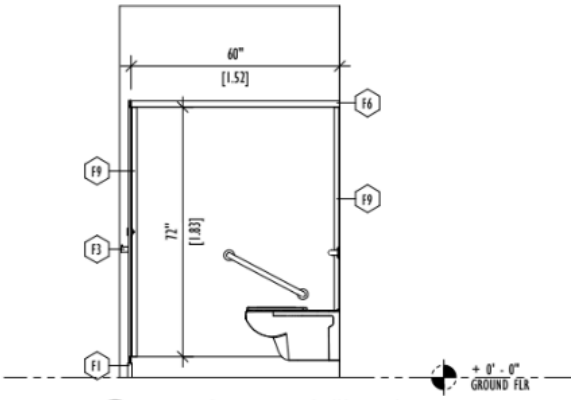

1 A8.02 STANDARD PRIVACY (CORNER 1)
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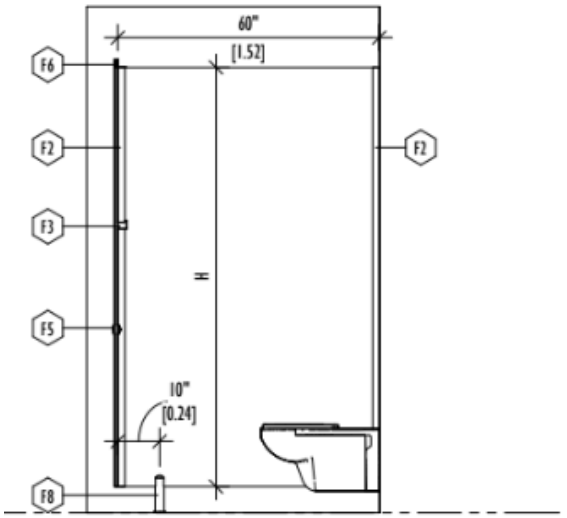
Technical Data Sheets

Full-Privacy Elevations



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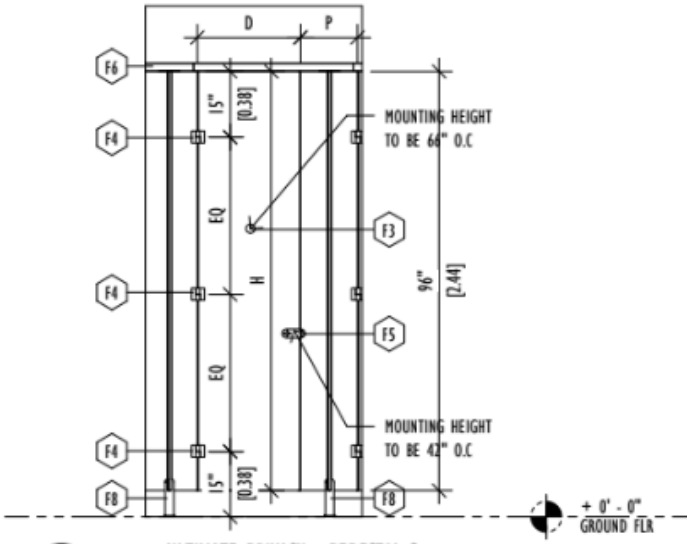

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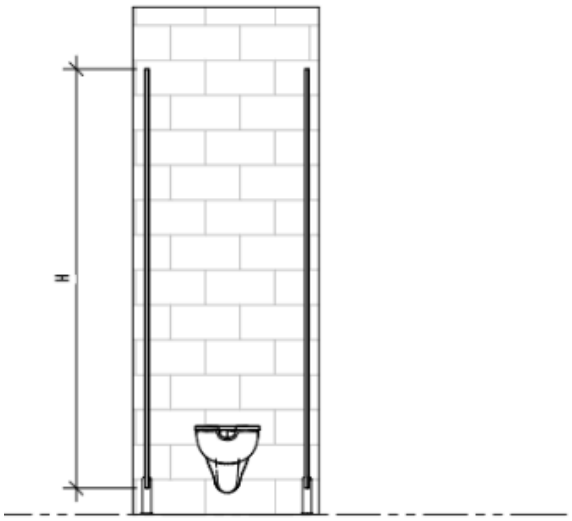

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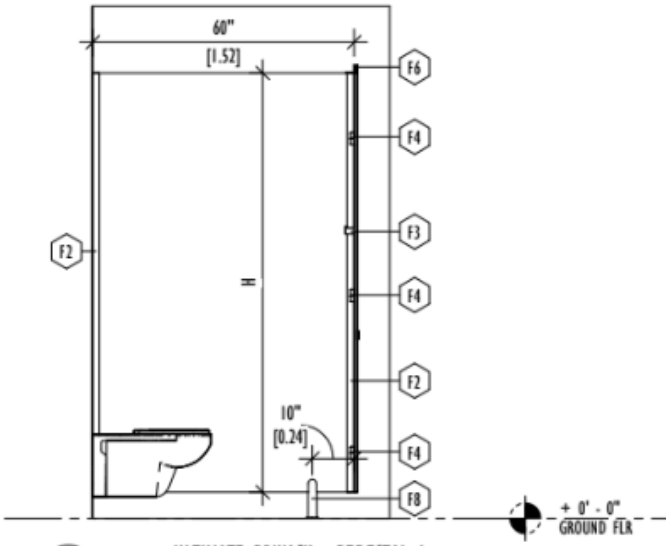

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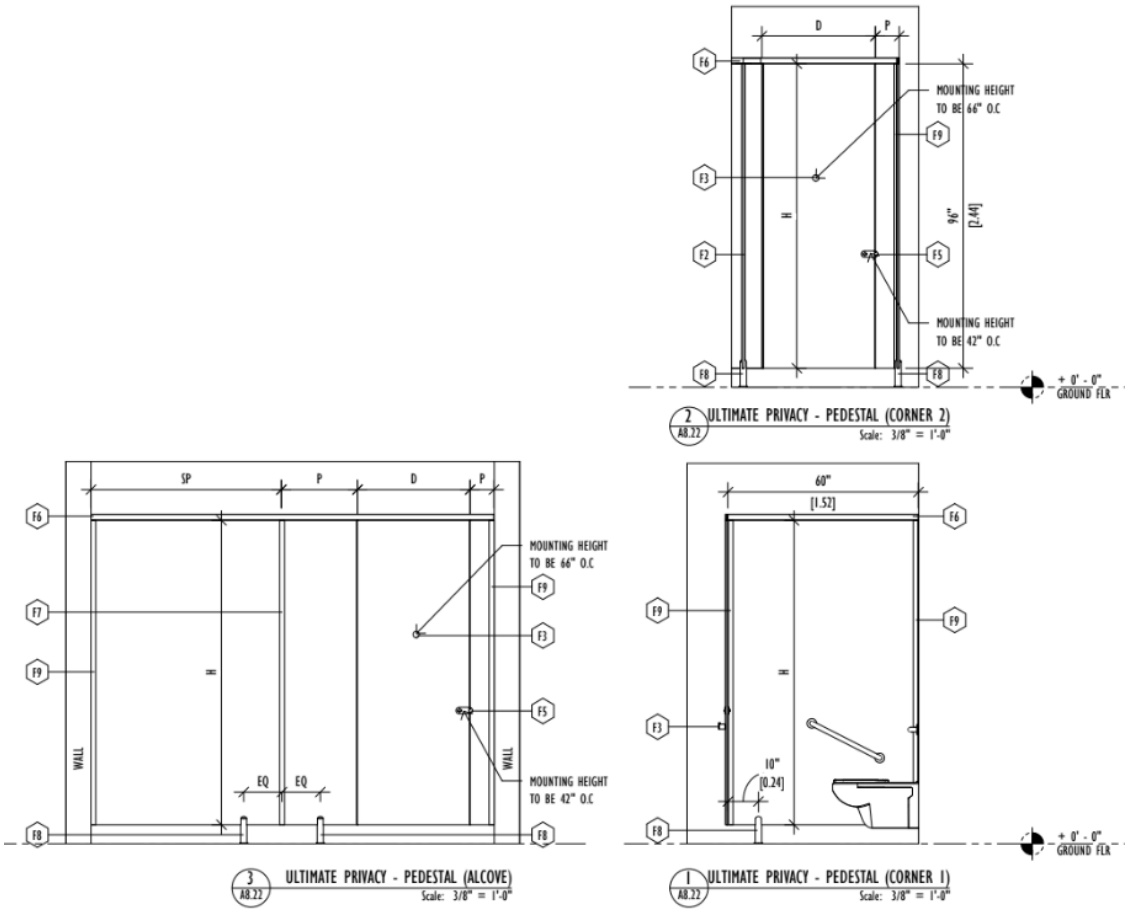
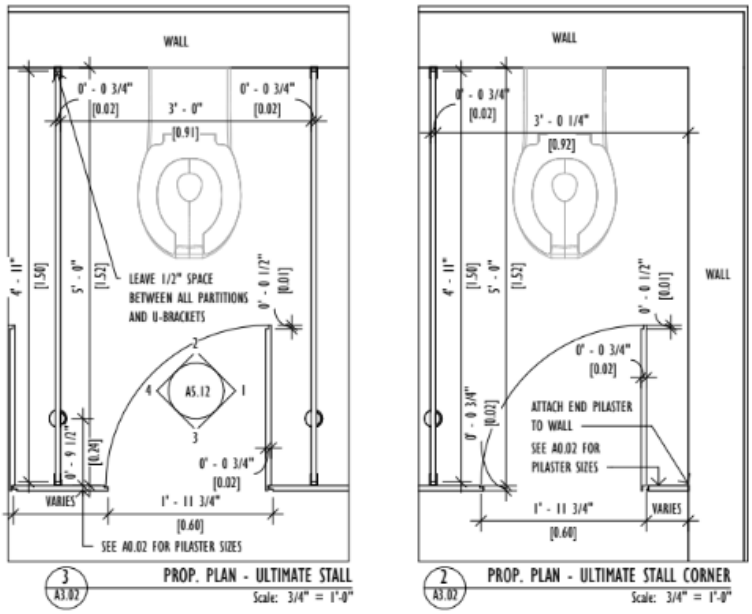

D
P
F6
MOUNTING HEIGHT
TO BE 66" O.C
F9
F3
H
96"
[2.44]
F2
F5
MOUNTING HEIGHT
TO BE 42" O.C
F8
F8
+ 0' - 0"
GROUND FLR
2 A8.22
ULTIMATE PRIVACY - PEDESTAL (CORNER 2)
Scale: 3/8" = 1'-0"
SP
P
D
P
F6
MOUNTING HEIGHT
TO BE 66" O.C
F9
F7
F3
F9
H
F5
WALL
WALL
EQ
EQ
MOUNTING HEIGHT
TO BE 42" O.C
F8
F8
3 A8.22
ULTIMATE PRIVACY - PEDESTAL (ALCOVE)
Scale: 3/8" = 1'-0"
60"
[1.52]
F6
F9
F9
H
F3
10"
[0.24]
F8
+ 0' - 0"
GROUND FLR
1 A8.22
ULTIMATE PRIVACY - PEDESTAL (CORNER 1)
Scale: 3/8" = 1'-0"


WALL
0' - 0 3/4"
[0.02]
3' - 0"
[0.91]
0' - 0 3/4"
[0.02]
4' - 11"
[1.50]
5' - 0"
[1.52]
LEAVE 1/2" SPACE
BETWEEN ALL PARTITIONS
AND U-BRACKETS
0' - 0 1/2"
[0.01]
A5.12
0' - 9 1/2"
[0.24]
0' - 0 3/4"
[0.02]
VARIES
1' - 11 3/4"
[0.60]
SEE A0.02 FOR PILASTER SIZES
3
A3.02
PROP. PLAN - ULTIMATE STALL
Scale: 3/4" = 1'-0"
WALL
0' - 0 3/4"
[0.02]
3' - 0 1/4"
[0.92]
4' - 11"
[1.50]
5' - 0"
[1.52]
0' - 0 1/2"
[0.01]
WALL
0' - 0 3/4"
[0.02]
0' - 0 3/4"
[0.02]
ATTACH END PILASTER
TO WALL
SEE A0.02 FOR
PILASTER SIZES
1' - 11 3/4"
[0.60]
VARIES
2
A3.02
PROP. PLAN - ULTIMATE STALL CORNER
Scale: 3/4" = 1'-0"