CHAPTER 7: Building Systems

INTERIOR PARTITIONS

Performance Standards

1. Easy to clean materials
2. Resistant to moisture or that inhibit the growth of biological contaminants
3. Impact resistant materials in high traffic areas
4. Durable, long life materials
5. Dimensional planning to reduce waste (i.e. 4 ft. by 8 ft. wallboard)
6. Use materials that meet industry consensus standards for VOC emissions.

Guidelines

1. Consider design for disassembly for a product and its parts to be reused, remanufactured, or recycled
2. Good acoustical qualities
3. Consider recycled/recyclable
4. Local (within 500 miles) materials and products where possible
5. Consider renewable materials

Examples

1. Concrete masonry walls (CMU)
2. Glazed tile and ceramic tile
3. Gypsum wallboard
4. Veneer plaster over gypsum wallboard
5. Operable partitions
6. Folding partitions
7. Demountable partitions
8. Wood framing
Examples

1. Concrete masonry walls (CMU)
2. Structural glazed tile walls (CGFU)
3. Ceramic tile (CT)

Performance Standards

1. Impact resistant
2. Easily cleanable & maintainable
3. Good acoustic qualities
4. Daylight enhancement qualities

Construction Standards

1. CMU walls: ASTM C190, 1900 psi compressive strength, normal weight aggregate
2. Tooled or struck mortar joints for cleanability. Use Type “S” mortar for loadbearing walls and Type “N” for non-loadbearing walls.
3. Glazed structural clay tile: ASTM C 126, Type I (single-faced units) and Type II (double-faced units)
4. Ceramic tile: for materials ANSI A 137.1 “Specifications for Ceramic Tile”; for installation ANSI 108 series and TCA handbook
5. Glazed wall tile: 5/16 inch thick, flat tile with cushion edges
6. Grout tile using latex Portland cement grout. Exception: use chemical resistant epoxy grout in kitchens
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GYPSUM WALLBOARD

Examples

1. Metal or wood studs with gypsum wallboard both sides
2. Veneer plaster over gypsum wallboard

Performance Guidelines

1. "Abrasive-resistant" and "high impact" in high traffic areas
2. Economical
3. Relatively easy to move or remove
4. Accommodates periodic finish color changes
5. Good sound barrier with acoustical insulation

Construction Standards

1. Do not use in exterior walls where threat of moisture and mold might be present
2. Sound transmission characteristic: Minimum STC: 41 in academic areas
3. Steel framing: comply with ASTM C754 and G40 hot-dip galvanized zinc coating
4. Gypsum wallboard: ASTM C36, Type X 5/8 inch thick
5. Type X wallboard required at rated partitions
6. Moisture resistant wallboard to be used in high moisture areas
7. Metal studs: ASTM C645, 20 gauge sheet base metal
8. Provide control joints in partitions 30 feet maximum
9. Veneer plaster: ASTM C58T consisting of separate base coat and finish coat
10. Wood stud grade marked as required by the applicable building code
11. Impact resistant materials in high traffic areas.
Examples

1. Operable partitions
2. Folding partitions
3. Demountable partitions

Performance Standards

1. Easily moved from opened to closed (stored) position by manual or electrical operating mechanism
2. Sound control (STC rating) as required to meet the sound isolation requirements for the functional use of the rooms or spaces to be divided
3. Options for tack and marker-board surfaces
4. Overhead structural support with minimal deflection as required for functional operation.
5. Demountable partitions convenient to disassemble and relocate

Construction Standards

1. Manually or electrically operated partitions
2. Operable partitions: panels ½ inch gypsum board laminated with 3/16 inch natural cork (STC 47) or steel face sheet (STC 50); Panel finish-vinyl fabric, carpet, tack boards or marker boards; pedestrian pass doors as required
3. Accordion folding partitions: steel or aluminum suspension tracks; manually operated; interior 22 gauge steel panels for sound isolation; vinyl coated fabric finish
4. Demountable partitions; face panels of gypsum board painted or covered with vinyl; face panels of steel painted or covered with vinyl or plastic laminate; doors and windows available as required
5. Non-combustible products that meet rated fire or smoke separation building code requirements