

Appendix 3G – Wood First Matrix

Project Co will use wood in the Design of the Acute Care Facility in accordance with the following table, using wood where it is marked as “Appropriate” subject to any comments set out under the “Justification” column.

Table 1: Acute Care Facility

Area of Usage	Appropriateness	Justification
Substructure		
Forming/ Shutter (temporary)	Appropriate	The use of wood in this process is a traditional method of construction.
Structure		
Slab on grade	Inappropriate	The loads applied to the slab are in excess of wood’s capabilities and wood is subject to rot, mould and insects such as termites, impacts that are exacerbated by proximity to the ground.
Beams	Inappropriate	Not permitted by the BC Building Code.
Columns	Inappropriate	Not permitted by the BC Building Code.
Upper Flooring	Inappropriate	Not permitted by the BC Building Code.
Roof (Penthouse)	Inappropriate	Not permitted by the BC Building Code.
Heavy Timber Structure or Non-Structural Elements	Potentially Appropriate as an 'Alternative Solution' Approach	Proponents are strongly urged to consider a heavy timber design.
Exterior Cladding		
Roof Finish (Flat Roof)	Inappropriate	There is no known wood product for this application.
Walls above ground level	Appropriate or Potentially Appropriate as an “Alternative Solution” Approach	<p>Exterior cladding, details, trims, etc., are permitted provided the interior surface of the wall assemblies are protected by a thermal barrier and the wall assembly satisfies the referenced test criteria for fire spread on exterior wall assemblies.</p> <p>Beyond that permitted by the BC Building Code, exterior components such as wood cladding and soffit/trims could be supported with an 'alternative solution' approach' incorporating fire-retardant treated wood (FRTW) or exterior sprinkler protection strategies (where warranted).</p> <p>Wood materials on soffits could extend to exterior wood on main building elevations. Alternative solution strategies should consider the use of FRT wood products and/or automatic sprinkler protection.</p>
Exterior Windows	Inappropriate	Ability to clean and water/chemical resistance are paramount in this location.
Curtain Wall	Inappropriate	There is no known wood product for this application.

Area of Usage	Appropriateness	Justification
Exterior Doors and Screens	Appropriate	Wood doors and screens can be used in low traffic areas.
Roof Accessories (parapet, cant strips, plywood backing)	Appropriate	Wood permitted
Interior Partitions and Doors		
Partition Studding	Inappropriate	Not permitted by the BC Building Code.
Interior Doors	Appropriate for offices Inappropriate for ORs and MDR	Framing, core and facing of door can be wood for locations not requiring greater than a 90 minute fire resistance rating. Wood doors in high metal cart and material transport traffic areas and high humidity areas like the clinical and MDR areas would be inappropriate.
Vertical Movement		
Stairs (Structural)	Inappropriate	Not permitted by the BC Building Code.
Stairs (treads, risers)	Inappropriate	Not permitted by the BC Building Code.
Guardrails	Appropriate for non-exit stairs	Wood can be used in these locations where there is a low to medium risk of impact.
Handrails	Appropriate	Permitted by the BC Building Code.
Fittings and Equipment		
Hardwood Floor	Appropriate	Wood could be used in certain, non-clinical locations as a floor finish; this would be limited to high end finished areas which are not subject to low acoustic or high usage requirements. Building code requirements would have to be met.
Ceiling Tiles	Appropriate	Wood could be used in ceiling tiles for aesthetic requirements in certain, non-clinical areas within the building provided that they are not more than 25mm thick with a flame spread rating not more than 25, except for not more than 10% of ceiling area in a fire compartment is permitted to have an FSR of up to 150. This would be limited to high end finished areas which are not subject to low acoustic or high usage requirements.
Wall Finish	Appropriate	Wood could be used as a wall finish for aesthetic and acoustic requirements in certain, non-clinical areas within the building provided that they are not more than 25mm thick with a flame spread rating not more than 150. This would be limited to high end finished areas which are not impaired by acoustic and high usage requirements. Beyond that permitted by the BC Building Code, interior finishes could be supported with an 'alternative solution' approach incorporating other considerations/features such as specific geometry/location of wood, potential fire exposure potential and

Area of Usage	Appropriateness	Justification
		enhanced fire suppression systems for the area.
Toilet Partitions	Appropriate	The core material for the partitions can be made from wood particles.
Signs	Appropriate	The base material on which the sign is mounted can be of wood.
Loose Equipment (Desks, chairs, etc)	Appropriate	The core material for the desks, chairs, etc., can be made from particle and complete wood substrate except where CSA standards require non-porous materials such as in MDR, the Sterile Core and the ORs.
Fixed Equipment (Millwork)	Appropriate	Frames, core material, doors and substrate for millwork can be constructed with wood. This includes show windows, aprons/backing, shelves, cabinets and counters.
Modular Benches	Inappropriate	Should be stainless steel in MDR.
Specialized Equipment	Inappropriate	Clinical equipment and associated environment cannot utilise wood as these environments need to be inert.
Blocking within walls	Appropriate	For attachment of handrails, accessories and similar interior finish items mounted on the surface of walls.
Nailing Elements	Appropriate	Wood nailing elements attached directly to or set into a non-combustible backing for the attachment of interior finishes are permitted provided there is no air space of more than 50mm thick.
Mechanical		
None Known		
Electrical		
None Known		
Site Development		
Landscaping (Architectural, decorative, site furnishings, etc)	Appropriate	Wood could be used in Landscaped areas for the Arts, Architectural features/site furnishings; seats, pagodas, etc.
Contractor		
Site establishment	Appropriate	Where appropriate, Project Co is to endeavour to utilise materials of wood and wood derivative for their site establishment.

If the Clinical Support Building is a stand-alone structure (whether or not attached to the Acute Care Facility by corridor or service links), Project Co will use wood in the Design of the Clinical Support Building in accordance with the following table, using wood where it is marked as “Appropriate” subject to any comments set out under the “Justification” column. If the Clinical Support Building is integrated as part of the Acute Care Facility structure, the following table will not apply and table 1 for the Acute Care Facility will apply to the entire combined Clinical Support Building and Acute Care Facility.

Table 2: Clinical Support Building

Area of Usage	Appropriateness	Justification
Substructure		
Forming/ Shutter (temporary)	Appropriate	The use of wood in this process is a traditional method of construction.
Structure		
Slab on grade	Inappropriate	The loads applied to the slab are in excess of wood’s capabilities and wood is subject to rot, mould and insects such as termites, impacts that are exacerbated by proximity to the ground.
Beams	Appropriate	Permitted by the BC Building Code.
Columns	Appropriate	Permitted by the BC Building Code.
Upper Flooring	Appropriate	Permitted by the BC Building Code.
Roof (Penthouse)	Appropriate	Permitted by the BC Building Code.
Heavy Timber Structure or Non-Structural Elements	Potentially Appropriate as an 'Alternative Solution' Approach	Although the base building structure is required to be of non-combustible construction, proponents are strongly urged to consider a heavy timber design that could be integrated as a 'secondary' structure or decorative installation for specific feature areas of the building.
Exterior Cladding		
Roof Finish (Flat Roof)	Inappropriate	There is no known wood product for this application.
Walls above ground level	Appropriate or Potentially Appropriate as an “Alternative Solution” Approach	Exterior cladding, details, trims, etc., are permitted provided the interior surface of the wall assemblies are protected by a thermal barrier and the wall assembly satisfies the referenced test criteria for fire spread on exterior wall assemblies. Beyond that permitted by the BC Building Code, exterior components such as wood cladding and soffit/trims could be supported with an 'alternative solution' approach' incorporating fire-retardant treated wood (FRTW) or exterior sprinkler protection strategies (where warranted). Wood materials on soffits could extend to exterior wood on main building elevations. Alternative solution strategies should consider the use of FRT wood products and/or automatic sprinkler protection.
Exterior	Inappropriate	Ability to clean and water/chemical resistance are paramount in this

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Windows		location.
Curtain Wall	Inappropriate	There is no known wood product for this application.
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Roof Accessories (parapet, cant strips, plywood backing)	Appropriate	Wood permitted
Interior Partitions and Doors		
Partition Studding	Appropriate	Permitted by the BC Building Code.
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Fittings and Equipment		
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