5111H JAMES HARDIE FIBRE CEMENT SHEET LININGS

Masterspec sections must be customised to suit the project being specified, by removing irrelevant information and adding project-specific information and selections.

1. GENERAL

This section relates to the supply and installation of James Hardie Villaboard® Lining and HardieGroove™ Lining for:
- internal wall linings
- ceiling linings

Modify or extend the above description to suit the project being specified.

Where the lining manufacturer prepares bracing schedules for their products, these lists should be used in preference to preparing your own bracing schedules. Include them either in the specification or on the drawings. This approach ensures the industry becomes familiar with one set of terminology for bracing elements (e.g. VB1 = a Villaboard® Lining 1200mm bracing element).

1.1 RELATED WORK

Refer to ~ for ~.

Include cross references to other sections where these contain related work. For wet areas it is important to reference any waterproofing sections.

Documents

1.2 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

AS/NZS 2589	Gypsum linings - Application and finishing
AS/NZS 2908.2	Cellulose-cement products - Flat sheet
NZS 3602	Timber and wood-based products for use in buildings

Delete from the DOCUMENTS clause any document not cited. List any additional cited documents. The following are related documents and if referred to in the work section need to be added to the list of DOCUMENTS.

NZBC C/AS1	*Fire safety*
NZBC E3/AS1	*Internal moisture*
NZBC G3/AS1	*Food preparation and prevention of contamination*
NZBC G6/AS1	*Airborne and impact sound*
AS/NZS 1170	*Structural design actions*
NZS 3603	*Timber Structures Standard*
NZS 3604	*Timber framed buildings*
AS/NZS 4680	*Hot-dip galvanized (zinc) coatings on fabricated ferrous articles*
BRANZ BU 379	*Preventing moisture problems in existing buildings*
BRANZ BU 393	*Powder-actuated and mechanically powered fastening tools*
BRANZ BU 402	*Levels of stopping for flush stopped linings*
BRANZ BU 519	*Fasteners selection*

1.3 MANUFACTURER/SUPPLIER DOCUMENTS

James Hardie documents relating to this part of the work:
Villaboard® Lining
HardieGroove™ Lining

Manufacturer/supplier contact details

Company:	James Hardie New Zealand Limited
Web:	www.jameshardie.co.nz
Telephone:	Ask James Hardie™ on 0800 808 868

It is important to ensure that all personnel on site have access to accurate, up to date technical information on the many products, materials and equipment used on a project. In most cases individual products are not used in isolation, but form part of a building process. Also a particular manufacturer's and/or supplier's requirements for handling, storage, preparation, installation, finishing and protection of their product can vary from what might be considered the norm. Access to technical information can help overcome this potential problem.

Warranties

1.4 WARRANTY - MANUFACTURER/SUPPLIER

Provide a material manufacturer/supplier warranty:
15 years: For James Hardie™ ~.

(refer to James Hardie™ product warranty)

Insert product selected, this may include; Villaboard® Lining, HardieGroove® Lining. Refer to James Hardie™ product warranty for details.

15 years: For accessories supplied by James Hardie (refer to James Hardie™ product warranty)

From: Date of purchase

- Provide this warranty on the manufacturer's standard form.

Refer to the general section 1237 WARRANTIES for additional requirements.

Modify or expand the clause to suit project requirements, options include:

Requirements

1.5 NO SUBSTITUTIONS

Substitutions are not permitted to any specified system, or associated components and products.

1.6 COMPLIANCE

Fibre cement sheets to AS/NZS 2908.2.

2. PRODUCTS

Materials

2.1 PLAIN FIBRE CEMENT SHEET LININGS

James Hardie Villaboard® Lining treated cellulose fibre in a matrix of cement and sand autoclaved sheet, sealed on face side.

2.2 PROFILED FIBRE CEMENT SHEET LININGS

James Hardie HardieGroove™ Lining treated cellulose fibre in a matrix of cement and sand autoclaved sheet.

Components

2.3 BATTENS, TIMBER

Minimum 45mm wide, 35mm deep timber with depth suitable for length of fasteners used.

2.4 PACKERS

3 - 4mm timber packers.

2.5 NAILS

6mm and 9mm linings: 40mm x 2.8mm galvanized flathead HardieFlex™ nails

Over Gypsum plasterboard: 50mm x 2.8mm galvanized flathead HardieFlex™ nails

2.6 SCREWS FOR POWER SCREW GUN DRIVING

Timber framing

6mm and 9mm linings: Villadrive 6 gauge x 30mm self embedding screws or HardieDrive™ self embedding stainless steel screws

Steel framing: Steel 8 gauge x 32mm self embedding screws

Use needle-point (wood) screws rather than drill point for 0.55 gauge steel sections.

2.7 WALL BOARD ADHESIVE

Polyurethane wallboard adhesive. Refer to James Hardie product installation manual.

Accessories

2.8 CONTROL JOINTS SECTION

45mm x 10mm shaped PVC control joint or Rondo P35 jointer.

2.9 EXTERNAL CORNER SECTIONS

30mm x 30mm x 1.2mm PVC angle.

2.10 PVC JOINTERS
6mm and 9mm PVC jointers.

2.11 POLYETHYLENE TAPE
Self adhesive polyethylene for behind expressed joints and expressed control joints.

2.12 JOINT REINFORCING TAPE
52mm wide perforated paper tape.

2.13 BEDDING COMPOUND
James Hardie® Base Coat compound powder.

2.14 FINISHING COMPOUND
James Hardie® Top Coat premixed.

2.15 SEALANT
Silicone or polyurethane sealant. Refer to the James Hardie installation manual.

3. EXECUTION

Conditions

3.1 MOISTURE CONTENT
Maximum moisture content of timber framing to NZS 3602.

3.2 PROTECT
Protect joinery, fittings and finishes already in place from water staining or damage from lining installation.

3.3 BUILDING
Ensure building is weatherproof before lining work commences.
It may be necessary to modify this clause or to define "weatherproof" more precisely. In some cases temporary covers over window openings might be sufficient to allow internal lining work to commence.

3.4 STORAGE
Take delivery of products dry and undamaged on pallets, and keep on pallet. Protect edges and corners from damage and covered to keep dry until fixed.

3.5 HANDLING
Avoid distortion and contact with potentially damaging surfaces. Carry sheets vertically. Do not drag sheets across each other, or across other materials. Protect edges, corners and surface finish from damage.

3.6 SUBSTRATE
Do not commence work until the substrate is of the standard required by the relevant manufacturer's technical literature for the specified finish; plumb, level and in true alignment. Maximum moisture content of timber framing to NZS 3602.

3.7 FIRE RESISTANCE RATING, FIBRE CEMENT
Install mineral fibre insulation or glass fibre insulation fitted tightly in the timber framing cavity. Apply fire retardant building paper to the exterior face of the framing and fix fibre cement cladding and lining sheets, direct or on cavity. Refer to project drawings for FRR system construction details and James Hardie Fire and Acoustic Design Manuals for further information.

3.8 ACOUSTIC RATING
Fix sheets to James Hardie Fire and Acoustic Design Manual.
Refer to James Hardie technical literature for special conditions and limitations.

3.9 BRACING SYSTEM
Fix sheets in accordance with James Hardie Bracing Design Manual.

Refer to James Hardie technical literature for special conditions and limitations. Refer also to any bracing schedules or drawings.

Application

3.10 FIXING WITH BUTT JOINTS
Cut sheet using the appropriate method for the specified finish. Prepare and fix square edged sheets in accordance with James Hardie Installation Manual. Include flexible sealant in wet areas.
Joint width: 1 - 2mm
Specify whether fasteners are to be driven below the surface or driven flush.

3.11 FIXING PVC JOINTERS
Prepare and fix square edged sheet to James Hardie Installation Manual. Include flexible sealant in wet areas.

3.12 FIXING ALUMINIUM JOINTERS
Prepare and fix square edged sheet to James Hardie Installation Manual. Include flexible sealant in wet areas.

3.13 FIXING FLUSH JOINTED WALLS, PAINT OR WALLPAPER
Prepare and fix recessed edge sheets to James Hardie Installation Manual. Fix with screws and/or nails at edges.
Use this clause when a superior surface finish is required. Also refer to levels of finish section for further information. Not for wet areas.

3.14 FIXING FLUSH JOINTED WALLS, HEAVY VINYL
Prepare and fix recessed edge sheets to James Hardie Installation Manual. Fix with screws and/or nails at edges.

3.15 FIXING FLUSH JOINTED CEILINGS, PAINT
Fix ceiling battens at 600mm centres maximum. (Do not fix sheets to the underside of roof trusses). Fix sheets in an offset pattern so that adjacent end joints do not coincide. Break the ceiling into bays not exceeding 9 metres x 6 metres and provide control joints at the perimeter of each bay. Provide control joints at the junction of large ceilings and narrow passages.
Refer to James Hardie Installation Manual for additional requirements with complex ceilings.

3.16 FIXING IN CERAMIC TILED AREAS
Prepare and fix sheets, horizontally or vertically and stagger joints where possible, to James Hardie Installation Manual.
Studs are required at 400mm centres for areas where tiles thicker than 6mm are to be fixed. Fix the sheets with nails or screws. Do not use adhesives.

3.17 PROVIDE VERTICAL CONTROL JOINTS
Provide vertical control joints at 7.2 metre centres maximum for general application and 4.2 metres centres maximum for tiled applications. Provide acoustic sealant in walls having an acoustic rating.

3.18 PROVIDE HORIZONTAL CONTROL JOINTS
Provide horizontal control joints at 7.2 metres centres maximum for general application and 4.2 metre centres maximum for tiled applications.

3.19 PROVIDE EXTERNAL CORNER ANGLE
Provide perforated PVC external corner angle or paper faced rigid spine corner mould to external corners.

3.20 INTERNAL CORNERS
Provide perforated PVC corner mould, or paper faced rigid spine corner mould or solid blocking to internal corners.
Refer to James Hardie Installation Manual regarding requirements for flush stopping of sheets.

3.21 SILICONE JOINTS
Provide polyethylene tape behind joints finished with flexible sealant.

3.22 LEVELS OF FINISH

Refer to AS/NZS 2589.

Level 0, 1 and 2 Refer to James Hardie Installation Manual

Level 3

Application: For use in areas which are to receive heavy or medium texture (spray or hand applied) finishes or where heavy paper wall coverings are to be applied as the final decoration.

Jointing/setting: Joints and corner joints will be set with James Hardie Base Coat reinforced with perforated paper tape and James Hardie Top Coat.

Finish: This level of finish must be sufficiently smooth to accept vinyl, tiles or textured coatings without blemishes.

This level of finish is not generally suitable where smooth painted surfaces or light to medium wall coverings are specified.

Level 4

Application: This is generally the accepted level of finish for domestic construction. It is used where light textures or wall coverings and smooth textured finishes and satin/flat/low sheen paints are illuminated by non-critical lighting.

Jointing/setting: Refer to flush jointing recommendations on page 11 James Hardie Villaboard® Lining installation manual.

Finish: For use where light-texture coatings or wallpaper or other lightweight wall coverings are to be applied. For painted finishes in non-critical lighting areas flat and low-sheen textured paints are to be applied. Gloss and semi-gloss paints are not generally suitable over this level of finish as any minor blemish will show under critical light. The weight, texture and sheen level or wall coverings applied over this level of finish must be carefully evaluated. Joints and fasteners must be adequately concealed if the wallcovering material is lightweight, contains limited pattern, has a gloss finish, or any combination of these features is present. Unbacked vinyl wall coverings are not suitable over this level of finish.

Level 5

Application: This level of finish is for use where gloss or semi-gloss paints are specified or where critical lighting conditions occur on satin, flat or low sheet paints.

Jointing/setting: Typically all joints and corner joints will have tape embedded in James Hardie Base Coat applied over all joints, angles, fastener heads and accessories. A thin skim coat of James Hardie Top Coat must be applied to the entire surface to be plastered. The surface must be finished smooth and free of tool marks and ridges and special care must be taken with the application of the finishing compound to achieve a smooth, true surface suitable for these critical finishes.

Finish: This level of finish is for use where gloss, semi-gloss, low-sheen or non-textured paints are specified or where critical lighting conditions occur.

Refer to SELECTIONS/drawings for required levels of finish.

Refer to James Hardie technical specification for additional information on finish levels. Refer to drawings or a finishing schedule as appropriate.

3.23 JOINT FINISHING FOR LOW SHEEN PAINT

Apply James Hardie Base Coat to fill recess. Firmly embed perforated paper tape in joints and cover with a thin layer of James Hardie Top Coat over all joints, angles, fastener heads and accessories and allow to dry. Apply a second coat of James Hardie Top Coat over the recess and feather the edges to achieve a level 4 finish.

3.24 JOINT FINISHING FOR GLOSS PAINT AND CRITICAL LIGHTING CONDITIONS
Embed tape in joints and corners and apply James Hardie Base Coat over all joints, angles, fastener heads and accessories. Apply a thin skim coat of James Hardie Top Coat to the entire surface to be plastered. Finish to a smooth surface, free of tool marks and ridges to achieve a level 5 finish suitable for these critical finishes.

3.25 JOINT FINISHING FOR WALLPAPER
Apply James Hardie Base Coat to fill recess. Firmly embed perforated tape in joints and cover with a thin layer of James Hardie Base Coat over all joints, angles, fastener heads and accessories and allow to dry. Apply a second coat of James Hardie Top Coat over the recess and feather the edges to achieve a level 4 finish.

3.26 JOINT FINISHING FOR TILED AREAS
Joints and corner joints set with James Hardie Base Coat reinforced with perforated paper tape to achieve a level 3 finish.

Completion

3.27 REPLACE
Replace damaged or marked elements.

3.28 CLEAN
Clean adjoining surfaces and fittings of spots, marks, dust and droppings.

3.29 LEAVE
Leave work to the standard required by following procedures.

3.30 REMOVE
Remove debris, unused materials and components from the site.

4. SELECTIONS

Linings

4.1 PLAIN FIBRE CEMENT SHEET LININGS
Location: ~
Type: James Hardie Villaboard® Lining
Thickness: ~mm
Fixing method: ~
Thickness options: 6mm and 9mm thick sheets, recessed on 2 or 4 sides and square edged.
Fixing method: Nails, Screw, Adhesive

4.2 PROFILED FIBRE CEMENT SHEET LININGS
Location: ~
Type: James Hardie HardieGroove™ Lining
Thickness: 7.5mm
Fixing method: ~
Fixing method: Nails, Screw, Adhesive

4.3 FIXING BUTT JOINTS
Location: ~
Fasteners: ~
Fasteners: To timber
40mm x 2.8mm galvanized HardieFlex™ nail
Villadrive 6 gauge x 30mm self embedding screw
HardieDrive™ 7 gauge x 30mm self embedding screw
To timber, over plasterboard
50mm x 2.8mm galvanized HardieFlex™ nail
To steel
Steel 8 gauge x 32mm self embedding screw
Specify whether fasteners are to be driven below the surface or driven flush.

4.4 FIXING EXPRESSED JOINTS
Location: ~

Fasteners: ~
Adhesive: ~
Fasteners: *To timber*
40mm x 2.8mm galvanized HardieFlex™ nail
Villadrive 6 gauge x 30mm self embedding screw
HardieDrive™ 7 gauge x 30mm self embedding screw
To timber, over plasterboard
50mm x 2.8mm galvanized HardieFlex™ nail
To steel
Steel 8 gauge x 32mm self embedding screw
Specify whether fasteners are to be driven below the surface or driven flush.

4.5 FIXING PVC JOINTERS
Location: ~
Fasteners: ~
Sealant: ~
Fasteners: *To timber*
40mm x 2.8mm galvanized HardieFlex™ nail
Villadrive 6 gauge x 30mm self embedding screw
To timber, over plasterboard
50mm x 2.8mm galvanized HardieFlex™ nail
To steel
Steel 8 gauge x 32mm self embedding screw
Specify whether fasteners are to be driven below the surface or driven flush.

4.6 FIXING FLUSH JOINTED WALLS, PAINT OR WALLPAPER
Location: ~
Fasteners: ~
Fasteners: *To timber*
40mm x 2.8mm galvanized HardieFlex™ nail
Villadrive 6 gauge x 30mm self embedding screw
HardieDrive™ 7 gauge x 30mm self embedding screw
To timber, over plasterboard
50mm x 2.8mm galvanized HardieFlex™ nail
To steel
Steel 8 gauge x 32mm self embedding screw

4.7 FIXING FLUSH JOINTED CEILINGS, PAINT
Location: ~
Finish: ~
Abutment detail: ~
Fasteners: *To timber*
40mm x 2.8mm galvanized HardieFlex™ nail
Villadrive 6 gauge x 30mm self embedding screw
HardieDrive™ 7 gauge x 30mm self embedding screw
To timber, over plasterboard
50mm x 2.8mm galvanized HardieFlex™ nail
To steel
Steel 8 gauge x 32mm self embedding screw
Refer to James Hardie Installation Manual for additional requirements with complex ceilings.

4.8 FIXING CERAMIC TILED AREAS
Location: ~
Fasteners: ~
Fasteners: *To timber*
40mm x 2.8mm galvanized HardieFlex™ nail
Villadrive 6 gauge x 30mm self embedding screw
HardieDrive™ 7 gauge x 30mm self embedding screw
To timber, over plasterboard
50mm x 2.8mm galvanized HardieFlex™ nail
To steel
Steel 8 gauge x 32mm self embedding screw
Refer to Villaboard® Lining installation manual for information. Fix the sheets with nails or screws. Do not use adhesives.

4.9 LEVELS OF FINISH
To conform to the following levels of finish:

Location Finish level

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Refer to James Hardie Installation Manual for details of level 5 finish and additional information on other finish levels. Refer to drawings or a finishing schedule as appropriate.