

Mt Gambier Railway Station

Stage 2 - Railway Toilets

Specification



Habitable Places Architects
24 Divett Place
Adelaide SA
08 8232 9925

Revision	Date	Approved by
Client Review	23.12.2020	Richard Woods

Mt Gambier Railway Station Toilets

Specification

TABLE OF CONTENTS

Table of contents	iii
0131 Preliminaries	1
0171 General requirements.....	3
0184 Termite management.....	7
0201 Demolition	9
0382 Timber framing.....	11
0520 Partitions	13
0511b Linings	19
0467 Glass	27
0612 Cementitious toppings	29
0621 Waterproofing - wet areas.....	31
0631 Tiling	35
0525b Cubicle systems	41
0581b Signage.....	43
0552b Metalwork	47
0671 Painting.....	51
0455p ASSA ABLOY door hardware	57
Appendix A Structural calculations	67
Appendix B Structural partition details	69
Appendix C Sanitary Selections Schedule.....	71
Appendix D Door Hardware Schedule	73

Blank page

0131 PRELIMINARIES**1 GENERAL****1.1 THE SITE****Protection of persons and property**

Temporary works: Provide and maintain required barricades, guards, fencing, shoring, temporary roadways, footpaths, signs, lighting and traffic management.

Accessways and services: Do not obstruct or damage roadways and footpaths, drains and watercourses and other existing services in use on or adjacent to the site. Determine the location of such services.

Property: Do not interfere with or damage property which are to remain on or adjacent to the site, including adjoining property encroaching onto the site.

Protection of Heritage listed property

Property: Protect existing Heritage building element in close proximity of new building works.

Rectification

Accessways and services: Rectify immediately any obstruction or damage to roadways and footpaths, drains and watercourses and other existing services in use on or adjacent to the site. Provide temporary services whilst repairs are carried out.

Property: Rectify immediately any interference or damage to trees and property which are to remain on or adjacent to the site, including adjoining property encroaching onto the site.

Special Note: If Heritage listed parts of building and/or building elements are damaged contractor to seek advise and direction from Heritage Architect prior to any rectification and/or remediation works commencing.

Existing services

Service to be continued: Repair, divert or relocate, as documented.

Redundant services: Remove redundant parts and make safe.

1.2 BUILDING THE WORKS**Safety**

Accidents: Promptly notify the Council of the occurrence of the following:

- Accidents involving death or personal injury.
- Accidents involving loss of time.

Accident reports: Submit reports of accidents.

- Purpose of submission: Information only.

Subcontracting

General: Submit a complete list of proposed subcontractors and suppliers.

Items supplied by Council

General: Materials and other items supplied free of charge to the contractor for installation in the execution of the works, as documented.

Unload and take delivery, inspect for defects and take care of the items. If defects are found, advise. Return unused items to the Council.

1.3 COMPLETION OF THE WORKS

Reinstatement

General: Before the date for practical completion, clean and repair damage caused by installation or use of temporary work and restore existing facilities used during construction to original condition.

Adjoining properties

Evaluation: At practical completion, for each adjoining property recorded, inspect the property with the architect and Council and occupant of the property, recording any damage that has occurred since the pre-commencement inspection.

Pest eradication

General: Employ suitably qualified pest exterminators. At practical completion, verify that completed works are free of pest types, as documented.

1.4 MISCELLANEOUS

Contractor and Council to observe confidentiality

Publicity: Do not issue information concerning the project for publication in the media without prior written approval of the Council.

Compliance with the law

Requirements of authorities: The Council, before entering into the contract, has given the notices, paid the fees, and obtained the permits, approvals and other authorisations, as documented.

Schedule of Items Supplied by Council

Item	Location
Disabled toilet door and frame, loose, unpainted.	In the Railway Station

On work health and safety requirements, the roles of private certifiers vary between jurisdictions.

0171 GENERAL REQUIREMENTS**1 GENERAL****1.1 APPLICABILITY****General**

Requirement: Conform to *0171 General requirements*, as appropriate, in all worksections.

1.2 STANDARDS**Current editions**

General: Use referenced Australian or other standards (including amendments), and the NCC including state and territory variations which are current three months before the date of the contract except where other editions or amendments are required by statutory authorities. Any local authority requirements take precedence.

1.3 INTERPRETATION**Abbreviations**

General: For the purposes of this specification the following abbreviations apply:

- BCA: National Construction Code series Volume Two: Building Code of Australia Class 1 and Class 10 buildings.
- NCC: National Construction Code.

Definitions

General: For the purposes of this specification, the following definitions apply:

- Contractor: Means the same as builder.
- Documented: Documented, as documented and similar terms mean contained in the contract documents.
- Hot-dip galvanized: Zinc coated to AS/NZS 4680 after fabrication.
- Metallic-coated: Steel coated with zinc or aluminium-zinc alloy by a continuous hot-dip process.
- Council: Council has the same meaning as client, Council or proprietor and is the party to whom the contractor is legally bound to construct the works.
- Professional engineer: As defined by the NCC.
- Proprietary: Identifiable by naming manufacturer, supplier, installer, trade name, brand name, catalogue or reference number.
- Provide: Provide and similar expressions mean supply and install and include development of the design beyond that documented.
- Required: Means required by the contract documents, the local council or statutory authorities.
- Supply: Supply, furnish and similar expressions mean supply only.

2 PRODUCTS

2.1 GENERAL

Manufacturers' or suppliers' recommendations

General: Provide and transport, deliver, store, handle, protect, finish, adjust and prepare for use the manufactured items to the manufacturers' recommendations.

Proprietary items/systems/assemblies: Assemble, install or fix to substrate to the manufacturers' or suppliers' recommendations.

Substitution

Alternatives: If alternatives are proposed, submit sufficient information to permit evaluation of the proposed alternatives.

2.2 TIMBER

Moisture content

General: Make milled products from timbers seasoned as follows:

- To within 3% of the equilibrium moisture content appropriate to the timber and its intended conditions of use.

Durability

General: Provide timbers with natural durability appropriate to the conditions of use or preservative-treated timbers of equivalent durability.

Natural durability class of heartwood: To AS 5604.

Preservative treatment: To the AS 1604 series.

Minimum requirement: To the **Natural and treated timber durability table**.

Natural and treated timber durability table

Exposure	Natural timber	Treated timber	Remarks
	Required durability class to AS 5604	Required hazard class to the AS 1604 series	
Inside, above ground. Protected from wetting with nil leaching. Well ventilated	Class 3	H2	Minimum Requirement is that all timber shall be treated to be resistant to borers and termites. Untreated timber must be protected with a finish
In-ground	Class 1	H4 (Severe wetting and leaching)	Treated timber resistant to borers, termites and severe decay. Applicable to fence posts, greenhouses, pergolas (in-ground) and landscaping timbers

2.3 STEEL

Durability

General: Provide steel products protected from corrosion to suit the conditions of use.

Internal engineer designed steel members: Remove mill scale, rust, moisture and oil. Grit blast class 2.5. Coat with a zinc phosphate primer to the manufacturer's instructions.

Galvanizing

General: Galvanize mild steel components (including fasteners) to AS/NZS 1214, AS 1397 or AS/NZS 4680, as appropriate, and in the following conditions:

- Embedded in masonry.
- Exposed to or in air spaces behind external leaves of masonry walls.

3 EXECUTION

3.1 WALL CHASING

Holes and chases

General: Make holes and chases required in masonry walls so that the structural integrity of the wall is maintained.

3.2 FIXING

General

Suitability: If equipment is not suitable for fixing to non-structural building elements, fix directly to structure and trim around penetrations in non-structural elements.

Fasteners

Sufficiency: Use proprietary fasteners capable of transmitting the loads imposed, and sufficient for the rigidity of the assembly.

3.3 COMPLETION

General

Final cleaning: Remove rubbish and surplus material from the site and clean the works throughout including interior and exterior surfaces exposed to view. Clean debris from the site, roofs, gutters, downpipes and drainage systems.

Warranties: Register with manufacturers, as necessary, and provide copies of manufacturers' warranties.

Instruction manuals: Provide the manufacturers' instruction manuals.

Operation: Make sure moving parts operate safely and smoothly.

Services layout: Provide a plan which shows the location of underground services.

Blank page

0184 TERMITE MANAGEMENT**1 GENERAL****1.1 STANDARDS****General**

Standard: To AS 3660.1.

Chemical soil barriers – reticulation systems

Type testing: To AS 3660.3 Section 5.

Termite management system notice

Requirement: Permanently fix a durable notice in a prominent location to BCA 3.1.4.4.

Certification

Requirement: Submit installation certificate to AS 3660.1 Appendix A3.

2 SELECTIONS**2.1 SCHEDULES****Termite management system schedule**

Barrier location	Barrier type
Under slabs	Chemical barrier
Slab wall junctions and slab penetrations	Stainless steel or termite membrane collars

Blank page

0201 DEMOLITION

1 GENERAL

1.1 STANDARDS

Demolition

Standard: To AS 2601.

2 EXECUTION

2.1 SUPPORT

Temporary support

Provide temporary support for sections of existing buildings which are to be altered and which rely for support on work to be demolished.

2.2 PROTECTION

Encroachment

General: Prevent the encroachment of demolished materials onto adjoining property, including public places.

Security

General: If walls or roofs are opened for alterations or additions, provide security against unauthorised entry to the building.

2.3 DEMOLITION

Hazardous materials removal

Standard: To AS 2601 clause 1.6.2.

Reinstatement

Rectification: Repair damage arising out of demolition work. Obtain written acceptance from the Council of each adjoining property of the completeness and standard of the rectification work.

Blank page

0382 TIMBER FRAMING

1 GENERAL

1.1 STANDARDS

General

Framing: To AS 1684.2, AS 1684.3 or AS 1684.4, as appropriate.

2 PRODUCTS

2.1 GENERAL

Storage and handling

General: Do not distort or damage timber or timber products.

Moisture content: Maintain the equilibrium moisture content of seasoned timber.

2.2 TIMBER

Hardwood: To AS 2796.1.

Softwood: To AS 4785.1. Minimum preservative treatment H2

2.3 COMPONENTS

Damp-proof course

Material: To AS/NZS 2904.

3 EXECUTION

3.1 FRAMING

Additional support

Requirement: Provide additional support in the form of noggings, trimmers and studs for fixing lining, cladding, hardware, accessories, fixtures and fittings as required.

Spacing of noggings: Maximum 1350 mm centres.

Damp-proof course

Requirement: Provide damp-proof courses under the bottom plate of stud walls built off slabs as follows:

- Walls of wet areas. Turn up at least 150mm both sides and tack to studs.

Installation: Lay in long lengths. Lap full width at angles and intersections and least 200mm and sealed. Seal DPC penetrations.

Blank page

0520 PARTITIONS

1 GENERAL

1.1 RESPONSIBILITIES

General

Requirement: Provide partitions systems, as documented.

Performance

Strength and stability: To remain stable, and without rattle and signs of deflection or permanent deformation under normal conditions of use, including the slamming of doors.

Serviceability: To support imposed dead loads, seismic loads, wind loads, including designated eccentric loads and not to deflect in excess of the following, where H is the height of the partition:

- The lesser of $H/240$ or 30 mm for partitions subjected to wind loads and lined with flexible material.
- The lesser of $H/360$ or 20 mm for partitions subjected to wind loads and lined with brittle materials.
- $H/500$ for eccentric loads.

1.2 TOLERANCES

Framed and lined partitions

Finished framing: To AS/NZS 2589 clause 4.2.2.

2 PRODUCTS

2.1 GENERAL

Storage and handling

Storage of glass and glazing materials: In a clean, dry area and unaffected by weather, to the manufacturer's recommendations. Protect from building materials and loose debris such as wet plaster, mortar, paint and welding spatter.

Handling glass: to the manufacturer's recommendations and without damage.

2.2 FRAMED AND LINED PARTITIONS

Light steel framing

General: Proprietary framing system of metallic-coated folded steel strip lipped studs and channel section top and bottom tracks and noggings.

Sections and members: To AS/NZS 4600.

Light timber framing

Timber species: Radiata pine.

Seasoning: Required.

Stress grade: F5 to AS/NZS 1748.1.

Minimum preservative treatment H2

Plasterboard

Standard: To AS/NZS 2588.

Fibre cement

Standard: To AS/NZS 2908.2.

Wall and ceiling linings: Type B category 2.

Minimum thickness: 9.0 mm.

Accessories

General: Accessories necessary to complete the installation including the following:

- Corner beads.
- Stop beads.
- Shadowline.
- Control joints.
- Sheet metal and MDF partition end caps.

Adhesives

General: Provide adhesives of types appropriate to their purpose and substrates, applied to transmit the loads imposed without causing discolouration of finished surfaces.

Sealants

General: Sealant types appropriate for the partition's documented acoustic rating and fire-resistance level, and compatible with partition materials and building substrate.

3 EXECUTION

3.1 PREPARATION**Substrate**

General: Prepare the substrate to receive the partitions.

Protection

General: Protect existing work from damage during the installation and rectify any damage. Provide temporary coverings if required.

Pre-conditioning

General: Acclimatise wood based system components in the in-service conditions for a minimum period of two weeks before assembly.

Set-out

General: Set out the partition grid on the centreline of framing members, and to coincide with the ceiling grid and other major building grid, as applicable.

3.2 FRAMED AND LINED PARTITIONS**Partition erection**

General: Install partitions plumb, level, on their correct alignment, and firmly fixed.

Building movements:

- Provide clearances or deflection heads so that partitions are not damaged by structural building movements including long term slab deflection.
- If fire-resistance levels or acoustic ratings are required, provide a resilient foam or mastic seal with properties equal to those required for the partition.

Structural floor control joints

General: Do not run or fix partitions framing across control joints.

Acoustic rated partitions

General: Isolate the frames from floors, ceilings and vertical abutments with beads of non-hardening sealant compatible with the materials to be sealed.

Trim

General: Provide trim such as beads, mouldings, stops and skirtings to make neat junctions between lining components, finishes and adjacent surfaces.

Sealing fire-resisting and acoustic rated partitions

General: Apply sealant to the manufacturer's recommendations and as follows:

- Around services pipes and penetrations.
- Electrical outlets and recessed lights: Line back and sides of fixture with plasterboard and seal around fixture junction with sealant.
- Around perimeter of lining panels: Provide continuous runs of sealant.

3.3 LIGHT TIMBER FRAMES IN FRAMED AND LINED PARTITIONS**Moisture content**

General: Do not install framing that does not meet the following values tested to AS/NZS 1080.1:

- Air conditioned buildings: 8 to 10%.
- Intermittently heated buildings: 10 to 12.5%.
- Unheated buildings: 12 to 15%.

Framing

General: Construct wall frames to AS 1684.4 Section 6, as appropriate for internal walls.

Double faced walls: Provide gauged timbers in studs, noggings and plates.

Stud framing

General: Provide studs in single lengths without splices. Rotate intermediate studs into tracks for friction fixing. Screw fix jamb studs, corner studs and wall intersection studs to tracks.

Fixing: Fix noggings at 1350 mm maximum centres vertically and as required for skirtings and wet area lining. Make sure that faces of noggings and studs are accurately aligned.

Lintels: Install a stiffened top plate lintel for spans of 1800 mm or greater.

Stud spacing: Conform to the sheeting manufacturer's recommendations for curved partitions.

Jambs

General: Install boxed double studs at jambs and heads to all openings.

Additional frame support

General: Provide frame support for fixing the following:

- Floor and wall mounted fixed joinery units, furniture and equipment.
- All wet area fittings and fixtures.
- All grabrails and handrails.

Timber noggging: Provide 240 x 40 mm timber noggging with proprietary stud fixing brackets for wall hung sanitary fittings.

Stud stiffening: Provide stud stiffening to support wall hung joinery units and equipment with:

- Full height close fitting timber inserts.
- Boxed steel lipped studs.

3.4 PLASTERBOARD LINING IN FRAMED AND LINED PARTITIONS

Installation

Gypsum plasterboard and fibre reinforced gypsum lining: To AS/NZS 2589.

Multiple sheet layers

Application: Fire-resisting and acoustic rated partitions.

Joints:

- Fill and flush up all joints and fixings in each layer and caulk up perimeters and penetrations before installing following layers.
- Stagger all sheet joints: Minimum 200 mm.

Joints and joint treatment

General: Install joint accessories as documented, in conformance with manufacturer's recommendations. Install plumb, level and true to line.

Flush joints: Use joint reinforcing tape bedded in joint compound with recessed edge sheets and finish flush.

Butt joints: Make joints over framing members or provide back blocking.

External corner joints: Bed purpose fabricated perforated metallic-coated steel corner beads in joint compound.

Ceiling junctions: Install purpose fabricated perforated metallic-coated steel shadowline to top of partition.

Sheet metal partition end caps: Provide purpose fabricated perforated metallic-coated steel end caps, sized for partition thickness and bedded in joint compound.

MDF end caps: Provide recessed edge sheets and finish flush using joint reinforcing tape and joint compound.

Dry joints: Use square edged sheet and finish with a PVC-U joining section.

Control joints: Provide purpose-made perforated metallic-coated control joint beads at not more than 12 m centres in partitions and to coincide with structural control joints. Bed in joint compound.

Wet areas: Provide additional supports, flashings, trim and sealants as required.

Joints in tiled areas: Bed reinforcing tape in joint compound. Do not apply a topping coat.

3.5 FIBRE CEMENT LINING IN FRAMED AND LINED PARTITIONS

Installation

General: Install as follows:

- Run sheets across the framing members.
- In flush jointed applications, stagger end joints in a brick pattern and locate joints on framing members, away from the corners of large openings.
- Provide supports at edges and joints.
- Do not fix to top and bottom plates or noggings.

Timber framing: Nail only or combined with adhesive.

Steel framing: Screw only or combined with adhesive.

Tiled and wet areas: Provide an extra row of noggings immediately above wall-to-floor flashings. Fix sheet at 150 mm centres to each stud and around the perimeter of the sheet. Do not use adhesive fixing alone.

Multiple sheet layers

Application: Fire-resisting and acoustic rated partitions.

Joints:

- Fill and flush up all joints and fixings in each layer and caulk up perimeters and penetrations before installing following layers.
- Stagger all sheet joints: Minimum 200 mm.

Joints and joint treatment

General: Install joint accessories as documented, in conformance with manufacturer's recommendations. Install plumb, level and true to line.

Flush joints: Use joint reinforcing tape bedded in joint compound with recessed edge sheets and finish flush.

External corner joints: Bed purpose fabricated perforated metallic corner beads in joint compound.

Ceiling junctions: Install purpose fabricated perforated metallic-coated steel shadowline to top of partition.

Sheet metal partition end caps: Provide purpose fabricated perforated metallic-coated steel end caps, sized for partition thickness and bedded in joint compound.

MDF end caps: Provide recessed edge sheets and finish flush using joint reinforcing tape and joint compound.

Dry joints: Use square edged sheet and finish with a PVC-U joining section.

Control joints: Provide control joints to coincide with structural control joints and as follows:

- Walls: ≤ 7.2 m centres.
- Control joint beads: Purpose-made metallic-coated.
- Support: Provide framing parallel to the joint on each side. Do not fix the lining to abutting building surfaces.

Wet areas: Provide additional supports, flashings, trim and sealants as required.

Joints in tiled areas: Bed reinforcing tape in joint compound. Do not apply a topping coat.

- Control joints: At maximum 4.2 m centres and spaced to suit joints required in tiling.
- Internal corners: Reinforce with metallic-coated steel angles. In corners subject to continuous moisture, flash over the angle and under the sheeting with continuous bitumen coated aluminium flashing.

3.6 COMPLETION

Cleaning

General: Remove protective coverings, replace damaged glass and leave the work clean, polished, free from defects, and in good condition.

Rectification

General: Correct any defects to joints, remove any excess joint compound, and leave the partition installation complete, clean and ready for the application of finishes.

Paint

General: Within 14 days of the date of practical completion, provide touch-up paint for each demountable partition colour used, including application instructions.

Warranties

Requirement: Warrant against defective materials and installation.

4 SELECTIONS**4.1 FRAMED AND LINED PARTITION SCHEDULES****Partition schedule**

Finishes Code	Finish Description	Detailed Notes	Location & other Information
WALL			
W-Ex	Existing Walls	Existing finish to walls to be retained. All walls prepared, sanded to provide a mechanical key and made good ready for paint finish.	Refer to drawings
W.P1	Internal Partition – Type 1	1 layer x 9mm flushable Fibre Cement Sheeting to either side of 90mm treated pine studwork. Insulation: 50mm thick, 11kg/m ³ tontine in wall cavity. Tiled skirting with waterproof membrane to corner of all floor/wall junctions as to code. Paint finish to partition,	Refer to drawings
W.P2	Internal Partition – Type 2	1 layer x 13mm plasterboard to each side of 90mm treated pine studwork. Insulation: 50mm thick, 11kg/m ³ tontine in wall cavity.	Refer to drawings
W.P3	New wall Lining - Type 3	As partition type W.P1 plus laminated panels concealed fixed on top of partition as detailed. Note one face to have special graphics printed product : Laminex "fusion" product system. Refer to "Linings" specification section for details.	Refer to drawings

0511B LININGS**1 GENERAL****1.1 RESPONSIBILITIES****General**

Requirement: Provide internal lining systems, as documented.

Performance

Requirement: Provide lining system with a surface that is:

- Resistant to impacts expected in use.
- Resistant to moisture encountered under expected environmental conditions.
- Free of irregularities.
- A suitable substrate for the nominated final finish.

1.2 INTERPRETATION**Definitions**

General: For the purposes of this worksection the definitions given in AS/NZS 4491 and the following apply:

- Decorative overlaid wood panels: Particleboard or fibreboard with a bonded decorative finishing surface such as thermosetting resin (low pressure melamine), PVC film, paper foils or wood veneer.
- Fibre cement sheet linings: Treated cellulose fibre in a matrix of cement and sand autoclaved sheet, sealed on one side.
- High pressure decorative laminates (HPDL):
 - . Panels consisting of core layers impregnated with phenolic and/or aminoplastic resins and a surface layer(s) impregnated with aminoplastic resins (mainly melamine resins).
 - . Sheets consisting of a decorative face and layers of fibrous sheet material (e.g. paper) impregnated with thermosetting resins and bonded together under heat and pressure of at least 5 MPa.
- Wet process fibreboard: Panel material with a nominated thickness of 1.5 mm or greater, manufactured from lignocellulosic fibres (derived from wood or other materials) with application of heat and/or pressure, the bond of which is derived from the felting of the fibres and the panels are manufactured with a forming moisture content greater than 20%.

1.3 TOLERANCES**Permitted deviations**

Bearing surface of finished framing:

- Gypsum lining: To AS/NZS 2589 clause 4.2.2.
- Other lining: 4 mm from a 1.8 m straightedge.

1.4 SUBMISSIONS**Warranties**

Lining materials: Submit the manufacturer's published product warranties.

1.5 INSPECTION

Notice

Inspection: Give notice so that inspection may be made of the following:

- Substrate or framing before installation of linings.
- Finished surface of installation before applying:
 - . Sealer.
 - . Finish coatings

2 PRODUCTS

2.1 GENERAL

Storage and handling

Requirement: Dry and undamaged lining stacked in pallets horizontally on a smooth, level surface. Prevent distortion or moisture ingress.

Timber or fibreboard panels: Store off the ground in a well-ventilated area.

Handling: Do not drag sheets across each other or across other materials. Protect edges, corners and surface from damage.

Certification

Timber based products: Label panels under the authority of a recognised certification scheme to *0185 Timber products, finishes and treatment*, as applicable to the product. Locate the label on faces or edges which will be concealed in the works.

2.2 FIRE PERFORMANCE

Fire hazard properties

Group number: To AS 5637.1.

2.3 PLASTERBOARD

General

Standard: To AS/NZS 2588.

Location: As specified on drawings

Thickness (mm): 13mm to walls and 9mm to ceilings

2.4 FIBRE CEMENT

General

Standard: To AS/NZS 2908.2.

Wall and ceiling linings: Type B category 2.

Minimum thickness: 9 mm.

Location: To all wet areas and as indicated on drawings

Type: Flushable to wet areas and square edge CFC to external lining

Thickness (mm): 9mm

2.5 TONGUE AND GROOVE BOARDS

Softwood

Standard: To AS 4785.1.

2.6 HIGH PRESSURE DECORATIVE LAMINATE SHEETS

Decorative overlaid wood panels

Standard: To AS/NZS 1859.3.

High-pressure decorative laminate (HPDL) sheets

Standard: To AS/NZS 2924.1.

Minimum thickness: Conform to the following:

- For horizontal surfaces fixed to a continuous substrate: 1.2 mm.
- For vertical surfaces fixed to a continuous substrate: 0.8 mm.
- For vertical surfaces fixed intermittently (e.g. to studs): 3.0 mm.
- For edge strips: 0.4 mm.

2.7 ADHESIVES, SEALANTS AND FASTENERS

Adhesives

For wallboards: Gunnable synthetic rubber/resin based mastic contact adhesive formulated for bonding flooring and wallboards to a variety of substrates.

Sealants

Acoustic sealant: Non-hardening sealant compatible with the materials to be sealed.

Fasteners

Steel screws: Hot-dip galvanized.

3 EXECUTION

3.1 CONSTRUCTION GENERALLY

Conditions

Commencement: Do not start lining work until the building or installation area is enclosed and weathertight, and all wet trades have been completed.

Substrates

Requirement: Plumb, level, in true alignment and to the lining manufacturer's recommendations.

Timber, steel framing and battened masonry: To AS/NZS 2589 clause 4.2.

Preparation: Before fixing linings, check and adjust the alignment of substrates or framing, if necessary.

Battens

General: Fix at each crossing with structural framing members, to solid walls or ceiling support. Provide wall plugs in solid substrates.

Accessories and trim

General: Provide accessories and trim as necessary to complete the installation.

Adhesives

General: Provide adhesive types appropriate for the purpose, and apply them so they transmit the loads imposed without causing discolouration of the finished surfaces.

3.2 PLASTERBOARD LINING

Installation

Gypsum plasterboard and fibre reinforced gypsum lining: To AS/NZS 2589.

Level of finish and jointing: To AS/NZS 2589 clause 3.1.

Supports

General: Install timber battens as follows:

- Where framing member spacing exceed the recommended spacing.
- Where direct fixing of plasterboard is not possible, due to the arrangement or alignment of the framing or substrate.
- Where the lining is the substrate for tiled finishes.
- If required for penetrations for services, including mechanical grilles and lighting fixtures.
- If required to support fixtures.

Joints

Flush joints: Provide recessed edge sheets and finish flush using perforated paper reinforcing tape.

External corner joints: Make joints over metallic-coated steel corner beads.

Wet areas: Install additional supports, flashings, trim and sealants as required.

Joints in tiled areas: Do not apply a topping coat after bedding perforated paper tape in bedding compound.

3.3 FIBRE CEMENT LINING**Installation**

Joints and layout: Run sheets across the framing members. In flush jointed applications, stagger end joints in a brick pattern and locate them on framing members, away from the corners of large openings. Provide supports at edges and joints.

Supports

General: Install timber as follows:

- Where framing member spacing exceed the recommended spacing.
- Where direct fixing of fibre cement is not possible, due to the arrangement or alignment of the framing or substrate.
- Where the lining is the substrate for tiled finishes.
- If required for penetrations for services, including mechanical grilles and lighting fixtures.
- If required to support fixtures.

Fixing

Timber framed construction: Nail only or combine with adhesive.

Wall framing: Conform to the following:

- Do not fix to top and bottom plates or noggings.

Ceilings: Fix using screw and/or adhesive to ceiling furring members. Do not fix sheets directly to the bottom chords of trusses.

- Ceiling battens: Fix at 600 mm maximum centres.

Wet areas: Do not use adhesive fixing alone.

Joints

Flush joints: Provide recessed edge sheets and finish flush using perforated paper reinforcing tape.

External corner joints: Make joints over metallic-coated steel corner beads.

Wet areas: Provide additional supports, flashings, trim and sealants as required.

Joints in tiled areas: Bed perforated paper tape in bedding compound. Do not apply a topping coat.

- Control joints: Not more than 4.2 m centres and space to suit joints required in tiling.
- Internal corners: Reinforce with metallic-coated steel angles. In corners subject to continuous moisture, flash over the angle and under the sheeting with continuous bitumen coated aluminium flashing.

3.4 TONGUE AND GROOVE TIMBER LINING

Installation

General: Install single lengths of boards.

Fixing: Nail twice to each crossing, except for secret nailed profiles.

Secret nail fixing: Fix nail diagonally through the tongue only. Punch nails to maintain correct alignment of the next board.

Nailheads: Treat visible nailheads as follows:

- In opaque finishes: Punch below surface and fill flush with putty after the surface has been primed.

Corners and junctions: Allow for movement at all corners and junctions.

Joints

End grain joints: Install boards so that butt joints are in compression.

Internal corners: Scribe.

External corners: Mitre.

3.5 TRIM AND ACCESSORIES

General

Requirement: Form neat tight joints and junctions between lining components, finishes and adjacent surfaces.

Do not use beads, mouldings and stops without Architects approval.

Proprietary items: Provide complete with installation accessories.

Timber trim: Fix using full length so that trim is secure and without movement. Where nail or screw fixings are used, make sure fastener finishes sufficiently below face of trim so that stopping piece finishes flush with the face.

3.6 HIGH PRESSURE DECORATIVE LAMINATE LINING

Installation

General: Panels mounted onto Fibre Cement lined partitions as detailed

Fixing: Concealed fixing from back of panels to existing wall substrate surface as per laminate manufacturers recommendation

Additional sealant fixing: Approved silicon type sealants to manufacturers recommendation

Exposed edges: 2mm ABS edging to match laminate colour

Joints

Butt join: Butt join panels with routed expressed rebate as detailed on drawings

3.7 SPECIAL CUSTOM PRINTED LAMINATE PANELS

Product

Special custom printed laminate panels: Laminex product "Fusion" with photographic image printed as detailed on drawings. Council will provide high resolution scan image of the artwork. Supplier shall process this image to be suitable for proof samples and production.

Custom printed laminate panels shall be installed to partition doors, with continuous match of the graphic image.

Proof samples

Supply a 900mm x 900mm proof sample at 1:1 scale for Council review and approval prior to manufacture and installation of full scope of works. Re-submit amended samples if directed by Council.

Maximum number of samples: 3

3.8 COMPLETION

General

Damaged or marked lining and components: Replace.

Exposed surfaces: Touch up shop applied finishes and restore damaged or marked areas.

Timber panels: If appearance is not uniform, replace panels.

Cleaning: Clean completed surfaces to remove irregularities and leave panels smooth and clean, to the manufacturer's recommendations. If required, sand with fine paper to remove irregularities and refinish panel surface.

- Debris and unused material: Remove from site.

Warranties

Requirement: At practical completion, submit warranties against defective materials and installation.

4 SELECTIONS

4.1 SHEET LINING

Sheet lining schedule

Property Code	PB	FCS	LA
Location	Ceilings and walls - refer to drawings	Internal walls to wet areas - refer to drawings	Internal feature walls - refer to drawings
Type	Plasterboard	Fibre Cement sheeting – flushable villa board or similar	High Pressure laminate
Thickness (mm)	13mm to walls 9mm to ceilings	9mm	18mm base board material thickness. Sheets with balanced laminate
Edge type	Flushed shadowline detail to all perpendicular junctions	Flushed shadowline detail to all perpendicular junctions	ABS to all exposed edges to match laminate colour
Joint type	Flushed	Flushed	Butt join with rebated expressed detail
Fixing	Countersunk heads flushed	Countersunk heads flushed	Concealed fixing and sealant
Finish	Painted	Painted	painted
Colour	Refer to "Painting" section	Refer to "Painting" section	Laminex "White"
Battens: -Size (mm)	Tophats or on studs	Tophats or on studs	Direct fixed to partition

Blank page

0467 GLASS**1 GENERAL****1.1 STANDARDS****General**

Materials and installation: To AS 1288.

Safety glass: To AS/NZS 2208.

2 PRODUCTS**2.1 MIRRORS****Reflective surface**

Type: Silver layer deposited on the glass or glazing plastic.

Protective coatings: Copper free coating, at least 5 µm thick, and 2 coats of mirror backing and edge sealing paint having a total dry film thickness of at least 50 µm.

Safety mirror

Type to AS 1288: Vinyl backed Grade A safety mirror.

Safety compliance: To AS/NZS 2208.

Solid backed mirrors

Backing: 9 mm CFC

Adhesive fixing to backing: Non-acidic silicone adhesive at the rate recommended by the manufacturer.

2.2 GLAZING FILM ARTWORK**Glazing film**

Printable self adhesive film, 3M or equal approved. Council will provide high resolution scan image of the artwork as indicated on External Glazing Artwork drawing. Supplier shall process this image to be suitable for proof samples and production.

Proof samples

Supply a 900mm x 900mm proof sample at 1:1 scale for Council review and approval prior to manufacture and installation of full scope of works. Re-submit amended samples if directed by Council.

Maximum number of samples: 3

2.3 GLAZING**Glass assemblies**

Requirement: To AS 1288 Section 7 and as documented.

Glass: Grade A safety glass.

3 EXECUTION

3.1 FIXING MIRRORS

Vinyl backed Grade A safety mirrors and solid backed annealed glass mirrors

Adhesive fixing: Clean surfaces to be bonded. Apply adhesive to the manufacturer's recommendations. Secure the mirror to the substrate with double sided adhesive tape until the adhesive cures.

Edging : All exposed edges to be bevelled and polished.

Fixing

Mirrors: Mirror fixing to AS 1288.

3.2 GLAZED VIEWING PANEL TO TOILET DOORS

Product

Aluminium glazing bar: Capral or similar 38mm x 38mm glazing bar

Glazing

"Frosted White" laminated glass

Fixing

To the manufacturer's recommendations and to AS 1288.

4 SELECTIONS

4.1 GLAZING & MIRROR COMPONENTS

Glazing schedule

Item	WD1A, WD2, WD3 -	WD1 -	M1 -
Size W x H (mm)	As shown on architectural dwgs	As shown on architectural dwgs	As shown on architectural dwgs
Product	Viridian - Clear 82	Viridian - Clear 82	Glass mirror
Edge processing	Polished	Polished and bevelled	Polished and bevelled
Fixing	Recessed anodised aluminium channel and proprietary polished stainless steel mechanical stand-off bracket fixings as detailed	Mechanical fixings as detailed	Direct stuck to board substrate
Frame: Material	Frameless	Frameless	Frameless
Glazing type	Laminated - Clear	Laminated - Obscure	-
Glazing: Colour and pattern	Clear	Frosted White laminated film with graphic image printed as detailed on External Glazing Artwork drawing	Silver

0612 CEMENTIOUS TOPPINGS

1 EXECUTION

1.1 PREPARATION

Substrates

General: Provide substrates as follows:

- Clean and free from any deposit which may impair adhesion of monolithic or bonded toppings.
- Remove excessive projections and fill voids and hollows with a mix not stronger than the substrate or weaker than the topping.

Bonded toppings

Hardened concrete: Roughen by scabbling or the like to remove 2 mm of the laitance and expose the aggregate.

Bonding product: Before laying topping wash the substrate with water and provide a bonding product or treat as follows:

- Keep wet for 2 hours or more.
- Remove surplus water and brush on neat cement or a clean slurry of cement and water.
- Place the topping while the slurry is wet.

1.2 APPLICATION

Installation

General: Spread the mix and compact. Strike off, consolidate and level surfaces to finished levels.

Toppings over 50 mm thick:

- Lay in two layers of equal thickness.
- Place a layer of reinforcement between the topping layers . Lap reinforcement 200 mm and tie. Do not create four way laps.

Curing

General: Prevent premature or uneven drying out and protect from the sun and wind.

Curing: Use a curing product or, as soon as it has set sufficiently, keep the toppings moist by covering with polyethylene film for at least seven days.

1.3 CONTROL OF MOVEMENT

General

Requirement: Provide control joints as follows:

- Over structural control joints.
- To divide complex room plans into rectangles.
- Around the perimeter of the floor.
- At junctions between different substrates.
- To divide large topping finished areas into bays.

Depth of joint: Right through to the substrate.

Sealant width: 6 to 25 mm.

Depth of sealant: One half the joint width, or 6 mm, whichever is the greater.

Control Joint setout

Accurately coordinate and set out control joints to align with tile joints, to minimise tile cutting.

1.4 JOINT ACCESSORIES**Floor finish dividers**

General: Provide a corrosion resistant metal dividing strip suitably fixed to the substrate, at junctions with differing floor finishes and with the top edge flush to the finished floor. If changes of floor finish occur at doorways, make the junction directly below the centre of the closed door.

0621 WATERPROOFING - WET AREAS

1 GENERAL

1.1 STANDARDS**Waterproofing wet areas**

Standard: To AS 3740.

2 PRODUCTS

2.1 PRODUCTS**Membranes**

Standard: To AS/NZS 4858.

Membrane systems

Requirement: Provide a proprietary membrane system suitable for the intended internal waterproofing.

Bond breakers

Requirement: Compatible with the extensibility class of the membrane to be used.

Material: Purpose made bond breakers tapes and closed cell foam backing rods or fillets of sealant.

Sealants

Requirement: Waterproof, flexible, mould-resistant and compatible with host materials.

3 EXECUTION

3.1 PREPARATION**Substrates**

General: Provide substrates as follows:

- Clean and free of any deposit or finish which may impair adhesion of membranes.
- If walls are plastered, remove loose sand.
- If walls or floors are framed or discontinuous, support members in full lengths without splicing.
- If floors are solid or continuous:
 - . Remove excessive projections.
 - . Fill voids and hollows greater than 10 mm with abrupt edges with a cement:sand mix not stronger than the substrate nor weaker than the bedding.
 - . Fill depressions less than 10 mm with a latex modified cementitious product with feathering eliminated by scabbling the edges.
 - . Fill cracks in substrates wider than 1.5 mm with a filler compatible with the membrane system.

Concrete substrates and concrete toppings: Cure for at least 28 days.

External corners: Round or arris edges.

Moisture content

Requirement: Verify that the moisture content of the substrate is compatible with the water vapour transmission rate of the membrane system by testing to AS 1884 Appendix A.

Falls

Substrate: If the membrane is directly under the floor finish, make sure the fall in the substrate conforms to the fall documented for the finish.

Water stop angles

Requirement: Provide water stop angles at door thresholds and shower enclosures to support the waterproof membrane at junctions between waterproofed and non-waterproofed areas.

Sizing: Size the vertical leg of the water stop angle to conform to the requirements of AS 3740.

Corners: Cut the horizontal leg and bend the vertical leg at corners instead of forming vertical joints between separate lengths of angle.

Fixing: Fix water stop angles to the substrate with compatible sealant or adhesive and corrosion-resistant countersunk or wafer head screws.

Bond breakers

Requirement: After the priming of surfaces, provide bond breakers at all wall/floor, hob/wall junctions and at control joints where the membrane is bonded to the substrate.

Sealant fillet bond breakers:

- Application: Form a triangular fillet or cove of sealant to internal corners within the period recommended by the membrane manufacturer after the application of the primer.
- Widths: 5 x 5 mm to vertical corners. 6 x 6 mm to 9 x 9 mm to horizontal corners.

Backing rod bond breakers: Retain in position with continuous length of tape pressed firmly in place against the surfaces on each side of the rod.

3.2 APPLICATION**Protection**

Damage: Protect membrane from damage during installation and for the period after installation until the membrane achieves its service characteristics that resist damage.

Extent of waterproofing

Waterproof or water resistant surfaces: To requirements of BCA 3.8.1.2.

Waterproof surface shall be installed to full extent of tiled floors.

Waterproof membrane shall be installed directly onto the concrete substrate and turned up at walls.

A second complete waterproof membrane shall be installed after installation of the topping slab and turned up at walls.

Vertical membrane terminations

Upstands: At least 150 mm above the finished tile level of the floor or 25 mm above the maximum retained water level, whichever is the greater.

Anchoring: Secure sheet membranes along the top edge.

Edge protection: Protect edges of the membrane.

Waterproofing above terminations: Waterproof the structure above the termination to prevent moisture entry behind the membrane using tiler's angle and finish overlaps.

Door jambs and architraves

Requirement: If the bottom of doorjambs and architraves do not finish above the floor tiling, waterproof their surfaces below tile level to provide a continuous seal between the perimeter flashing to the wall/floor junction and the water stop angle.

Drainage connections

Floor wastes: Turn membrane down 50 mm minimum into the floor waste drainage flanges and adhere to form a waterproof connection.

Curing of liquid applied systems

Curing: Allow membrane to fully cure to manufacturers recommendations before tiling.

Blank page

0631 TILING

1 GENERAL

1.1 STANDARDS

Tiling

General: Conform to the recommendations of AS 3958.1.

Slip resistance

Stair treads, ramps and landings: Classification to AS 4586.

2 PRODUCTS

2.1 TILES AND ACCESSORIES

Tiles

Standard: To AS ISO 13006.

Coves, nosings and skirtings: Provide matching stop-end and internal and external angle tiles moulded for that purpose.

Exposed edges: Purpose-made border tiles with the exposed edge (whether round, square or cushion) glazed to match the tile face. If such tiles are not available, provide metal corner beads on external corners.

Accessories

General: If available, provide tile accessories such as round edge ceramic tiles, cove tiles, step treads and nosings to stairs, landings, and thresholds, skirtings, sills, copings and bath vents, which match the surrounding tiles, composition, colour and finish.

2.2 MATERIALS

Adhesives

Standard: To AS ISO 13007.1.

PVA (polyvinyl acetate)-based adhesives: Do not use in wet areas or externally.

Mortar materials

Cement type to AS 3972: GP.

Sand: Fine aggregate with a low clay content selected for grading, sharp and free from efflorescing salts.

Bedding mortar

Mix proportion (cement:sand), by volume: Select proportions from the range 1:3 to 1:4 for satisfactory adhesion. Provide minimum water.

Water

General: Clean and free from any deleterious matter.

Grout

General purpose cement based grout: Mix with fine sand. Provide minimum water consistent with workability.

Pigments for coloured grout: Colourfast fillers compatible with the grout material. For cement-based grouts, provide lime-proof natural or synthetic metallic oxides compatible with cement.

Reconstituted honed concrete tile/paver

General: Measure, cast and supply custom made precast reconstituted honed concrete tile/paver. 40mm thick with all exposed edges and face with honed finish.

3 EXECUTION**3.1 SUBSTRATES****Drying and shrinkage**

General: Before tiling, allow at least the following times to elapse (for initial drying out and shrinkage) for these substrates:

- Concrete slabs: 42 days.
- Concrete blockwork: 28 days.
- Toppings on slabs and rendering on brick or blockwork: A further 21 days.

3.2 PREPARATION**Substrates without wet area membranes**

General: Conform to the following:

- Clean off any deposit or finish which may impair adhesion or location of tiles.
- If framed or discontinuous, support members are in full lengths without splicing.
- If solid or continuous:
 - . Remove excessive projections.
 - . Fill voids and hollows greater than 10 mm with abrupt edges with a cement:sand mix not stronger than the substrate or weaker than the bedding.
 - . Fill depressions less than 10 mm with a latex modified cementitious product and eliminate feathering by scabbling the edges.

Absorbent substrates: If suction is excessive, control it by dampening but avoid over-wetting and do not apply mortar bedding to substrates showing surface moisture.

Dense concrete: If not sufficiently rough to provide a mechanical key, roughen by scabbling or the like to remove 3 mm of the surface and expose the aggregate; then apply a bonding treatment.

Substrates with wet area membranes

General: Make sure substrates are as follows:

- Clean and free of any deposit or finish which may impair adhesion or location of tiles.
- Compatible with all components of the floor system.

3.3 TILING GENERALLY**Cutting and laying**

Cutting: Cut tiles neatly to fit around fixtures and fittings and at margins where necessary. Drill holes without damaging tile faces. Cut recesses for fittings such as soap holders. Rub edges smooth without chipping.

Laying: Return tiles into sills, reveals and openings. Butt up to returns, frames, fittings, and other finishes. Strike and point up beds where exposed. Remove tile spaces before grouting.

Variations

General: Distribute variations in hue, colour, or pattern uniformly, by mixing tiles or tile batches before laying.

Protection

Floor tiles: Keep traffic off floors until the bedding has set and attained its working strength.

Floor finish dividers

General: Finish tiled floors at junctions with differing floor finishes with a corrosion-resistant metal dividing strip fixed to the substrate. If changes of floor finish occur at doorways, make the junction directly below the closed door.

Provide metal water stops angles at door thresholds to BCA 3.8.1.2.

3.4 SETTING OUT**Tile joints**

Joint widths: Set out tiles to give uniform joint widths within the following limits:

- Floors:
 - . Dry pressed tiles: 3 mm.
 - . Extruded tiles: 6 mm.
 - . Vitrified: 3 to 5 mm.
 - . Quarry tiles: 6 to 12 mm.
- Mounted mosaics: To match mounting pattern.
- Walls:
 - . Dry pressed tile: 1.5 mm.
 - . Extruded tile: 6 mm.

Joint alignment: Set out tiling with joints accurately aligned in both directions and wall tiling joints level and plumb.

Joint position: Set out tiles from the centre of the floor or wall to be tiled and, if possible, make sure cut tiles are a half tile or larger.

Fixtures: If possible, position tiles so that holes for fixtures and other penetrations occur at the intersection of horizontal and vertical joints or in the centre of tiles.

Falls and levels

General: Grade floor tiling to even and correct falls generally and to floor wastes and elsewhere as required. Make level junctions with walls. If falls are not required, lay level.

Fall, general: 1:100 minimum.

Fall, in shower areas: 1:60 minimum.

Change of finish: Maintain finished floor level across changes of floor finish including carpet.

3.5 BEDDING**Preparation of tiles**

Adhesive bedding: Fix tiles dry; do not soak.

Mortar bedding: Soak porous tiles in water for half an hour and then drain until the surface water has disappeared.

Bedding

General: Use bedding methods and materials which are appropriate to the tile, the substrate, the conditions of service, and which leave the tile firmly and solidly bedded in the bedding material and adhered to the substrate. Form falls integral with the substrate.

3.6 GROUTED AND SEALANT JOINTS**Grouted joints**

General: Commence grouting as soon as practicable after bedding has set. Clean out joints as necessary before grouting.

Face grouting: Fill the joints solid and tool flush. Clean off surplus grout. Wash down when the grout has set. When grout is dry, polish the tiled surface with a grout film remover and clean cloth.

Sealant joints

General: Provide sealant joints filled with sealant and finished flush with the tile surface as follows:

- Where tiling is cut around sanitary fixtures.
- At corners of walls in showers.
- Around fixtures interrupting the tile surface, for example pipes, brackets, bolts and nibs.
- At junctions with elements such as window and door frames and built-in cupboards.

Material: Anti-fungal modified silicone.

Width: 5 mm.

Depth: Equal to the tile thickness.

3.7 RECONSTITUTED HONED CONCRETE TILE**Material**

General: Precast reconstituted honed concrete tile/paver. 40mm thick with all exposed edges and face with honed finish.

Colouring : Natural concrete with mixed aggregate of dolomite, white quartz and river pebble.

Face grouting: Fill the joints solid and tool flush. Clean off surplus grout. Wash down when the grout has set. When grout is dry, polish the tiled surface with a grout film remover and clean cloth.

Samples

Submit sample for Council approval prior to manufacture of on precast tile representing the proposed aggregate and cement colour, size and mix, and the proposed honed finish and bevel edges.

Laying

General: Provide mortar bed and grout as per normal tile installation.

Opening sizes

General: Provide single lengths to opening if possible. Where opening exceeds 1000mm, lengths of approximately 500mm to be manufactured.

Contractor to confirm sizes of pavement to Architect prior to commencement of manufacturing of honed paver/tile.

Overhead installation

Provide concealed mechanical fixings to manufacturers details, chemical anchored into the tile and substrate. Do not use surface adhesives alone.

4 SELECTIONS**4.1 SCHEDULES****Tile schedule**

Item	F.T1	F.PC1	W.ST	W.T1
Location	Floors - As shown on architectural dwgs	Floor and to openings as shown on architectural dwgs	Skirting - As shown on architectural dwgs	Walls - As shown on architectural dwgs
Type	Fully vitrified floor tile.	Honed concrete paver/tile	Fully vitrified floor tile.	Glazed ceramic wall tile
Size W x H (mm)	400mm x 400mm	40mm thick. Fabricate lengths to suit openings	400mm x 100mm (cut floor tile as detailed)	200mm x100mm
Supplier / product	Beaumont Tiles	Custom fabricated	Beaumont Tiles	Johnson "Waringa"
Colour	Parkstone Charcoal 1007516	Natural Grey concrete with mixed aggregate of local red dolomite, white quartz and small river pebbles	Parkstone Charcoal 1007516	White
Finish	Textured	Honed to all exposed edges and faces. 2mm bevelled corners	Textured	Gloss
Grout	To match tile colour	To match tile colour	To match tile colour	To match tile colour

Blank page

0525B CUBICLE SYSTEMS**1 GENERAL****1.1 TOLERANCES****General**

Deviation (from true grid lines and planes): 1:1000 to a maximum of 3 mm.

Misalignment (of adjoining surfaces at panel junctions): 1 mm.

Panel thickness: ± 0.5 mm.

Length and width: 0.1% of the dimension or 0.5 mm, whichever is the greater.

Flatness, twist, winding and bow: 1 mm deviation from a 2.4 m straightedge placed in any position.

Maximum deviation of edges from the intended true line: ± 1 mm.

2 PRODUCTS**2.1 PRODUCT SYSTEMS****High pressure decorative laminate (HPDL) panels and doors**

Material: Compact high pressure decorative laminate panels with an integral surface finish and edges sealed by the manufacturer.

Standard: To AS/NZS 2924.1.

- Classification: Compact general purpose standard (CGS).

Panel edge: Factory prefinished square cut, ground smooth and arrised. Cleaned and oiled by the manufacturer.

2.2 COMPONENTS**Suspension beam**

General: For suspended systems, provide a heavy duty suspension beam consisting of a galvanized mild steel channel, located immediately above the ceiling framing along the line of the partition fronts. Build the ends into masonry structure or provide end fixings to the structure, as necessary, to transfer the load. Drill the bottom flange of the channel for the partition fixing bolts.

Hardware

Fixing hardware: Bolts, dowels, brackets, standards, cappings and stabilising bars supplied to complete the cubicle assembly.

Door furniture: As documented.

3 EXECUTION**3.1 PANELS****Acclimatisation**

General: Condition wood-based product components in the anticipated environment for two weeks before assembly.

Control of movement

Assembly: Accommodate thermal expansion of panels.

Manufactured cubicle system installation

Assembly: Attach divisions and nibs to walls and fronts with purpose-made proprietary fixings. Cut nibs and divisions that abut walls, as required, so that assembly is plumb. Seal edges as recommended by the manufacturer.

Floor mounted/overhead braced type: Fix fronts to the floor with proprietary fittings and at the top to a metal channel headrail, supplied as part of the system. Run headrail across the fronts and fix to the walls at each end. Form the channel into a box section over doorways by snapping in a mating channel insert.

Heads of openings: Fix stabilising head channels by screwing to the top of the partitions. Provide an infill strip to the channel across the opening.

Freestanding type: Fix fronts to the floor with proprietary fittings.

3.2 COMPLETION**Warranties**

Requirement: Cover materials and workmanship in the terms of the warranty in the form of interlocking warranties from the supplier and installer.

- Form: Against failure of materials and execution under normal environment and use conditions.
- Period: As offered by the supplier/manufacturer.

4 SELECTIONS**4.1 SCHEDULES****Cubicle schedule**

Property	W.P4
Manufacturer	Laminex Industries
Product name	Latitude cubicle system
Panel material and thickness: (mm)	13mm compact laminate.
Panel edges	High impact exposed compact laminate
Panel finish: Type	Laminate
Panel finish: Colour	Laminex "Fossil"
Door operation	Close shut position
Hardware: Coat hook/door stop	Hafele, "Startec". part no. 937.13.550 Door mounted door stop, with wardrobe hook and robber stopper
Hardware & Furniture: Finish :	Refer to Door hardware schedule Stainless steel brushed finish

0581B SIGNAGE**1 GENERAL****1.1 RESPONSIBILITIES****General**

Requirement: Provide signage systems, as documented.

Performance

Requirement: Provide signage as follows:

- Appropriately secured.
- Located within a clear line of vision.
- To contrast with the background.
- With clean, well defined edges or arrises, and free from blemishes.

1.2 CROSS REFERENCES**General**

Requirement: Conform to the following:

- 0171 General requirements.

1.3 STANDARDS**Signs**

Safety signs - design and use: To AS 1319.

Signs and graphics for disability access: AS 1428.1 and AS 1428.2.

Tactile wayfinding signs: To AS 1428.4.2.

2 PRODUCTS**2.1 MATERIALS****Materials standards**

Aluminium:

- Plate for engraving: Alloy and temper designation 6063-0 to AS 2848.1.
- For casting: To AS 1874.

Stainless steel: Surface finish designation 4 (general purpose polished).

Plastics:

- PVC-U sheet: Semi-rigid sheet.
- Rigid cellular polystyrene: To AS 1366.3, class VH for cut-out shapes.

Photoluminescent exit signs: To BCA E4.8(b).

3 EXECUTION

3.1 WORKMANSHIP

Production

General: Form signage and graphic items accurately with clean, well defined edges or arises, free from blemishes. Engraving to two layer plastic laminate: Engrave lettering to expose the lower laminate.

Engraved and filled: Lettering precision cut and filled colouring material. Clean faces of all filling material.

Casting: Produce shapes free of pits, scale, blow holes or other defects, hand or machine finished if necessary.

Laser cut lettering: Individual vinyl letters with self-adhesive backing.

Printed lettering: Lettering and graphic images screen/digitally printed on:

- Film with self-adhesive backing.
- Acrylic sheet.
- Aluminium plate.
- Stainless steel plate.

Large format digital printing: Lettering and graphic images screen printed film with self-adhesive backing.

Signwriting: Lettering and graphic images hand painted direct to the background by a tradesman with recognised qualifications and demonstrated skills.

Fabricated: Three dimensional, formed as follows:

- Laser cutting from solid material and hand finished as necessary.
- Moulding: Individual plastic hollow three dimensional characters and shapes formed by:
 - . Injection moulding.
 - . Vacuum forming.
- Built-up individual shapes by fabricating the faces and edges from separate pieces neatly and securely joined.

Shop drawings

General: Provide shop drawings indicating type of sign, format, heights, mounting locations, fixing details for approvals prior to manufacture.

Samples

General: Provide samples of the following signs types prior to manufacture:-

- Stainless Steel Plate Braille : Provide sample of plate with Braille, font and colour for approval
- Vinyl letters : Provide sample of font, size and colour for approvals

3.2 INSTALLATION

General

Requirement: Install signage and graphic items level and plumb, securely mounted, with concealed corrosion and theft-resistant fixings.

Self-adhesive signs

Requirement: Fix free of bubbles and creases.

3.3 COMPLETION

Cleaning

General: Remove protective coverings, replace damaged signage and leave the work clean, polished, free from defects, and in good condition.

Warranties

Requirement: Installer's warranty against defective workmanship or wrong installation.

4 SELECTIONS

4.1 GENERAL SIGNS

Sign type schedule

Property	Stainless Steel Plate - Braille signage	Self Adhesive Vinyl lettering
Sign plate: Material	Stainless steel	-
Sign plate: Size (l x h x t) (mm)	Square to BCA Spec D3.6	-
Sign plate: Finish/colour	Brushed stainless	-
Sign plate: Fixing method	Double sided tape to smooth wall finish and mechanical concealed fixings to uneven wall claddings	-
Characters: Material	Moulded plastic and as per standard manufacturer's specifications	Adhesive vinyl letters
Characters: Letter height/thickness (mm)	Moulded plastic and as per standard manufacturer's specifications	30mm in capital case
Characters: Finish/colour	Black	Black
Characters: Typeface	Aria	Arial
Characters: Fixing method	-	Self adhesive

Sign schedule

Location	Type	Text or Symbols	Application
ACCESS/UNISEX WC Wall mounted to hinge side of door	Stainless steel plate - Square format Finish : Brushed finished with black lettering & Braille	Symbols for Disability & Uni-sex Toilet	Plate fixed to wall @ 950mm above floor level to top of plate and compliant to BCA Spec D3.6
MALE WC	Adhesive Vinyl	Symbol for Male	Fixed to door glazed

Location	Type	Text or Symbols	Application
Door mounted		Toilet	viewing panel
FEMALE WC Door mounted	Adhesive Vinyl	Symbol for Female Toilet	Fixed to door glazed viewing panel

0552B METALWORK**1 GENERAL****1.1 RESPONSIBILITIES****General**

Requirement: Provide metal fixtures, as documented.

Performance

Requirements:

- Undamaged, plumb, level and straight or as documented.
- Free of surface defects or distortions or as documented.

1.2 STANDARDS**General**

Access for maintenance: To AS 1657.

Tactile indicators: To AS/NZS 1428.4.1.

1.3 TOLERANCES**General**

Requirement: ± 2 mm from design dimensions.

1.4 SUBMISSIONS**Products and materials**

Proprietary items: Submit the manufacturer's product data standard drawings and details showing:

- Methods of construction.
- Assembly and fixing, with dimensions and tolerances.

Stainless steel: For each batch of stainless steel supplied to the works, submit the certificate of conformance or test certificate to the applicable standard, as documented.

Stainless steel welding: Before fabrication commences, submit evidence of qualification of the welding procedure by testing to AS/NZS 1554.6 clause 4.7 or evidence of prequalification to AS/NZS 1554.6 clause 4.12.

Shop drawings

General: Submit shop drawings to a scale that best describes the detail, showing the following information:

- Overall and detail dimensions.
- Details of fabrication and components.
- Details of fabrication involving other trades or components.
- Information necessary for site assembly.
- Proposals for the break-up of large items as required for delivery to the site.
- Proposed method of joining the modules of large items.

Subcontractors

General: Submit names and contact details of proposed suppliers, fabricators and installer. Delete if supplier/fabricator/installer details are not required.

1.5 INSPECTION

Notice

Inspection: Give notice so that inspection may be made of the following:

- Arrival of materials on site or in workshop.
- Shop fabricated or assembled items ready for delivery to the site.
- Commencement of shop or site welding.
- Site erected assemblies on completion of erection, before covering up by cladding and encasing.
- Steel surfaces prepared for, and immediately before, site applied finishes.

Surfaces requiring inspection

Welded components, steel castings and corroded metal surfaces: Visual inspections to AS 3978.

2 PRODUCTS

2.1 GENERAL

Storage and handling

Requirement: Store and handle fabricated metalwork, as follows:

- Deliver to site in unbroken wrapping or packing.
- Store on a level base, away from uncured concrete and masonry and areas of wet plaster.
- Do not store in contact with other materials that may cause staining, denting or other surface damage.
- Use gloves when handling precoated finishes.
- Keep storage time to minimum by delivering items only when required for installation.

Marking

General: Provide suitable and sufficient marks or other means for identifying each member of site-erected assemblies, and for their correct setting out, location, erection and connection. Mark bolted connections to show the bolting category. Do not mark stainless steel by notching.

2.2 MATERIALS

Metals and components

Performance: Provide metals and components in quantity, lengths and cross-sections of strength and stiffness suited to their required function, finish, fabrication and method of installation.

Fasteners

Performance: Provide non-galvanic corrosion fasteners.

Materials: Provide fasteners in materials of structural and mechanical strengths and corrosion resistance at least equal to that of the lowest resistant metal in the connection.

To stainless steel: Appropriate stainless steel materials only.

3 EXECUTION

3.1 CONSTRUCTION GENERALLY

Metals

Performance: Provide metals capable of transmitting the loads imposed and sufficient for the required performance and behaviour of the assembly without causing deflection or distortion of finished surfaces.

Incompatible metals: Separate using concealed layers of suitable materials in appropriate thicknesses.

Fabrication

Workshop: Fabricate and pre-assemble items in the workshop wherever practicable.

Edges and surfaces: Keep clean, neat and free from burrs and indentations. Remove sharp edges without excessive radiusing.

Tube bends: Form bends in tube without deforming the cross section and the material thickness.

Colour finished work: Match colours of sheets, extrusions and heads of fasteners.

Thermal movement: Accommodate thermal movement in joints and fastenings.

Joints

General: Fit joints to an accuracy appropriate to the class of work. Finish visible joints made by cutting, drilling, welding, brazing or soldering using grinding, buffing or other methods appropriate to the class of work, before further treatment.

Self-finished metals: Free of surface colour variations, after jointing.

Joints: Fit accurately to a fine hairline or as documented.

Splicing

General: Provide structural members in single lengths.

3.2 WELDING AND BRAZING

Welding

Quality: Provide finished welds which are free of surface and internal cracks, welding slag, and porosity.

Site welds: Avoid site welding wherever possible. If required, locate site welds in positions for down hand welding.

Butt weld quality level: Not inferior to the appropriate level recommended in AS/NZS 1554.1 Section 6, AS/NZS 1554.6 Section 6 or AS 1665 Appendix A, as appropriate.

Brazing

General: Make sure brazed joints have sufficient lap to provide a mechanically sound joint.

Butt joints: Do not use butt joints for joints subject to load. If butt joints are used, do not rely on the filler material only.

3.3 STAINLESS STEEL FABRICATION

Welding stainless steel

Certification of welders: To AS 1796.

Soldering

General: Do not solder stainless steel.

3.4 STAINLESS STEEL GRABRAILS

General: Provide and install stainless steel proprietary disabled grab rails to suit disabled toilet and shower room as indicated on plan drawings

Fixing: Provide all relevant fixings and packers to suit masonry substrate

Location: To Accessible Bathroom as indicated on drawings

Type: Fixed with proprietary fixing plates and sleeves to allow for masonry substrate

Size: Nominal 80mm diameter with domed top (such as Allpack Group)

Finish: Stainless steel

Installation: In accordance with AS1428

3.5 EXTERNAL STEEL BALUTRADE

General

Materials, design and construction: To AS 1657.

Location: To external new pavement to Accessible Bathroom

Fabrication

Method: Welding and brackets (Refer to drawings for details)

Joints: Produce smooth unbroken surfaces at joints or as documented. Scribe the joints to all steel members.

Balustrade: 50mm diameter CHS As indicated on drawings

Fixing: Cast into concrete as detailed on drawings

Finish: Hot dip Galv

Kerb rail : Hardwood timber fixed to packers with galvanised chemical anchors as detailed

3.6 SUNDRY HARDWARE

The following sanitary fittings shall be provided:

Surface mounted soap dispensers

Location : One to each of Women's, Men's and Accessible Bathroom

Proprietary items: Tork Foam Soap Dispenser - Article: 460010

Finish: Stainless steel

Toilet roll holders

Type; Kimberly Clark KCP Aquarius 70260 Jumbo Roll Dispenser
Single

Location : To all toilet cubicles

3.7 COMPLETION

Cleaning

Temporary coatings: On or before completion of the works, or before joining up to other surfaces, remove all traces of coatings used as temporary protection.

Blank page CP1, CP2, CP3: These designate each instance or type or location of the item scheduled.

0671 PAINTING

4 GENERAL

4.1 STANDARDS**Painting**

General: To the recommendations of those parts of AS/NZS 2311 referenced in this worksection.

5 PRODUCTS

5.1 PAINTING MATERIAL**Paint brand**

Quality: If the product is offered in a number of levels of quality, provide premium quality lines.

Handling

Delivery: Deliver paints to the site in the manufacturer's labelled and unopened containers.

Low VOC emitting paints

VOC limits for low odour/low environmental impact paint types:

- Primers and undercoats: < 65 g/litre.
- Low gloss white or light coloured latex paints for wall areas: < 16 g/litre.
- Coloured low gloss latex paints: < 16 g/litre.
- Gloss latex paints for timber doors and trims: < 75 g/litre.

Combinations

General: Do not combine products from different manufacturers in a system.

Clear timber finish systems: Provide only the combinations of putty, stain and sealer recommended by the manufacturer of the top coats.

Putty and fillers

Material: To the recommendation of the paint system manufacturer as suitable for the substrate and compatible with the primer.

Tinting

General: Provide only products which are colour tinted by the manufacturer or supplier.

6 EXECUTION

6.1 PREPARATION**Order of work**

Other trades: Before painting, complete the work of other trades as far as practicable within the area to be painted, except for the installation of fittings, floor sanding and laying flooring materials.

Clear finishes: Complete clear timber finishes before commencing opaque paint finishes in the same area.

Protection

General: Before painting, clean the area and protect from dust contamination. Use drop sheets and masking agents to protect surfaces, including finished surfaces and adjacent surfaces during painting.

Fixtures and furniture: Remove door furniture, switch plates, light fittings and other fixtures before painting, and refix in position on completion of painting.

Wet paint warning

Notice: Place in a conspicuous location and do not remove until the paint is dry.

Substrate preparation - generally

General: Prepare substrates to receive the painting systems.

Cleaning: Clean down the substrate surface. Do not cause damage to the substrate or the surroundings.

Filling: Fill cracks and holes with fillers, sealants, putties or grouting cements as appropriate for the finishing system and substrate, and sand smooth.

- Clear finish: Provide filler tinted to match the substrate.

Clear timber finish systems: Prepare the surface so that its attributes will show through the clear finish without blemishes, using methods including the following:

- Removal of bruises.
- Removal of discolourations, including staining by oil, grease and nailheads.
- Bleaching where necessary to match the timber colour sample.
- Puttying.
- Fine sanding, with the last abrasive no coarser than 220 grit, so that there are no scratches across the grain.

Unpainted surfaces

Standard: To AS/NZS 2311 Section 3.

Previously painted surfaces

Preparation of a substrate in good condition: To AS/NZS 2311 clause 7.4.

Preparation of a substrate in poor condition: To AS/NZS 2311 clause 7.5.

Preparation of steel substrates with protective coatings: To AS 2312.1 Section 8 and AS 1627.1.

6.2 PAINTING**Paint application**

Standard: To AS/NZS 2311 Section 6.

Timing: Apply the first coat immediately after substrate preparation and before contamination of the substrate can occur. Apply subsequent coats after the manufacturer's recommended drying period has elapsed.

Priming before fixing

General: Apply one coat of wood primer (2 coats to end grain) to the back of the following before fixing in position:

- External fascia boards.
- Timber door and window frames.
- Bottoms of external doors.

- Associated trims and glazing beads.
- Timber board cladding.

Sanding

Clear finishes: Sand the sealer, using abrasive no coarser than 320 grit, without cutting through the colour. Take special care with round surfaces and edges.

Repair

Requirement: Clean off marks, paint spots and stains progressively and restore damaged surfaces to their original condition. Touch up new damaged decorative paintwork or misses with the paint batch used in the original application.

Repair of galvanizing

Cleaning: For galvanized surfaces which have been subsequently welded, or which have been welded, prime the affected area.

Primer: Type 2 organic zinc rich coating for the protection of steel to AS/NZS 3750.9.

Tinting

General: Tint each coat of an opaque coating system so that each has a noticeably different tint from the preceding coat, except for top coats in systems with more than one top coat.

Services

General: Paint new services and equipment if not embedded, except chromium, anodised aluminium, GRP, PVC-U, stainless steel, non-metallic flexible materials and normally lubricated machined surfaces. Repaint proprietary items only if damaged.

6.3 PAINT SYSTEMS

Paint system description

Generally: The paint system is referred to by its final coat.

Primers and undercoats: Provide primers and undercoats recommended by the manufacturer of the selected final coat as suitable for the substrate and the final coat.

Number of coats: Unless specified as one or two coat systems, each paint system consists of at least 3 coats.

Selection: Provide paint systems that conforms to the **Paint final coat table**.

Paint final coat table

Final coat	Applicable Australian Standard
Interior	
Flat latex	AS 3730.1
Floor varnish - moisture cured	AS 3730.27
Floor varnish - two pack isocyanate cured	AS 3730.27
Low gloss latex	AS 3730.3
Semi-gloss latex	AS 3730.2
Gloss latex	AS 3730.12

7 SELECTIONS

7.1 SCHEDULES

Interior Painting Schedule

Surface identification	Substrate	Paint system	Colour reference	Colour name or code
Floors	Timber door threshold - hard wood	Modified Oil	Feast Watson "Tung oil"	Clear
Walls - General	- Plasterboard - CFC - Existing plaster rendered masonry	Low gloss latex interior	Dulux Colour Specifier	"Stowe White" PCWE4
Walls - Feature wall to male toilet cubicle to both sides including Door D106 & architrave	- CFC - Plasterboard - Timber door	Low gloss latex interior	Dulux Colour Specifier	"Bull Ring" P06B7
Ceilings - Airlock & Male Toilets. Original Heritage ceiling	Large flat panels - Plasterboard - Fibrous plasterbaord	Low gloss latex interior	Dulux Colour Specifier	'Burnside' P12F5
Ceilings - Trims Airlock & Male Toilets. Original Heritage ceiling	- All plasterboard or fibrous plaster moulds, battens and cornice trim ceiling details	Low gloss latex interior	Dulux Colour Specifier	"Stowe White" PCWE4
Ceilings - Women's and Accessible Toilets	Timber match boarding including exposed timber rafters	Low gloss latex interior	Dulux Colour Specifier	"Stowe White" PCWE4
Existing Timber windows and associated frames	Existing timber frames	Full gloss solvent borne	Dulux Colour Specifier	"Stowe White" PCWE4

Surface identification	Substrate	Paint system	Colour reference	Colour name or code
Timber doors & associated architraves and frame Doors D101, D102 & D103	Existing and new timber doors & frames	Full gloss solvent borne	Dulux Colour Specifier	"Bull Ring" P06B7 - Main body of door, frame and architraves. "Pre-Raphaelite" P06B5 To highlight 4 panel door inserts

Blank page

0455P ASSA ABLOY DOOR HARDWARE**1 GENERAL****1.1 RESPONSIBILITIES****General**

Requirement: Provide door hardware, as documented.

1.2 COMPANY CONTACTS**ASSA ABLOY technical contact**

Website: www.assaabloy.com.au/en/local/au/contact/

Lorient door seals: www.lorient.com.au/contact

1.3 CROSS REFERENCES**General**

Requirement: Conform to the following:

- 0171 General requirements.

ASSA ABLOY door hardware schedule. Refer to Appendix D.

1.4 MANUFACTURERS DOCUMENTS**Technical manuals**

ASSA ABLOY materials and installation manuals:

www.assaabloyopeningsolutions.com.au/en/local/au/.

Lorient door seal data sheets, installation manuals & CAD downloads:

www.lorient.com.au.

1.5 INTERPRETATION**Abbreviations**

General: For the purposes of this worksection, the abbreviations given in AS 4145.1 Appendix D apply.

Definitions

General: For the purposes of this worksection, the general definitions given in AS 4145.1 Section 2 apply.

1.6 SUBMISSIONS**Records**

Door hardware schedule: Submit an amended schedule, prepared by ASSA ABLOY Australia or their designated door hardware supplier, showing changes to the contract door hardware schedule resulting from the following:

- Approval of a hardware sample.
- Acceptance of an ASSA ABLOY alternative to the specification.
- A contract variation to a door hardware requirement.

Key coding system: Submit the lock manufacturer's record of the key coding system showing each lock type, number and type of key supplied, key number for re-ordering, and name of supplier.

Warranties

General: Submit warranties, as documented.

2 PRODUCTS

2.1 GENERAL**Product substitution**

Other products: Conform to PRODUCTS, **GENERAL, Substitutions** in *0171 General requirements*.

Product identification

General: Marked to show the following:

- Manufacturer's identification.
- Product brand name.
- Product type.
- Quantity.

Supply

Delivery: Deliver door hardware items, ready for installation, in individual complete sets for each door, as follows:

- Clearly labelled to show the intended location.
- In a separate dust and moisture proof package.
- Including the necessary templates, accessories fixings and fixing instructions.

Hardware specified generically: Hardware of the required strength and quality to perform its function, appropriate to the intended conditions of use, suitable for use with associated hardware, and fabricated with fixed parts firmly joined.

Replacement items

Door hardware: Match items being replaced with the existing, or as documented. Upgrade hinges as necessary to conform to **Hinges for timber doors table** and **Hinges for aluminium doors table**.

2.2 HINGES**Butt hinge materials**

Timber doors in timber or steel frames:

- Material: Stainless Steel
- Product: Lockwood series.

Aluminium framed doors in aluminium frames:

- Material: Stainless Steel
- Product: Interfold stainless steel or high tensile aluminium with fixed stainless steel pins in nylon bushes, and with nylon washers to each knuckle joint.

Doors fitted with closers: Provide low friction ball bearing hinges.

Fire-resisting doors: To AS 1905.1.

Timber solid core doors

Number of hinges: Determine the number of hinges required based on the nominated door leaf size and weight only. For other door leaf sizes or for doors with applied finishes, use the weight of the door to determine the number of hinges required. For doors fitted with door closers with backcheck, add 20 kg to door weight.

Size of hinges: Determine the size of the hinge based on the door leaf thickness:

- 35 to 43 mm thick door: 100 x 75 mm butt hinges with a minimum thickness of 2.5 mm.
- 44 to 55 mm thick door: 100 x 100 mm butt hinges with a minimum thickness of 2.5 mm.
- > 55 mm thick door: To the door hardware schedule.
- For alternative hinge calculations, use ASSA ABLOY [hinge calculator](#).

Hinge pin: Supply fixed pins to hinges of doors opening out or designated as a security doors. For all other doors, provide loose pins.

Hinges for timber doors table

Nominal door leaf size (L x W x T) (mm)	Door leaf weight (kg)	Number of hinges
2040 x 400 x 35	≤ 19	2
2040 x 600 x 35	≤ 29	2
2040 x 720 x 35	≤ 35	3
2040 x 820 x 35	≤ 39	3
2040 x 920 x 35	≤ 44	3
2040 x 1020 x 35	≤ 49	4
2040 x 720 x 40	≤ 37	3
2040 x 820 x 40	≤ 42	3
2040 x 920 x 40	≤ 48	3
2040 x 1020 x 40	≤ 52	4
2040 x 720 x 50	≤ 45	3
2040 x 820 x 50	≤ 50	3
2040 x 920 x 50	≤ 57	3
2040 x 1020 x 50	≤ 68	4
2400 x 720 x 40	≤ 50	4
2400 x 820 x 40	≤ 52	4
2400 x 920 x 40	≤ 55	4
2400 x 1020 x 40	≤ 60	4
Length (L) is the dimension along the knuckles, not including hinge tips, if any, and width (W) is the dimension across both hinge leaves when opened flat.		

2.3 ANCILLARIES

Bolts

General: Barrel bolts, flush bolts and tower bolts with keepers, including lock plates, staples, ferrules or floor sockets.

Rebated doors

General: For mortice locks or latches to rebated doors, provide purpose-made rebated pattern items.

Strike plates

General: For steel door frame installations, provide strike plates designed to allow the full extension of the lock tongue or similar devices and the correct operation of the locking mechanism.

2.4 DOOR CONTROLLERS**Standard**

General: To AS 4145.5.

Performance

Requirement: Door controllers, pivots, floor or overhead door closers, and automatic door operators, suitable for the door type, size, weight, sliding action and swings required and the operating conditions, including wind and air conditioning pressure.

Closers

Hinged and pivot doors:

- Fire-resisting doors: Closers tested and certified for use as components of fire-resisting door assemblies:
 - . Standard: To AS 1905.1.

2.5 KEYING**Keying requirements**

Standard: To AS 4145.2 for keying security

Requirement: Provide door hardware and keys, as documented.

Delivery of keys

Great grandmaster, grandmaster and master keys: Arrange for delivery direct to the Council.

For locks keyed to differ and locks keyed alike: Check the quantity against key records, and deliver keys to the contract administrator at practical completion.

Identification

Labelling: Supply each key with a purpose-made plastic or stamped metal label legibly marked to identify the key, attached to the key by a metal ring.

Key material

Lever locks: Malleable cast iron or mild steel.

Pin tumbler locks: Nickel alloy, not brass.

Number of keys table

Key code	Key type	Minimum number of keys
GGMK	Great grandmaster keys	2
GMK	Grandmaster keys	2
MK	Master keys	2 per code group
KD	Locks keyed to differ	2 per lock
KA	Locks keyed alike:	
	- 2 locks in code group	4
	- 3 to 10 locks in code group	6
	- 11 to 40 locks in code group	10
	- 41 and over locks in code group	1 per 4 locks or part thereof

2.6 DOOR SEALS

Standards

Quality management for manufacture: To ISO 9001.

Acoustic applications minimum standard: To BCA F5.5.

Acoustic applications: Tested to ISO 10140-2 and rated to AS/NZS ISO 717.1.

Fire door assemblies: To AS 1530.4 and in conformance with AS 1905.1.

Smoke door assemblies: NCC DTS: To NCC Spec C3.4.

Smoke door assemblies: Performance based: Tested to AS 1530.7 and leakage in conformance with AS 6905.

Combined fire and smoke door assemblies: To NCC Spec C3.4, AS 1530.4, AS 1905.1 and AS 1530.7.

Weather and energy sealing applications: To AS/NZS 4420.1 and AS 2047.

Access doors for people with disability: To AS 1428.1.

Finishes

CA: Clear anodised

Si: Silicone Rubber .

PE: Painted Polyester Enamel finish (Powder coat)

Aluminium extrusions

Material: Commercial grade alloy 6060 T5.

Finish to visible extrusions: Satin clear anodising, or as documented.

Thickness:

- Perimeter seal extrusions: Minimum 15 µm.
- Threshold plates and threshold plate seals: Minimum 20 µm.

PVC gaskets

Lorient proprietary grade PVC extrusions:

- Food grade with integral antimicrobial additive.
- Service temperature: -50 C to +70o C.

Silicone rubber gaskets

Lorient proprietary flame-retarded silicone rubber extrusions:

Service temperature: -60° C to + 230° C.

Fasteners:

Unexposed applications: Zinc-plated self-drilling/self-tapping fasteners supplied with each product.

External coastal exposure applications: Substitute the standard fasteners supplied with equivalent stainless steel versions.

Technical Manuals

- Data sheets, installation manuals & CAD downloads: www.lorient.com.au
- Lorient Technical Contact: www.lorient.com.au

3 EXECUTION

3.1 INSTALLATION

General

Handling: Before supply, verify on site, the correct handling of hardware items.

Operation: Make sure working parts are accurately fitted to smooth close bearings, without binding or sticking, free from rattle or excessive play, lubricated where appropriate.

Mounting height

Locks and latches: Centreline of the door knob or lever spindle above finished floor: as per Australian standards

Locks

Cylinders: Fix vertically and with consistent key alignment.

Door stops

Fixing: Fix on the floor, skirting or wall, as appropriate, to prevent the door or door furniture striking the wall or other surface.

Fasteners

Materials: Provide materials compatible with the item being fixed, and of sufficient strength, size and quality to perform their function.

- Concealed fixings: Provide a corrosion resistant finish to concealed fixings.
- Exposed fixings: Match exposed fixings to the material being fixed.

Security: Locate exposed fixings to lock furniture on the inside faces of external doors and on the inside faces of internal doors to lockable rooms.

Support: Provide appropriate back support (for example lock stiles, blocking, wall noggings and backing plates) for hardware fixings.

- Hollow metal sections: Provide backing plates drilled and tapped for screw fixing, or provide rivet nuts with machine thread screws. Do not use self-tapping screws or blind rivets.

Floor springs

General: Form a recess in the floor slab for the floor spring box, securely fix and grout the box in place so that the cover plate is flush with the finished floor.

Hinges

Metal frames: Fix hinges using metal thread screws.

Timber doorsets: Install butt hinges in housings equal in depth to the thickness of the hinge leaf (except for hinges designed for mounting without housing), and fix with countersunk screws.

Door Seals

Supply: Provide seals for door assemblies in individual complete sets for each door, ready for installation as follows: Clearly identified on packaging to show the intended location with relevant product identification details

Packaging: Provide recyclable cartons and recyclable polythene wrapping with appropriate fitting instructions and fixings

Fasteners: Unexposed applications: Zinc-plated self drilling / self-tapping fasteners supplied with each product. For external coastal exposure applications: Substitute the standard fasteners supplied with equivalent stainless steel versions.

Backset: Consider appropriate back set clearance requirements for hinging, latching furniture and automatic closers.

Installation: In accordance with fitting instructions supplied with each product.

Door assembly preparations: Mortise, semi-rebate or groove door assemblies to match the dimensions recommended in installation instructions.

3.2 COMPLETION

Adjustment

General: Leave the hardware properly adjusted with working parts in working order, and clean, undamaged, properly adjusted, and lubricated where appropriate.

Automatic door operators: Maintain and adjust the system throughout the defects liability period.

Keys

Contractor's keys: Immediately before practical completion, replace or reset cylinders to which the contractor has had key access during construction to exclude the contractor's keys.

Warranties

Automatic door operator's warranty (or interlocking warranties): By the supplier and installer for the system and its installation, for a period of at least twelve months from the date of practical completion.

Mechanical Products: 25 Years

- Exception, Yale Mechanical Products: 10 Years.

4 SELECTIONS

4.1 PRODUCT FINISHES

General

Requirement: All hardware finishes to be "Satin Chrome", or like finish depending on the availability and base material of the specified items.

Satin Chrome finishes: Plated using trivalent process.

- Exceptions for approval: Lockwood Velocity Series.

Hardware locations

Door hardware schedule: The following schedules describe the selected hardware item but do not indicate the locations or quantities. Refer to Appendix D for Door Hardware Schedule.

4.2 ASSA ABLOY LOCKS AND LATCHES

Locks and latches schedule

Door type	Brand / Product series	Comments
Solid core	Lockwood Selector 3770 Series Selector Mortice Lock	
Fire rated	Lockwood Selector 3770 Series Selector Mortice Lock	
Timber framed glass	Lockwood Selector 3770 Series Selector Mortice Lock	

4.3 ASSA ABLOY FURNITURE

Furniture schedule

Backplate Type	Brand/Product series	Comments
Plate	Lockwood 1800 Series Plate Brass Door Furniture	

Handles and plates schedule

Plate/Pull Type	Brand/Product series	Comments
Push/Pull Plate D-Handle	Lockwood Artefact 214 Series Plate Door Furniture	

4.4 ASSA ABLOY DOOR CONTROLLERS

Door closers schedule

Type	Brand / Product series	Comments
Generally Type A	Lockwood 2615 Cam Action Door Closer Lockwood 2616 Cam Action Door Closer	

Door closer type:

- A: High performance.
- B: Medium performance.
- C: Low performance.

Automatic door operators schedule

Brand	Item	Comments
ASSA ABLOY Entrance Systems		

4.5 ASSA ABLOY ANCILLARY HARDWARE

Bolts schedule

Provide products as specified in hardware sets. If none specified, provide products as listed below.

Type	Brand/ Product series	Size
Door Stop	Lockwood A250	

4.6 DOOR SEALS

Acoustic door seal schedule

Door type	Rating	Lorient product	Comments
-----------	--------	-----------------	----------

Single leaf 40mm solid core door	Rw32	Lorient LAS1212 Batwing + LAS 8001si	Concealed fixing: Fit LAS1212 Batwing to head and sides of door frame and fully mortise LAS8001si into door bottom.
		Lorient LAS7001si + LAS8001si	Surface mounted: Fit LAS7001si to head and sides of door frame and fully mortise LAS8001si into door bottom. Optional LAS4000 aluminium threshold may be used as required.
Single leaf proprietary acoustic door	>Rw50	Check manufacturers reports	

Weather, draft, dust and insect door seal schedule

Door type	Lorient product	Comments
Single leaf door	LAS7001si + LAS8001si	Surface mounted: Fit LAS7001si to head and sides of door frame and fully mortise LAS8001si into door bottom.
	LAS1212 + LAS8001si	Concealed fixing: Fit LAS1212 to head and sides of door frame and fully mortise LAS8001si into door bottom.
	LAS7005si + LAS8006si	Surface mounted: LAS7005si to head and sides of door frame and surface mount LAS8006si on door bottom
Double Leaf door	LAS7001si + LAS8001si + AAS7506 astragal	Surface mounted: Fit LAS7001si to head and sides of door frame and fully mortise LAS8001si into door bottom. Fit AAS7506 to meeting stiles.
	LAS1212 + LAS8001si + AAS7506 astragal	Concealed fixing: Fit LAS1212 to head and sides of door frame and fully mortise LAS8001si into door bottom. Fit AAS7506 to meeting stiles.

Door threshold plates and ramps schedule

Door type	Lorient product	Comments
Single leaf door	LAS4002 40 mm wide threshold plate LAS4010 75 mm wide x 6 mm high threshold plate LAS4011 100 mm wide x 6 mm high threshold plate LAS4012 125 mm wide x 6 mm high threshold plate LAS4013 150 mm wide x 6 mm high threshold plate AAS4551 100 mm wide threshold ramp with 12.5 mm rise AAS4552 150 mm wide threshold ramp with 12.5 mm rise AAS4553 150 mm wide threshold ramp with 19 mm rise	

4.7 DOOR HARDWARE SETS

The hardware sets represent the design intent and direction of the Council and architect. They are a guideline only and should not be considered a detailed hardware schedule. Discrepancies, conflicting hardware and missing items should be brought to the attention of the architect with corrections made prior to the bidding process. Omitted items not included in a hardware set should be scheduled with the appropriate additional hardware required for proper application and functionality.

The supplier is responsible for handing and sizing all products and providing the correct option for the appropriate door type and material where more than one is presented in the hardware sets. Quantities listed are for each pair of doors, or for each single door.

APPENDIX A STRUCTURAL CALCUATIONS
--

Blank page

Toilet Floor Slabs Structural Design

Mount Gambier Railway Station

Habitable Places Architects

October 2020

Ref: 20190180 R003A

Principal Contact

Gene Lassaline

Mount Gambier

3-5 Helen Street
PO Box 1192

Mount Gambier SA 5290

T: +61 8 8723 5002

mtgambier@tonkin.com.au



Building exceptional
outcomes together

Safety in Design

As required under Work Health and Safety legislation, a hazard analysis of the proposed structure has been undertaken as part of our design process. The purpose of the hazard analysis is to identify risks present during construction, use, maintenance and future demolition of the structure. The hazard analysis has been undertaken based on applicable site visits and the architect/building designer drawings and information supplied to us.

The components designed by Tonkin have been designed in accordance with relevant Australian Standards and to meet the performance criteria of the National Construction Code (NCC). In this instance we cannot foresee any risks specific to this site that can be avoided or mitigated by our design.

This structure can reasonably be expected to be constructed in accordance with a safe "Industry Standard" process. This process must be performed by a competent Licenced Contractor who works to the relevant Safe Work Australia codes of practice and follows the highest form of safety protection, for all workers at the site. It also requires that all other parties associated with the design shall conduct their duties in a professional manner and to the relevant codes of practice.

GENERAL NOTES

MISCELLANEOUS

- These drawings are to be read in conjunction with the Architect's drawings for both tendering and constructional purposes. The Engineer's drawings must not be scaled.
- All masonry construction to conform to AS 3700 Masonry Structures or AS4773 Masonry in Small Buildings, where applicable.
- Mortar in masonry shall typically be 1:1:6 (M3); and M4 for structural block work, severe exposure and below damp proof course. Provide 2 layers of malthoid on brickwork supporting concrete.
- Filling to be select, non-clay, non-organic material compacted in 150 mm layers to 95% Standard Maximum Dry Density (AS 1289) or as noted. For guidelines to Earthworks refer to AS 3798.
- Footings are to be founded on firm undisturbed material having a safe bearing capacity of not less than 100 KPa.
- During construction the Contractor shall be responsible for maintaining the structure in a stable, safe condition and ensuring that no part shall be overstressed during construction activities. Design of temporary works is the responsibility of the Contractor.
- For residential and small commercial construction, the builder shall refer to AS 2870 "Residential slabs and Footings" and particularly the Section of "Construction Requirements".
- The engineer shall be contacted for further advice should conditions encountered at the site vary from the design documents or accepted standard practice for construction.
- Substitution of specified member sizes or materials is not permitted without consent from the engineer.

REINFORCED CONCRETE

- Concrete construction shall comply with the Code AS 3600 latest amendment.
- Minimum concrete compressive strength at 28 days to be 25 MPa unless noted. Maximum slump of concrete shall be 80 mm (+/- 15mm).
- Reinforcement designations are as follows R6 denotes structural grade round bar to AS 1302, SL82 fabric or L8TM denotes hard drawn wire mesh to AS 4671, N16 denotes cold worked deformed bars to AS 4671.
- Clear concrete cover to reinforcement, unless noted, shall be; deposited in contact with the ground or deposited in forms but later exposed to ground, weather and water – 65 mm, Deposited in forms for interior dry environments – 20 mm. Residential footings and residential slabs only - 40mm to unprotected ground or external exposure, 30mm to a damp proof membrane in contact with the ground, 20mm to an internal surface.
- Reinforcement splices shall be lap splices unless noted otherwise: Trench mesh and bars to 12mm diameter – 500mm. N16 bars – 700mm. N20 bars – 900mm. Slab mesh – spacing of 2 wires + 25mm (minimum 2 wires in each sheet must overlap).
- Reinforcement is represented diagrammatically and not necessarily shown in true projection.
- All reinforcement shall be securely supported in its correct position during concreting by approved bar chairs, spacers or support bars.
- For surface falls and RL's refer architect's drawing.
- Formwork shall be designed and constructed in accordance with AS 3610.
- Provide "Fortecon" or equal moisture barrier throughout under entire slab on grade.

STRUCTURAL STEELWORK

- Steel fabrication and construction shall comply with the Code AS 4100. All steel materials shall comply with the following standards:
AS /NZS 3678 Structural Steel – Hot Rolled Plates and Floor Plates
AS /NZS3679.1 Structural Steel – Part 1: Hot Rolled Bars & Sections
AS/NZS 3679.2 Structural Steel – Part 2: Welded I Sections
AS/NZS 1111 Grade 4.6/S Commercial Bolts
AS/NZS1252 Grade 8.8/TF/TB High Strength Structural Bolts
- Cold formed C & Z sections to be AS1397 steel, min G450 stress grade, Z350 galv coating, by Lysaght, Stramit or approved equal.
- Galvanised fasteners shall be used for all anchor bolts, masonry embedment bolts and all fasteners exposed to weather or moisture.
- Incompatible metals shall be separated by concealed layers of suitable inert material and thickness.
- Welding shall be continuous 6mm fillet weld unless otherwise noted.
- The ends of all tubular members are to be sealed with nominal thickness plates and continuous fillet weld unless otherwise shown.
- Unless otherwise specified all internal steelwork shall be sand blasted Class 2.5 and painted with one shop coat of approved zinc rich primer 75 microns DFT. Steelwork exposed to weather or moisture to be galvanised Z350, unless noted otherwise. (Finish paints and coatings to be confirmed with Architect)
- Damage to galvanised coatings to be power tool or hand tool cleaned to a sound substrate followed by 2 heavy coats of zinc rich epoxy "Cold Galv/ Galvafruid" installed to manuf. specifications.

TIMBER

- All materials and workmanship shall comply with all current relevant Australian Standards including the following:
AS 1111 ISO Metric Hexagon Commercial Bolts and Screws
AS 1684 Residential Timber Framed Construction
AS 1720 Timber Structures
AS/NZS 1328 Glued Laminated Structural Timber
AS/NZS 2269 Plywood – Structural
AS/NZS 4357 Structural Laminated Veneer Lumber
- All timber shall be of the best quality of the species and grades specified. It shall be straight, sound, well seasoned, and free from all defects including white ant., borer, sap, shakes, loose knots, warp, twist, holes, splits and fractures.
- Unless otherwise specified all milled timber and dressed timber shall be seasoned.
- Should the Contractor wish to use an alternative timber to that specified, he shall submit details of the timber he proposes to use to the Engineer for approval before commencing construction.
- Bolts shall be galvanised with hexagon heads and with washers under both the head and the nut. The washer diameter shall be 1.5 times the dimension across the corners of the head. Edge and end distances and spacing to fasteners shall be in accordance with AS 1720. All bolts shall be checked and tightened at the end of the maintenance period.
- Screws used for fixing shall be of the proper length and number, with flush smooth heads where countersunk screws are required. All screws that are damaged when driven or from any other cause, shall be removed and undamaged ones used in their place.
- Nails to be a minimum 1.5 times longer than the thickness of timber fastened (not less than 4-6 times if member is plywood) but penetration into second member to be greater than 10 x nail diameter.
- Timber stored at site shall be covered and protected from wet conditions. It shall be stored well clear of the ground.

Project Mt G Rail Station Toilets

Job number 2019.0180

Taken by

Date 22/10/20 Page 1 of

Location

Present

☐ Phone ☐ Meeting ☐ Site visit ☐ Other

Calculation GL Checked

RAIL STATION TOILETS

TONKIN SCOPE OF WORK - 3 ITEMS

- 1.) TOILETS FLOOR SLAB (BELOW & NEXT 2 SHEETS)
- 2.) LINBLS IN TOILET WALLS (REFER PG. 4)
- 3.) EXTERNAL SLAB (REFER PG 6 & 8)

1.) TOILET FLOOR SLAB

EXIST TOILET IS BUILT ON FILL APPROX 1.8m DEEP BELOW EXIST SLAB (REFER "SOIL TEST - EXIST TOILET 13/09/20" ON NEXT PAGE)

∴ FOR NEW FLOOR SLAB → BUILD SLAB ON PIERS TO FIRM GROUND (PIERS 2.0m DEEP)

T.O.F. NEW FLOORS (ARCH) + T.O.C (⁻⁷⁰~~-75~~ SETDOWN)

LADIES & MENS = ^(SURVEY DRAWING) 100.09 → 100.015 (say 100.02)

H.H.C ACCESS = ^(EXTERNAL PAVING EXIST) 99.89 → 99.815 (say 99.82)

PIER DESIGN - ALLOW PIERS SUPPORT SLAB AREA OF 2.0m x 1.3m (MAX)

- ALLOW FOR DL - SLAB + TILES - SAS, $175 \times 24 = 4.2 \text{ kPa}$
- ALLOW FOR LL (occasional) - $50\% \times 2.0 \text{ kPa} / (170.1) = 1.0 \text{ kPa}$

∴ TL @ PIER = $2.0 \times 1.3 \times 5.2 \text{ kPa} = 13.5 \text{ kN}$

IF USE 300 Ø PIER → $\text{Brg } p = \frac{13.5}{\pi \times 0.15^2} = 190 \text{ kPa}$ (TOO HIGH) X

IF USE 350 Ø PIER → $\text{Brg } p = \frac{13.5}{(\pi \times 0.175^2)} = 140 \text{ kPa}$ X

IF USE 400 Ø PIER → $\text{Brg } p = \frac{13.5}{\pi \times 0.2^2} = 107 \text{ kPa}$ ✓ _{on firm ground}

Project **MT G RAIL STATION TOILETS**

Job number **2019.0180**

Taken by

Date **22/10/20** Page **3** of

Location

Present

☐ Phone ☐ Meeting ☐ Site visit ☐ Other

Calculation **AL**

Checked

- SELECT 400 Ø PIER 25 X 1.8m DEEP (BELOW U/S NEW SLAB) 3-N12 vert

SLAB **SA** 125 THICK 32MPa, SL72 T&B

TOP COVER (AGAIN GROUT & TILES) = 20mm (A1- AS360)

BOTT COVER (OVER FOOTBLD) = 25+10 = 35mm (A2- " ")

CHECK SLAB BENDING UNDER FULL ULTIMATE LOAD

$$Tlf = (4.2 \text{ kPa (PG1)} \times 1.2) + (2.0 \text{ kPa (AS1170.1)} \times 1.5) = 8.1 \text{ kPa}$$

$$\therefore \text{IN 1.0m strip } M_f = 8.1 \text{ kN/m} \times 2^2/8 = 4.0 \text{ kNm}$$

$$A_{ST} \text{ REQ} = \frac{M_f}{\sigma_{fy}} = \frac{4.0 \times 10^6 \text{ Nm}}{0.8 \times 500 \times 72} = 138 \text{ mm}^2/\text{m}$$

$$d = 125 - 35 - 5 = 85 \text{ mm}$$

$$z = 0.85d = 72 \text{ mm}$$

$$\text{SL72} \rightarrow A_{ST} = 192 \text{ mm}^2 \text{ OR } \geq 138$$

SL7206 T&B

Deflect check \rightarrow Table 9.1 123.3 min thickness req'd

Simply support $\rightarrow l_n/20 \therefore 2009/20 = 100 \text{ mm} < 125 \text{ mm} \text{ OK} \checkmark$

Continuous $\rightarrow l_n/10 \therefore 900 \text{ mm}/10 = 90 \text{ mm} < " " \checkmark$

Select 130 thick Slab on Fortecor
32 MPa, SL82 T&B
20 Top Cover, 35 Bot Cover

Note Pour Piers as soon as excavated (Prior to slab & Pipe excavate)
Cover Top with Fortecor
No Reo Protrusion from pier to slab

Project Mt G Rail Station Toilet

Job number 2019.0180

Taken by

Date 23/10/20 Page 4 of

Location

Present

☐ Phone ☐ Meeting ☐ Site visit ☐ Other

Calculation GL

Checked GL 23/10/20

Lintel Design

Lintels Likely Required at 3 Locations

- 1.) New Door in men's/women's wall in Air Lock
(allow 1200 wide opening, 2x150 stone, No roof)
- 2.) Hand Basin - Women's Toilet
(allow 1200 wide opening, 1x150 stone, No roof)
- 3.) D.A. Toilet (allow 1000 wide, 2x150 stone, 2.3m RLW)

Use Flat plate x 150 wide (each leaf), can be greater than 10 thick (Flat easier to install than UA), min 150 Beam E.E on sound masonry

Design for 1.2m span with stone & self wt steel (this will be worst case & will cover 1000 wide opening at DA Door).

$$TL = (0.8m \times 0.15 \times 13) + (0.15 \times 0.02 \times 78) \text{ self}$$

$$TL = 1.794 \text{ kNm} \quad \text{say } 2.0 \text{ kNm/m (conserv)} \quad \text{span } 2.0 \text{ kNm/m}$$

Deflect will control ($\max \Delta = L/500$)

$$w_{ts} = 2.0 \times 1.2^2 / 8 = 0.36 \text{ kNm}$$

$$150 \times 16 \text{ Flat} \rightarrow I_x = bh^3/12 = 51,200 \text{ mm}^4 = 0.051 \times 10^6 \text{ mm}^4$$

$$\frac{\Delta}{L} = \frac{m L}{E I_x} = \frac{0.36 \times 1.2}{2000 \times 0.051} = 0.0042 \quad \Delta = L/236 \quad (\text{No Good}) \times$$

$$150 \times 20 \text{ Flat} \rightarrow I_x = 100,000 \text{ mm}^4 \rightarrow \Delta = L/462 \quad \times$$

$$150 \times 24 \text{ Flat} \rightarrow I_x = 172,800 \rightarrow \Delta = L/796 \quad (1.5 \text{ mm}) \quad \text{OR}$$

Select 150W x 24 THICK Flat
150 Level Gnd Beam on
Sound masonry, Modern Pack
Galv HD 390

← Typical
Lintel
x 5 PLACES

(5 PRELIM DRAWING SKETCHES FOLLOW)

APPENDIX B STRUCTURAL PARTITION DETAILS
--

Blank page

Toilet Partition Wall Strengthening Design

Mount Gambier Railway Station

Habitable Places Architects

December 2020
Ref: 20190180 R004A

Principal Contact

Gene Lassaline

Mount Gambier

3-5 Helen Street
PO Box 1192
Mount Gambier SA 5290
T: +61 8 8723 5002
mtgambier@tonkin.com.au



Building exceptional
outcomes together

Safety in Design

As required under Work Health and Safety legislation, a hazard analysis of the proposed structure has been undertaken as part of our design process. The purpose of the hazard analysis is to identify risks present during construction, use, maintenance and future demolition of the structure. The hazard analysis has been undertaken based on applicable site visits and the architect/building designer drawings and information supplied to us.

The components designed by Tonkin have been designed in accordance with relevant Australian Standards and to meet the performance criteria of the National Construction Code (NCC). In this instance we cannot foresee any risks specific to this site that can be avoided or mitigated by our design.

This structure can reasonably be expected to be constructed in accordance with a safe "Industry Standard" process. This process must be performed by a competent Licenced Contractor who works to the relevant Safe Work Australia codes of practice and follows the highest form of safety protection, for all workers at the site. It also requires that all other parties associated with the design shall conduct their duties in a professional manner and to the relevant codes of practice.

GENERAL NOTES

MISCELLANEOUS

1. These drawings are to be read in conjunction with the Architect's drawings for both tendering and constructional purposes. The Engineer's drawings must not be scaled.
2. All masonry construction to conform to AS 3700 Masonry Structures or AS4773 Masonry in Small Buildings, where applicable.
3. Mortar in masonry shall typically be 1:1:6 (M3); and M4 for structural block work, severe exposure and below damp proof course. Provide 2 layers of malthoid on brickwork supporting concrete.
4. Filling to be select, non-clay, non-organic material compacted in 150 mm layers to 95% Standard Maximum Dry Density (AS 1289) or as noted. For guidelines to Earthworks refer to AS 3798.
5. Footings are to be founded on firm undisturbed material having a safe bearing capacity of not less than 100 KPa.
6. During construction the Contractor shall be responsible for maintaining the structure in a stable, safe condition and ensuring that no part shall be overstressed during construction activities. Design of temporary works is the responsibility of the Contractor.
7. For residential and small commercial construction, the builder shall refer to AS 2870 "Residential slabs and Footings" and particularly the Section of "Construction Requirements".
8. The engineer shall be contacted for further advice should conditions encountered at the site vary from the design documents or accepted standard practice for construction.
9. Substitution of specified member sizes or materials is not permitted without consent from the engineer.

REINFORCED CONCRETE

10. Concrete construction shall comply with the Code AS 3600 latest amendment.
11. Minimum concrete compressive strength at 28 days to be 25 MPa unless noted. Maximum slump of concrete shall be 80 mm (+/- 15mm).
12. Reinforcement designations are as follows R6 denotes structural grade round bar to AS 1302, SL82 fabric or L8TM denotes hard drawn wire mesh to AS 4671, N16 denotes cold worked deformed bars to AS 4671.
13. Clear concrete cover to reinforcement, unless noted, shall be; deposited in contact with the ground or deposited in forms but later exposed to ground, weather and water – 65 mm, Deposited in forms for interior dry environments – 20 mm. Residential footings and residential slabs only - 40mm to unprotected ground or external exposure, 30mm to a damp proof membrane in contact with the ground, 20mm to an internal surface.
14. Reinforcement splices shall be lap splices unless noted otherwise: Trench mesh and bars to 12mm diameter – 500m. N16 bars – 700mm. N20 bars – 900mm. Slab mesh – spacing of 2 wires + 25mm (minimum 2 wires in each sheet must overlap).
15. Reinforcement is represented diagrammatically and not necessarily shown in true projection.
16. All reinforcement shall be securely supported in its correct position during concreting by approved bar chairs, spacers or support bars.
17. For surface falls and RL's refer architect's drawing.
18. Formwork shall be designed and constructed in accordance with AS 3610.
19. Provide "Fortecon" or equal moisture barrier throughout under entire slab on grade.

STRUCTURAL STEELWORK

20. Steel fabrication and construction shall comply with the Code AS 4100. All steel materials shall comply with the following standards:
AS /NZS 3678 Structural Steel – Hot Rolled Plates and Floor Plates
AS /NZS3679.1 Structural Steel – Part 1: Hot Rolled Bars & Sections
AS/NZS 3679.2 Structural Steel – Part 2: Welded I Sections
AS/NZS 1111 Grade 4.6/S Commercial Bolts
AS/NZS1252 Grade 8.8/S/TF/TB High Strength Structural Bolts
21. Cold formed C & Z sections to be AS1397 steel, min G450 stress grade, Z350 galv coating, by Lysaght, Stramit or approved equal.
22. Galvanised fasteners shall be used for all anchor bolts, masonry embedment bolts and all fasteners exposed to weather or moisture.
23. Incompatible metals shall be separated by concealed layers of suitable inert material and thickness.
24. Welding shall be continuous 6mm fillet weld unless otherwise noted.
25. The ends of all tubular members are to be sealed with nominal thickness plates and continuous fillet weld unless otherwise shown.
26. Unless otherwise specified all internal steelwork shall be sand blasted Class 2.5 and painted with one shop coat of approved zinc rich primer 75 microns DFT. Steelwork exposed to weather or moisture to be galvanised Z350, unless noted otherwise. (Finish paints and coatings to be confirmed with Architect)
27. Damage to galvanised coatings to be power tool or hand tool cleaned to a sound substrate followed by 2 heavy coats of zinc rich epoxy "Cold Galv/ Galvafrid" installed to manuf. specifications.

TIMBER

28. All materials and workmanship shall comply with all current relevant Australian Standards including the following:
AS 1111 ISO Metric Hexagon Commercial Bolts and Screws
AS 1684 Residential Timber Framed Construction
AS 1720 Timber Structures
AS/NZS 1328 Glued Laminated Structural Timber
AS/NZS 2269 Plywood – Structural
AS/NZS 4357 Structural Laminated Veneer Lumber
29. All timber shall be of the best quality of the species and grades specified. It shall be straight, sound, well seasoned, and free from all defects including white ant., borer, sap, shakes, loose knots, warp, twist, holes, splits and fractures.
30. Unless otherwise specified all milled timber and dressed timber shall be seasoned.
31. Should the Contractor wish to use an alternative timber to that specified, he shall submit details of the timber he proposes to use to the Engineer for approval before commencing construction.
32. Bolts shall be galvanised with hexagon heads and with washers under both the head and the nut. The washer diameter shall be 1.5 times the dimension across the corners of the head. Edge and end distances and spacing to fasteners shall be in accordance with AS 1720. All bolts shall be checked and tightened at the end of the maintenance period.
33. Screws used for fixing shall be of the proper length and number, with flush smooth heads where countersunk screws are required. All screws that are damaged when driven or from any other cause, shall be removed and undamaged ones used in their place.
34. Nails to be a minimum 1.5 times longer than the thickness of timber fastened (not less than 4-6 times if member is plywood) but penetration into second member to be greater than 10 x nail diameter.
35. Timber stored at site shall be covered and protected from wet conditions. It shall be stored well clear of the ground.

Project MT G RAIL STATION TOILETS

Job number 2019.0150

Taken by

Date 30/11/20 Page 1 of

Location

Present

☐ Phone ☐ Meeting ☐ Site visit ☐ Other

Calculation GL Checked

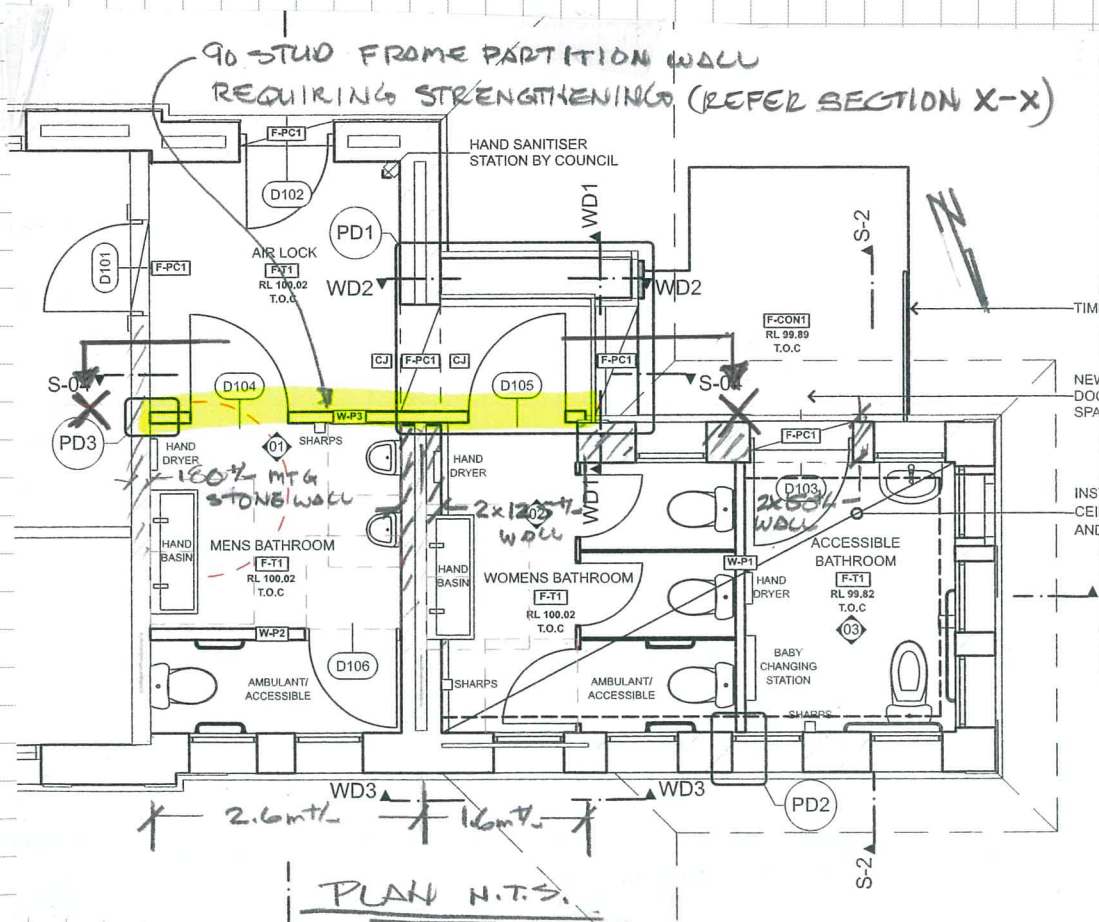
ADDITIONAL WORK - REDESIGNED PARTITION WALL FRAME - BETWEEN AIR LOCK & MEN'S/WOMEN'S BATHROOMS

- NEW TIMBER FRAMED STUD WALL FRAME - TOP WALL ENDS BELOW EXISTING STEEL ROOF TRUSSES; MIN FIXING AREA AVAILABLE TO FIX WEST END OF NEW WALL TO EXIST STONE WALL
- 2 HEAVY SWING DOORS SUSPENDED IN PARTITION WALL FRAME

(REFER PLAN BELOW FOR WALL LOCATION)

→ EXTRA STEEL FRAMING (HEADER & POSTS, ANCHORS) REQ'D IN PARTITION WALL FRAME TO STIFFEN.

TONKIN SCORE OF WORK → PROVIDE DESIGN & SKETCH DETAILS FOR STEEL TO STRENGTHEN STUD WALL FRAME IN PARTITION



Project **MT G RAIL STATION TOILETS**

Job number **2019.0180**

Taken by

Date **30/11/20** Page **2** of

Location

Present

☐ Phone ☐ Meeting ☐ Site visit ☐ Other

Calculation **GL** Checked

LOADS - LATERAL - WIND AS1170.2, $C_{pn} = 0.5$ $p_{ult} = 0.83 \text{ kPa}$
 $\therefore W_L = 1.2 \text{ m} \times 0.5 \times 0.83 \text{ kPa} = 0.498 \text{ kN}$
 or p_{ult} Load AS1170.1 $\rightarrow 0.7 \text{ m}^2 @ 1.5 \text{ m}$
 $H_L = 0.7 \times 1.5 = 1.05 \text{ kN}$

$S_{pan} = 2.6 \text{ m max}$ $M_F = (1 \times 2.6^2 / 8) = 0.85 \text{ kNm}$
 or $M_F = 1.05 \times 2.6 / 4 = 0.68 \text{ kNm}$

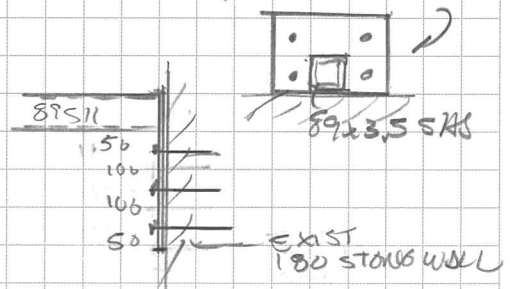
$89 \times 3.5 \text{ SHS} \rightarrow \phi_{WK} = 11.5 \text{ kNm} \Rightarrow 0.85 \text{ kNm OK}$

Select $89 \times 3.5 \text{ SHS}$ (Zinc Silicate Paint)
 for 1 Header $\times 4.2 \text{ m L}$, 2 cols \times
 $2.4 + 0.07 = 0.035 + 0.09 = 2.3 \text{ m H}$

Base - 10 R, 4 - m10 $\times 100 \text{ L}$ Blue Tip Screw A.B.

Fixing to Masonry Walls

E. End (e. side men's Bathroom wall)
 6 End R to $89 \times 3.5 \text{ Header} \times 400 \text{ L}$
 3 - $10 \times 100 \text{ L}$ Ramps @ 100 cts



- Also Fix First Stud to wall with $10 \times 100 \text{ Ramps}$
 @ 600 cts, Counter Sink Anchor 20mm into Stud

CENTRAL (men/women - 2x125 stud + 50 cavity)

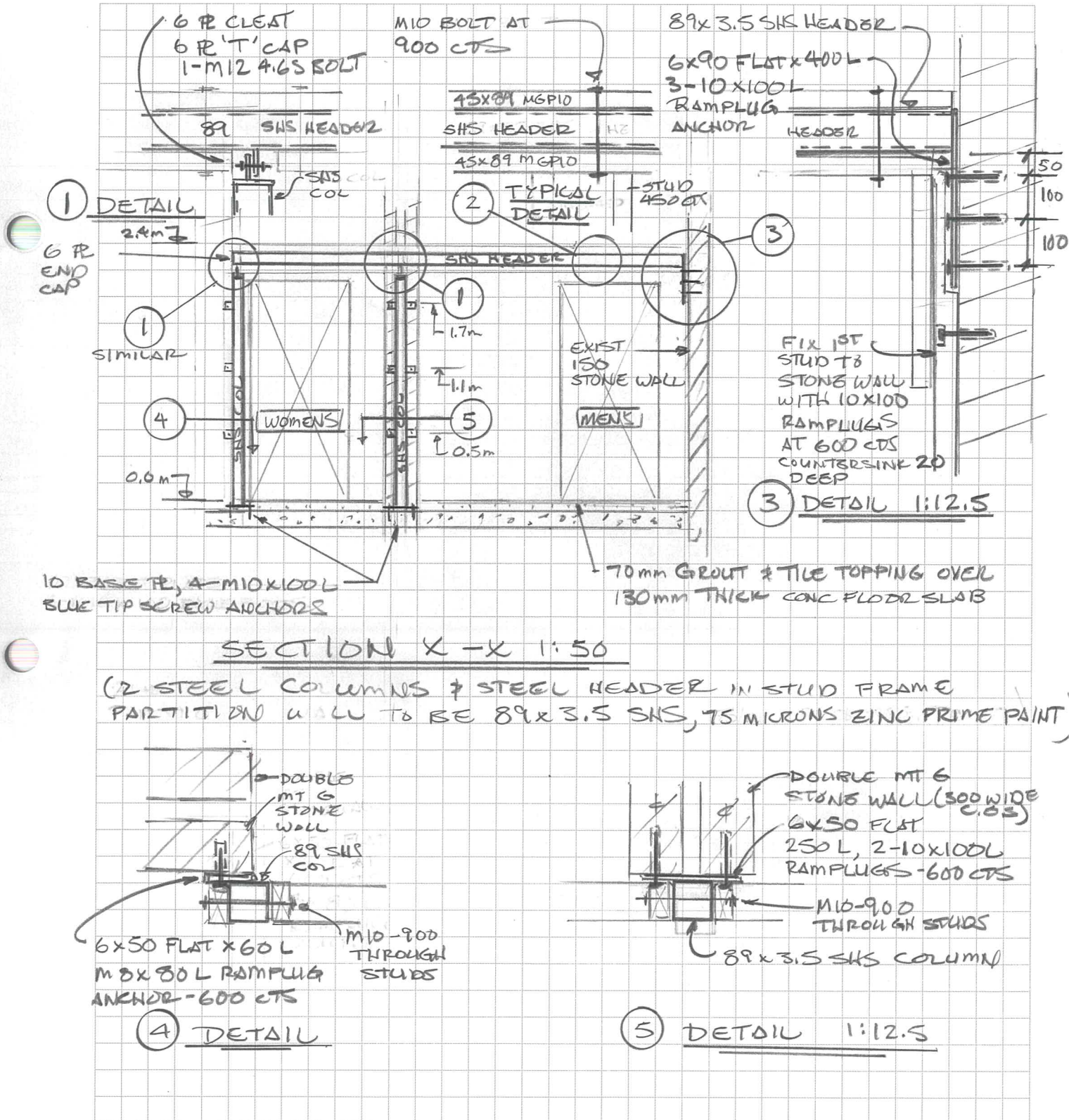
$89 \times 3.5 \text{ SHS Col}$
 6 $\times 50 \text{ Flat} \times 250 \text{ L} @ 600 \text{ cts}$ 1 - $10 \times 100 \text{ L}$
 Ramps 3.6 End of Flat to ϕ stone wall leaf
 6 R 'T' cap, 1 - m12 4.6 S to 6 R cleat @ Header

WEST END

6 $\times 50 \text{ Flat} \times 60 \text{ Long} @ 600 \text{ cts}$, 8 $\times 50 \text{ L}$ Ramps
 Anchors to stud @ 600 cts
 Same 'T' cap & bolted cleat connect to header

HEADERS - S END R, m10 Bolt Thru Plate @ 900 cts

Project MT G RAIL STATION TOILETS WALL Job number 2019.0180
 Taken by _____ Date 1/12/20 Page 3 of 3
 Location _____
 Present _____
☐ Phone ☐ Meeting ☐ Site visit ☐ Other Calculation GL Checked GL 1/12/20



APPENDIX C SANITARY SELECTIONS SCHEDULE
--

Refer to Hydraulic
Notes Drawing

Blank page

APPENDIX D DOOR HARDWARE SCHEDULE
--



16/12/2020 05:49 PM

Cover Letter | Door Hardware Schedule

Project Name: MT GAMBIER RAILWAY TOILETS

Project ID: 67123 (16-12-2020)

Revision Note:

Project Address: Mt Gambier SA 5290 AUSTRALIA

Keying System: Extension of Existing System

Architect Company: STUDIO KIPRIDIS

Architect Project ID:

Consultant: Mitch Callard

This schedule is based on the following documentation.

- Project Comments:**
- *AUSTRALIAN MADE - Lockwood branded locks and door furniture specified within this project are Australian made products. All Lockwood branded product carries a 25 year mechanical warranty. For specific warranty information on ASSA ABLOY products please visit - www.assaabloy.com.au/en/local/au/About-ASSA-ABLOY/Warranties-and-Guarantees/
 - *CONSTRUCTION CYLINDERS - Temporary construction cylinders, supplied by the hardware distributor, shall be used during the construction period. At practical completion, the construction cylinders will be removed and replaced by the Master keyed cylinders
 - *DOOR CLOSERS - Adjust all door closers to the lowest effective opening force. Ensure that closers to outward opening doors are mounted to the inside/push side of doors
 - *DOOR SEALS & THRESHOLDS - where specified, are to be site measured and checked (Not by ASSA ABLOY) for correct size and suitability prior to ordering.
 - *MASTER KEYED CYLINDERS - are to be provided to match the clients' existing master key system. Final master key requirements are to be provided by the client at a later date. Arrange for final master keyed cylinders to be installed at the point of practical completion. Allowance has been made for one (1) cut key per cylinder in this door hardware schedule, any additional cut keys will need to be priced separately.
 - *SPECIALLY MADE PRODUCTS - Assembled to Order, Made to Order or specially keyed goods are deemed as NOT RETURNABLE for credit and orders in respect of such goods cannot be cancelled once ordered.
 - *SUBSTITUTION - This specification forms part of the tender documents. Door hardware on this schedule shall not be substituted without the express written permission of the Architect.
 - *VERIFICATION - Errors and omissions excepted (E&OE) - every effort has been made to ensure the accuracy of the information supplied within this specification. Prior to placement of an order with the hardware manufacturer, this hardware schedule must be checked, by the hardware supplier, against final floor plans to confirm door handing and any changes made after the issue date of this specification.

Spence Doors, an ASSA ABLOY group company, can provide a full compliant solution for rated and non-rated door and frame requirements excluding aluminium solutions.

ASSA ABLOY Hardware specified within this project is compatible with applicable Spence door applications (at time of production of this documentation).

For questions concerning details of the Spence doors and frames, their specifications, and their utilisation, please contact Spence Doors projectenquiry@spencedoors.com.au. Alternatively visit www.spencedoors.com.au.

Door Hardware Schedule

ASSA ABLOY
Opening Solutions

Experience a safer
and more open world

Project Name: MT GAMBIER RAILWAY TOILETS
Schedule No: 67123

Item	Qty	Description	Brand	Finish
Mark: D101	To/From Room:	LADIES WAITING ROOM		
Height: 2100	Width:	930		
LW10075BBSSS	3	HINGES 100X75X2.5 BALL BEARING	LOCKWOOD	SSS
3772V-SS	1	3772 - ANTI-VANDAL ESCAPE LOCK	LOCKWOOD	SS
570TEMPKA	1	570 TEMPORARY CYLINDER KEYED ALIKE	OTHER	NONE
GMK	1	MASTER KEYED CYLINDER TO END USERS EXISTING KEY SYSTEM WITH ONE (1) KEY	OTHER	N/A
1801/70SC	1	1801 SQUARE END PLATE WITH CYLINDER HOLE & 70 LEVER	LOCKWOOD	SC
1905/70SC	1	1905 SQUARE END PLATE WITH 70 LEVER	LOCKWOOD	SC
A250SC	1	A250 FLOOR MOUNTED DOOR STOP TP	LOCKWOOD	SC
Mark: D102	To/From Room:	AIRLOCK		
Height: 2100	Width:	920		
BY OTHERS	1	HARDWARE BY OTHERS	OTHER	
Mark: D103	To/From Room:	ACCESSIBLE BATHROOM		
Height: 2100	Width:	1000		
LW10075BBSSS	3	HINGES 100X75X2.5 BALL BEARING	LOCKWOOD	SSS
3772V-SS	1	3772 - ANTI-VANDAL ESCAPE LOCK	LOCKWOOD	SS
MIBDP2SC	1	ASTRA INDICATOR BOLT MIB/DPV2 WITH OFFSET TURN	OTHER	SC
570TEMPKA	1	570 TEMPORARY CYLINDER KEYED ALIKE	OTHER	NONE
GMK	1	MASTER KEYED CYLINDER TO END USERS EXISTING KEY SYSTEM WITH ONE (1) KEY	OTHER	N/A
1801/70SC	1	1801 SQUARE END PLATE WITH CYLINDER HOLE & 70 LEVER	LOCKWOOD	SC
1905/70SC	1	1905 SQUARE END PLATE WITH 70 LEVER	LOCKWOOD	SC
2615DASIL	1	2615 SERIES CAM ACTION DOOR CLOSER SIZE 1-5 DELAYED	LOCKWOOD	SIL
A250SC	1	A250 FLOOR MOUNTED DOOR STOP TP	LOCKWOOD	SC
LAS4011 - 1000	1	100mm WIDE LOW PROFILE THRESHOLD PLATE	LORIENT	CA
LAS3007si -1000	1	FACE-FIXED SILICONE WEATHER SEAL FOR DOOR BOTTOMS	LORIENT	CA
Mark: D104	To/From Room:	MENS BATHROOM		
Height: 2100	Width:	950		
LW10075BBSSS	3	HINGES 100X75X2.5 BALL BEARING	LOCKWOOD	SSS
21424NN/P2SS	1	214 EXTERIOR PLATE & P2 PULL HANDLE	LOCKWOOD	SS
21507NNSS	1	215 INTERIOR PLATE	LOCKWOOD	SS
2615DASIL	1	2615 SERIES CAM ACTION DOOR CLOSER SIZE 1-5 DELAYED	LOCKWOOD	SIL
2616-104SIL	1	2616 SERIES ANGLED MOUNTING PLATE	LOCKWOOD	SIL
KP950X100SSS	2	KICKPLATE 950X100 SSS	OTHER	SSS
A250SC	1	A250 FLOOR MOUNTED DOOR STOP TP	LOCKWOOD	SC
Mark: D105	To/From Room:	WOMENS BATHROOM		
Height: 2100	Width:	950		
LW10075BBSSS	3	HINGES 100X75X2.5 BALL BEARING	LOCKWOOD	SSS
21424NN/P2SS	1	214 EXTERIOR PLATE & P2 PULL HANDLE	LOCKWOOD	SS
21507NNSS	1	215 INTERIOR PLATE	LOCKWOOD	SS
2615DASIL	1	2615 SERIES CAM ACTION DOOR CLOSER SIZE 1-5 DELAYED	LOCKWOOD	SIL
2616-104SIL	1	2616 SERIES ANGLED MOUNTING PLATE	LOCKWOOD	SIL
KP950X100SSS	2	KICKPLATE 950X100 SSS	OTHER	SSS
A250SC	1	A250 FLOOR MOUNTED DOOR STOP TP	LOCKWOOD	SC

Door Hardware Schedule

ASSA ABLOY
Opening Solutions

Experience a safer
and more open world

Project Name: MT GAMBIER RAILWAY TOILETS
Schedule No: 67123

Item	Qty	Description	Brand	Finish
Mark:	D106	To/From Room:	AMBULANT ACCESSIBLE	
Height:	2100	Width:	920	
A102	3	ALUMINIUM LIFT-OFF HINGE RH - (A102RHF)	MCCALLUM	SNA
3774-TASS	1	3774 - ANTI-LOCKOUT PRIVACY LOCK	LOCKWOOD	SS
NX8/40SC	1	NEXION METAL FRAME STRIKE KIT TP	LOCKWOOD	SC
1814/70SC	1	1814 SQUARE END PLATE WITH PRIVACY INDICATOR EMERGENCY TURN & 70 LEVER	LOCKWOOD	SC
1939S/70LSC	1	1939 SQUARE END PLATE WITH DISABLED TURN & 70 LEVER SELECTOR LH	LOCKWOOD	SC
A250SC	1	A250 FLOOR MOUNTED DOOR STOP TP	LOCKWOOD	SC

ASSA ABLOY is represented in all major regions, in both mature and emerging markets, with leading positions in Australia, Europe and North America.

As the world's leading lock group, ASSA ABLOY offers a more complete product range of door opening solutions than any other company in the market.



Openings Studio is a suite of BIM software tools for creating and visualising 3D doors, frames, and hardware objects for use in design, construction, and facility management. This program enables our consultants to write schedules with greater efficiency and contains built-in workflow tools for RFI's, change management, and collateral material.

Download Openings Studio
Visit assaabloy.com.au/openings to download a copy.

ASSA ABLOY Australia Pty Ltd
235 Huntingdale Road
Oakleigh, Victoria, 3166
Australia
ABN 90 086 541 907

1300 LOCK UP (1300 562 587)
lockweb.com.au

MELBOURNE FAX 1800 647 673
BRISBANE FAX 1800 626 140

Disclaimer

Whilst every effort has been made to ensure that the information (including product images and drawings) contained in this documentation is accurate at the time of print, ASSA ABLOY Australia Pty Limited ("ASSA ABLOY") recommends that you consult ASSA ABLOY or its agents prior to placing an order to ascertain current information on specific products, as ASSA ABLOY reserves the right to make changes without notice. ASSA ABLOY will not be liable for any injury, loss or damage whatsoever, arising from any errors or omissions in the information contained in the documentation or arising from the use or application of the information contained herein. © 2020 copyright by ASSA ABLOY All rights reserved



Cover Letter | Hardware Image Summary

16/12/2020 05:49 PM

Project Name: MT GAMBIER RAILWAY TOILETS

Project ID: 67123 (16-12-2020)

Revision Note:

Project Address: Mt Gambier SA 5290

Keying System: Extension of Existing System

Architect Company: STUDIO KIPRIDIS

Architect Project ID:

Consultant: Mitch Callard

This schedule is based on the following documentation.

- Project Comments:**
- *AUSTRALIAN MADE - Lockwood branded locks and door furniture specified within this project are Australian made products. All Lockwood branded product carries a 25 year mechanical warranty. For specific warranty information on ASSA ABLOY products please visit - www.assaabloy.com.au/en/local/au/About-ASSA-ABLOY/Warranties-and-Guarantees/
 - *CONSTRUCTION CYLINDERS - Temporary construction cylinders, supplied by the hardware distributor, shall be used during the construction period. At practical completion, the construction cylinders will be removed and replaced by the Master keyed cylinders
 - *DOOR CLOSERS - Adjust all door closers to the lowest effective opening force. Ensure that closers to outward opening doors are mounted to the inside/push side of doors
 - *DOOR SEALS & THRESHOLDS - where specified, are to be site measured and checked (Not by ASSA ABLOY) for correct size and suitability prior to ordering.
 - *MASTER KEYED CYLINDERS - are to be provided to match the clients' existing master key system. Final master key requirements are to be provided by the client at a later date. Arrange for final master keyed cylinders to be installed at the point of practical completion. Allowance has been made for one (1) cut key per cylinder in this door hardware schedule, any additional cut keys will need to be priced separately.
 - *SPECIALLY MADE PRODUCTS - Assembled to Order, Made to Order or specially keyed goods are deemed as NOT RETURNABLE for credit and orders in respect of such goods cannot be cancelled once ordered.
 - *SUBSTITUTION - This specification forms part of the tender documents. Door hardware on this schedule shall not be substituted without the express written permission of the Architect.
 - *VERIFICATION - Errors and omissions excepted (E&OE) - every effort has been made to ensure the accuracy of the information supplied within this specification. Prior to placement of an order with the hardware manufacturer, this hardware schedule must be checked, by the hardware supplier, against final floor plans to confirm door handing and any changes made after the issue date of this specification.

Spence Doors, an ASSA ABLOY group company, can provide a full compliant solution for rated and non-rated door and frame requirements excluding aluminium solutions.

ASSA ABLOY Hardware specified within this project is compatible with applicable Spence door applications (at time of production of this documentation).

For questions concerning details of the Spence doors and frames, their specifications, and their utilisation, please contact Spence Doors projectenquiry@spencedoors.com.au. Alternatively visit www.spencedoors.com.au.




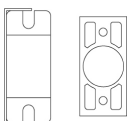




Hardware Image Summary

ASSA ABLOY

Opening Solutions

Experience a safer
and more open world

Project Name: MT GAMBIER RAILWAY TOILETS
Schedule No: 67123

Brand	Item	Description	Qty	Finish
LOCKWOOD	LW10075BBSSS	HINGES 100X75X2.5 BALL BEARING	12	SSS
				
MCCALLUM	A102	ALUMINIUM LIFT-OFF HINGE RH - (A102RHF)	3	SNA
LOCKWOOD	3772V-SS	3772 - ANTI-VANDAL ESCAPE LOCK	2	SS
				
LOCKWOOD	3774-TASS	3774 - ANTI-LOCKOUT PRIVACY LOCK	1	SS
				
LOCKWOOD	NX8/40SC	NEXION METAL FRAME STRIKE KIT TP	1	SC
				
OTHER	MIBDP2SC	ASTRA INDICATOR BOLT MIB/DPV2 WITH OFFSET TURN	1	SC
OTHER	570TEMPKA	570 TEMPORARY CYLINDER KEYED ALIKE	2	NONE
OTHER	GMK	MASTER KEYED CYLINDER TO END USERS EXISTING KEY SYSTEM WITH ONE (1) KEY	2	N/A
LOCKWOOD	1801/70SC	1801 SQUARE END PLATE WITH CYLINDER HOLE & 70 LEVER	2	SC
				
LOCKWOOD	1814/70SC	1814 SQUARE END PLATE WITH PRIVACY INDICATOR EMERGENCY TURN & 70 LEVER	1	SC
				
LOCKWOOD	1905/70SC	1905 SQUARE END PLATE WITH 70 LEVER	2	SC
				
LOCKWOOD	1939S/70LSC	1939 SQUARE END PLATE WITH DISABLED TURN & 70 LEVER SELECTOR LH	1	SC
				
LOCKWOOD	21424NN/P2SS	214 EXTERIOR PLATE & P2 PULL HANDLE	2	SS
LOCKWOOD	21507NNSS	215 INTERIOR PLATE	2	SS






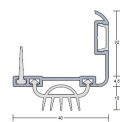
Hardware Image Summary

ASSA ABLOY

Opening Solutions

Experience a safer
and more open world

Project Name: MT GAMBIER RAILWAY TOILETS
Schedule No: 67123

Brand	Item	Description	Qty	Finish	
					
LOCKWOOD	2615DASIL	2615 SERIES CAM ACTION DOOR CLOSER SIZE 1-5 DELAYED	3	SIL	
					
LOCKWOOD	2616-104SIL	2616 SERIES ANGLED MOUNTING PLATE	2	SIL	
					
OTHER	KP950X100SSS	KICKPLATE 950X100 SSS	4	SSS	
LOCKWOOD	A250SC	A250 FLOOR MOUNTED DOOR STOP TP	5	SC	
					
LORIENT	LAS4011 - 1000	100mm WIDE LOW PROFILE THRESHOLD PLATE	1	CA	
					
LORIENT	LAS3007si -1000	FACE-FIXED SILICONE WEATHER SEAL FOR DOOR BOTTOMS	1	CA	
					
OTHER	BY OTHERS	HARDWARE BY OTHERS	1		

Project Name: MT GAMBIER RAILWAY TOILETS
Schedule No: 67123

ENVIRONMENTAL PRODUCT DECLARATION as per ISO 14025 and EN 15804

Owner of the Declaration	ASSA ABLOY Australia Pty Ltd
Programme holder	Institute Bauen und Umwelt e.V. (IBU)
Publisher	Institute Bauen und Umwelt e.V. (IBU)
Declaration number	EPD-ASA-20160079-IBA1-EN
Issue date	27.04.2016
Valid to	26.04.2021



ASSA ABLOY Australia Pty Ltd

Lockwood 1800 Series Plate Door Furniture - Lever and Cylinder Hole 1801/70SC

For more information please visit www.lockweb.com.au

ENVIRONMENTAL PRODUCT DECLARATION as per ISO 14025 and EN 15804

Owner of the Declaration	ASSA ABLOY Australia Pty Ltd
Programme holder	Institute Bauen und Umwelt e.V. (IBU)
Publisher	Institute Bauen und Umwelt e.V. (IBU)
Declaration number	EPD-ASA-20160081-IBA1-EN
Issue date	27.04.2016
Valid to	26.04.2021



ASSA ABLOY Australia Pty Ltd

Lockwood 1800 Series Plate Door Furniture - Lever Only 1905/70SC

For more information please visit www.lockweb.com.au

Project Name: MT GAMBIER RAILWAY TOILETS
Schedule No: 67123

ENVIRONMENTAL PRODUCT DECLARATION as per ISO 14025 and EN 15804

Owner of the Declaration	ASSA ABLOY Australia Pty Ltd
Programme holder	Institute Bauen und Umwelt e.V. (IBU)
Publisher	Institute Bauen und Umwelt e.V. (IBU)
Declaration number	EPD-ASA-20160082-IBA1-EN
Issue date	27.04.2016
Valid to	26.04.2021



ASSA ABLOY Australia Pty Ltd

Single-point locks - Lockwood 3772SS Commercial Mortice Lock

For more information please visit www.lockweb.com.au

ENVIRONMENTAL PRODUCT DECLARATION as per ISO 14025 and EN 15804

Owner of the Declaration	ASSA ABLOY Australia Pty Ltd
Programme holder	Institute Bauen und Umwelt e.V. (IBU)
Publisher	Institute Bauen und Umwelt e.V. (IBU)
Declaration number	EPD-ASA-20140209-IBC1-EN
Issue date	13.02.2015
Valid to	12.02.2020



ASSA ABLOY Australia Pty Ltd

Lockwood DC 2615

For more information please visit www.lockweb.com.au



ASSA ABLOY is represented in all major regions, in both mature and emerging markets, with leading positions in Australia, Europe and North America.

As the world's leading lock group, ASSA ABLOY offers a more complete product range of door opening solutions than any other company in the market.



Openings Studio is a suite of BIM software tools for creating and visualising 3D doors, frames, and hardware objects for use in design, construction, and facility management. This program enables our consultants to write schedules with greater efficiency and contains built-in workflow tools for RFI's, change management, and collateral material.

Download Openings Studio
Visit assaabloy.com.au/openings to download a copy.

ASSA ABLOY Australia Pty Ltd
235 Huntingdale Road
Oakleigh, Victoria, 3166
Australia
ABN 90 086 541 907

1300 LOCK UP (1300 562 587)
lockweb.com.au

MELBOURNE FAX 1800 647 673
BRISBANE FAX 1800 626 140

Disclaimer

Whilst every effort has been made to ensure that the information (including product images and drawings) contained in this documentation is accurate at the time of print, ASSA ABLOY Australia Pty Limited ("ASSA ABLOY") recommends that you consult ASSA ABLOY or its agents prior to placing an order to ascertain current information on specific products, as ASSA ABLOY reserves the right to make changes without notice. ASSA ABLOY will not be liable for any injury, loss or damage whatsoever, arising from any errors or omissions in the information contained in the documentation or arising from the use or application of the information contained herein. © 2020 copyright by ASSA ABLOY All rights reserved