



Peak® Aluminium Balustrade

Certificate of Compliance

Building Code of Australia

WARNING No representation or warranty is given that your particular application of these products complies with relevant building codes or that the fasteners provided or used are appropriate for your application. Therefore consult with professionals and local building officials before beginning work: (i) to ensure compliance with relevant building codes for your application and for your proposed use of fasteners; (ii) to ensure the integrity of the structural components in connection with which these products are to be used; (iii) to identify appropriate safety gear that is to be used during installation such as a safety harness when working above ground; (iv) to ensure that the work area is free from utilities, services and hazards; and, (v) to clarify any instructions or warnings that may not be clear. Work in a safe manner wearing protective gear such as gloves, eyewear, headwear, footwear and clothing. When using tools always comply with operation manuals and instructions. Metal and glass may have sharp edges and could fragment or splinter during or as a result of handling or cutting. Do not use these products in connection with any substance that is or may be harmful or corrosive to the products. Inspect and maintain these products and the structural components that they are used in connection with on a regular basis using professionals when appropriate. This report has been prepared for certain standard residential applications. Obtain professional advice for any non-standard or non-residential application.



November 22, 2021

Peak Products Pty Ltd
20-22 Southern Court
Keysborough Victoria 3173
Australia

CERTIFICATE OF COMPLIANCE: Peak® Aluminium Balustrade

To whom it may concern:

Compliance:

I did prepare the design and I certify that the part of the design described as:
Peak® Aluminium Balustrade complies as a *Deemed-to Satisfy Solution* complying with the following Parts of the National Construction Code (NCC) 2019 – Building Code of Australia (BCA), Volumes 1 and 2:

- **BCA Volume One,**
D2.16 – Barriers to prevent falls,
For domestic and residential applications in Class 2, 3 & Class 4 parts of buildings for AS/NZS 1170.1:2002, Table 3.3 – Minimum Imposed Actions for Barriers, “A” & “C3”.
For the case of ‘Glass Panel’ applications, the Design Ultimate Wind Pressure, calculated in accordance with AS/NZS 1170.2, shall not exceed ± 1.56 kPa.
For the case of ‘Sectional Glass’ applications, the Design Ultimate Wind Speed, calculated in accordance with AS/NZS 1170.2, shall not exceed 62 m/s.
For the case of ‘Glass Panel’ and/or ‘Sectional Glass’ applications no part of the glass shall be glazed more than 5m from the finished floor or ground level.
For the case of ‘Wide Baluster’ or ‘Standard Baluster’ applications, the Design Ultimate Wind Speed, calculated in accordance with AS/NZS 1170.2, shall not exceed 84 m/s.
D2.17 - Handrails,
For domestic and residential applications in Class 2, 3 & Class 4 parts of buildings only.
D2.18 - Fixed platforms, walkways, stairways and ladders
For domestic and residential applications in Class 2, 3 & Class 4 parts of buildings only.
For the case of ‘Glass Panel’ and/or ‘Sectional Glass’ applications no part of the glass shall be glazed more than 5m from the finished floor or ground level.
- **BCA Volume Two,**
Part 3.9.2 – Barriers and Handrails
For the case of ‘Glass Panel’ applications, the Design Ultimate Wind Pressure, calculated in accordance with AS/NZS 1170.2, shall not exceed ± 1.56 kPa. This includes AS 4055 Wind Classifications N1 and N2 (and excludes AS 4055 Wind Classifications N3, N4, N5, N6, C1, C2, C3 and C4).
For the case of ‘Sectional Glass’ applications, the Design Ultimate Wind Speed, calculated in accordance with AS/NZS 1170.2, shall not exceed 62 m/s. This includes AS 4055 Wind Classifications N1, N2, N3, N4, C1 and C2 (and excludes AS 4055 Wind Classifications N5, N6, C3 and C4).

November 22, 2021



For the case of 'Wide Baluster' or 'Standard Baluster' applications, the Design Ultimate Wind Speed, calculated in accordance with AS/NZS 1170.2, shall not exceed 84 m/s. This includes AS 4055 Wind Classifications N1, N2, N3, N4, N5, C1, C2 and C3 (and excludes AS 4055 Wind Classifications N6 and C4).

Subject to the following conditions:

- i. Installation of the *Peak® Aluminium Balustrade* shall be in accordance with the *Peak® Aluminium Balustrade - Installation Guide (II01PB_V4)*.
- ii. Product selection and installation shall be made by a competent person who is conversant with the application and technical aspects of the product, and has ready access to the relevant technical information related to the product installation.
- iii. Particular attention shall be paid to the structural adequacy of all connections to supporting structures designed by others. All supporting structures shall be independently verified as capable of providing the necessary structural support to the *Peak® Aluminium Balustrade*.

Limitations:

- i. This certificate specifically excludes any assessment of the suitability of Peak® Aluminium Balustrade and/or Peak® Aluminium Handrail as a swimming pool safety barrier.
- ii. This certificate does not deal with any aspect of the performance of gate components or their installation (detailed on page 14 of Peak® Aluminium Balustrade - Installation Guide (II01PB_V4)).
- iii. This certification does not deal with materials safety, site safety or safe work practices in any form. Specification and installation should only be considered in conjunction with reference to appropriate hazards.
- iv. This certification does not deal with the quality assurance aspects of the manufacturing, transportation and installation processes.

Design documents – Specifications / Test Reports / Engineering:

| Specifications: | Prepared by: | Date: |
|---|------------------------------|--------------|
| Peak® Aluminium Balustrade – Installation Guide (II01PB_V4) | Peak Products Corporation | March 2020 |
| Peak® Aluminium Balustrade – System Drawings (see Attachment 1) | Peak Products Corporation | March 2020 |
| Peak® Aluminium Balustrade – Geometric and Material Properties (company confidential) | Peak Products Corporation | January 2015 |
| Fastener Schedule (see Attachment 2) | Acronem Consulting Australia | April 2020 |

November 22, 2021



| Test Reports: | Prepared by: | Date: |
|--|----------------------------|-----------------|
| Test Report MT-19-0362, Load Testing of Aluminium Balustrade Posts | Melbourne Testing Services | 2 May 2019 |
| Report 20190951M01, Mechanical Testing Report | AlfaTest | 22 May 2019 |
| Report 20191023M01, Mechanical Testing Report | AlfaTest | 15/05/2019 |
| Test Report 2016-094-R1, Peak Aluminium Balustrade System Load Tests to AS/NZS 1170.1 for Peak Products Corporation. | Ian Bennie Associates | 7 February 2019 |

| Engineering: | Prepared by: | Date: |
|--|------------------------------|--------------|
| REPORT No: ACA – 200305 200402, “Peak® Aluminium Balustrade - NCC 2019, Building Code of Australia Volumes 1 & 2 – Appraisal - Barrier | Acronem Consulting Australia | 2 April 2020 |

Signature:

Date:

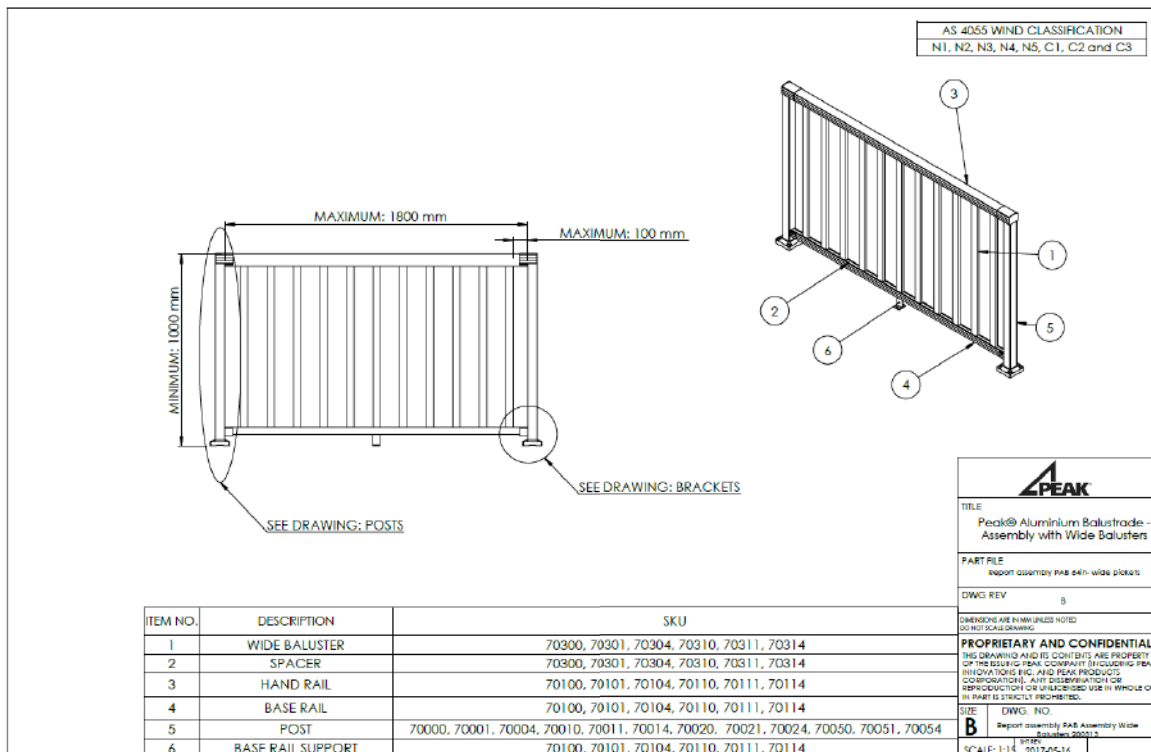
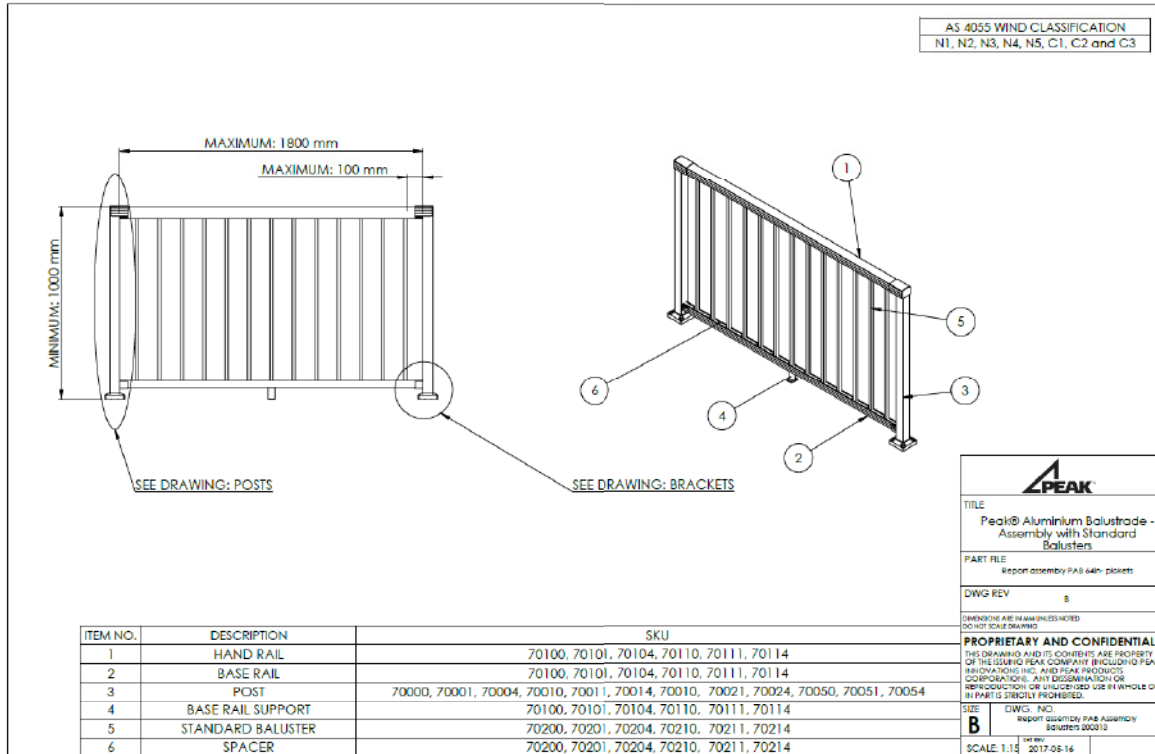
22ND NOVEMBER 2021

CAMERON CHICK BE(HONS), PH.D, GC.COM.(MKTG), M.AIRAH, RPEQ
REGISTERED PROFESSIONAL ENGINEER, VIC. (CIVIL): PE0000967, QLD. (STRUCTURAL): 15370
DIRECTOR - ACRONEM CONSULTING AUSTRALIA PTY LTD

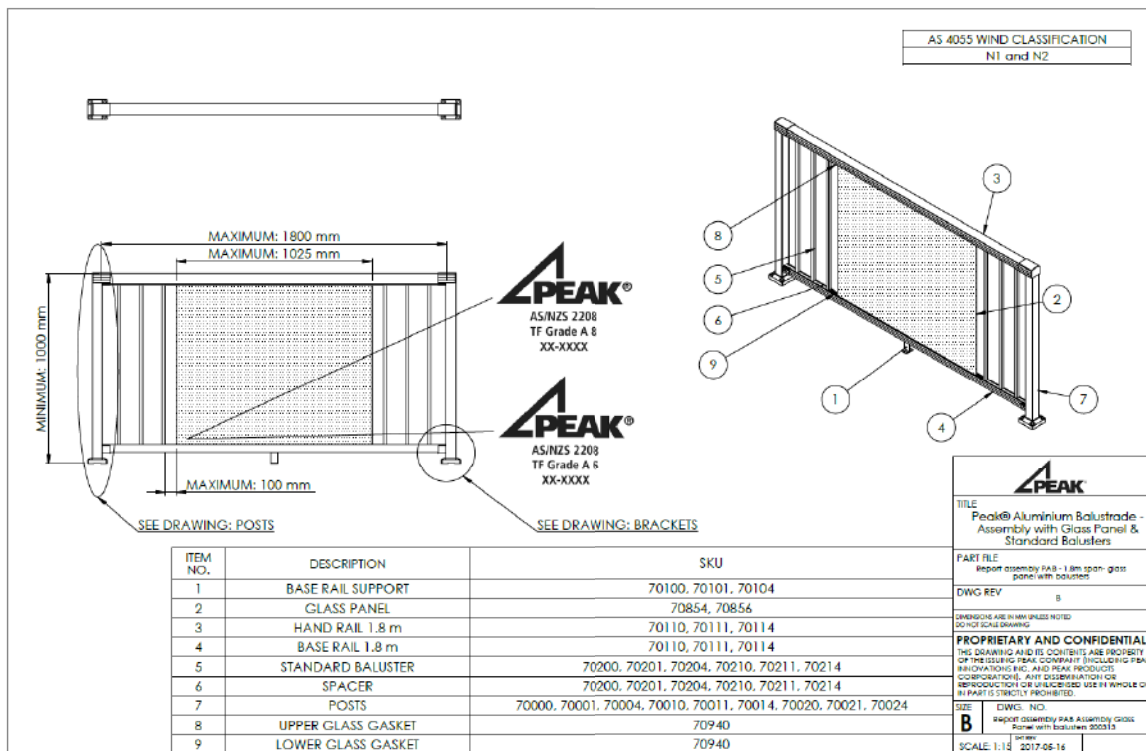
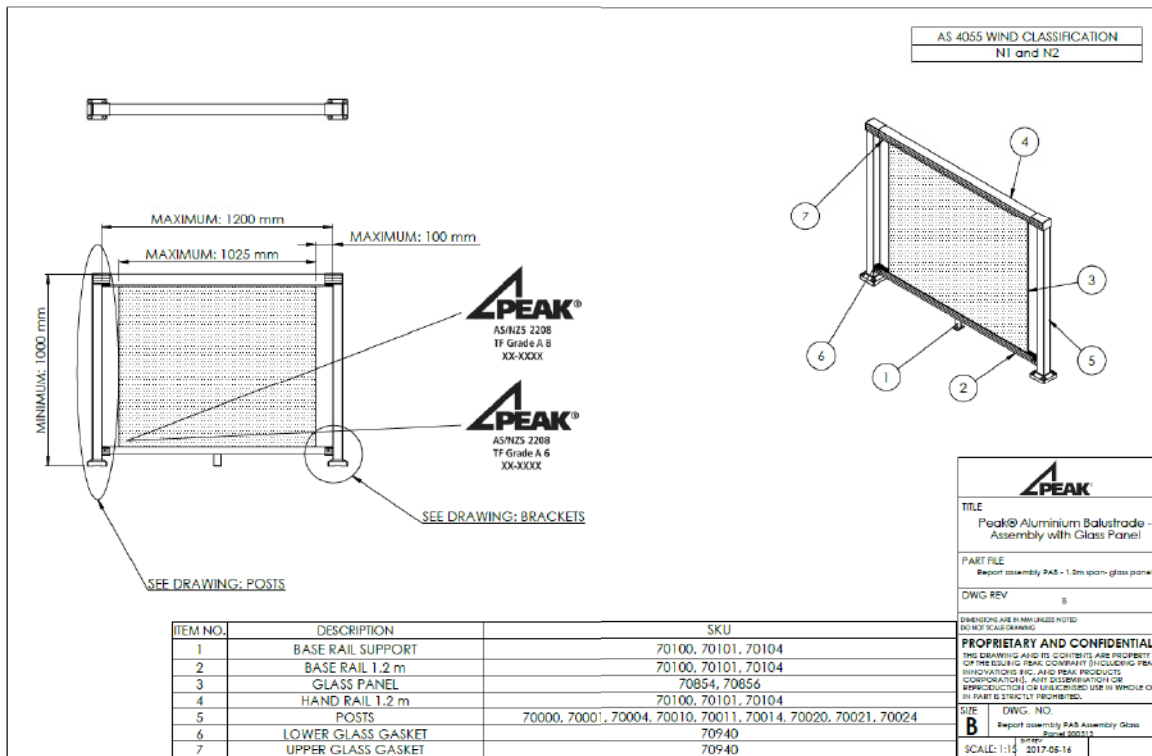
November 22, 2021



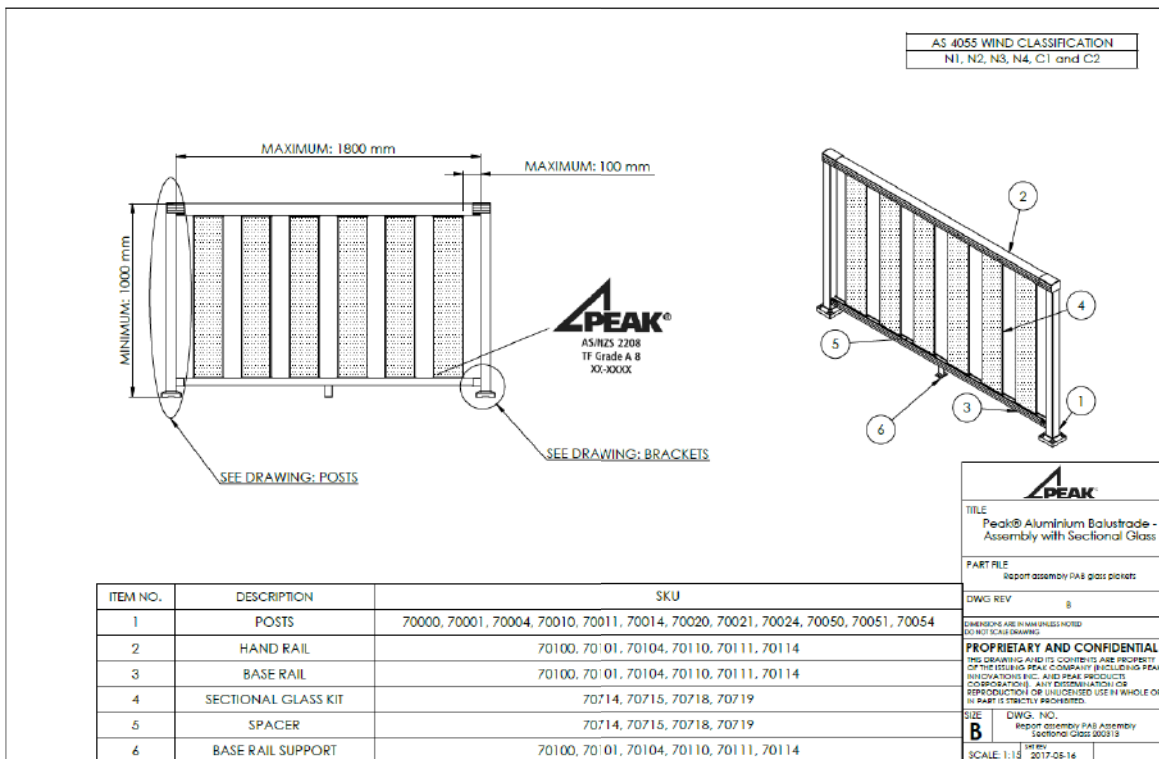
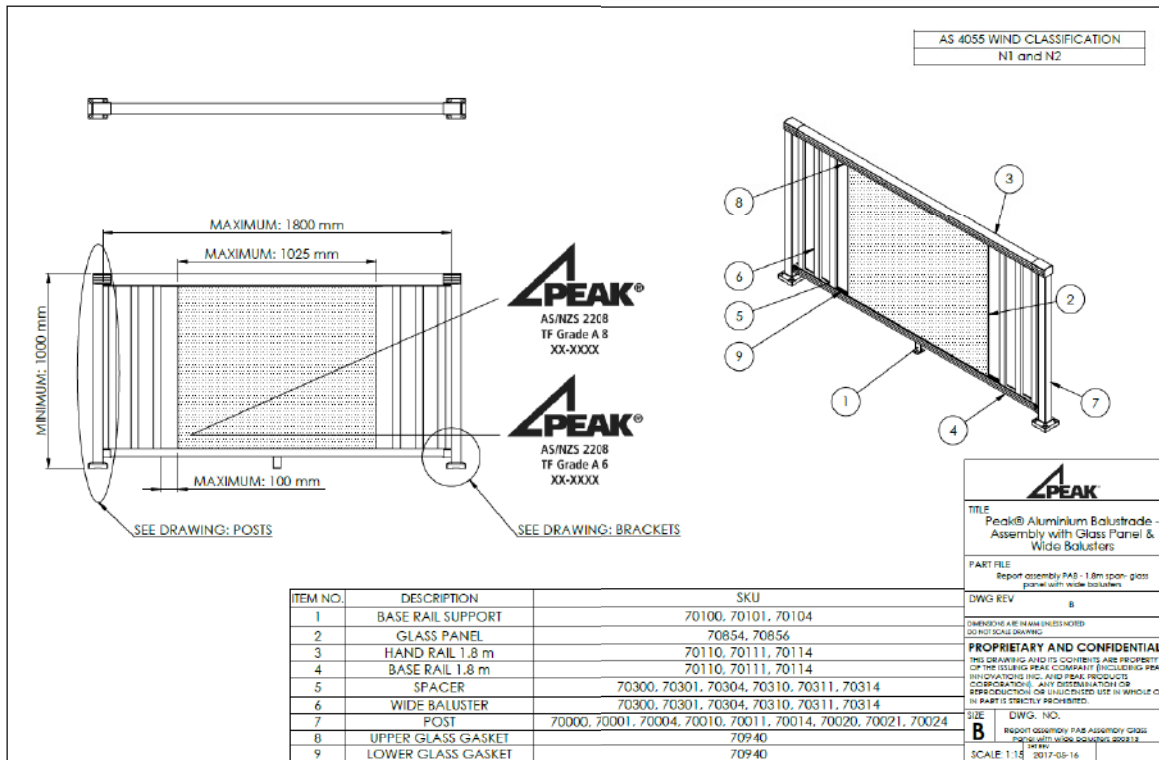
Attachment 1: Peak® Aluminium Balustrade - System Drawings



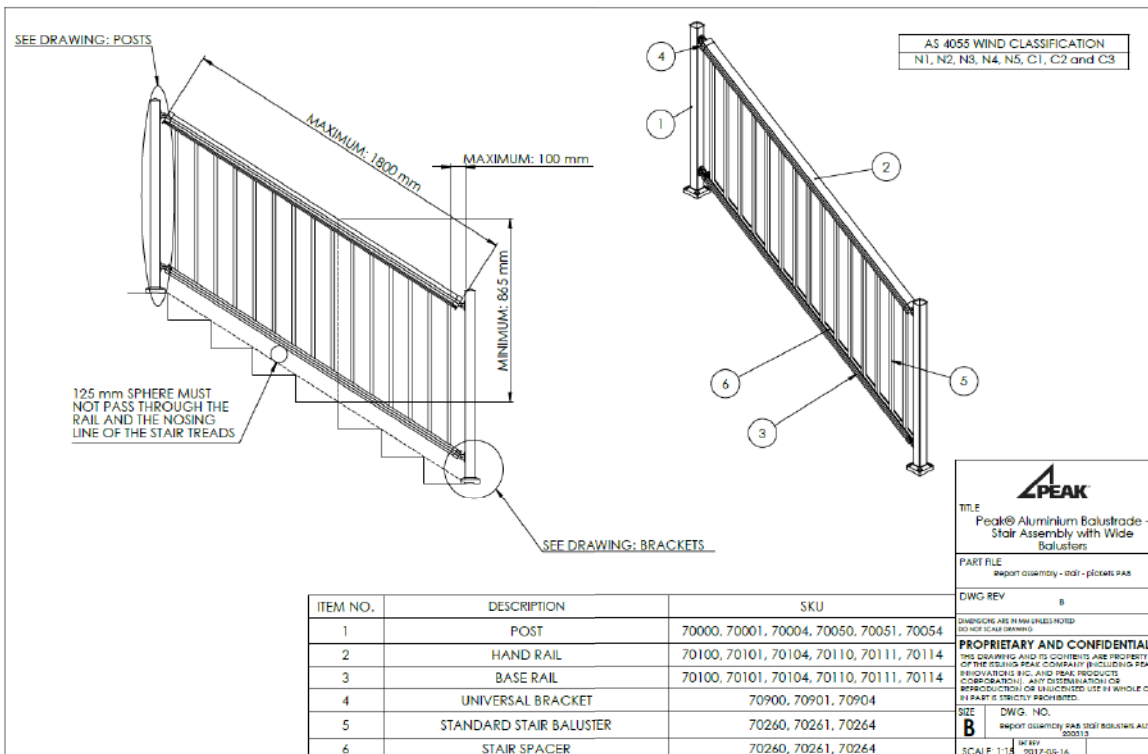
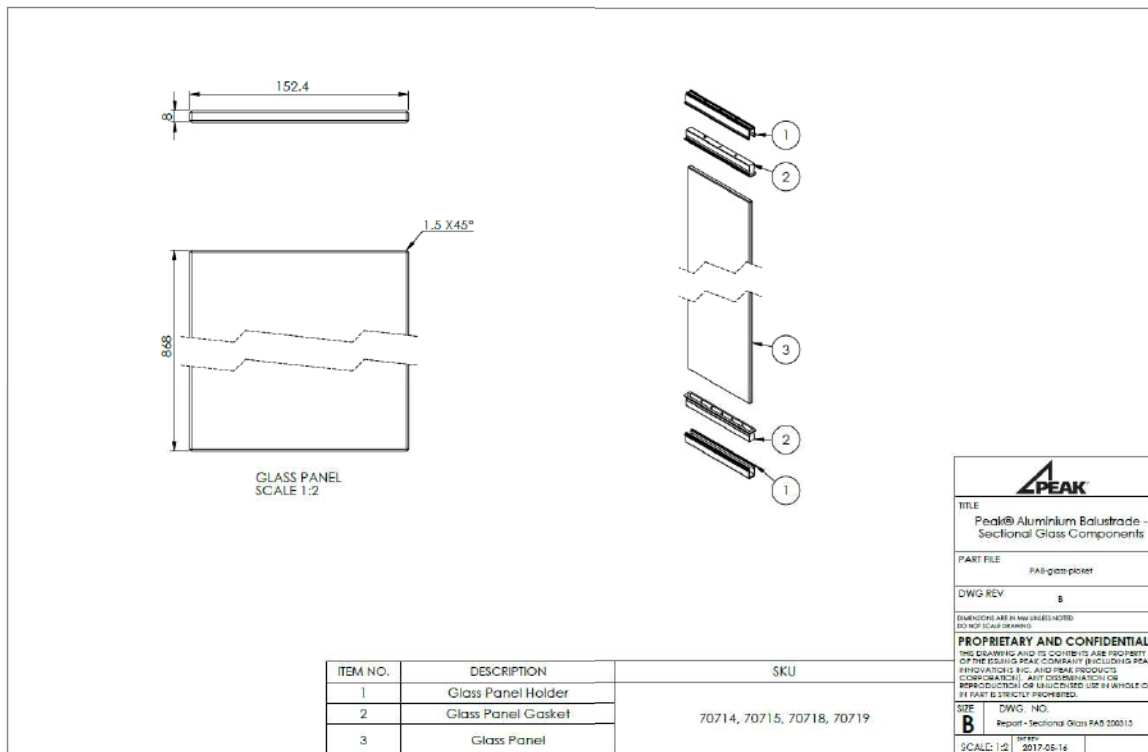
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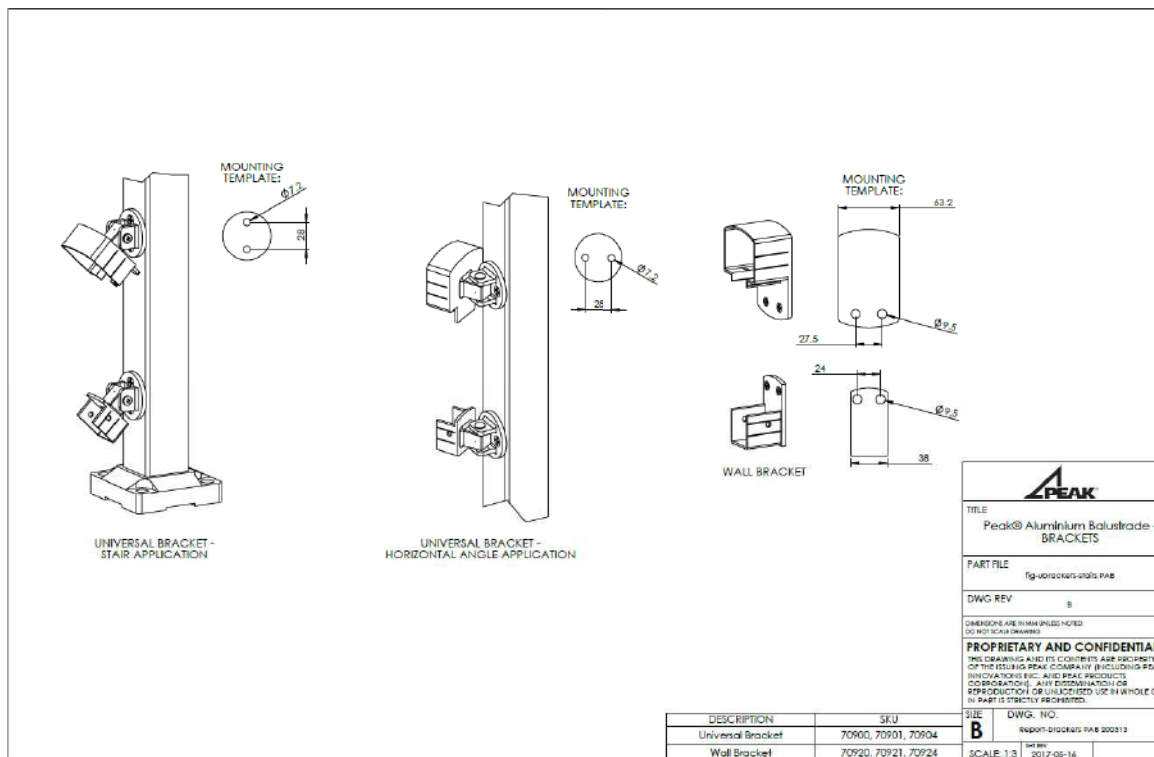
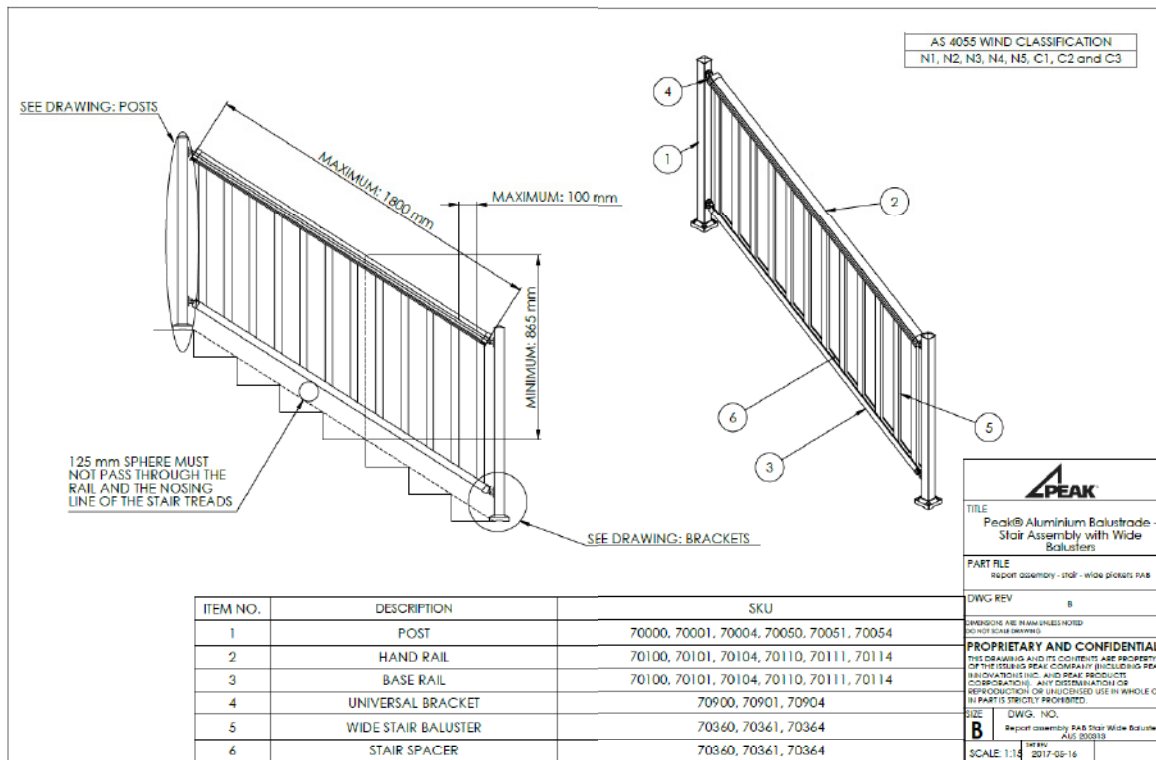
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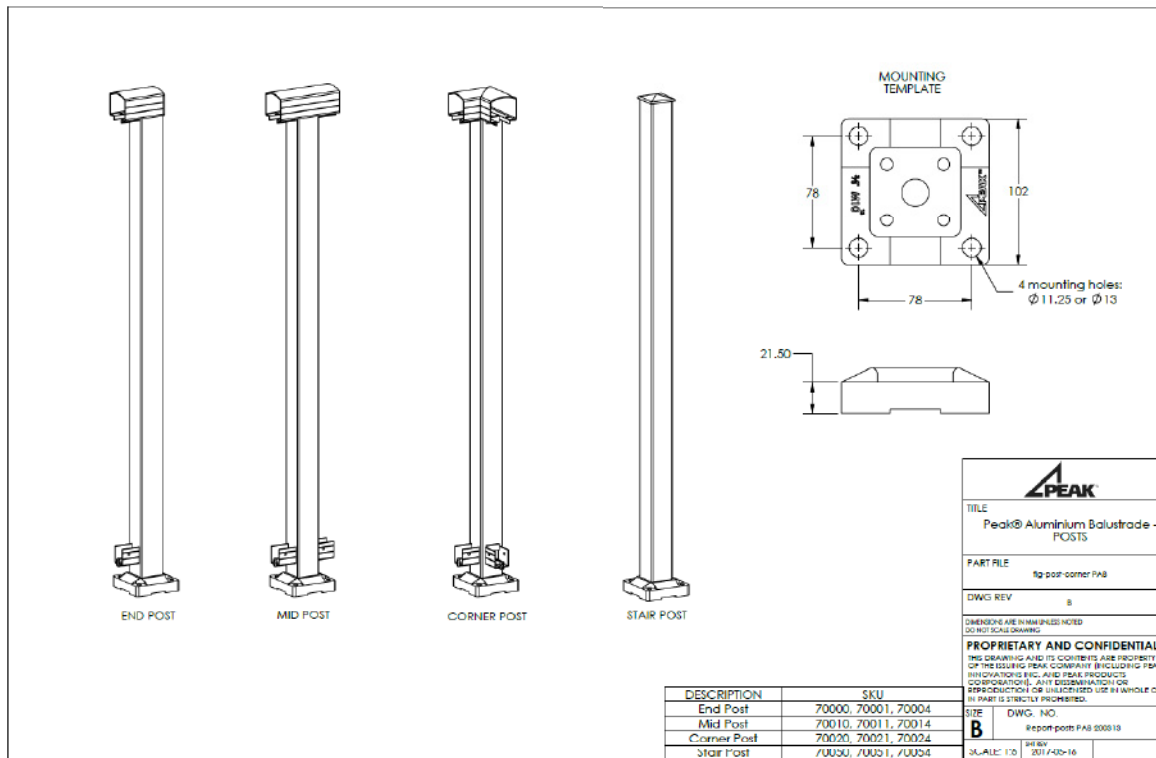
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November 22, 2021



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Attachment 2: Fastener Schedule

The following summary information is provided on the fasteners used in conjunction with the Peak® Aluminium Balustrade. More detailed information regarding additional fastener requirements may be found in REPORT No: ACA – 200305 2000402.

In all cases, the attachment of fasteners to a suitable concrete or timber supporting structure designed by others, must be independently verified for each installation.

Peak® Aluminium Balustrade

- **Post Base to Concrete:**

- Mechanical Anchoring:
 - 4 x Ramset™ WERCS Ankascrew™ Anchor, M10x100 mm (AS10100WGM50), or
4 x Ramset™ Ankascrew™ Anchor, M10x100 mm (AS10100GM), installed in accordance with Ramset™ Technical Data Sheet.
 - Minimum Concrete Strength 25 MPa,
 - Minimum Edge Distance 70 mm,
 - Minimum concrete embedment depth 72 mm.
- Chemical Anchoring:
 - Design conditions in accordance with Ramset Design Calculator include:
 - Non-Cracked Concrete
 - Ramset “EPCON C8 Xtrem” Part No: C8450
 - Anchor Size: M10
 - Anchor Stud – Gr 5.8 or G316
Part No: CS10130, CS10130GH or CS10130SS
 - Minimum Edge Distance: 30mm
 - Min. Concrete Strength: 25MPa
 - Min. Hole Diameter / Depth: 12mm / 72mm
 - Min. Concrete thickness: 96mm

- **Post Base to Timber**

- 4 x Coach Screw, M10 x (length) mm, Class 4.6 or Class 4.8 in accordance with AS/NZ 4291.1 and a hardness of 120-250 HV (67 HRB-22HRC) with:
 - Minimum embedment depth of the threaded portion of the coach screw into the side grain of the supporting structure is not less than,
 - 100 mm for JD3 (e.g. Seasoned, Mixed Australian Hardwoods),
 - 125 mm for J3 (e.g. Unseasoned, Mixed Australian Hardwoods),
 - 145 mm for JD4 (e.g. Seasoned, Mixed Softwood Species), or
 - 185 mm for J4 (e.g. Unseasoned, Pine, Radiata, Australia).
 - Minimum end distance (5D) 50 mm, see AS 1720.1 for definitions.
 - Minimum edge distance (4D) 40 mm, see AS 1720.1 for definitions.
 - The diameter of the hole for the shank shall be not less than the shank diameter of the screw nor exceed it by more than 1 mm or 10% of the shank diameter, whichever is lesser.



- The diameter of the hole for the threaded portion of the screw shall not exceed the root diameter of the screw.
- The depth of the hole shall exceed the intended depth to which the screw is to be driven.

- Wall Bracket to Concrete

- o 2 x Ramset™ WERCS Ankascrew™ Anchor, M6x50 mm (AS06050WGM100), or
2 x Ramset™ Ankascrew™ Anchor, M6x50 mm (AS06050GM),
to be installed in accordance with Ramset™ Technical Data Sheet.
- o Minimum Concrete Strength 25 MPa,
- o Minimum Edge Distance 50 mm,
- o Minimum concrete embedment depth 39 mm.

- Wall Bracket to Timber

- **Option 1:** 2 x Coach Screw, M6 x (length) mm, Class 4.6 or Class 4.8 in accordance with AS/NZ 4291.1 and a hardness of 120-250 HV (67 HRB-22HRC) with:
 - o Minimum embedment depth of the threaded portion of the coach screw into the side grain of the supporting structure is not less than,
 - o 45 mm for JD3 (e.g. Seasoned, Mixed Australian Hardwoods),
 - o 50 mm for J3 (e.g. Unseasoned, Mixed Australian Hardwoods),
 - o 50 mm for JD4 (e.g. Seasoned, Mixed Softwood Species), or
 - o 60 mm for J4 (e.g. Unseasoned, Pine, Radiata, Australia).
 - o Minimum end distance (8D) 48 mm, see AS 1720.1 for definitions.
 - o Minimum edge distance (4D) 24 mm, see AS 1720.1 for definitions.
 - o The diameter of the hole for the shank shall be not less than the shank diameter of the screw nor exceed it by more than 1 mm or 10% of the shank diameter, whichever is lesser.
 - o The diameter of the hole for the threaded portion of the screw shall not exceed the root diameter of the screw.
 - o The depth of the hole shall exceed the intended depth to which the screw is to be driven.
- **Option 2:** 2 x Type 17 14g (6.3 mm) screws with ST6.3 thread in accordance with AS 3566 with:
 - o Minimum embedment depth into the side-grain of the supporting structure,
 - o 45 mm for JD3 (e.g. Seasoned, Mixed Australian Hardwoods),
 - o 50 mm for J3 (e.g. Unseasoned, Mixed Australian Hardwoods),
 - o 50 mm for JD4 (e.g. Seasoned, Mixed Softwood Species), or
 - o 60 mm for J4 (e.g. Unseasoned, Pine, Radiata, Australia).
 - o Minimum end distance (10D) 63 mm, see AS 1720.1 for definitions.



- Minimum edge distance (5D) 31.5 mm, see AS 1720.1 for definitions.
- The diameter of the hole for the threaded portion of the screw shall not exceed the root diameter of the screw.
- The wall bracket shall be aligned such that a line drawn between the screws is aligned across the grain.
- **Base Rail Support Bracket to Concrete**
 - 2 x Ramset™ WERCS Ankascrew™ Anchor, M5x30 mm (AS05030), to be installed in accordance with Ramset™ Technical Data Sheet.
 - Minimum Concrete Strength 25 MPa,
 - Minimum Edge Distance 40 mm,
 - Minimum concrete embedment depth 27 mm.
- **Base Rail Support Bracket to Timber**
 - 2 x Type 17 10g timber screws (4.88 mm) in accordance with AS 3566 with:
 - Minimum embedment depth into side-grain of the supporting structure (7D) 34 mm, for J1 to J4 and JD1 to JD4 (e.g. Unseasoned or Seasoned, Mixed Australian Hardwoods or Mixed Softwood Species or Pine, Radiata, Australia).
 - Minimum end distance (10D) 49 mm, see AS 1720.1 for definitions.
 - Minimum edge distance (5D) 25 mm, see AS 1720.1 for definitions.
 - The diameter of the hole for the threaded portion of the screw shall not exceed the root diameter of the screw.
 - The base rail support bracket shall be aligned such that a line drawn between the screws is aligned across the grain.