

Building Code Clause(s) B1

PRODUCER STATEMENT – PS1 – DESIGN

(Guidance on use of Producer Statements (formerly page 2) is available at www.engineeringnz.org)

ISSUED BY: Structural Engineers NZ Ltd
(Design Firm)

TO: Moddex NZ LLP
(Owner/Developer)

TO BE SUPPLIED TO: Any Territorial Authority
(Building Consent Authority)

IN RESPECT OF: Structural Design of Handrail System
(Description of Building Work)

AT: Anywhere in New Zealand
(Address)

Town/City: Anywhere in New Zealand (Address) **LOT** **DP** **SO**

We have been engaged by the owner/developer referred to above to provide:

Structural Engineering

(Extent of Engagement)

services in respect of the requirements of Clause(s) B1 of the Building Code for:

All or Part only (as specified in the attachment to this statement), of the proposed building work.

The design carried out by us has been prepared in accordance with:

Compliance Documents issued by the Ministry of Business, Innovation & Employment B1/VM1 or
(verification method/acceptable solution)

Alternative solution as per the attached schedule

The proposed building work covered by this producer statement is described on the drawings titled:

Refer to attached schedule and numbered Refer to attached schedule ; together with the specification, and other documents set out in the schedule attached to this statement.

On behalf of the Design Firm, and subject to:

- (i) Site verification of the following design assumptions Refer to attached schedule
- (ii) All proprietary products meeting their performance specification requirements;

I believe on reasonable grounds that a) the building, if constructed in accordance with the drawings, specifications, and other documents provided or listed in the attached schedule, will comply with the relevant provisions of the Building Code and that b), the persons who have undertaken the design have the necessary competency to do so. I also recommend the following level of construction monitoring/observation:

CM1 CM2 CM3 CM4 CM5 (Engineering Categories) or as per agreement with owner/developer (Architectural)

I, Sadeer Kattan am: CPEng 1013983 # Reg Arch #
(Name of Design Professional)

I am a member of: Engineering New Zealand NZIA and hold the following qualifications: BE (Hons) CPEng CEng

The Design Firm issuing this statement holds a current policy of Professional Indemnity Insurance no less than \$200,000*.

The Design Firm is a member of ACENZ:

SIGNED BY Sadeer Kattan (Signature) Sadeer Kattan Digitally signed by Sadeer Kattan Date: 2021.02.12 09:22:14 +13'00'
(Name of Design Professional)

ON BEHALF OF Structural Engineers NZ Ltd Date: 12/02/2021
(Design Firm)

Note: This statement shall only be relied upon by the Building Consent Authority named above. Liability under this statement accrues to the Design Firm only. The total maximum amount of damages payable arising from this statement and all other statements provided to the Building Consent Authority in relation to this building work, whether in contract, tort or otherwise (including negligence), is limited to the sum of \$200,000.*

This form is to accompany **Form 2 of the Building (Forms) Regulations 2004** for the application of a Building Consent.
THIS FORM AND ITS CONDITIONS ARE COPYRIGHT TO ACENZ, ENGINEERING NEW ZEALAND AND NZIA

SCHEDULE

*From Page 1:

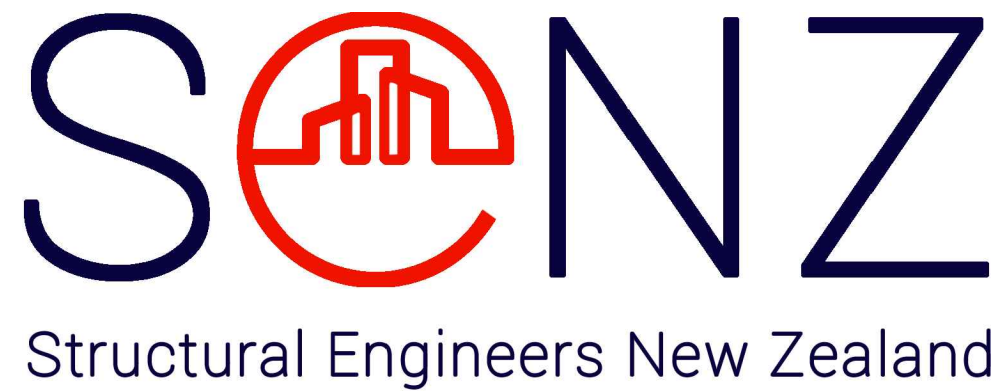
On behalf of the design firm and subject to site verification of the following design assumptions:

1. The supporting structure, as designed by others, is able to withstand the applied loads. This must be effectively communicated with the building owner or manager. SENZ takes no responsibility should this not be followed.
2. The installation of the handrails is in accordance with the limits and specifications as set out on the drawing listed below.
3. The handrails are designed for loading class C3, as set out in AS/NZS 1170.1.

DRAWINGS:

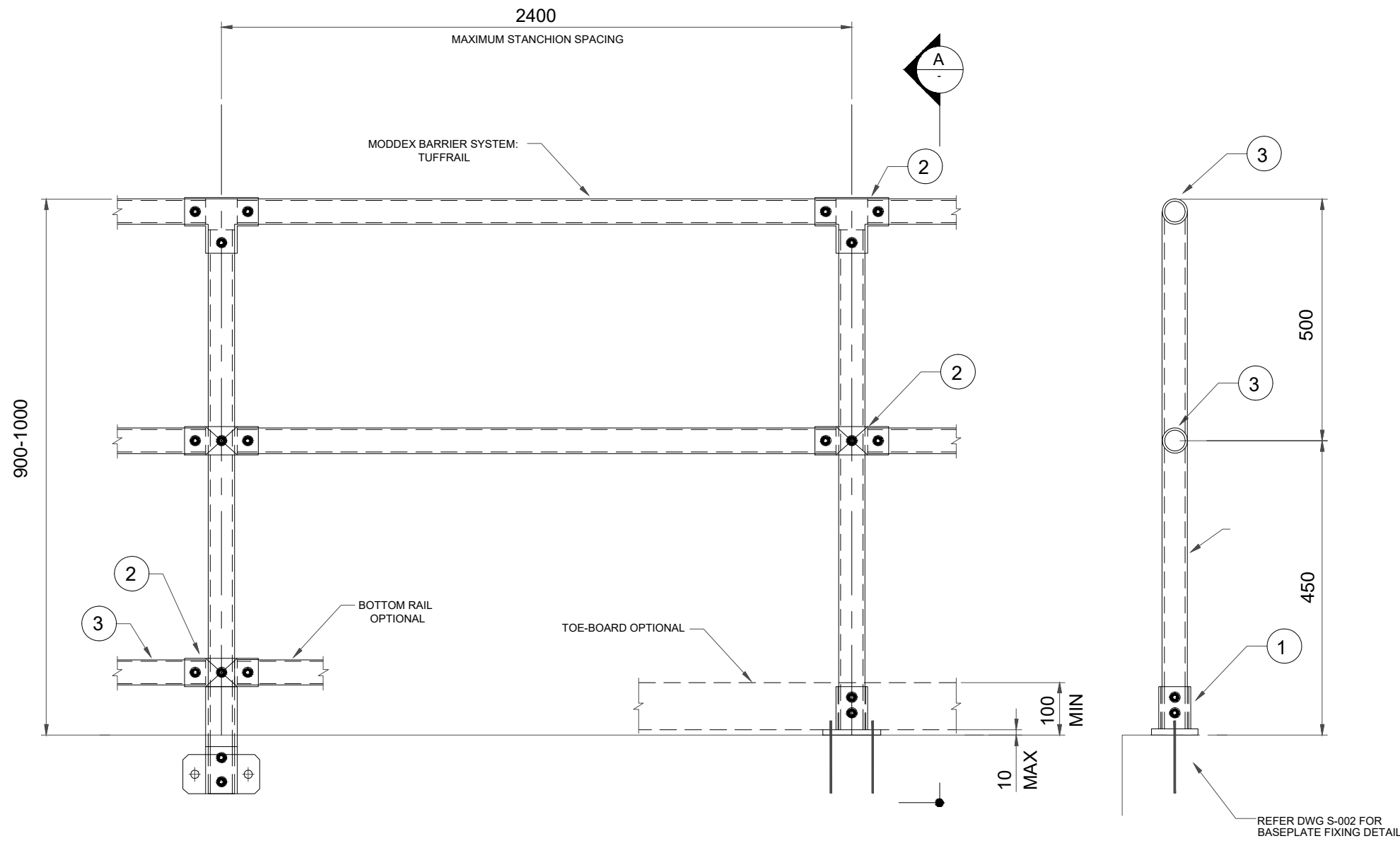
Drawing Number	Sheet	Revision	Date	Description
SENZ-033-004-G-000	1	0	12/02/2021	Drawing Schedule
SENZ-033-004-S-001	1	0	12/02/2021	Typical Horizontal Barrier Elevation
SENZ-033-004-S-002	1	0	12/02/2021	Barrier Details and Specifications Elevation
SENZ-033-004-S-003	1	0	12/02/2021	Typical Horizontal Handrails Elevation
SENZ-033-004-S-004	1	0	12/02/2021	Handrail Details and Specifications Elevation

**STRUCTURAL DRAWINGS
STANDARD HANDRAILS
JOB NUMBER - 033 - 004**



DWG NO	TITLE	REV	REV DATE
033-004-G-000	DRAWING SCHEDULE	0	12/02/2021
033-004-S-001	TYPICAL HORIZONTAL BARRIER ELEVATION	0	12/02/2021
033-004-S-002	BARRIER DETAILS AND SPECIFICATION	0	12/02/2021
033-004-S-003	TYPICAL HORIZONTAL HANDRAIL ELEVATION	0	12/02/2021
033-004-S-004	HANDRAIL DETAILS AND SPECIFICATION	0	12/02/2021

						Business Address: Level 1 52 Highbrook Drive, East Tamaki, Auckland	<p>Chartered Civil & Structural Engineers</p>	Client:	Project: MODDEX BARRIER SYSTEM: TUFFRAIL	FOR CONSTRUCTION	
					Office Number: (+64) 09 275 6029	Title: DRAWING SCHEDULE			Drawing No. 033 - 004 - G - 000	Rev. 0	
					Mobile Number: (+64) 021 967 977						
0	FOR CONSTRUCTION	MW	SK	SK	12/02/21	E-mail Address: info@structural-engs.co.nz					
REV	Issue	By	Chk	Appd	Date	Website: www.structural-engs.co.nz					



1:10 TYPICAL HORIZONTAL BARRIER ELEVATION

1:10 SECTION A

GENERAL

1. THESE SPECIFICATIONS SHALL TAKE PRECEDENCE UNLESS OTHERWISE ADVISED BY THE DESIGN ENGINEER
2. COMPLY WITH CONTRACTORS HSE PLAN.
COMPLY WITH HEALTH & SAFETY IN EMPLOYMENT ACT & REGULATIONS.
MAINTAIN SAFE SITE AND WORK PRACTICES AT ALL TIMES.
3. ALL WORK AND MATERIALS SHALL COMPLY WITH THE BUILDING ACT & REGULATIONS.
4. THE BUILDING DESIGNER IS RESPONSIBLE FOR ENSURING THE NECESSARY SUPPORTING STRUCTURE IS PROVIDED FOR THE BARRIER SYSTEM.
5. THE SUPPORTING STRUCTURE SHALL BE DESIGNED FOR THE MINIMUM DESIGN LOADS SPECIFIED IN THE BASIS OF DESIGN.
6. THE SUPPORTING STRUCTURE SHALL BE DESIGNED TO ACCOMMODATE THE SPECIFIED BARRIER ANCHORS.
7. OBTAIN BUILDING CONSENT AS REQUIRED, CALL FOR ALL SCHEDULED INSPECTIONS AND FINAL INSPECTION FOR CODE OF COMPLIANCE ON COMPLETION.
8. CHECK ALL DIMENSIONS AND LEVELS ON SITE BEFORE STARTING CONSTRUCTION WORK.
REFER ARCHITECTURAL DIMENSIONING FOR LAYOUT AND LEVELS.
REFER ENGINEERING DIMENSIONING FOR DETAILS.
9. ALL COMPONENTS OF THE MODDEX BARRIER SYSTEM INCLUDING FIXINGS AND ANCHORS SHALL BE SUPPLIED BY MODDEX NZ.

BASIS OF DESIGN

- | | |
|----------------------------|--|
| 1. DESIGN LIFE | 50 YEARS MINIMUM |
| 2. BUILDING OCCUPANCY B, E | |
| 3. LOADINGS | AS/NZS 1170.1 : 2002 - TABLE 3.3
AS 1657 : 2013 - CL6.1 |
| 4. LIVE LOADINGS | LINE 0.35 kN/m
CONCENTRATED 0.6 kN
INFILL N/A |

STRUCTURE

ITEM NO.	MATERIAL	GRADE
1	CAST BASE FLANGE	MALLEABLE CAST IRON
2	CAST CONNECTOR	MALLEABLE CAST IRON
3	48.3 OD x 3.2 GALVANIZED CHS	250

1. ALL PIPE TO CONFORM TO : AS 1074
2. GALVANIZING TO : AS/NZS 4680 : 2006
3. REFER TO MODDEX BARRIER SYSTEM : TUFFRAIL FOR FURTHER PRODUCT SPECIFICATION DETAILS.

BARRIER CONFIGURATION OPTIONS

1. TOP RAIL & MID RAIL.
2. TOP RAIL, MID RAIL & BOTTOM RAIL.
3. TOP RAIL, MID RAIL & TOE-BOARD.
4. TOP RAIL, MID RAIL, BOTTOM RAIL & TOE-BORAD.

REV	Issue	By	Chk	Appd	Date
0	FOR CONSTRUCTION	MW	SK	SK	12/02/21

Business Address: Level 1 52 Highbrook Drive,
East Tamaki, Auckland
Office Number: (+64) 09 275 6029
Mobile Number: (+64) 021 967 977
E-mail Address: info@structural-engs.co.nz
Website: www.structural-engs.co.nz

SONZ
Structural Engineers New Zealand
Chartered Civil & Structural Engineers

Client: **moddex**

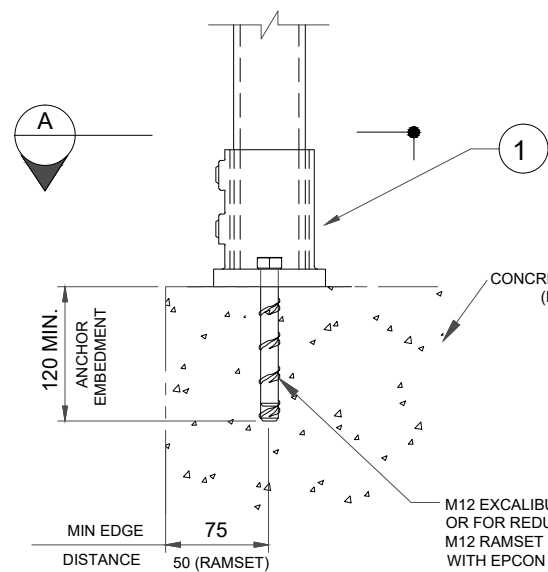
Project: MODDEX BARRIER SYSTEM: TUFFRAIL

Title: TYPICAL HORIZONTAL BARRIER ELEVATION

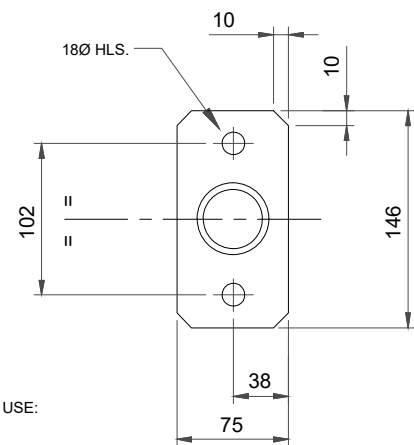
FOR CONSTRUCTION

Drawing No. 033 - 004 - S - 001

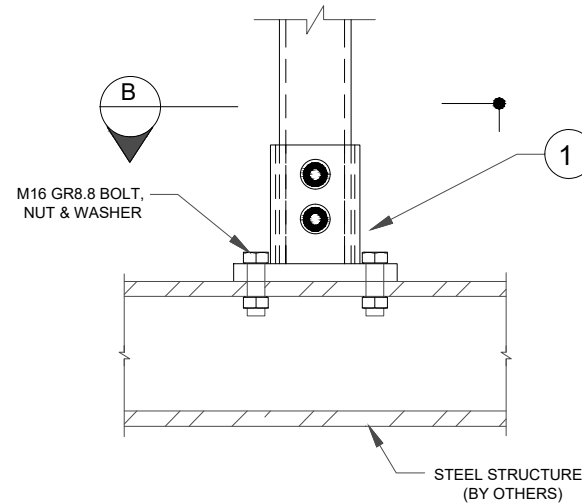
Rev. 0



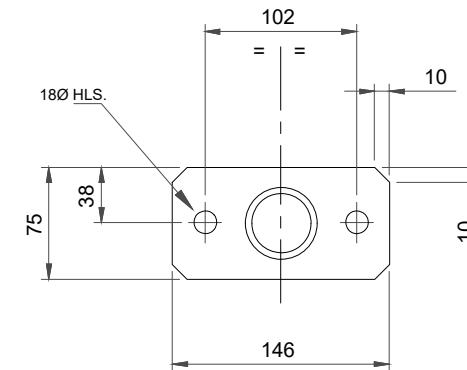
TYP. BASEPLATE TO CONCRETE FIXING
1:5 (TOP MOUNT)



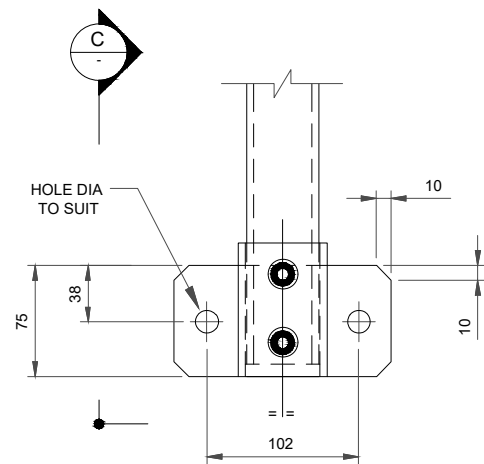
SECTION A
1:5



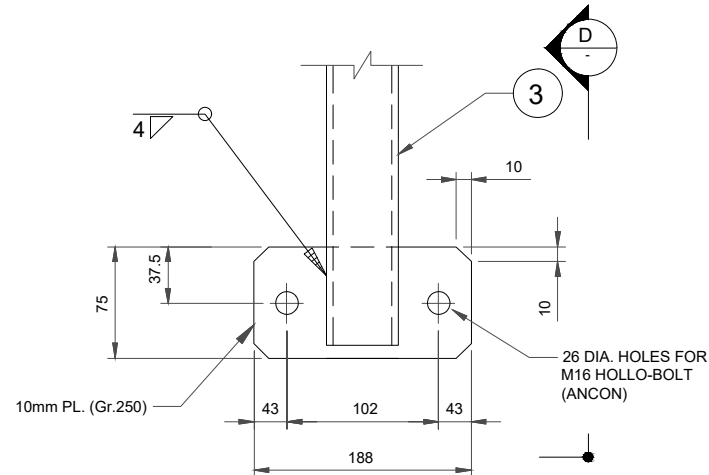
TYP. BASEPLATE TO STEEL FIXING
1:5 (TOP MOUNT)



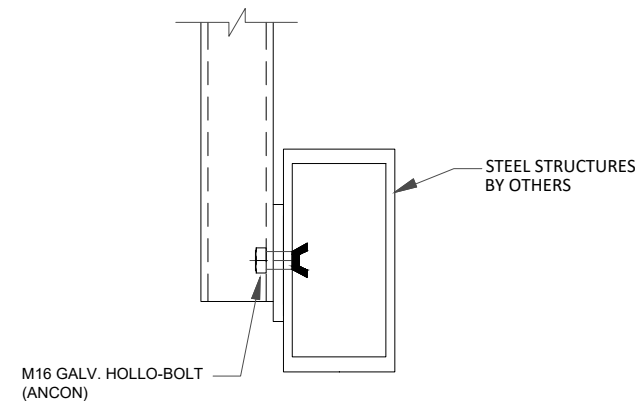
SECTION B
1:5



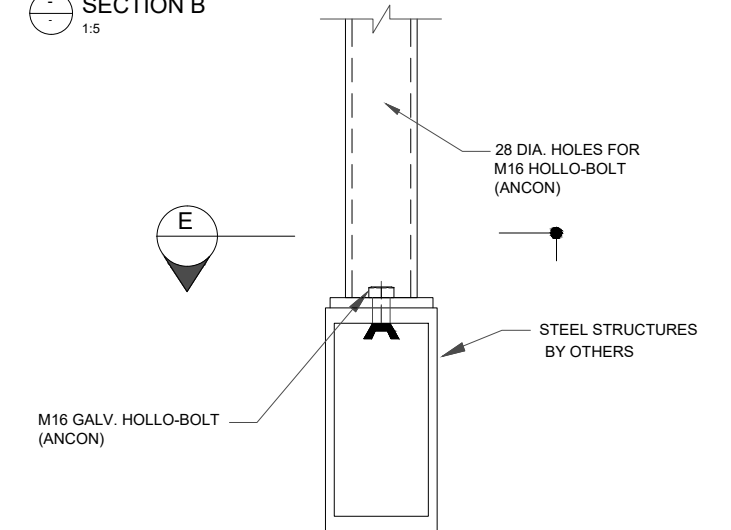
TYP. FACE MOUNT FIXING
1:5



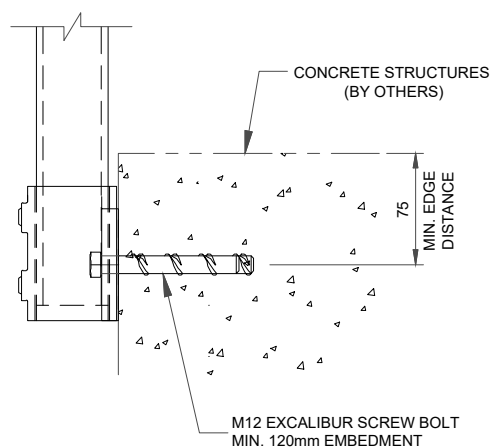
TYP. HOLLOW SECTION FIXING FACEMOUNT
1:5



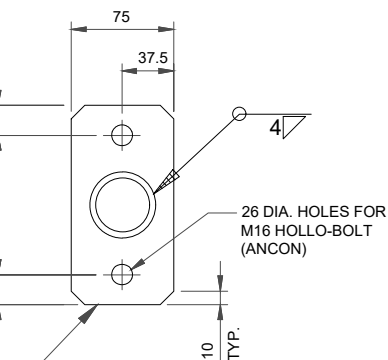
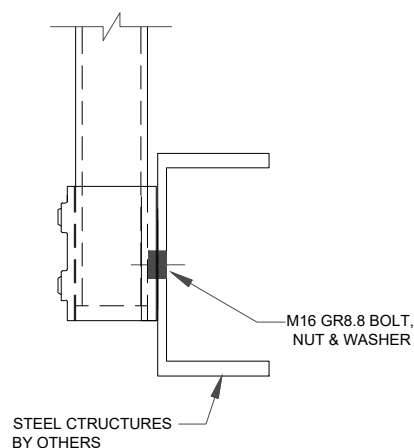
SECTION D
1:5 FACE MOUNT



TYP. HOLLOW SECTION FIXING TOP MOUNT
1:5



SECTION C
1:5 FACE MOUNT



SECTION E
1:5 TOP MOUNT

ANCHORS:

CONCRETE

1. ANCHORS SHALL BE M12 EXCALIBUR SCREWBOLT UNLESS NOTED OTHERWISE.
2. ALTERNATIVE ANCHOR OPTION REDUCED EDGE DISTANCE:
EXTERIOR ALL ZONES RAMSET CS12160SS FIXED WITH EPCON C8.
3. CONCRETE STRUCTURES SUPPORTING BARRIER SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 25 MPa.

STEEL

1. ANCHORS SHALL BE M16 BOLTS, NUTS AND WASHERS. (PROPERTY CLASS GRADE 8.8)

ANCHOR MATERIAL / COATING

- | | |
|--------------------|------------------------|
| 1. INTERIOR | ZINC |
| 2. EXTERIOR ZONE B | GALVANIZED (AS 1214) |

0	FOR CONSTRUCTION	MW	SK	SK	12/02/21
REV	Issue	By	Chk	Appd	Date

Business Address: Level 1 52 Highbrook Drive, East Tamaki, Auckland
 Office Number: (+64) 09 275 6029
 Mobile Number: (+64) 021 967 977
 E-mail Address: info@structural-engs.co.nz
 Website: www.structural-engs.co.nz



Client: MODDEX BARRIER SYSTEM: TUFFRAIL

Title: BARRIER DETAILS AND SPECIFICATION

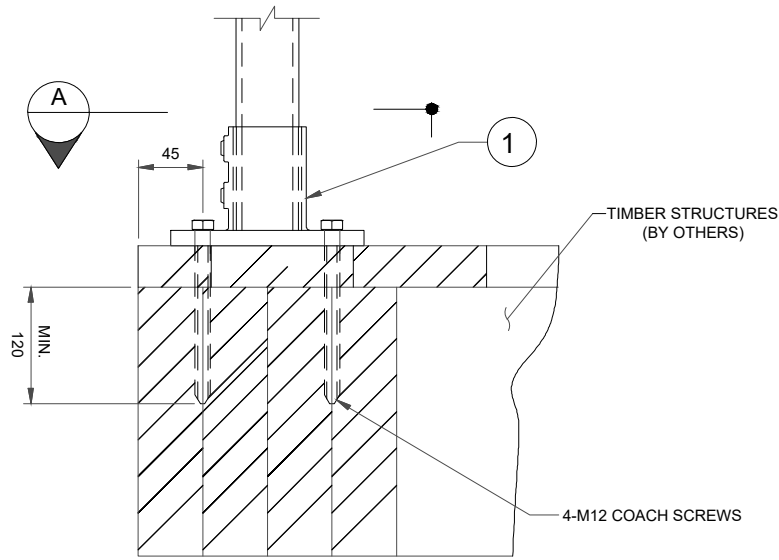
FOR CONSTRUCTION

Drawing No. 033 - 004 - S - 002

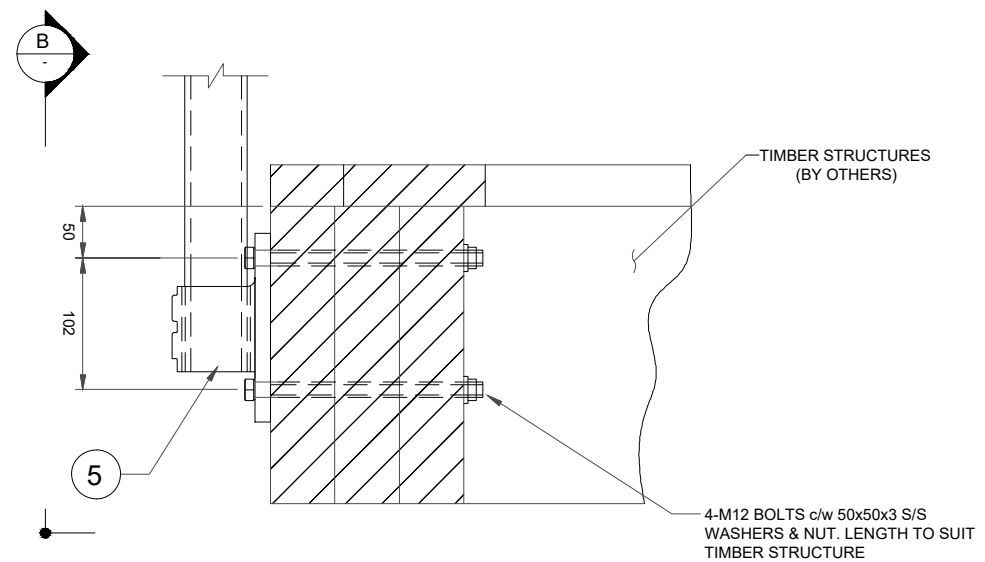
Rev. 0



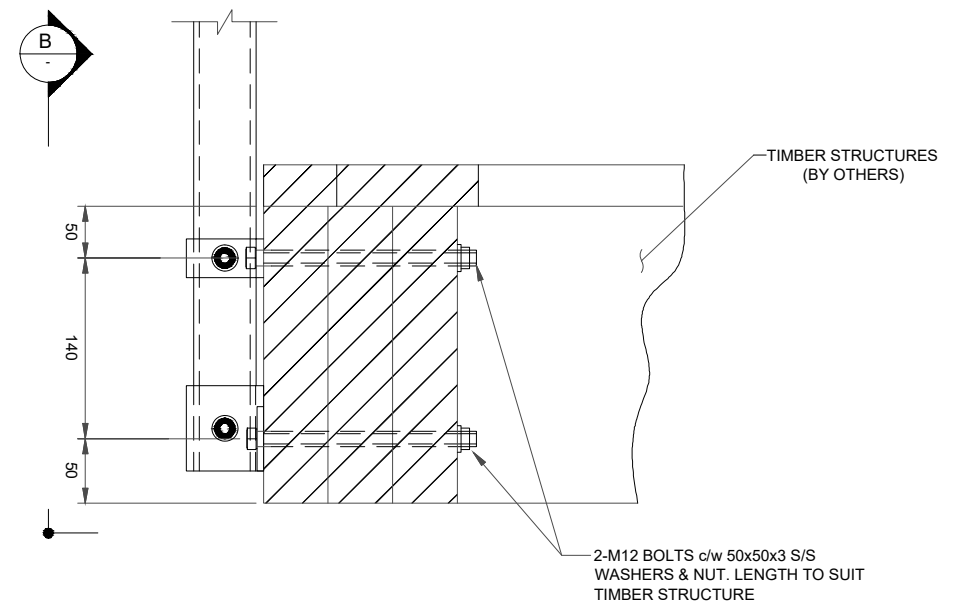
						Business Address: Level 1 52 Highbrook Drive, East Tamaki, Auckland	 Chartered Civil & Structural Engineers	Client:	Project:	FOR CONSTRUCTION		
						Office Number: (+64) 09 275 6029				Title: TYPICAL HORIZONTAL HANDRAIL ELEVATION	Drawing No.	Rev. 0
						Mobile Number: (+64) 021 967 977						
0	FOR CONSTRUCTION	MW	SK	SK	12/02/21	E-mail Address: info@structural-engs.co.nz						
REV	Issue	By	Chk	Appd	Date	Website: www.structural-engs.co.nz						



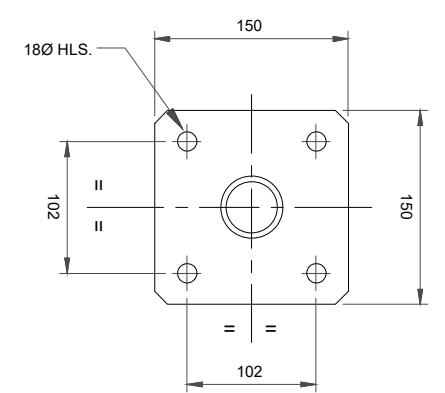
TYP. TOP MOUNT FIXING
1:5



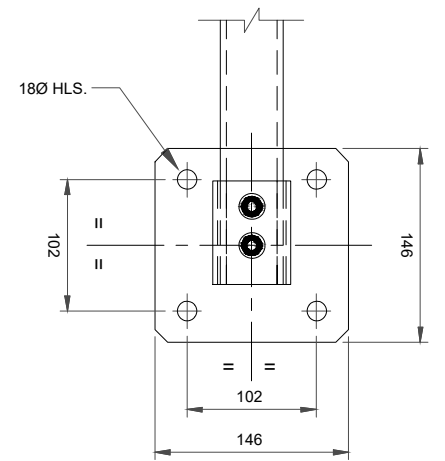
TYP. FACE MOUNT FIXING
1:5



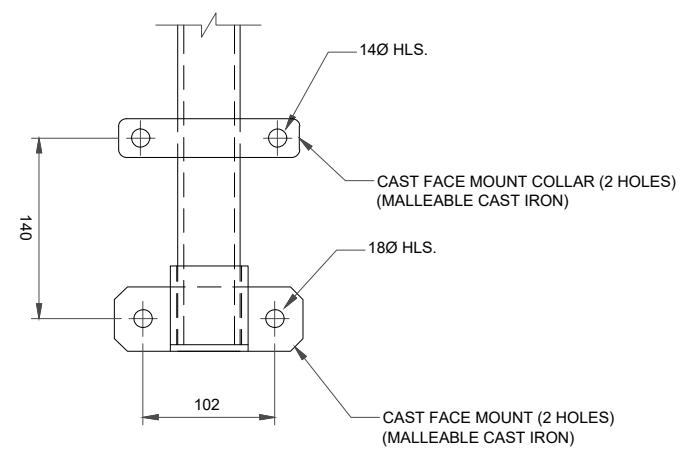
ALT. FACE MOUNT FIXING
1:5



SECTION A
1:5 TOP MOUNT



SECTION B
1:5 FACE MOUNT



SECTION C
1:5 FACE MOUNT

ANCHORS:

TIMBER:

- TIMBER STRUCTURES SUPPORTING BARRIERS SHALL BE DESIGNED IN ACCORDANCE WITH THE NEW ZEALAND BUILDING CODE AND NZS 3604 (TIMBER FRAMED BUILDINGS)

ANCHOR MATERIAL COATING (NZS 3604 - TBL 4.1)
1. EXTERIOR, EXPOSED - TYPE 304 STAINLESS STEEL

0	FOR CONSTRUCTION	MW	SK	SK	12/02/21
REV	Issue	By	Chk	Appd	Date

Business Address: Level 1 52 Highbrook Drive, East Tamaki, Auckland
 Office Number: (+64) 09 275 6029
 Mobile Number: (+64) 021 967 977
 E-mail Address: info@structural-engs.co.nz
 Website: www.structural-engs.co.nz


 Structural Engineers New Zealand
 Chartered Civil & Structural Engineers

Client: _____

Project: _____

Title: **HANDRAIL DETAILS AND SPECIFICATION**

FOR CONSTRUCTION

Drawing No. _____ Rev. **0**