

26/02/2024

RE: STRUCTURAL ENGINEERING CERTIFICATE

1. Structure

Ezzy Fit FRP composite post for retaining wall. Class 10b structure under the Building Code of Australia.

Post dimension and shape:

- 100x100x6 H
- 100x100x6 U
- 100x100x10 H
- 100x100x10 U

2. Description of aspect/s certified

- 100x100x6 H and 100x100x6 U shaped posts:
 - ✓ 1m high above the ground. The maximum spacing of the posts is 2.0m subject up to 5kPa surcharge live load.
 - ✓ 1m high above the ground. The maximum spacing of the posts is 2.4m subject up to 3kPa surcharge live load.
- 100x100x10 H and 100x100x10 U shaped posts:
 - ✓ 2m high above the ground. The maximum spacing of the posts is 1.6m subject up to 5kPa surcharge live load.
 - ✓ 2m high above the ground. The maximum spacing of the posts is 2.0m subject up to 3kPa surcharge live load.
 - ✓ 1m high above the ground. The maximum spacing of the posts is 2.4m subject up to 5kPa surcharge live load.

The posts are recommended to have an angle which is a 1 in 10 slop.

The site condition below must be taken into account when to design the post of retaining wall:

- Soil property;
- Wind load;
- Earthquake load;
- Top surcharge load;
- Retained earth pressure;

- Ground water pressure;
- The post footing design with the embedment requirement;
- The distance of building to the retaining wall;
- The distance of construction zone to the retaining wall.

3. Basis of certification

AS1170.0-2002 (R2016) Structural Design Actions-General Principles;
AS1170.1-2002 (R2016) Permanent Imposed & Other Actions;
AS1170.2-2002 Wind loads;
AS1170.4-2007 Earthquake Actions;
AS4678-2002 Earth Retaining Structures;
AS2870-2011 Residential slabs and footings.

4. Reference documentation

Ezzy Fit Post Drawings;

This certificate must work with the relevant Building Regulation form (e.g. Form 15 in QLD) for a given site location.

Bin Wang



MIEAust | CPEng | NER (2915503)