

**J.V. CONSULTING ENGINEERS Pty. Ltd.**

A.C.N. 007 208 228

364 Main Street

Mornington, 3931

Phone (03) 5975 9333

Fax (03) 5975 9444

Email eng@jvconeng.com.au

Project:

3 PONY LAKE  
11 - CLARE

Engineer:

JOHN VARKOVIC

**COMPUTATIONS**

Job No.:

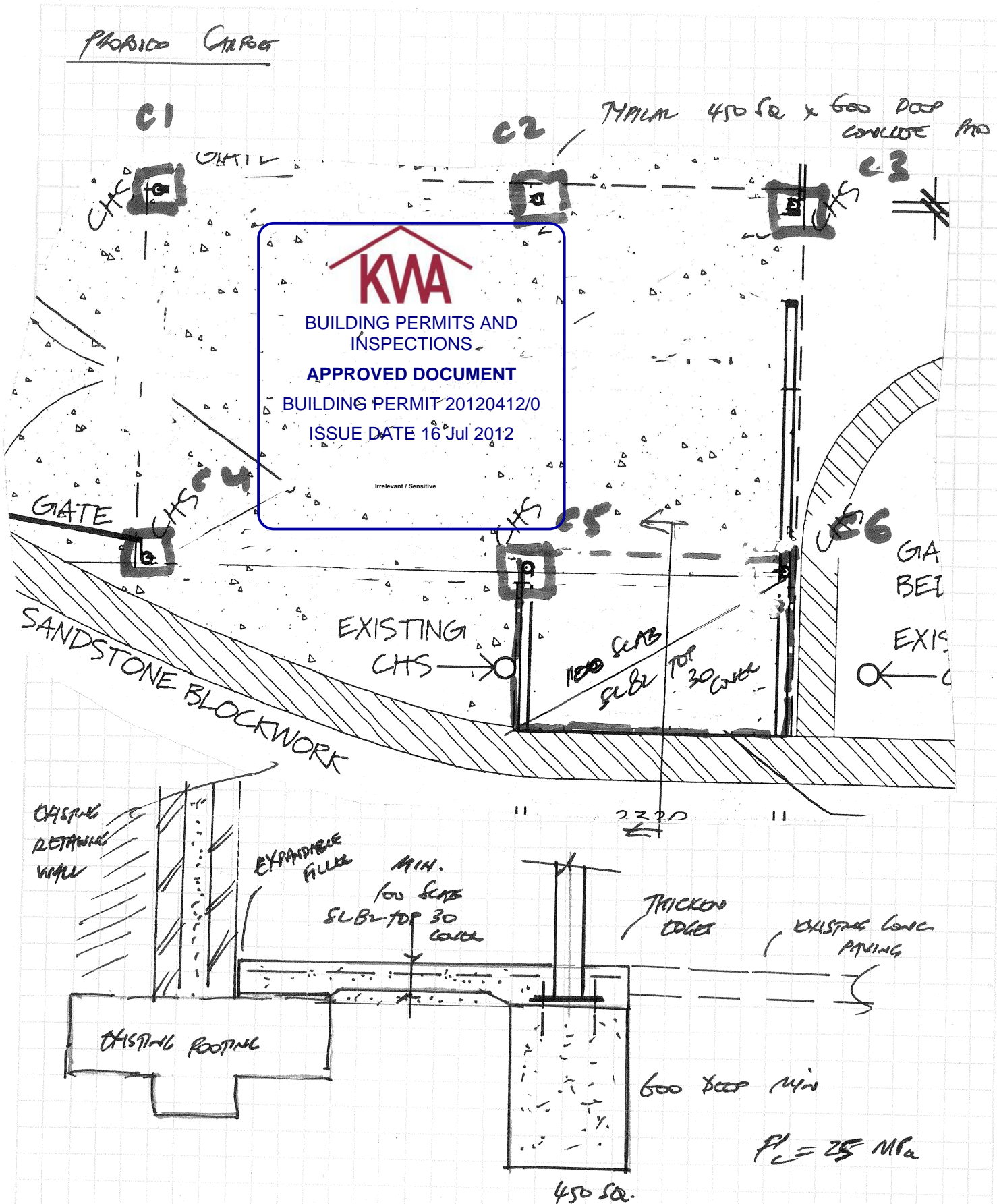
12167

Date:

JUNE 2012

Page:

1





**J.V. CONSULTING ENGINEERS Pty. Ltd.**

A.C.N. 007 208 228

364 Main Street

Mornington, 3931

Phone (03) 5975 9333

Fax (03) 5975 9444

Email eng@jvconeng.com.au

Project: .....

Engineer: .....

BUILDING PERMITS AND

INSPECTIONS

APPROVED DOCUMENT

BUILDING PERMIT 20420412/0

ISSUE DATE 16 Jul 2012

Irrelevant / Sensitive

CARPET BEAMS

MAX SPAN = 3800

$$\text{Effective Load Width} = 2.0 - \frac{0.4}{0.24} = 0.5$$

$$\underline{1.3 \text{ k/m}}$$

MAX WIND UPLIFT: —

TOE TAIL CH 2

$$V_z = 45 \times 0.91 \times 0.9 \times 1.0 = 36.8 \text{ m/sec}$$

$$\therefore p_z = 0.6(36.8)^2 \times 10^{-3} = 0.81 \text{ kPa}$$

$$\text{MAX WIND UPLIFT} = 0.81 \times 1.0 = 0.81 \text{ k/m}^2 \times 2.0 = 1.6 \text{ k/m}^2$$

$$\therefore \text{DL} + \text{U} = 1.3 \text{ k/m} \downarrow$$

$$\text{DL} + \text{WL} = 0.8 \text{ k/m} \uparrow$$

$$M_{\text{max}} = 2.3 \text{ kNm}$$

$$240 \times 45 \text{ F7 TP} \rightarrow f_z = 3.7 \text{ MPa} \text{ OK. (240 x 45 F7 } f_z = 5.3)$$

$$f_{ss} = 4.9 \text{ MPa} \text{ OK. } 3.0 \times 2 = 6.0$$

$$(240 \times 45 \text{ F7}) \rightarrow A = 8.7 \text{ MPa} \text{ OK. } 5.3 \times 2 = 10.6$$

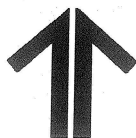
ie MIN. 240 x 45 F7 TP. BEAMS OK.

TOTAL WIND FORCE ALONG CARPET CHAIRS

$$= 6 \times (0.81 \times 9) \times 1.0 = 4.5 \text{ kN}$$

TOTAL 6 POSTS TAKE 4

$$\therefore \text{Load/post} = 1.1 \text{ kN}$$



**J.V. CONSULTING ENGINEERS Pty. Ltd.**

A.C.N. 007 208 228

364 Main Street

Mornington, 3931

Phone (03) 5975 9333

Fax (03) 5975 9444

Email eng@jvconeng.com.au

Project: .....

Engineer: .....



BUILDING PERMITS AND  
INSPECTIONS

APPROVED DOCUMENT

BUILDING PERMIT 20120412/0

ISSUE DATE 16 Jul 2012

COMPUTATIONS

Job No. 12167

Date: .....

Page 3

Irrelevant / Sensitive

$$\text{Rise HEIGHT} = 2400$$

$$\therefore M_{\text{RAE}} = 2.64 \text{ kNm}$$

$$101.6 \phi \times 3.2 \text{ CHS}$$

$$Z = 23.6 \times 10^3$$

$$F = 1.20 \times 10^6$$

$$f_b = 111.9 \text{ MPa} (= 0.32 F_y)$$

OK

$$\checkmark \leq \frac{1.1 \times 2 \times 10^3 \times 10^{12} \times 10^3}{3 \times 2 \times 10^8 \times 1.2 \times 10^6}$$

$$= 4.2 \times 0.86 = 18.2 \text{ mm}$$

Acceptable for CHS  $\therefore$  OK.

OK 101.6  $\phi$  x 3.2 CHS OK for Ribs

$$\text{Total vol. UPST OF CHS} = 0.8 \times 6.1 \times 3.5 = 17.1 \text{ L}$$

$$6 \text{ FORMS} \rightarrow 2.85 \text{ kN} = 0.119 \text{ m}^3$$

IE 600 x 450 OK. OK.

$$\text{Bolt at 130 mm} \therefore \text{Bolt Load} = \frac{2.64}{0.13} = 20.3/2 = 10.2 \text{ kN}$$

IE MIN. 4 - M12 "CHS" 10 BASE PLATE





**J.V. CONSULTING ENGINEERS Pty. Ltd.**

A.C.N. 007 208 228

364 Main Street

Mornington, 3931

Phone (03) 5975 9333

Fax (03) 5975 9444

Email eng@jvconeng.com.au

Project: .....

Engineer: .....

**BUILDING PERMITS AND  
INSPECTIONS**

**APPROVED DOCUMENT**

**BUILDING PERMIT 20120412/0**

**ISSUE DATE 16 Jul 2012**

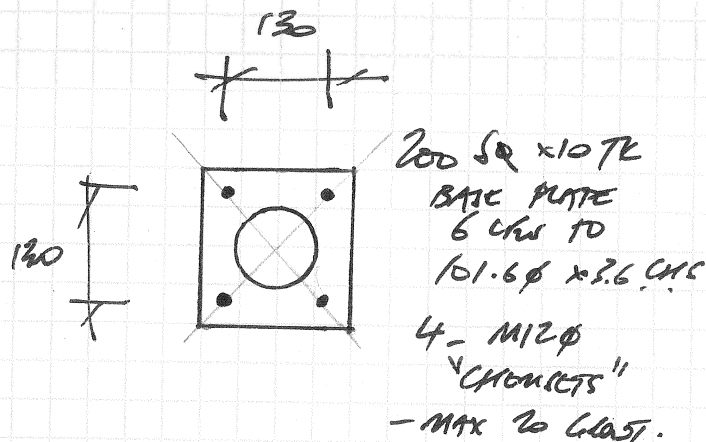
**COMPUTATIONS**

Job No.: 12167

Date: .....

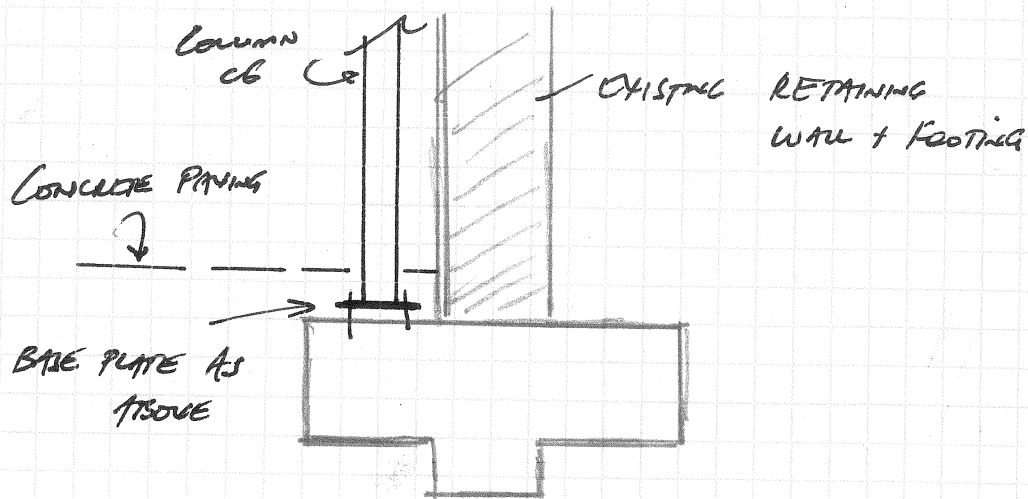
Page: 4

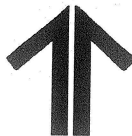
Irrelevant / Sensitive



THICK BASE PLATE C1 - C5

C6 Column Fixing — TO RETAINING WALL FOOTING





**J.V. CONSULTING ENGINEERS Pty. Ltd.**

A.C.N. 007 208 228

364 Main Street

Mornington, 3931

Phone (03) 5975 9333

Fax (03) 5975 9444

Email eng@jvconeng.com.au

Project: .....

Engineer: .....



**BUILDING PERMITS AND  
INSPECTIONS**

**APPROVED DOCUMENT**

BUILDING PERMIT.20120412

ISSUE DATE 16 Jul 2012

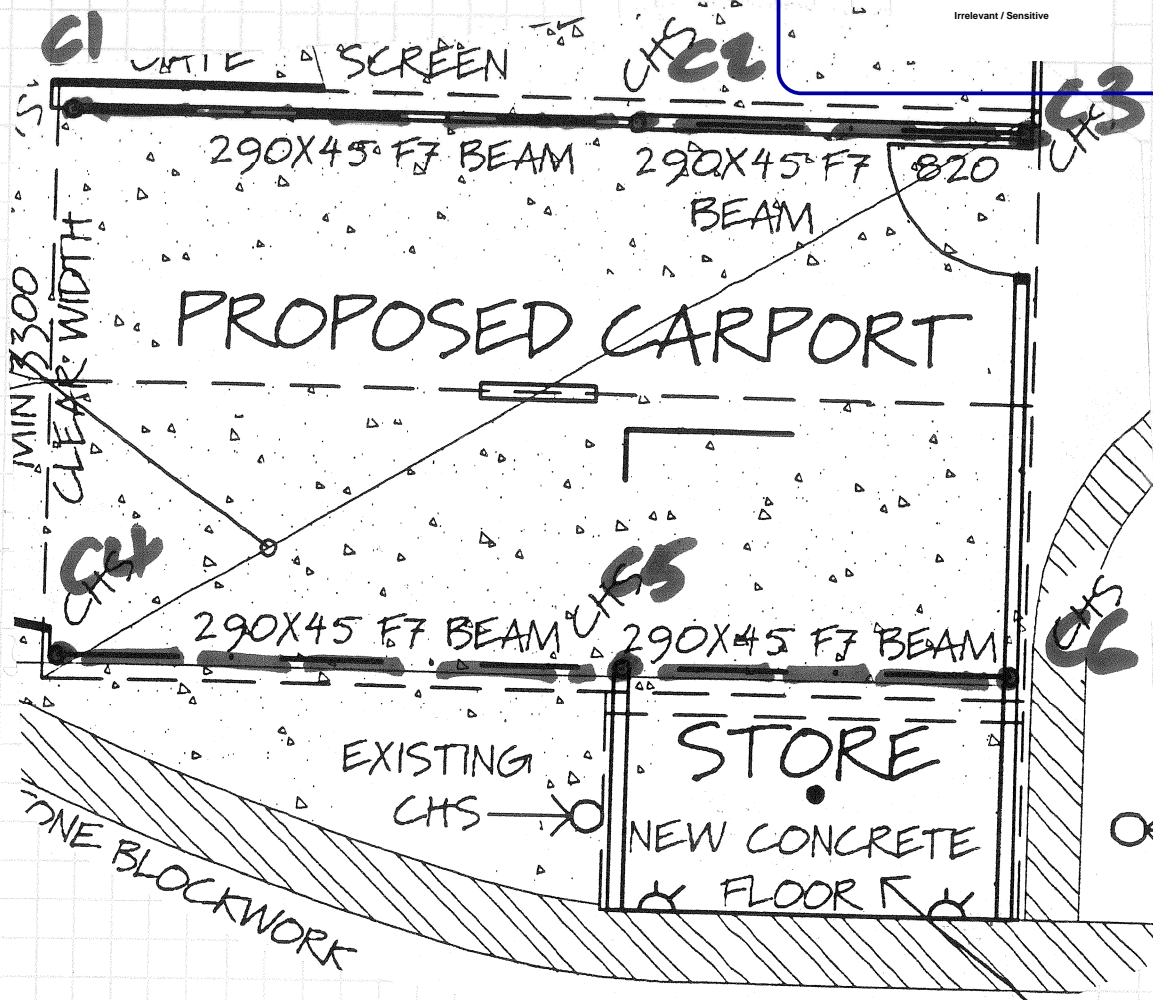
**COMPUTATIONS**

Job No: 12167

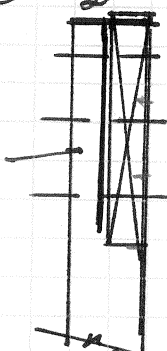
Date: .....

Page: 5

Irrelevant / Sensitive



CAP PLATE  
4 BAR  
WELD



TYPICAL PITCHING  
BEAM TO  
CHS.

8 CLEAR  
PLATE  
4 CHS TO  
CHS  
3. M12φ  
BOLTS TO  
290x45 F7

101.6φ CHS

NOTE: ALL FREEWALL

4 FITTINGS TO  
BE HOT DIP  
CRANKED

OR EQUIVALENT  
CORROSION PROTECTION