List of references

Books


• Friedman, M. 1994. A history of Africans with Special Reference to Marabastad 1902-1923. Submitted in fulfilment of the requirements for the degree of Master of Arts in the subject History at the University of South Africa


**JOURNALS**


**ONLINE RESOURCES**


**UNPUBLISHED RESOURCES**

Appendix A: Structural Design Calculations
COLD-FORMED LIPPED CHANNEL PURLIN DESIGN

Attributes

- fy: 200 MPa, Yield stress
- E: 200 Gpa, Modulus of elasticity
- Span: 6 m, Purlin span length
- Sag loss: 1, Number of sag bars
- Unbraced L: 3 m, Laterally unsupported length
- Continuity: Simply supported, Design system chosen
- Spacing: 1 m, Horizontal purlin spacing
- Sheet brace: No
- Spacing /: 200, Deflection ratio

Loads

- DLmax 0.43 kN/m², Max dead load for DL load case
- LLmax 0.25 kN/m², Max live load for CVL load case
- DLmin 0.18 kN/m², Min dead load for D+W load case
- WLmax 0.63 kN/m², Max wind uplift load for D+W load case

Load factors

- ULS 1.3
- SLS 1.1

Combined loads

- CVL 1.32 0.97 kN/m
- D+W 0.35 0.35 kN/m

Section selected: CFLC 150 x 75 x 30 x 2.5

Section mass: 6.31 kg/m

Calculation

- Simply supported
  - Mx 0.125 Wk²
  - Φ 0.9
  - f'c 274.2 MPa
  - f'c 222.8 MPa
  - Zx 36.8 10⁶ mm³
  - Zc 30.6 10⁶ mm³
  - Zc 1.0
  - fy 200.0 MPa
  - Mr 6.99 kN/m
  - Mu/Mr 0.85

- Laterally supported
  - Mu 0.125 Wk²
  - Mu 0.125 x 1.316 x 36
  - Zx 36.8 10⁶ mm³
  - Zc 30.6 10⁶ mm³
  - Zc 1.0
  - fy 200.0 MPa
  - Mr 6.99 kN/m
  - Mu/Mr 0.85

- Lateral unsupported
  - Mu 0.125 Wk²
  - Mu 0.125 x 1.316 x 36

Finally confirms

- Laterally supported
  - Mu 0.08 Wk²
  - Mu / 3.79 kN/m

- Lateral unsupported
  - Mu 0.11 Wk²
  - Mu / 3.79 kN/m

Deflection

- δmax 0.0008 Wk/γ
- δmax 15.0 mm
- δmax 30.0 mm
- span / 401
- δmax / 0.58

Table 8.4

Table 8.5

Table 8.6

Table 8.7

Table 8.8
APPENDIX B: SUSTAINABLE BUILDING ASSESSMENT RESULTS

SUSTAINABLE BUILDING ASSESSMENT TOOL (SBAT- P) V1

<table>
<thead>
<tr>
<th>PROJECT</th>
<th>ASSESSMENT</th>
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<tbody>
<tr>
<td>Project title:</td>
<td>Data:</td>
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<tr>
<td>Location:</td>
<td>Undertaken by:</td>
</tr>
<tr>
<td>Building type:</td>
<td>Company / organisation</td>
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<tr>
<td>Internal area (m²):</td>
<td>Telephone:</td>
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<tr>
<td>Number of users:</td>
<td>Fax:</td>
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</table>

![Sustainable Building Assessment Tool Diagram]

<table>
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<th>Economic</th>
<th>Environmental</th>
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</thead>
<tbody>
<tr>
<td>4.3</td>
<td>4.1</td>
<td>3.3</td>
</tr>
</tbody>
</table>

Overall 3.9  
Classification Good
Dedication
All glory to God for His blessings and grace. My father, mother and sister for supporting me in my architectural quest. To all my friends, thank you for keeping a smile on my face when I most needed it. And my best friend and fiancé, thank you for giving me our own memories and inspiring new meaning in the years ahead. To those we lost this year, M & A, we miss you and will keep you in our memory. Peace and love to all!