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3rd November 2022

Brett Hutton
JCDecaux
Unit 2-3, 182-190 Euston Rd,
Alexandria NSW 2015

RE: Saunders St and Miller st, Pyrmont, Sydney, 2009
Column Mounted P50 Signage, Structural Feasibility Statement

This Structural Feasibility Statement has been conducted by Dennis Bunt Consulting Engineers Pty Ltd (DBCE) at the request of JCDecaux.

The proposed sign is documented in the generic DA drawings by the architects Tzannes (JCD Multi-Site P50) 21027/ 001(D), 002(D) and 003(C) and the site-specific DA drawings by DBCE 21254 / DA01(D), DA02(F), and DA03(B).

A survey of the site was commissioned by JCDecaux.

The P50 sign is a single sided LED screen with visual screen dimensions of 3072mm horizontally x 4608mm vertically. The top of the LED screen will be located 8290mm above the ground. The sign is to be located above a column and horizontal beam that will form an L shape under the screen. The column and horizontal beam will be clad in stainless steel. There will be a door in the rear of the column to store equipment for the LED screen.

Site Description

The site is located between the footpath on Saunders st to the west and the Sydney trains track to the east. The ground appears to be soil overlaying what appears to be high strength rock.

The ground from the footpath is fairly flat for about 8m and then drops almost vertically about 6m to the level of the track. A rock face is visible at the vertical drop.

Structural Description

Steel frame

The structure will consist of a fabricated steel column 600mm x 300mm x 20mm thick and a rectangular box section welded to the top of the column to form an L shape.

A door is to be located in the rear of the column to store equipment so the column will act as a C section for most of its height.

A welded steel frame consisting of 200 x 100 RHS vertical members and 100x100 SHS horizontal members will be bolted to the top of the horizontal box section. Spigots will be welded to the top of this section and the vertical members in the welded frame will drop over the spigots and be fixed with bolts.

The LED screen will be assembled in the contractor's factory and clamped to the welded frame so it can be transported to site as one unit.

The L shaped structure will have stainless steel cladding fixed to it also in the contractor's factory and be transported to the site as one unit.

On site the L shaped structure will be bolted to the top of the concrete footing and the welded frame supporting the LED screen bolted to the L shaped frame.

The weight of the structure including the digital screen and the cladding is approximately 3.1 tonnes.

The sign is to be designed for a wind load for region A, terrain category 2.5 and a 50 year design life in accordance with AS1170.2.

Footing

Due to the appearance of relatively shallow high strength rock a pad footing is recommended. A footing 2.5m x 3m x 1.2m deep will be structurally acceptable. A 1.2m x .3m deep plinth above the footing is also recommended as it would enable most of the footing to be covered in soil.

If the depth of soil above the rock is less than 1.5m a shallower footing fixed to the rock by drilling and epoxying reinforcing bars into the rock could be used as an alternative to excavating the rock.

A services search should be completed before the ground is excavated for the pad footing.

The top of the pad footing should be buried 300mm below the top of the ground with a plinth on top for the column to be bolted to ensure plants can ground over the footing.

Recommendations

Based on the survey and our preliminary design we see no reason why the cantilevered signage cannot be installed.

A geotechnical assessment must be submitted post development consent to provide information on the soil/rock profile and its depth below ground."

A services search is undertaken in the area of the footing.

If you have any questions, please do not hesitate to ring the undersigned on 9451 7757

Yours Faithfully,

A handwritten signature in blue ink, appearing to read 'J Linsell', written in a cursive style.

John Linsell BE(Hons), MIEAust, CPEng, NPER(Struct)
for Dennis Bunt Consulting Engineers Pty Ltd