Dennis Bunt
Consulting Engineers Pty Ltd

ABN 23 039 013 724
Level 2, Building 8
Forest Central Business
49 Frenchs Forest Road East
Frenchs Forest NSW 2086

PO Box 652
Forestville, NSW, 2087
PH: (02) 9451 3455
FX: (02) 9451 3466
Email:info@dbce.com.au

Ref: 23073

30th April 2024

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

RE: Sydney Park Rd, Erskineville, NSW
Super 8 LED screen, 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 DA drawings by DBCE 23073 / DA01(D) and DA02(A).

A survey of the site was commissioned by JCDecaux.

The signage will consist of a super 8 LED screen with the visual dimensions being 7936mm horizontally and 2048mm vertically. The top of the LED screen will be located approximately 5.7m above the adjacent footpath. The screen will be located on one side of a steel box that will sit on a steel column. The inside of the box will be able to be accessed from a door in the back of the box to enable maintenance of the LED screen from behind.

The signage will be designed in accordance with the following loading codes.

AS/NZS 1170.0:2002	Structural design actions Part 0 : General Principles
AS/NZS 1170.1:2002	Structural design actions Part 1: Permanent, imposed, and other actions
AS/NZS 1170.2:2021	Structural design actions Part 2 : Wind actions
AS/NZS 1170.4:2007	Structural design actions Part 4 : Earthquake actions in Australia

Site Description

The site is located between the footpath on Sydney Park Rd to the south and the Sydney Trains tracks to the north.

There is a Sydney Trains fence between the footpath and the proposed location of the sign. The ground falls steeply from the fence to the level of the train tracks for approximately 10m. A new lockable gate will be added to the fence and a walkway from the gate to the rear of the column supporting the sign. A ladder will be added to the rear of the column to access a raised platform behind the sign box. From the raised platform the sign box can be accessed from a door in the back of the box.

Structural Description

Steel frame

The structure will consist of a rectangular steel box which will act as a 3D welded steel frame. There will be a walkway in the bottom of the box. The LED screen will be clamped to the face of the box.
The soffit of the box will be bolted to the top of a steel column, 610mm in diameter and the bottom of the column bolted to a concrete footing.

The LED screens will be assembled in the contractor's factory and clamped to the welded box so they can be transported to site as one unit.

The column will be transported separately.

The weight of the structure including the digital screens and the cladding is approximately 3 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.

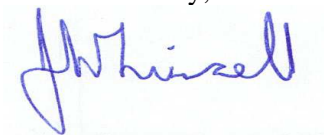
Footing

As the ground falls steeply, a concrete pile is recommended. It is estimated a 750-diameter pile approximately 13m in length will be required so the pile will extend approximately 5m below the track level. A 1.5m x 1.5m x 1.5m deep cap will be added to the top of the pile. Due to the slope of the ground the top of pile cap will be partially above ground.

Recommendations

Based on the survey and our preliminary design we see no reason why the cantilevered signage cannot be installed.
A geotechnical report is commissioned to provide information on the soil and its profile.
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 0400 023 714.

Yours Faithfully,



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