Attachment B

Code of Practice – Construction-Related Temporary Structures On and Above Roads

Draft Code of Practice: Construction-related Temporary Structures On and Above Roads

The City of Sydney acknowledges the Gadigal of the Eora Nation as the Traditional Custodians of our local area

CITY OF SYDNEY

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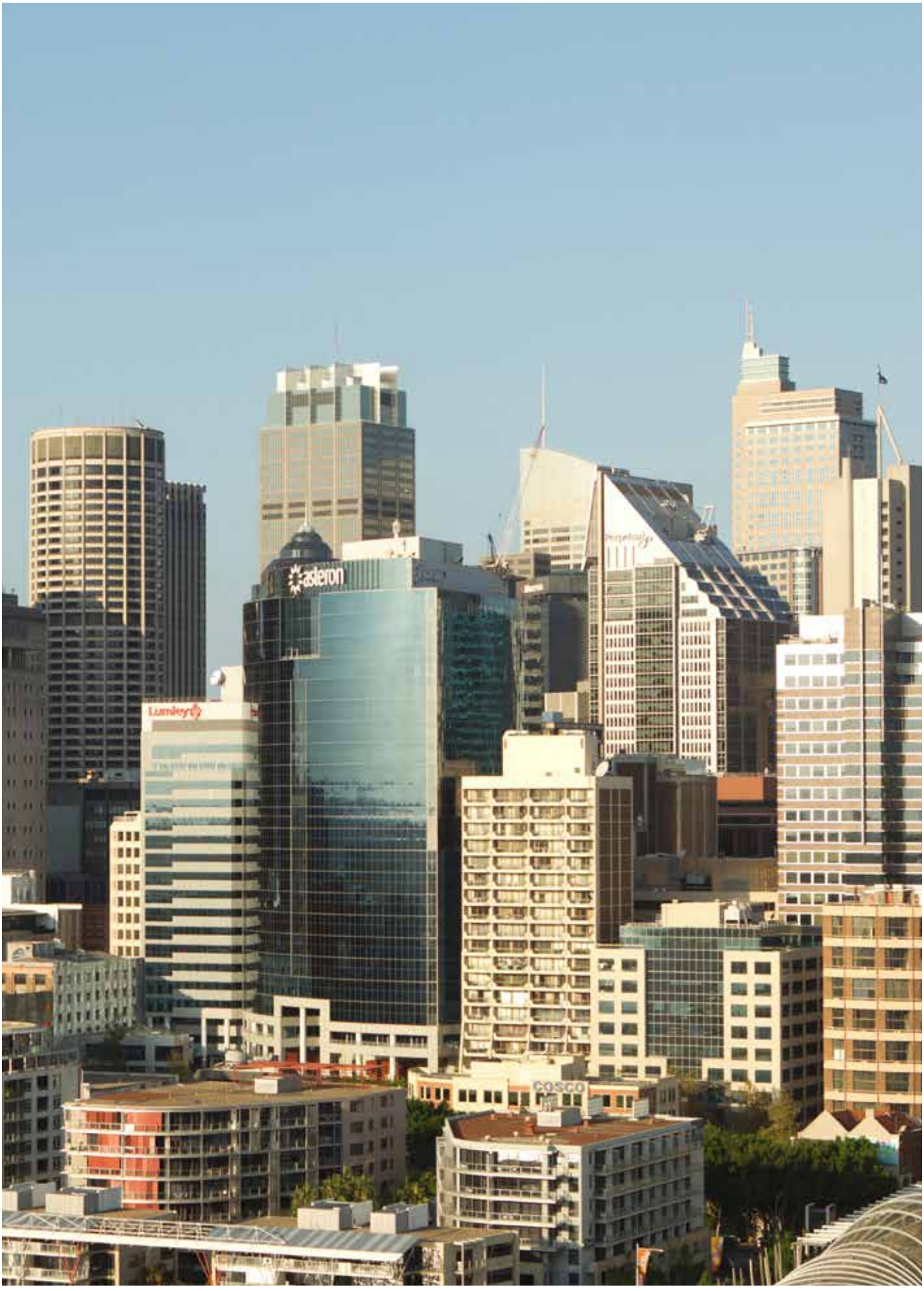

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Part 01 Preliminary

1.1 About this part

This part provides an overview of the general and the administrative requirements that apply to the placement of *temporary structures* on and above roads. It also sets out the purpose of the Code of Practice and identifies the statutory provisions that apply.

1.2 Overview

The City of Sydney local government area has an area of some 26 square kilometres. The city is Australia's iconic face to the world and international gateway. Some 320,000 visitors enter each day together with 437,000 workers. The city is also home to more than 242,000 residents.

The city undergoes continual change through the construction of new buildings and alterations and additions to existing buildings. Maintenance work on the city's substantial existing building stock is also a significant activity.

Temporary structures such as protective structures *(hoardings)*, perimeter *scaffolding* systems, cantilevered platforms and other structures are often a necessary part of development and building maintenance. *Hoarding* structures are typically

required to isolate a *worksite/workplace* from *public spaces* and to provide adequate protection and safety for the public. *Temporary structures* such as *scaffolding* systems are also required to screen and isolate *worksites* and provide a safe work platform for workers.

It is important that *temporary structures* erected in *public spaces* are designed and installed to a high standard to minimise impacts on the movement of people, vehicles, cyclists and operations of the business community. Poorly designed and maintained *temporary structures* can result in adverse visual impacts in the streetscape, particularly in the high-density city centre.

The installation of *temporary structures* on and above the *City's* land must therefore satisfy key design requirements including:

- minimising pedestrian and *cycleway* obstructions and inconvenience;
- maintaining safe, *accessible* passage (and clear widths) and high amenity including safe walking surfaces past *worksites* and *workplaces*; and
- minimising adverse visual impacts on the local environment.

The Code also requires the integration of public art and other high quality graphics such as historic images on *temporary structures* (mainly *hoardings* and *scaffolding*) to:

- mitigate visual impacts of *worksites* and *workplaces*; and
- enrich and vitalise *public spaces* to give added creativity, interest and meaning to Sydney's culture vibrancy and history.

The Code sets out minimum performance objectives and specific design criteria (deemed-to-comply provisions) for *hoardings* and *scaffolding* that will minimise and control impacts whilst allowing proponents to undertake work and to meet their legislative work health and safety responsibilities to protect the public.

1.3 Title of the Code and legal status

This Code of Practice ('the Code") is called the 'Code of Practice: Construction-related Temporary Structures On and Above Roads'. The Code gains its authority through the 'Local Approvals Policy: Construction-related Temporary Structures On and Above Roads' adopted under the provisions of the Local Government Act 1993.

1.4 What matters and activities are dealt with in this Code

This Code consists of six parts that deal with various forms of *temporary structures* and their usage including setting minimum design, maintenance and usage requirements to minimise adverse impacts, as follows:

Part 01 - Preliminary

Provides an overview of the legislative context of the Code, when seeking *approval* to install and use *temporary structures* and other mandatory requirements of the *City*.

Part 02 - General requirements

Describes the general requirements that apply to the various forms of *temporary structures* and their use.

Part 03 - Design requirements – *hoardings*

Describes the detailed requirements for the design of *hoardings* and their component elements.

Part 04 - *Scaffolding*

Sets out the minimum standards for *scaffolding* systems including specific design and installation certification.

Part 05 - Other forms of *temporary structures*

Specifies the requirements (including certification) applying to other forms of construction-related *temporary structures*.

Part 06 - Requirements for the display of graphics

Details design and installation requirements for the display of graphics on some forms of *temporary structures* that are regulated by this Code.

1.4.1 Construction-related temporary structures and their use - statutory context (see also 1.10)

Some forms of *temporary structures*, such as *hoardings* and *scaffolding* that are installed in *public spaces* are classified as exempt development under the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. These structures and their use are typically ancillary to construction works associated with *development consent* but their placement and use still require specific *approval* under the Local Government Act and the Roads Act.

In all cases *approval* under these two statutes must be obtained before erecting any forms of *temporary structures* in and above a *public space*.

1.5 Activities that are not regulated through this Code

The following construction-related activities (categories listed in the Table of Section 68 of the Local Government Act 1993) are not regulated by this Code:

(a) the carrying out of *hoisting* operations (Category E(1) activities) using equipment or devices such as:

- site-based cranes
- mobile cranes
- elevated work platforms including boom-lifts and scissor-lifts
- building maintenance units (BMUs)
- other equipment used to undertake any form of *hoisting* operation. (refer to the 'Note' below);

(b) installation of temporary barricades and devices (Category E(2) activities) in *public spaces* associated with *worksites* including:

- *road openings*
- mobile scaffolds/ladders
- pedestrian exclusion zones (barricading) associated with *hoisting* operations and other activities
- other minor works undertaken in *public spaces*; (refer to the 'Note' below);

(c) the placement of skip bins in *public spaces* (Category C(3)) – regulated through the City of Sydney 'Waste Management *Local Approvals Policy*';

(d) carrying out stormwater drainage works (Category B(5)) – discharging pooled rainwater in construction/excavation sites into the *City*'s stormwater drainage system; and

(e) connecting a private stormwater drainage system to a drainage system under the control of the *City* (Category B(6)).

Note: Activities in (a) and (b) are regulated through the *City*'s 'Code of Practice: Hoisting and Construction Activities On and Above Roads'.

1.6 The purpose of the Code

The city undergoes continual change and various activities through:

- the construction of new buildings
- alterations and additions to existing buildings
- maintenance of existing buildings.

These activities can affect and adversely impact on *public spaces* including the safety, amenity and convenience of the public and building occupants.

Works can also impact on business operations through the temporary loss of public exposure including *business identification signage* (see **2.16**) and access to the business by customers and deliveries.

To minimise impacts the *City* expects, and requires, that all *temporary structures* and activities affecting *public spaces* will be undertaken in a manner that complies with:

(a) this Code (by specifying design controls to minimise adverse impacts);

(b) other applicable policies, codes and guidelines adopted by the *City*;

(c) conditions of *development consent*; and

(d) *approvals* (permits) allowing *temporary structures* and associated activities to be carried out in *public spaces*.

1.6.1 Regulating and controlling the placement and use of temporary structures in a high density city (see also 1.19)

(a) In allowing the placement of *temporary structures* in and above *public spaces* the *City* has various statutory responsibilities to ensure structures and associated work activities are carried out in accordance with *approvals* and applicable controls. This can include taking action to address non-compliances or unsafe practices.

(b) A person or entity including developers, builders, sub-contractors and *principal certifiers* also have certain obligations and responsibilities to ensure work is undertaken in a manner that:

(i) meets all *approval* requirements (*consents* and *permits*);

(ii) provides acceptable public safety and protection; and

(iii) maintains acceptable standards of public and community amenity near *temporary structures* and *worksites/workplaces*.

(c) It is critical to the effective operation and use of *public spaces* that structures and associated work activities are appropriately managed to minimise adverse impacts including pedestrian and cyclist movement past or beneath structures. This is particularly critical in areas that have high pedestrian densities and movement such as the *city-centre* and the outer suburb high density business and residential areas.

1.6.2 Industry liaison and statutory approvals

As a means to achieve orderly development including the installation of *temporary structures* with the least possible impact, the *City*'s Building Regulatory Team can assist the development and construction sectors through the provision of detailed information and technical assistance about the city's special needs and requirements.

1.6.3 Other activities and approvals

Other activities may also require *approval* and/or concurrence from other *City* teams. This includes:

- traffic management aspects
- bicycle and scooter movement
- *accessibility* (safe and convenient access);
- *street tree* removal and/or pruning permits (see **3.17.4**)
- granting the *approved* days and times to install and remove *temporary structures* (see **2.11.1**)
- site shoring and ground-anchoring to support *roads* when excavating (see **2.13**, **3.10.3** and the *City*'s 'Code of Practice: Hoisting and Construction Activities On and Above Roads').

1.7 Adoption of the Code

The Code of Practice was *approved* by Council on << date >> through a 'Local Approvals Policy: Construction-related Temporary Structures On and Above Roads' adopted under the provisions of the Local Government Act 1993.

1.8 Primary aims of the Code

This Code sets out the *City*'s minimum design criteria, *approval* processes and ongoing regulation for the placement of *temporary structures* in *public spaces* to ensure compliance with prescribed standards. To achieve this the Code:

(a) provides practical controls for the design, maintenance and regulation of *temporary structures (hoardings, scaffolding, cantilevered work platforms and other forms of temporary structures)* erected on or above *roads*;

(b) specifies controls to ensure that *temporary structures* are appropriately designed and maintained to minimise adverse impacts on safe and convenient pedestrian passage past *worksites* and structures including:

(i) people with disability and special mobility needs;

(ii) high quality public amenity and public safety;

(iii) minimising impacts on vehicle and bicycle movement on *roadways*; and

(iv) requirements for the display of public art and graphics on *hoardings* and *scaffolding* to add visual interest in *public spaces* and mitigate visual impacts of construction sites and *temporary structures*.

Figure 1.1: Map of the local government area showing the *city-centre* and *non-city-centre* zones (refer to **Figure 1.1a** for a detail of the *city-centre* zone)

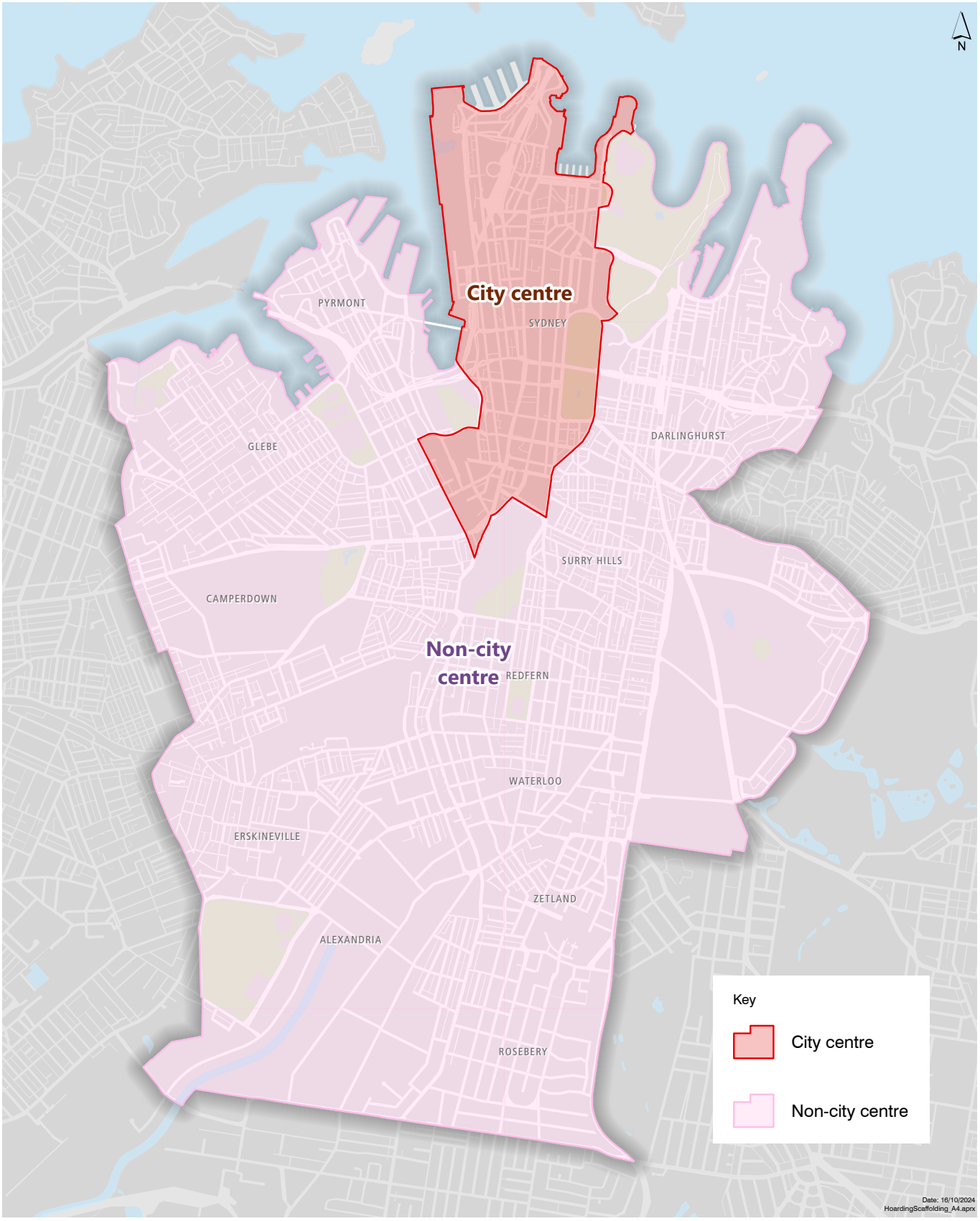
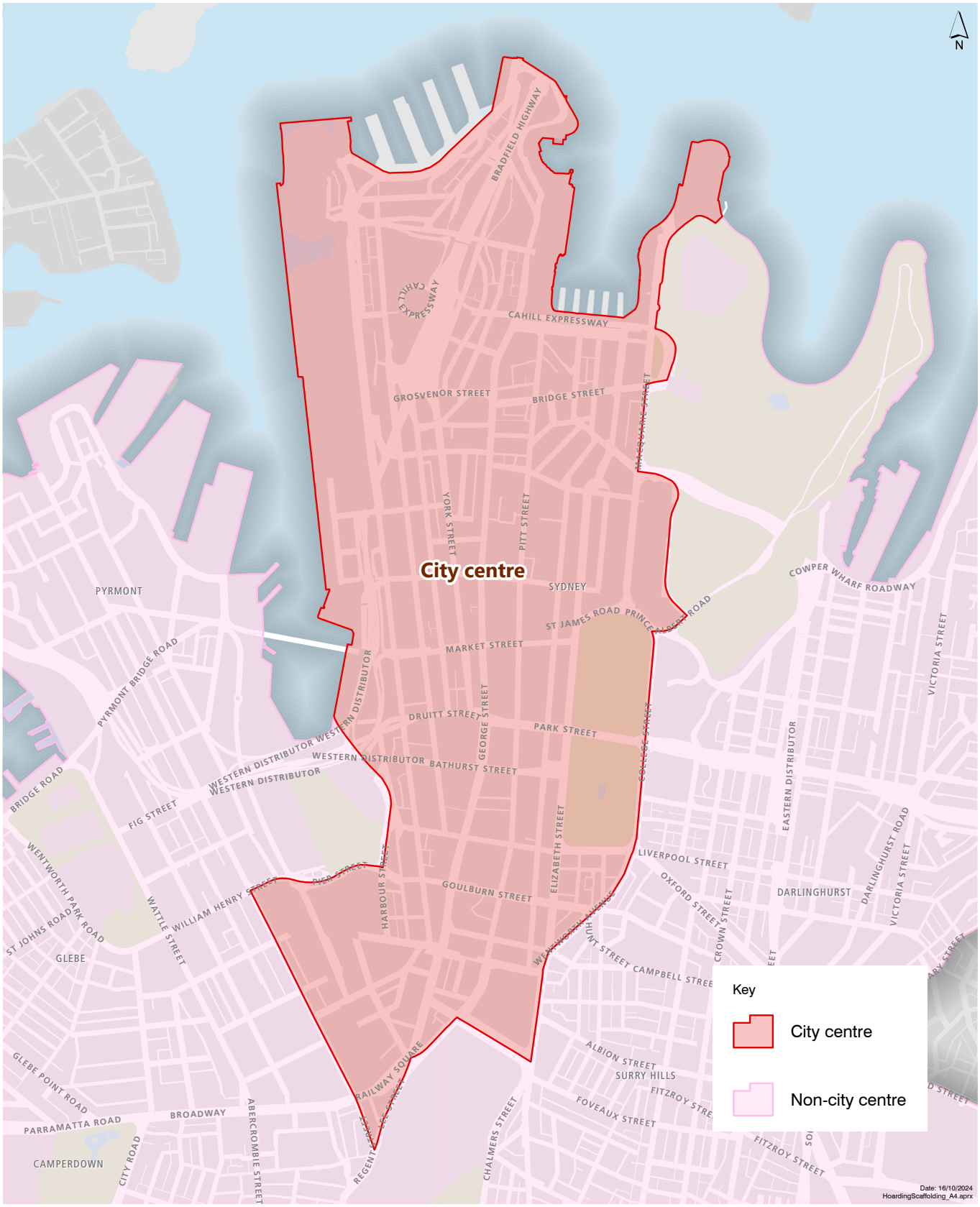


Figure 1.1a: (detail) Map showing the *city-centre* zone



1.9 Where does the Code apply?

(a) The Code applies to all land within the City of Sydney Local Government Area (LGA) with the exception of land (*roads*) under the control and authority of:

- Place Management NSW
- Infrastructure NSW in relation to the Barangaroo area.

(b) In some circumstances the above agencies may require or expect specific compliance with all or some of the technical and regulatory provisions of this Code.

(c) Proponents seeking to erect *temporary structures* in areas under the control of the government agencies listed above will need to seek agency *approval*. Where a *worksite* overlaps *roads* under both agency control and *City* land (*roads*), separate applications must be lodged and *approvals* obtained from each entity.

(d) Concurrence (*approval*) requirements from Transport for NSW also apply in relation to State *classified roads* (s138 of the Roads Act 1993) before carrying out activities on such roads including the need to obtain required *road* occupancy licences (see **1.10**).

1.10 To what matters (approvals) does this Code relate and regulate?

The Code specifically relates to applications and *approvals* required under s68 of the Local Government Act 1993 and s115 and s138 of the Roads Act 1993. The following matters must be noted by a proponent when seeking approval:

(a) In assessing an application the *City* will consider the relevant provisions of the Local Government Act and s139 of the Roads Act including giving consideration to the provisions as set out in this Code.

(b) Where a *temporary structure* is proposed to be placed on a *classified road* the concurrence of Transport for NSW must also be obtained (s138(2) of the Roads Act). A list of *classified roads* is available on the website of Transport for NSW.

(c) As part of considering an application the *City* will refer the proposal to Transport for NSW seeking their concurrence.

(d) It is important that proponents allow sufficient time in the work program to obtain the required concurrences and *approvals*.

(e) Site perimeter temporary fencing erected on private land such as chain-wire fencing located wholly within a property allotment is not regulated through this Code and does not require *approval*, subject to the work activity on the site being classed as exempt or complying development under the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 (see also **1.4.1**).

Note: Approval for structures and activities under this Code cannot be granted retrospectively.

Figure 1.2: *Approval* is required when swinging or *hoisting* material over a public *road* or slewing any part of a crane over a *road* including vaning actions. Refer to the *City*'s 'Code of Practice: Hoisting and Construction Activities On and Above Roads' for further information.

Photo: Peter Conroy / City of Sydney

1.11 The structure of this Code

It is expected that in the majority of cases proposals for *temporary structures* will be capable of complying with the deemed-to-comply criteria. Compliance with the deemed-to-comply provisions automatically satisfies the performance objectives.

1.11.1 Use of 'performance objectives' vs 'deemed-to-comply' approaches for hoarding and scaffolding designs

The detailed controls for the design of *hoardings* (Part 03) contain both 'performance objectives' and 'deemed-to-comply' criteria. Part 04 has *scaffolding* provisions.

Where it is not possible to meet the deemed-to-comply criteria and there are clearly demonstrated construction and/or site constraints, consideration will be given to alternative designs that meet the performance objectives of the Code. Consideration will also be given to designs that propose a combination of deemed-to-comply and performance approach.

If a performance-based design approach is used, applicants must demonstrate how the relevant performance objectives will be satisfied including any impacts on deemed-to-comply provisions.

1.11.2 The role of diagrams, photographs and notes in the Code

The Code consists predominately of text-based controls, with diagrams and photographs included to assist the reader in understanding the text provisions. The diagrams do not nominate or specify all of the prescriptive requirements, therefore when designing *temporary structures* the reader must not rely solely on the details in the diagrams and/or photographs in order to comply with this Code.

In the event of any inconsistency between the written prescriptive requirements and the diagrams, the written requirements apply.

'Notes' in the text generally provide explanatory information and are provided to assist the reader in understanding various provisions and draw attention to other relevant matters within and outside the Code that may also need to be considered.

1.12 Relevant Acts, Regulations and documents

1.12.1 Primary relevant Acts and other policies

The acts, codes and policies listed below may be relevant to the design and use of *temporary structures* and should be considered when preparing an application and the ongoing management and maintenance of a *temporary structure*.

Legislation:

- Local Government Act 1993;
- Local Government (General) Regulation 2021;
- Roads Act 1993;
- Roads Regulation 2018;
- Work Health and Safety Act 2011;
- Work Health and Safety Regulation 2017 (and adopted *SafeWork NSW* Codes of Practice - see **2.6.1**);
- Environmental Planning and Assessment Act 1979;
- Environmental Planning and Assessment Regulation 2021;
- Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021;
- State Environmental Planning Policy (Exempt and Complying Development Codes) 2008;
- State Environmental Planning Policy (Transport and Infrastructure) 2021;
- State Environmental Planning Policy (Biodiversity and Conservation) 2021;
- Access to Neighouring Land Act 2000;
- Protection of the Environment Operations Act 1997;
- Illegal Logging Prohibition Act 2012 and Regulation;

- The Sydney Local Environmental Plan 2012; and
- The Sydney Development Control Plan 2012.

Policies, strategies and plans:

- The City of Sydney 'Public Art Policy';
- The City of Sydney 'Cultural Strategy 2025-2035';
- City of Sydney 'Footpath Gardening Policy';
- 'A City for Walking' Strategy and Action Plan, City of Sydney;
- The City of Sydney 'Graffiti Management Policy';
- The City of Sydney 'Tree Management and Donation Policy';
- The City of Sydney 'Urban Forest Strategy'
- The City of Sydney 'Street Tree Master Plan';
- The City of Sydney 'Inclusion (Disability) Action Plan';
- The City of Sydney 'Prosecution and Civil Enforcement Policy';
- The City of Sydney 'Performance Bond Policy';
- The City of Sydney 'Revenue Policy' (Fees and Charges); and
- The City of Sydney 'Sydney Lights: Public Domain Design Codes'.

Codes and guides:

- The Building Code of Australia;
- The City of Sydney 'Creative Graphic Design Guide for Construction-related Temporary Structures' (hoardings and scaffolding);
- The City of Sydney 'Code of Practice for Hoisting and Construction Activities On and Above Roads';
- The City of Sydney 'Inclusive and Accessible Public Domain Guidelines';
- The City of Sydney 'Display of Premises Numbers' information; and
- Fire and Rescue NSW 'Fire Safety Guidelines: Access for Fire Brigade Vehicles and Firefighters'.

Notes:

1. This list is not exhaustive.
2. Readers should refer to the *City*'s website to check for current adopted documents that apply in the city and the status of legislation on the NSW Legislation website.

1.12.2 Other related documents applying to temporary structures

The following documents may apply:

- The relevant Australian Standards adopted by the Building Code of Australia including but not limited to AS/NZS 1170 Parts 0, 1 & 2, AS 1170.4, AS 4100, AS 1720, AS 3600 and AS 1657;
- AS/NZS 1576.1 'Scaffolding - General requirements'
- AS 4970 'Protection of Trees on Development Sites'
- AS 4373 'Pruning of Amenity Trees'
- *SafeWork NSW* Code of Practice: Overhead Protective Structures;
- *SafeWork NSW* Code of Practice for the Safe Design of Structures;
- *SafeWork NSW* Code of Practice for Demolition Work;
- *SafeWork NSW* Code of Practice for Excavation Work;
- *SafeWork NSW* Code of Practice for Construction Work;
- Safe Work Australia's Guide to Managing Risk in Construction: concrete placement;
- General Guide for Scaffolding and Scaffolding Work, Safe Work Australia;
- 'Technical Manual for Traffic Control at Worksites', NSW Roads & Maritime Services;
- The 'Guide to Traffic Engineering Practice', Austroads;
- Technical directions issued by Transport for NSW; and
- The City of Sydney 'Traffic Control Plans for People Riding Bicycles.

1.13 Legislation and other matters

1.13.1 Federal and state legislation

The Code does not override state or federal legislation. Applicants must check other relevant legislation, adopted codes of practice and guidelines that may apply to the installation and use of *temporary structures* in *public spaces*.

1.13.2 Approvals granted under this Code

An *approval* under this Code to place a *temporary structure* on or above Council's land is given based on the provision of a certificate of structural design provided by the applicant and issued under Section 93 of the Local Government Act (see also **2.8**).

Other certificates and checklists may also be required as part of the application and approval processes.

1.13.3 Public safety - work health and safety legislation

It is the responsibility of the *person conducting a business or undertaking (PCBU)* as defined in the Work Health and Safety Act to ensure the design, installation and maintenance of *temporary structure/s* satisfies relevant work health and safety legislation including codes of practice issued by *SafeWork NSW*. See also **2.6.1**.

1.13.4 Other approvals issued by the City

The Code does not override conditions of a *development consent* applying to the land adjoining the *road* on which a *temporary structure* is to be installed.

1.14 What are the implications for non-compliance with this Code?

Placing and using *temporary structures* on *roads* can cause impacts on the use of *public spaces* including pedestrian access and amenity. This Code therefore sets out provisions to regulate and control such structures and associated work activities to minimise impacts. This can include the *City*:

- overseeing *temporary structure* installation and removal
- ongoing monitoring of installed structures and the condition of the *public space* to maintain safe public passage, amenity and cleanliness and
- issuing corrective directions and taking other actions where non-compliances arise (see **1.14.1**).

The *City* can take compliance and/or enforcement action in accordance with several applicable statutes and policies including:

(a) the *Local Approvals Policy* under which this Code is adopted;

(b) the *City*'s Prosecution and Civil Enforcement Policy;

(c) the Local Government Act 1993;

(d) the Roads Act 1993 and;

(e) the Environmental Planning and Assessment Act 1979.

1.14.1 Corrective actions

In regulating various activities, an *authorised person* of the *City* may:

- issue penalty notices
- give orders
- issue directions – in writing, and in an emergency, orally under Section 237 of the Roads Act 1993. This can include formal directions being issued on the entity that placed a *temporary structure* in a *public space* such as the owner/*supplier* of a *temporary structure* (s107 of the Roads Act 1993) and
- initiate court action to enforce orders and directions, and prosecute for associated breaches of the applicable legislation.

Parties not acting in accordance with this Code and *approvals* may be given verbal and/or written notice to comply before an infringement notice is issued.

At all times, the *City* reserves the right to issue an immediate infringement notice or penalty depending on the seriousness of the circumstance and at the discretion of the *authorised person* including consideration of the *City*'s 'Prosecution and Civil Enforcement Policy'.

1.15 Performance bonds

Performance bonds (also known as damage/ security deposits) are used to ensure persons placing some types of *temporary structures* on *roads* and/or carrying out work in a *public space* meet prescribed technical standards and other *City* requirements.

1.15.1 Public spaces and City infrastructure

Bonds will be used where required to undertake repairs and/or complete works to city infrastructure and assets (including *street trees* and gardens - see **1.15.2**) where damage occurs or works do not comply or are not completed to the *City*'s standards. Bonds must comply with the *City*'s 'Performance Bond Policy' and be in the form of:

- documentary evidence such as bank guarantee; or
- an undertaking; or
- a bank cheque; or
- cash (not exceeding $10,000); or
- EFTPOS.

Where a *performance bond* is lodged through a bank guarantee or other form of agreed undertaking it must not nominate a termination or expiry date.

Where a *performance bond* applies the required amount will be determined at the time of assessing an application. Bond rates are set out in the *City*'s Revenue Policy (Schedule of Fees and Charges). Bonds must be paid before an *approval* (permit) is released.

Bonds may also be used to recover costs incurred by the *City* including, but not limited to, the following circumstances:

(a) administering and enforcing the conditions of an *approval* and the provisions of this Code where the person or entity having the benefit of an *approval* (permit) fails to comply with the conditions of *approval* and/or a direction of the *City* to rectify, repair or maintain a *temporary structure*;

(b) the removal of a *temporary structure* where an *approval* has lapsed or been revoked and the applicant and/or entity that owns/installed the structure fails to remove the structure;

(c) the condition of a *temporary structure* is found to be structurally defective or inadequate requiring its removal or modification and the applicant and/or entity that installed the *temporary structure* fails to take appropriate action thereby requiring the *City* to remove the structure or carry out remedial repairs;

(d) general maintenance including the removal of graffiti and bill posters that has not been carried out regularly or a structure's surface is not kept in good repair and appearance requiring the *City* or its contractors to undertake maintenance work;

(e) the installation, repair and/or replacement of graphics where the applicant fails to undertake works as required by this Code, an *approval* and/or as directed by the *City*;

(f) the relocation, removal or reinstatement of street parking control signage or parking ticket machine associated with a *temporary structure* installation where the holder of a permit fails to do so as directed or required by the *City*; and

(g) where it is considered that the design and/or installation of a *temporary structure* may be inadequate or is non-compliant with this Code, the *City* may commission an independent qualified engineer or other person to audit the submitted drawings and/or installation to determine the acceptability or otherwise of a structure (see **1.20**).

Notes:

1. *Performance bonds* are generally not required for Type-A *hoardings* and/or minor *scaffolding* systems erected on stone paving or other special surface material when the *temporary structure* is associated with minor works such as painting, building maintenance or shopfront works. (Refer to **Figure 3.4.3** for requirements for Type-A hoardings where a Performance Bond may not be required.)
2. Demolition of masonry elements and/or new masonry works are not considered minor therefore bonds apply irrespective of the *footway* surface material.

1.15.2 Street trees and street gardens (see 3.17)

Performance bonds can also be used for the protection and/or maintenance of *street trees*, garden beds, landscaping and grass verges in the vicinity of a *temporary structure* where the applicant fails to protect and undertake required maintenance.

Where damage or deterioration occurs, including damage when *hoisting* from a *works zone*, and the holder of the *approval* (permit) fails to follow a direction to undertake remedial works, the *performance bond* will be used to recover costs associated with:

(a) undertaking inspections and reporting on affected areas and damage and required remedial works;

(b) undertaking remedial pruning to manage the tree canopy after damage occurs; and

(c) the full removal and replacement of severely damaged tree/s and street landscaping/ garden beds (as determined by the *City*) and the associated ongoing maintenance until the tree/s and gardens are fully established to the *City's* satisfaction (generally a minimum period of 12 months).

1.15.3 Bonds imposed by the City's Public Domain Team and Construction Regulation Team

Performance bonds may apply for any works including rectification in relation to:

- damage of public infrastructure, both above and below ground level
- damage resulting from temporary shoring/ ground-anchoring of roads (*footways*/ *roadways*)
- other *public space* infrastructure damage.

Refer to the *City*'s 'Code of Practice: Hoisting and Construction Activities On and Above Roads' for further details.

1.15.4 Recovery of public land occupation fees

In circumstances where scheduled occupation fees for the use of *City* land are not paid the *performance bond* held to satisfy a condition of an *approval* may be used to recover outstanding fees.

1.16 Public liability insurance

The holder of an *approval* (permit) uses the *road* at its own risk. In the *City* giving *approval*, the permit-holder agrees to release and indemnify the *City* and to keep the *City* indemnified against any claim, damage, expense, loss, cost (including reasonable legal costs) or liability (including liabilities of the *City* to third parties) arising from or in connection with the use of the *road*.

An indemnification, in the form of a *public liability insurance* policy, affords protection to the *City* in respect of any claims including any excess on the insurance policy arising from a claim.

An indemnity must be in the amount of at least $20 million for any individual claim that may be made and any excess on the insurance policy arising out of any claim. The insurance policy must be held in the name of the person or entity holding an *approval*.

1.16.1 Indemnity during the placement and dismantling of temporary structures

The *City* must be indemnified during the placement and dismantling of *temporary structures*.

1.16.2 Indemnity for the full duration that temporary structures are in place

Valid indemnity insurance must be held for the full duration that a *temporary structure* is in place. Where an insurance policy does not cover the full period of the proposed installation (as stated in the application), the *approval* (permit) will be restricted to the insured period. An application to extend an *approval* (**1.19.4**) must be made at least two (2) weeks prior to the *approval* lapsing and evidence of a renewed policy must be included with the application.

1.16.3 Indemnity – change of entity holding an approval (Permit)

In circumstances where the entity (applicant) holding an *approval* for a *temporary structure* exits a project or wishes to transfer the project (*temporary structure*) to another entity, the new entity must lodge a fresh application together with a new *public liability insurance* policy, to seek *approval* to allow the *temporary structure* to remain in place under a fresh *approval* held in the name of the new entity.

1.16.4 Indemnity – withdrawal by insurer

The holder of an *approval* and indemnity must inform the *City* immediately upon becoming aware that the insurer has or intends to withdraw the indemnity. In such circumstances the holder of the *approval* must provide to the *City* a replacement indemnity that meets the *City*'s requirements.

1.16.5 Damage sustained on temporary structures and/or public safety incidents/injuries - reporting

The person in control of a *worksite* and responsible for the *approved temporary structure* (typically the *PCBU*) must formally notify the *City* (verbally and in writing) of any incidents such as damage sustained to a *temporary structure* that could affect its structural integrity and/or any injuries to the public.

Note: Notification requirements under the WH&S Act (NSW) and *SafeWork NSW* may also apply.

1.17 Certification - design and installation

The *City* requires certification from an appropriately qualified person (see **2.8**) confirming that the design of a *temporary structure* complies fully with this Code in respect to the structural adequacy provisions.

1.17.1 Certification by qualified persons (Local Government Act, s93)

Certification complying with Section 93 of the Local Government Act 1993 is required for the design and installation of a *temporary structure* to verify its structural adequacy and compliance with the *approved* plans, details and conditions of *approval* (see **2.8**). Certification must be provided using the prescribed template in the application form and *approval* determination *(*permit*).*

Certification from an appropriately qualified person is also required at prescribed intervals for certain types of structures during the placement period to confirm that the *temporary structure* remains structurally sound and compliant (refer to **2.8** and **2.11**).

1.18 Making an application

All types of *temporary structures* listed in **2.2** require *approval* prior to being placed in, on or above a *road*. *Approval* can be sought through completion and lodgement of a valid application and payment of fees using the standard form available on the *City*'s website.

1.18.1 Application and site inspection fees

Application fees apply to assess a proposal for compliance against the *City*'s requirements including the *Local Approvals Policy* and this Code.

For most types of *temporary structures* a site inspection fee is also payable at the time of application lodgement. The site inspection is required to assess the locality and to record the condition of the *footway/roadway* surfaces and other *City* infrastructure in relation to *performance bonds* (see **1.15**).

Application and inspection fees are set out in the *City*'s Revenue Policy (Schedule of Fees and Charges) available on the *City*'s website.

1.18.2 Information and documents that must be lodged with an application

To enable the *City* to undertake a thorough assessment of a proposal (application) minimum information and details must be provided. Information that must be lodged is set out in the *temporary structures* application form.

1.18.3 Assessment and compliance

Upon receipt and acceptance of a fully completed valid application and fee payment, the proposal will be assessed against the *City*'s requirements including this Code.

In circumstances where additional information or clarification is required, the applicant will be contacted and requested to provide further details.

Where the *City* is satisfied that a proposal meets all of the relevant requirements including complying with the provisions set out in this Code, an *approval* will be granted, subject to conditions (refer also to the *Local Approvals Policy* for further details).

1.18.4 Forms of temporary structures not specifically addressed in this Code

The Code regulates the common forms of *temporary structures* that are typically associated with construction-related activities (as listed in **2.2**). In circumstances where forms or elements of structures are not specifically regulated or referenced by this Code the *City*, as owner of the land *(road)* on which a *temporary structure* is to be installed, will assess a proposal for compliance with the objectives and principles outlined in this Code.

Where a proposed structure fails to meet the above requirements the *City* may allow the proponent to make design changes for further consideration.

1.18.5 Refusal of an application

In circumstances where an application is incomplete, invalid and/or a proposal does not meet the *City*'s requirements, and the applicant fails to address the outstanding issues and matters, the application will be refused.

1.19 Other applications, required approvals and revocation provisions

An *approval* (permit) for a *temporary structure* is granted under s94 of the Local Government Act 1993 and s139 of the Roads Act 1993. Other *approvals* may also be required.

1.19.1 Barriers and changes to parking control signage

Where the placement of *temporary structures* and/or barriers are proposed on *roads* including the temporary closure of a *road* or part, the applicant must include in the application a specific request for such works and structures (s115 of the Roads Act).

Where traffic/parking control signage will be affected by a *temporary structure* (and require relocation or temporary removal) a plan (and photographs) showing all affected existing traffic control and/or parking signs, proposed new signs or proposed relocated signs must be submitted with a *temporary structures* application (see **2.7**).

A permit will be issued with conditions that must be satisfied including payment of fees to the *City*'s signage contractor to adjust signs. This can include the removal of signage stems, if essential, including the reinstatement of signs/stems after removal of the *temporary structure*.

1.19.2 Hoisting activities over roads and from approved works zones

Approval for the installation of *temporary structures* on or above a *road* does not automatically permit the use of equipment (cranes and hoists) to swing (including vaning actions) or lift material across or over any part of a public *road*.

Approval under Part E1 of the Table to Section 68 of the Local Government Act and Section 139 of the Roads Act must also be obtained for *hoisting* activity associated with:

(a) the installation and removal of *temporary structures*;

(b) the development site or a *works zone*; and

(c) the movement of any part of a *hoisting* device over a public *road* including crane boom wind vaning actions.

Refer to the *City*'s 'Code of Practice: Hoisting and Construction Activities On and Above Roads' for further information including the establishment of a *works zone*.

1.19.3 Amending an approval

Proposed modifications/amendments to an *approved temporary structure* must be granted beforehand. An amendment can only be considered before changes are made (retrospective *approval* is not allowed under legislation).

A person or entity to whom an *approval* is granted may apply to amend an *approval* (permit) under s106 of the Local Government Act if the amendment is minor only.

The assessment of an application to amend an *approval* will include, but is not limited to, the following matters:

(a) whether the proposed amendment is substantially the same as that originally *approved*;

(b) whether any prejudice will be caused to any person who made a submission concerning the original proposal; and

(c) whether consultation and/or concurrence with another authority such as Transport for NSW is required.

An amended determination replaces the original *approval* from the date endorsed on the notice of determination (permit).

1.19.4 Extending an approval

The *City* may determine to extend an *approval* under s107 of the Local Government Act if it is satisfied that there is good cause for doing so. An *approval* will not be extended beyond 5 years.

An *approval* may not be extended where:

(a) a *temporary structure* is structurally unsound, is not being satisfactorily maintained, or is non-compliant with an *approval*;

(b) graphics (see **Part 06**) have not been installed in circumstances where the original *approval*, due to the short duration of installation of the *temporary structure* of the initially proposed installation were not required to be provided. In these circumstances an extension will only be granted upon graphics being installed in accordance with this Code and the 'Creative Graphic Design Guide for Temporary Structures';

(c) there are outstanding fees payable or there is a breach of the permit conditions;

(d) a development and/or works have stalled or ceased and the temporary structure is no longer required for its approved purpose and the *City* requires its removal or modification; and/or

(e) any other matter as determined by the *City*.

An *approval* to extend a permit must be obtained before the permit lapses.

1.19.5 Revoking an approval (permit)

As permitted by the Local Government Act 1993, the *City* may revoke an *approval* where any of the following apply:

(a) an applicant fails to act on directions to rectify a *temporary structure* particularly matters relating to structural adequacy where public safety is at risk;

(b) a *public liability insurance* policy for a *temporary structure approval* is not current or has been withdrawn by the insurer;

(c) the applicant fails to comply with an *approval* including conditions of a permit;

(d) any other circumstance as determined by the *City*.

In circumstances where an *approval* is revoked and the structure is not removed, the *City* reserves the right to take action to have the unauthorised *temporary structure/s* removed and recover all associated costs (see **1.15.1**).

Note: See s109 of the Local Government Act and s140 of the Roads Act for further information in relation to revoking an *approval*.

1.20 Auditing

The *City* may undertake audits of any form of *temporary structure,* its use and any works that take place in, on or above the *City*'s land *(roads)*.

1.20.1 Rights to randomly audit

The *City* reserves the right to randomly or specifically audit:

(a) certified documentation lodged at both application and throughout the installation stages; and/or

(b) at completion of a *temporary structure installation* and throughout its placement.

Where necessary, the *City* may appoint a person or entity such as a structural engineer to undertake an independent assessment of all documentation held or provided to the City (see **2.7**).

1.20.2 Access to sites

Where access is required to undertake audits and inspections of *temporary structures* the holder of an *approval* (permit) must not prevent or obstruct an *authorised person* or independent auditor acting on behalf of the *City* accessing a *worksite* and *workplace*, subject to satisfying the relevant visitor access provisions under the NSW Work Health and Safety Act 2011.

1.21 Maintenance of temporary structures (see also 2.12)

In allowing the installation of *temporary structures* on or above *roads* the *City* expects and requires that such structures are fully maintained to a standard acceptable to the *City* and the *supplier* of a structure.

The Work Health and Safety Act 2011 (Section 25) imposes obligations on a *supplier* of a *temporary structure* to give adequate information to the user of a structure of any conditions necessary to ensure that the structure is without risks to health and safety when used for a purpose for which it was designed or manufactured or when carrying out any activity on a *temporary structure*.

Effective maintenance of a *temporary structure* during its placement and use is critical in terms of ensuring that risks to the public are eliminated or minimised.

To ensure that *temporary structures* are appropriately maintained and used in accordance with an *approval* the holder of an *approval* must establish effective management monitoring processes in accordance with the conditions/ instructions issued by the *supplier* of a *temporary structure* and any requirements of the *City*. To meet these outcomes the *City* may require the *supplier* of a *temporary structure* to:

(a) undertake periodic inspections of an installation at any time required by the *City* to ensure that the structure remains in a structurally sound condition;

(b) inspect and confirm that the structure remains compliant with the *approved* design including that no unauthorised changes have been made; and

(c) ensure its use, including any *approved* use such as the placement of site sheds and hoists on a Type-B *hoarding*, accords with the *supplier*'s requirements (certified design and any nominated conditions of use).

Further requirements for periodic inspection of *hoardings* and other structures also apply - see **2.8.9**.

1.22 Definitions

All defined terms in this Code are italicised for ease of reference and use.

accessible or ***accessibility*** having features to enable use or passage by people with disability.

approved or ***approval*** unless expressly stated otherwise, is a determination (*approval*) granted by the *City* in force under the Local Government Act 1993 and Roads Act 1993 which includes the term 'permit'.

authorised person an employee of Council (the *City*) generally or specially authorised in respect of or whose duty it is to deal with, or to act in regard to, any acts, matters or things in relation to which the expression is used. (Local Government Act 1993)

Before You Dig Australia a free national referral service designed to assist persons and entities in preventing damage and disruption to Australia's significant and extensive infrastructure service networks when undertaking work in *public spaces*.

business identification signage means a sign—

(a) that indicates—

(i) the name of the person or business, and

(ii) the nature of the business carried on by the person at the premises or place at which the sign is displayed, and

(b) that may include the address of the premises or place and a logo or other symbol that identifies the business, but that does not contain any advertising relating to a person who does not carry on business at the premises or place.

Note: Business identification signs are a type of ***signage*** — refer to the definition of this term in the dictionary of the LEP. (Sydney Local Environmental Plan 2012)

cantilevered facade-mounted materials landing platform a fixed or retractable platform attached to a building's facade or building perimeter that overhangs a *road* and which is used to hoist and land material and equipment to and from a *site*, typically a floor of a multi-level building using site-based or mobile *hoisting* devices such as cranes.

cantilevered work platform a temporary platform generally consisting of structural elements such as needle beams and decks attached to a building and on which *scaffolding* may be erected to undertake work on a building.

certifier a person who is a registered *certifier* under the Buiding and Development Certifiers Act.

City The Council of the City of Sydney.

city-centre and ***non-city-centre*** the areas of the local government area as shown in the map at **Figure 1.1** in which various design controls apply including occupation fees.

classified road includes:

- a main *road*;
- a highway;
- freeway;
- a controlled access *road*;
- a secondary *road*;
- a tourist *road*;
- a tollway;
- a transitway; and
- a State road. (Roads Act 1993)

Note: A full list of *classified roads* is available on the website of Transport for NSW.

construction activity physical activities carried out within a *public space* including:

- works of any nature;
- the installation and use of *temporary structures*;
- the operation of plant and equipment including *hoisting* operations;
- demolition works;
- excavation works; and
- *road openings*.

community land land that is classified as *community land* under Division 1 of Part 2 of Chapter 6 of the Local Government Act 1993. (Local Government Act 1993)

Note: *Community land* reflects the importance of the land to the community because of its use or special features. It is generally land intended for public access and use. Restrictions often apply to create obligations to maintain access such as a trust deed or land dedication.

control measure in relation to a risk to health and safety, means a measure to eliminate or minimise the risk. (Work Health and Safety Regulation 2017)

cycleway a pathway for use by people riding a bike or scooter and includes separated *cycleways*, bike lanes and *shared paths*.

development consent (consent) means consent under Part 4 of the Environmental Planning and Assessment Act 1979 to carry out development and includes, unless expressly excluded, a complying development certificate. (EP&A Act 1979).

footway the part of a *road* that is set aside or formed as a path or way for pedestrian traffic (whether or not it may also be used by bicycle traffic). (Roads Act 1993)

hoarding a *temporary structure* placed on the *City's* land *(footway/roadway)* that separates a *worksite* from the *public space* and which may also include an overhead protective barrier (deck) to afford protection to the *public space* from objects that may fall from a *worksite* or *workplace*.

hoisting the action of raising or lowering a load (material, plant, equipment) or workers, by powered mechanical or manual means and includes *hoisting* using a crane, winch, elevated work platform, a mast climbing work platform, suspended scaffold, personnel and materials hoist, boom lift, and/or building maintenance unit.

hung scaffold a form of *scaffolding* that is an independent temporary structure that hangs statically from another structure, typically a building that can incorporate traversing features enabling the scaffold to be moved laterally when in use but is not capable of being raised or lowered. (AS/NZS 1576.1)

local approvals policy a formal policy adopted by Council under the provisions of the Local Government Act 1993 and in relation to this Code, refers to the *Local Approvals Policy* for Construction-related Temporary Structures On and Above Roads.

overhead protective structure (temporary) an overhead structure or plant required for the protection of persons on a construction site and the adjoining public areas (*SafeWork NSW* 'Code of Practice: Overhead Protective Structures).

performance bond (bond) a financial deposit or undertaking and held by the *City* for use in circumstances set out in this Code and in an *approval* (permit) in force under the Local Government Act 1993 and Roads Act 1993.

permit holder a person or entity that holds an *approval*.

person conducting a business or undertaking (PCBU) Refer to Section 5 of the Work Health and Safety Act 2011. For the purposes of this Code, this person is the holder of an *approval* (determination) for a *temporary structure* such as a builder; a contractor; or other person involved in placing a *temporary structure* in, on or above a *public space*.

principal certifier (PC) a person appointed under legislation to carry out inspections of approved building works and undertake other statutory functions.

Note: A PC is generally not responsible for regulating activities within a *public space* adjoining a development site unless there are conditions of *development consent* that specifically require PC involvement.

public liability insurance insured for legal liability owed to another person or entity who suffers loss, damage, injury or death by reason of the insured's activities.

public road means a road which the public are entitled to use (Local Government Act 1993).

public spaces a *road,* including *footways* and *cycleways*. See also the definition of '*road*'.

road a road is defined in both the Local Government Act 1993 and the Roads Act 1993. They must be read in conjunction.

Under the Local Government Act 1993 a road is:

(a) highway, street, *laneway*, pathway, footpath, *cycleway*, thoroughfare, bridge, culvert, causeway, road-ferry, ford, crossing, bypass, and trackway, whether temporary of permanent; and

(b) any part of a road and any part of any thing referred to in paragraph (a), and and

(c) any thing forming part of a road or any thing forming part of any thing referred to in paragraph (a).

Under the Roads Act 1993 a road also includes:

(a) the airspace above the surface of the road; and

(b) the soil beneath the surface of the road; and

(c) any bridge, tunnel, causeway, road-ferry, ford or other work or structure forming part of the road.

road opening any intrusive disturbance within a *road* including excavation required to carry out works such as placement of footings to support a *temporary structure*, installing and/or connecting subsurface *utilities* and stormwater drainage systems.

roadway (also known as carriageway) the portion of a *road* designed for use by moving vehicles including a light rail vehicle and bicycles.

SafeWork NSW the authority constituted under the Workplace Injury Management and Workers Compensation Act 1998 and which is the regulator of the NSW workers compensation system and also the regulator for work, health and safety legislation in NSW.

scaffolder a person engaged in erecting, altering or dismantling *scaffolding*. (AS/NZS 4576:1995 'Guidelines for Scaffolding')

scaffold (scaffolding) a *temporary structure* specifically erected to allow and support access or work platforms. (Work Health and Safety Regulation 2017)

Note: Where the term '*scaffolding*' appears in this Code it refers to 'perimeter *scaffolding*' erected on or above the *City's* property (*road*). It does not apply to *scaffolding* erected on private property associated with construction, demolition or maintenance activity on a building or other structure.

shared path as defined in the NSW Road Rules Regulation 2014 (clause 242).

site shed/s prefabricated temporary buildings/ enclosures used for purpose of providing facilities for workers at *workplaces* for such purposes as ablutions, lunchrooms, first-aid and site administration.

street tree a tree that is growing within a *footway*, road verge or adjoining garden location. It may also include trees located close to the boundary of the adjoining private property, where their canopy (branches and leaves) overhang the *public space*.

structure means anything that is constructed, whether fixed or moveable, temporary or permanent, and includes—

(a) buildings, masts, towers, framework, pipelines, transport infrastructure and underground works (shafts or tunnels), and

(b) any component of a structure, and

(c) part of a structure (NSW Work Health and Safety Act 2011)

supplier in relation to plant or a structure, as defined in Section 25 of the NSW Work Health and Safety Act.

temporary structure a structure that is not designed, installed or constructed to be permanent and includes the following structures placed on or above a *public space:*

- Type-A *hoarding* – a plywood sheet fence, with or without *scaffolding* used to enclose or isolate a *worksite* from the *public space including a work compound*;
- Type-B *hoarding* – an *overhead protective structure* constructed of a steel frame that provides a barrier from objects that may fall from a *worksite* into the *public space* and where necessary, to also enclose a *worksite* by means of a plywood sheet fence;
- *site sheds*;
- *cantilevered work platforms or overhead protective deck*;
- facade retention system;
- *scaffolding;*
- *facade-mounted cantilevered materials landing platform;*
- screens, shutters, slip-forms and similar *temporary structures* fitted to the perimeter of a building under construction or demolition;
- *work compound;*
- tower crane (structure);
- any other form of *temporary structure* associated with demolition, construction, building maintenance or other similar structures, as determined by the *City*.

utilities publicly, privately or jointly owned and operated services system, located on, in or above public property (*road*), the purpose of which is to transport or transmit for either the public or a private party a service or commodity such as electricity, telecommunications, gas, light, oil, power, television, water and waste by means of cables, conduits, ducts, fibre optics, pipes and wires and includes related objects, such as access chambers, pits, valves and other appurtenances.

Note: This defined term is based on the definition in AS 5488-2013 'Classification of Subsurface Utility Information (SUI)'.

vehicular crossing the portion of a driveway or vehicular accessway located between the *roadway* (street gutter/kerb) and the property/*worksite* boundary (property frontage).

work compound a temporary enclosure established on a *road* that is:

- used for construction-related activities such as the storage of material and equipment, *site sheds* (facilities for workers) and other similar uses and is associated with *approved* development on a land parcel in close proximity to the compound; and
- formed by a framed and plywood sheeted fence equivalent to a Type-A *hoarding* but having a fence height of not less than 2.1m and which complies with the applicable provisions of this Code.

workplace for the purposes of this Code a *workplace* is where work, including the placement of permitted work-related items, is undertaken in *public spaces*.

worksite a place where work is undertaken on private land by a business or undertaking.

works zone a *City-approved* or Transport for NSW-*approved* and signposted space on a *road* dedicated to the temporary standing of vehicles associated with a *worksite* to allow the delivery and removal of material, plant and equipment to and from a *worksite* and *workplace* (see also Clause 181 in the NSW Road Rules 2014).

Note: *Approval* of a *works zone* is not granted as part of a *temporary structures approval*. A separate application and *approval* is required (refer to the *City*'s 'Code of Practice: Hoisting and Construction Activities On and Above Roads' and *City* website for further information.

Photo: Katherine Griffiths / City of Sydney

Eyes on the horizon by Reg Mombassa (a.k.a. Chris O'Doherty).
Photo: Peter Conroy / City of Sydney

Part 02 General requirements

2.1 About this Part

This Part includes general and specific requirements that *temporary structures* must meet in order to satisfy the objectives of the *Local Approvals Policy*.

It sets out the general principles for the selection, design, installation and use of *temporary structures* including:

- an overview of the applicable requirements of the Work Health and Safety Act 2011 and Regulations;
- a summary of the matters to be considered when preparing an application and seeking an *approval;* and
- the general principles for the design and effective management of *temporary structures* including their use.

The Code contains both 'deemed-to-comply' and 'performance-based' objectives that are specific to *hoardings* and *scaffolding* (Parts 03 and 04) and apply depending on the circumstances of the site and scale of proposed development or works (see **1.11**).

2.2 Types of temporary structures that are regulated by this Code

The Code regulates the design, installation and ongoing maintenance requirements for several forms of *temporary structures.* Detailed design provisions for *hoardings* are set out in **Part 03**.

The types of *temporary structures* dealt with in this Code are:

2.2.1 Hoardings

There are four principal forms of *hoardings* as set out below.

2.2.1.1 Custom built Type-A hoardings

A Type-A *hoarding* is a fence consisting of a structural frame of timber or steel, typically clad with water-resistant structural plywood sheets and having a height of not less than 2.1 metres that separates a *worksite* from a *public space*.

Koala Fantastic Fabulous Fun by Rosie Deacon
Photo: Peter Conroy / City of Sydney

Fencing is typically constructed on-site using various elements and often includes counterweighting and lateral bracing elements behind the fence. Proprietary fencing systems are permissible subject to meeting the minimum standards set out in this Code (see below). Refer to **Part 03** for detailed design requirements.

2.2.1.2 Proprietary Type-A hoardings

A modular system of prefabricated standardised products and components that form a temporary barrier (fence) to restrict unauthorised access to work areas, prevent work activities within a site impacting on *public spaces*, and contain debris and materials etc. from escaping from a *worksite* into *public spaces*. The system can also include counterweighting and bracing elements.

Photo: Peter Conroy / City of Sydney

These systems are typically designed and installed to comply with 'AS 4687: Parts 1&3 2022 Temporary fencing and *hoardings*'.

These modular systems are permissible in the *City* subject to meeting all applicable deemed-to-satisfy provisions and being certified in accordance with **2.8**.

2.2.1.3 Type-B hoardings (prefabricated modular gantry design)

A Type-B *hoarding* is typically a prefabricated modular steel gantry structure installed in segments to form an integrated *overhead protective structure* allowing pedestrians and cyclists to pass unencumbered and safely beneath.

Photo: Peter Conroy / City of Sydney

A modular Type-B *hoarding* may also incorporate a site fence.

The structural frame of Type-B *hoardings* must be of steel. Timber framing is not permitted (see **2.3**).

2.2.1.4 Type-B hoardings - custom-built / site specific (member components assembled in situ)

Designed to achieve the same purpose as a modular gantry system but is generally a larger system of steel member and framed *overhead protective structure* spanning wide *footways* or *roadways* (typically laneways under which vehicles pass) and capable of supporting large loads placed on *hoarding* decks.

Photo: Peter Conroy / City of Sydney

This form of *hoarding* affords greater design flexibility to address site-specific issues including:

- avoiding obstructions such as street furniture, street lighting/ power poles and *street trees* whilst at the same time minimising *footway* encroachments (avoiding the use of multiple support columns);
- maximising clear pedestrian pathways particularly on wide and/or busy *footways*; and
- providing a more refined and visually appealing design and appearance.

This type of *hoarding* design is often required:

(a) in localities with high pedestrian densities such as the *city-centre* to minimise obstructions and maximise the clear span between support columns; and

(b) where multiple *site sheds* and other *approved temporary structures* (loads) are proposed to be placed on a *hoarding* deck.

A site fence of structural grade plywood may also form part of the design.

2.2.2 Work and storage compounds

An enclosed space (unroofed) established on a *road* that is formed of steel or timber framing and clad with plywood sheet (or other suitable and *approved* material) and which meets the design standards of a Type-A *hoarding* including access openings and securable doors/gates.

Photo: Peter Conroy / City of Sydney

Compounds are generally not permitted, however, their establishment and use will be considered on a site-specific basis where the need is clearly evident and justified. Examples include a *worksite* that has limited space and/or physical constraints to allow safe and effective material and plant storage or mandatory essential facilities for workers such as sheds for sanitary purposes, first-aid and lunchrooms (refer to **Parts 03** and **05** for further details).

2.2.3 Scaffolding

Scaffolding is often required to allow for safe and effective worker access to the facade of existing buildings to undertake maintenance activities or for the construction of new buildings or alterations/ additions to existing buildings.

Photo: Peter Conroy / City of Sydney

Scaffolding is also often required for the encapsulation of a *worksite* as a dust and minor debris control measure.

Scaffolding can take the following forms of installation:

- erected directly on a *road* (typically a *footway*) with a Type-A *hoarding* fence at the base of the *scaffold* to secure the site and prevent unauthorised access;
- placed wholly or partially on the deck of a Type-B *hoarding;*
- cantilevered from a building or other structure as a self-supporting system or placed and supported on needle beams/platform); and/or
- hanging *scaffold*.

Further details are set out in **Part 04**.

2.2.4 Cantilevered catch-scaffold/netting

A temporary system of *scaffold* components and netting projecting from the face of a building that forms a capture structure generally associated with minor works to prevent objects falling into a *public space* and thereby forming a system of overhead protection. Refer to **Part 05** for further details.

Photo: Peter Conroy / City of Sydney

Catch-scaffolding/netting systems are not permitted as part of a Type-B *hoarding* to extend the area of overhead protection (see **2.3**). If greater overhead protection is required, a cantilevered *hoarding* deck extension meeting the deck design criteria in **3.11** may be permitted subject to *City* consideration. This includes attaining an acceptable height clearance when placed near or above a *roadway*, generally 4.5m, unless otherwise *approved* allowing a reduced height.

2.2.5 Facade-mounted cantilevered materials landing platform

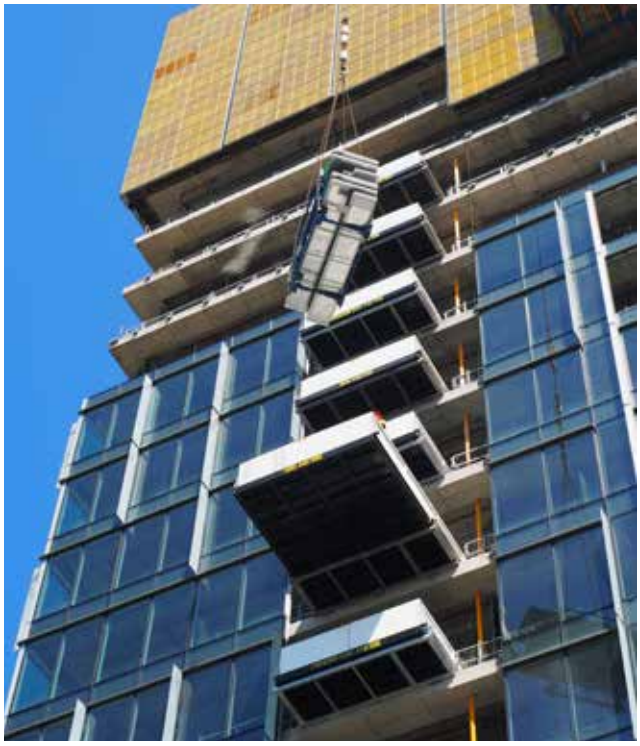


Photo: Peter Conroy / City of Sydney

Generally a proprietary platform system (fixed or retractable) that projects over a *road* from the face of a building under construction or an existing building undergoing alteration. Platforms allow materials and equipment to be hoisted to the platform (or removed) using a site-based crane or mobile crane. See **Part 05** for further details.

2.2.6 Cantilevered overhead protective platforms/decks

A system of structural steel frame and deck that projects (cantilevers) from the perimeter of a building above a *public space* for the purpose of forming an overhead protective system (deck) to the *public space*.

Photo: Peter Conroy / City of Sydney

This form of *overhead protective structure* is a substitute for a Type-B gantry *hoarding* placed at *road* level. Their use is generally not supported by the *City* as construction and dismantling can require the temporary closure of *footways* or *roadways* for significant periods resulting in disruption to pedestrian, cyclists and vehicular movement.

Photo: Peter Conroy / City of Sydney

Where however there are clearly demonstrated site constraints or construction needs the *City* may consider allowing these types of temporary protective structures.

2.2.7 Building perimeter construction shutters, fall-safety screens and other similar structures

Photo: Peter Conroy / City of Sydney

Typically proprietary mesh systems of screens or shutters and other systems such as slip-form and jump-form systems that are located on the perimeter of a building undergoing construction and which may overhang a *road*. These devices are used as part of the construction process and/or as a safety barrier to mitigate worker falls. They can also be used as a containment system to prevent objects falling from a *worksite* into a *public space*. Refer to **Part 05** for further details and controls.

2.2.8 Facade retention systems

Photo: Peter Conroy / City of Sydney

Façade retention structures are typically associated with existing buildings to provide lateral support using several methods and systems of custom-built fabricated steelwork, counterweighting and/or footings.

They are typically used to preserve architecturally significant frontages during works behind the façade. Structures include:

(a) a combination of existing and new structural elements within a land allotment;

(b) temporary elements (structures) erected in a *public space*;

(c) a combination of (a) and (b); and/or

(d) dual purpose of support and overhead protection (*hoarding*) where pedestrian access is maintained past the site and through the retention structure.

Further details and requirements are set out in **Part 05**.

2.2.9 Site sheds placed on hoarding decks

In all cases the *City*'s preference is to avoid placing *site sheds* in *public spaces* including on the deck of Type-B *hoarding*s. There are several reasons for this including minimising impacts of visual massing (bulk and scale) in the streetscape. This is particularly important in cases where double-stacked sheds are proposed.

Photo: Peter Conroy / City of Sydney

In preparing site and construction management plans and needs proponents must not presume that *site sheds* on *hoarding*s will be allowed. Refer to **5.5** for further details and requirements.

2.2.10 Tower cranes (structure)

In the vast majority of cases site crane structures and elements are fully located within the property allotment boundaries. This aligns with the *City*'s strong preference to keep these structures and equipment confined within the site (with the exception of booms where hoisting from an *approved* hoisting zone on a road). This aim must therefore form a key aspect of the site establishment and construction planning processes.

Photo: Peter Conroy / City of Sydney

In unusual and special circumstances based on the type and extent of work including potential constraints of a site, it may be necessary to locate a crane structure (mast and/or the body/motor) on or above a *road*. Where this applies *approval* is required from the *City*. Refer to **Part 05** for further details and requirements.

2.3 Prohibited forms of temporary structures

The *City* does NOT PERMIT:

(a) Type-B *overhead protective structures* constructed of pipe *scaffolding;*

(b) the use of modified shipping containers to act as overhead protective structures;

(c) *mesh fencing* in a *public space* adjoining a *worksite* unless the *City* determines that there are exceptional circumstances and the fencing meets the requirements of the *City* based on site-specific conditions.

(d) timber-framed Type-B *hoarding*s; and/or

(e) cantilevered catch-netting systems attached to Type-B *hoardings*.

These types of *hoarding* systems do not satisfy several key provisions of this Code including:

- minimising physical and visual obstruction of the *footway* (**refer to 3.5, 3.8, 3.9** and **3.11**)
- base counterweights (steel mesh temporary fencing) project into the pedestrian thoroughfare (presenting trip and fall hazards)
- providing a tidy, uncluttered and visually pleasing structure (**3.5**)
- eliminating elements that permit easy climbing and unauthorised entry to *worksites* (3.5 and **3.8**)
- maximising the clear width of a *footway* between support columns particularly for wide *footways* (**3.5** and **3.11**)

Photo: Peter Conroy / City of Sydney

Figures 2.1: These four forms of *temporary structures* are NOT PERMITTED within the City of Sydney area.

Photo: Peter Conroy / City of Sydney

- ensuring structural adequacy and stability of a *hoarding* particularly withstanding vehicular impacts - tube *scaffolds* (**3.8**)
- minimising the size and number of sole-boards and baseplates to avoid trip hazards
- difficulties of integrating counterweights within the structure in a visually uncluttered manner (**3.9**)
- issues associated with displaying required surface treatments (graphics).

2.4 Relationship with applicable legislation

Clause **1.12** lists legislation, codes, policies and other documents that may also be relevant to the design, assessment and approval of *temporary structures* associated with work activities. *Temporary structures* are used for several purposes including isolating and protecting *public spaces.*

In terms of protecting a *public space* the principal statutes in NSW that regulate a *worksite*/*workplace*, including managing and mitigating risks associated with objects that may fall from a *worksite* or *workplace* are the NSW Work Health and Safety Act and NSW Work Health and Safety Regulation. The key provisions of the Regulations relating to workplaces near a *public space* are set out in **2.5**.

2.5 Work health and safety obligations

In allowing a *person conducting a business or undertaking (PCBU)* to meet their statutory responsibilities under the Work Health and Safety legislation to protect and isolate a *public space* from a *workplace* and *worksite* the *City* will permit the placement of *temporary protective structures* on or above a *road* subject to meeting minimum prescribed objectives relating to the design, installation and maintenance of these structures to ensure:

(a) they have the least possible adverse impact on pedestrian movement and amenity;

(b) safe, accessible and convenient pedestrian, vehicular and cycling movement past workplaces; and

(c) adverse visual impacts in the streetscape are minimised through restricting the size (scale and height) of *hoardings* (including no or minimal *site sheds* - see **5.5**) and the display and continued maintenance of graphics on *hoarding* surfaces and *scaffolding* (wraps).

Refer also to **1.13** for provisions relating to legislation.

2.5.1 Work Health and Safety Regulation

The NSW Work Health and Safety Regulation sets out several requirements that are particularly relevant to worksites and workplaces:

54 Management of risk of falling objects

A PCBU at a workplace must manage, in accordance with Part 3.1, risks to health and safety associated with an object falling on a person if the falling object is reasonably likely to injure the person.

Note: *WHS Act—section 19 (see clause 9)*

55 Minimising risk associated with falling objects

(1) This clause applies if it is not reasonably practicable to eliminate the risk referred to in clause 54.

(2) The person conducting the business or undertaking at a workplace must minimise the risk of an object falling on a person by providing adequate protection against the risk in accordance with this clause.

MAXIMUM PENALTY:

(a) in the case of an individual - $6,000, or

(b) in the case of a body corporate - $30,000.

(3) The person provides adequate protection against the risk if the person provides and maintains a safe system of work, including:

(a) preventing an object from falling freely, so far as is reasonably practicable, or

(b) if it is not reasonably practicable to prevent an object from falling freely - providing, so far as is reasonably practicable, a system to arrest the fall of a falling object.

EXAMPLES:

- *Providing a secure barrier*
- *Providing a safe means of raising and lowering objects*
- *Providing an exclusion zone where persons are prohibited from entering.*

298 Security of workplace

(1) A person with management or control of a workplace at which construction work is carried out must ensure, so far as is reasonably practicable, that the workplace is secured from unauthorised access.

MAXIMUM PENALTY:

(a) in the case of an individual - $3,600, or

(b) in the case of a body corporate - $18,000.

(3) In complying with subclause (1), the person must have regard to all relevant matters, including:

(a) risks to health and safety arising from unauthorised access to the workplace, and

(b) the likelihood of unauthorised access occurring, (Example: The proximity of the workplace to places frequented by children, including schools, parks and shopping precincts.)

(c) to the extent that unauthorised access to the workplace cannot be prevented - how to isolate hazards within the workplace.

2.6 Other codes of practice relating to construction-related activities

A *SafeWork NSW* code of practice applies to anyone who has a duty of care in the circumstances described in a code. In most cases following an approved code of practice would achieve compliance with the health and safety duties in the Work Health and Safety Act in relation to the subject matter of a code.

Like regulations, codes of practice deal with particular issues and do not cover all hazards or risks which may arise. The health and safety duties require duty-holders to consider all risks associated with work, not only those for which regulations and codes of practice exist.

There are four primary *SafeWork NSW* codes of practice for development and construction-related activities. The following codes apply to the design and maintenance of *temporary structures* such as *hoardings*:

(a) Code of Practice: Overhead Protective Structures

The design and installation of *hoardings* is guided by the Code of Practice: Overhead Protective Structures published by *SafeWork NSW*.

The purpose of the Code of Practice is to provide practical guidance for the design of overhead protective structures for use in New South Wales to enable *PCBU*s to meet their statutory work safety responsibilities under the NSW Work Health and Safety Act and Regulations.

The Code makes provision for a local council to impose additional requirements regarding an *overhead protective structure* including the submission of drawings and calculations for *approval* before erection.

(b) Code of Practice: Construction Work

This Code prescribes requirements that principal contractors and other *persons conducting a business or undertaking* (construction-related work) on how to satisfy the health and safety requirements under the Work Health and Safety Act and Regulations. This includes how to isolate workplaces from *public spaces* and protect persons from objects that may fall from a *workplace*.

(c) Code of Practice: Demolition work

Demolition work is a type of 'construction work'. When carrying out demolition work, the requirements relating to construction work must also be complied with. Demolition work is also 'high risk construction work' if it involves demolition of an element of a structure that is loadbearing or otherwise related to the physical integrity of the structure.

(d) Code of Practice: Safe Design of Structures

This Code is relevant for anyone making decisions that influence the design outcome such as clients, developers and builders. The Code applies to the design of 'structures' defined under the WHS Act to mean anything that is constructed, whether fixed or moveable, temporary or permanent, and includes:

- buildings, masts, towers, framework, pipelines, roads, bridges, rail infrastructure and underground works (shafts or tunnels)
- any component of a structure
- part of a structure.

2.6.1 Relationship of this Code to the SafeWork NSW Codes of Practice

This Code is not a substitute for the various codes of practice applying to construction-related work, but rather a supplement to these codes. The NSW Work Health and Safety Act, Work Health and Safety Regulation and relevant codes of practice are the primary statutes and codes that regulate work safety including public safety near a *worksite*.

It is the responsibility of the proponent (typically the *PCBU*) to assess the risks to the public regarding an activity at a *worksite* adjoining and/or in a *public space* (see also **1.13.3**). This includes determining the type and extent of objects that may fall or project from a *worksite,* securing a *worksite* and establishing *control measures* required to be implemented to address such risks and any impacts on adjoining properties. Other statutory responsibilities also apply.

This Code does not detail nor address aspects for determining the *control measures* that may be required to deal with risks to persons in a *public space.* This is the role of a *PCBU* and/or a *supplier* of plant (*temporary structure*). The Code focuses on design solutions to minimise the impacts associated with placing *temporary structures* in or above a *public space* including impacts on public *accessibility*, convenience and amenity.

Applicants (*PCBU*s) will therefore need to advise *supplier*s and contractors of *temporary structures* particularly *overhead protective structures*, of the system of protection required to meet all relevant work, health and safety risks and obligations.

2.7 Designing and documenting a temporary structure

2.7.1 Drawings and details

Parts 03, 04 and **05** contain requirements and provisions for the design and installation of *temporary structures*. An applicant seeking an *approval* (permit) to install a *temporary structure* will need to demonstrate how compliance has been achieved with the provisions of this Code. This will require the submission of detailed and accurate drawings, specifications and any other information that the *City* may require to give full and proper consideration to a proposal (see **2.9.2**).

2.7.2 Impacts of temporary structures on adjoining or adjacent properties

Where it is proposed to place a *temporary structure* on a *roadway* or *footway* in front of an adjoining or adjacent property such as a Type-B *hoarding, scaffolding* and *site sheds* (refer to **5.5**) placed over laneways (see **2.14** and **2.15)** it will also be necessary to ensure adequate overhead protection to the *public space* is provided and the applicant will be required to consult with likely affected property owners (see **2.15**).

2.8 Structural design, certification and eligibility

Temporary structures must be designed in accordance with the relevant Australian Standards including:

- AS/NZS 1170 Part 1 - Permanent, imposed and other actions
- AS/NZS 1170 Part 2 - Wind actions and
- AS 1170 Part 4 – Earthquake actions.

The design and installation of *temporary structures* must also comply with the relevant provisions of the NSW Work Health and Safety Act and Regulations and any applicable *SafeWork NSW* Codes of Practice and specifically the 'Code of Practice: Overhead Protective Structures'.

2.8.1 Documents and certification required to be submitted with an application

Documents/certification to be provided include:

(a) structural design drawings and details including plan view drawings, typical sections, member sizes, connections/fixings, soleplate details and footings (where specifically allowed);

(b) structural certification of the design using the *City*'s standard certification form (part of the temporary structures application form) issued by an appropriately qualified, registered and experienced practising structural engineer (refer to **2.8.3**);

(c) for *scaffolding* installations the designer must hold appropriate and required qualifications and licence in accordance with the Work Health and Safety Act/Regulation and *SafeWork NSW* requirements (see **2.8.4**);

Figure 2.2: The location and potential impact on City infrastructure must be considered in the design of *temporary structures* and be identified and shown accurately in the design drawings.

Photo: Peter Conroy / City of Sydney

For large and complex *scaffolding* systems the *City* may also require a certificate of design from a structural engineer having extensive experience in scaffold design to verify the structural adequacy of a proposed scaffold. A certificate of design using the *City*'s standard certificate template for the proposed *scaffolding* system must be provided with the application; and

(d) other information and details as set out in this Code and in the temporary structures application form.

A full list of all documents required to be lodged as part of an application can be found at **2.9.2.**

2.8.2 Design and inspection certification by structural engineers

A certificate of structural design in accordance with the *City*'s standard template (refer to the temporary structures application form) must be submitted with an application for *temporary structures*, as prescribed in the form. For the inspection and certification of installations, complete and lodge the standard certificate template (in the *approved* permit).

2.8.3 Eligibility of structural engineers

Persons designing, inspecting and certifying *temporary structures* must:

(a) be appropriately qualified and a practising structural engineer holding tertiary qualifications in structural engineering;

(b) hold chartered membership of Engineers Australia and/or hold National Engineering Registration (NER); and

(c) have the necessary experience and competency to certify *temporary structures* regulated through this Code and satisfy all applicable requirements or conditions of registration prescribed by Engineers Australia (see **2.8.6**).

2.8.4 Eligibility of scaffolding contractors

(a) A *scaffolder* erecting and certifying a *scaffolding* structure must hold a *scaffolding* licence issued by *SafeWork NSW* appropriate for the type of scaffold (design and/or installation).

(b) An assessment of the supporting structure to which a scaffold may be attached may be required to ensure it can withstand the loading imposed by the scaffold. Where *scaffolding* ties are anchored or braced through wall openings to an adjoining structure particularly non-reinforced masonry buildings, the *City* may, based on the size of the *scaffold* and works, require certification from a practising structural engineer verifying that the existing building/structure is capable of providing adequate support to the *scaffolding* system. See also **4.5.4** for further details.

2.8.5 Eligibility of other persons

Determining the eligibility of other persons (not prescribed in **2.8.3** and **2.8.4**) will be at the discretion of the *City* based on the type of *temporary structure* to be installed, inspected and maintained.

2.8.6 Structural considerations for Type-B hoardings and other temporary structures

Type-B *hoardings* must comply with the relevant requirements of the Work Health and Safety Act 2011, Regulations and applicable codes of practice published by *SafeWork NSW*.

The structural design and stability of Type-B *hoardings*, and other similar structures such as facade retention systems, together with the elements to be placed on the *hoarding* need to be addressed in order to comply with this Code. Some factors include:

(a) the purpose of a Type-B *hoarding* beyond the provision of overhead protection, for example as the location for *site sheds*, *scaffolding* placement/support, equipment and other permitted *temporary structures*;

(b) various dynamics associated with demolition activity and excavation works (ground conditions and cantilevered support) see also **2.8.8**;

(c) particular and unusual forms of building design, construction and support;

(d) stability aspects in relation to motor vehicle impacts (see **3.8.2** and **3.9.1(a)**) including factors such as the proximity of the structure to the kerb, type of road, the types of vehicles using the *road* (passenger vehicles, trucks, buses) and vehicle speed (based on the sign-posted speed limit in the locality of the *hoarding*); and

(e) wind actions experienced in the locality and how wind movement and velocities may impact on, or be altered by, the *hoarding* or other *temporary structure*.

2.8.7 Skills and experience of designers/ certifiers

In designing and checking compliance it is important that engineers certify within their area of skills and experience including applying Engineers Australia's Code of Ethics which requires engineers to "act on the basis of adequate knowledge". Engineers Australia's Guidelines on Professional Conduct also require engineers to "practice within areas of competence and seek peer review" (when considered necessary).

2.8.8 Assessment of ground conditions to support temporary structures (hoardings)

The holder of a permit (typically the principal contractor such as a PCBU) is responsible for maintaining the condition of the *footway/roadway* adjoining a *worksite* to a standard at least equal to the surface condition prior to commencement of work.

To prevent damage to the existing paving and utility services beneath a *footway* and to ensure a stable surface is available to support a *temporary structure*, an appropriately qualified person such as a geotechnical and/or structural engineer must assess the adequacy of the *footway* and subsurface ground conditions to fully and safely support a proposed *temporary structure*. This is also a requirement of the *SafeWork NSW* Code of Practice.

The total proposed load of the *temporary structure*, including *site sheds*, *scaffolding* and other allowable and *approved* structures/equipment to be placed on the primary *temporary structure* must be used in the assessment.

The following matters are minimum requirements that must be considered and satisfied:

(a) a thorough survey/assessment to locate and consider:

  (i) all utility services and underground structures (pits). For information on the location of utility services, call '*Before You Dig Australia*';

  (ii) basement areas of buildings that may extend beneath a *road*;

  (iii) glass block *footway* lights and associated subsurface lightwells to basements;

  (iv) pedestrian tunnels, underground railway station concourses and other similar subsurface voids; and

  (v) roots of major *street trees*.

(b) consultation with the relevant utility authority or agency for design bearing pressures on or near any services likely to be impacted from loads of a *temporary structure*;

(c) assessment of whether the subsurface ground conditions are sufficiently stable to support all expected loads including considering any likelihood of previously filled land upon which the *temporary structure* will be placed; and

(d) the placement of *temporary structures* adjacent to sites undergoing demolition and/or excavation activity. Establish ground conditions and bearing pressures including any likely ground disturbance caused by the proposed in-ground works. This includes adverse impacts resulting from ground erosion in the vicinity of the structure and whether any special design controls and monitoring are necessary (see also **3.8.2(e), 3.8.6(c), 2.8.8(c)** and **2.13.4**).

2.8.9 Installation durations exceeding six (6) months - certification

(a) The holder of a permit must have inspections of *temporary structures* (*hoarding*/*scaffolding*/ cantilevered overhead protective deck) undertaken at not less than six (6) monthly intervals by an appropriately qualified practising structural engineer/licensed *scaffolder* using the *City*'s standard form. A certificate must be submitted to the *City* after inspection and completion of any remedial work that is found necessary (and details noted in the certificate).

(b) The City may require proof of current compliance and adequacy with relevant standards at any time irrespective of **(a)**. See also **2.12.1(h)**.

Note: A *PCBU* and/or a *supplier* of plant (structures) may require checks and certification at intervals less than six months.

2.9 Applications

2.9.1 Seeking approval to install a temporary structure

An application using the standard form must be lodged when seeking *approval* to install a *temporary structure*. To allow sufficient time to assess proposals, applications must be lodged at least two (2) weeks prior to the date of the proposed installation.

Note: Proponents must allow additional time for large and complex structures/sites including where infrastructure in vicinity of a site may be impacted. (see **2.8.8**).

Where consideration is required to allow the placement of traffic barriers on *roadways* and/ or changes to traffic control signage, proponents must allow at least four (4) weeks for required consultation with the *City*'s Traffic Operations Unit (see also **1.19.1** and **3.10.4**).

In cases where a *temporary structure* is proposed to be installed on a *classified road* additional time must also be allocated in the work program to allow for required concurrences to be obtained from Transport for NSW (see **1.10**).

Figure 2.3: Sightlines from *City*-operated CCTV surveillance cameras must not be obstructed by *temporary structures*. Traffic monitoring cameras (and private property cameras required by a condition of *development consent*) must also not be obstructed. Remounting the *City*'s cameras beneath *hoardings* may be an acceptable solution. Refer to **2.17** for information on private CCTV surveillance cameras mounted on *temporary structures*.

Photo: Peter Conroy / City of Sydney

2.9.2 Drawings and details

The following minimum information must be lodged with an application:

(a) architectural-type drawings – fully dimensioned site plan at a minimum scale of 1:100 showing:

(i) the *footway* finish and widths including the accurate location of the *hoarding* and utility pits in the *footway* and other infrastructure such as electricity poles, smart poles (and any potential impacts on banner display arms) and parking/traffic control signage/ stems;

(ii) the site fence and *scaffolding* (where proposed) fully dimensioned including an elevation drawing of the extent of the proposed *scaffold*;

(iii) *site sheds* including their accurate position on Type-B *hoardings* (see **5.5** and the application form);

(iv) any proposed or *approved works zone* on the *roadway*;

(v) existing building entrances, emergency egress exits and existing sprinkler/hydrant booster connections located on the building facade;

(vi) *street trees* including trunk diameter and dimensions of tree pits (see **(j)**); and

(vii) street furniture (see **3.8.7** regarding temporary removal) accurately plotted on drawings with clearances to site fences etc. clearly shown;

(b) accurate and detailed sections, elevations and information clearly setting out:

(i) the *hoarding* heights to the underside of the deck and bracing for Type-B *hoardings* including required screening of bracings and the various heights where *hoardings* are to be located on sloping *footways*/ *roadways*;

(ii) clear *footway* width dimensions and the location of the site fence including showing any proposed encroachment onto the *footway* where required for specific construction or access needs (encroachments must be minimised); and

(iii) detailed written justification for any site fence encroachment on the *footway* and any variations to the Code that are being sought (refer to **3.10.3** and the application form);

(c) the location of artwork or historic images proposed or required to be displayed on a *temporary structure* (see **Part 06**.);

(d) the lighting system for Type-B *hoardings* (location of luminaires);

(e) details setting out the length of time that the *hoarding* will be installed as well as the nature of the works that are to be undertaken during this period (refer to the application form);

Figure 2.4: The installation and removal of a *temporary structure* must be undertaken in accordance with the conditions of *approval* and be continuous once work commences (see **2.11.2(b)**). This includes maintaining safe passage for pedestrians, cyclists and traffic past the area.

Photo: Peter Conroy / City of Sydney

Photo: Peter Conroy / City of Sydney

(f) details (plan) of any required or proposed temporary pedestrian pathways (on *roadways*), temporary closure of a *footway* and/or pedestrian diversion past *worksites* or changes to street parking and traffic control signage that may be affected by the proposed *hoarding* (see also **3.10.4**);

(g) an indication (in the application form) of other *temporary structures* (other than *hoardings* and *scaffolding*) such as *cantilevered facade-mounted materials landing platforms* associated with crane *hoisting* activity that project over a *public space* (a separate application is required).
Note: An *approval* is required for other *temporary structures* such as cantilevered platforms, construction screens/shutters/slip-forms, catch-scaffolds and other *temporary structures* including *hoisting* activities (see **1.5, 1.19.2 and 2.11.5**);

(h) fully detailed structural drawings and other details including:

(i) the location of the proposed *temporary structure* including any relevant items such as:

- *scaffolding*, including proposed supplementary spreader beams on the deck of Type-B hoardings
- access/emergency stretcher stairways including any proposed access stairs from the *footway* to the deck of Type-B *hoarding*s
- the location of any *site sheds* on the *hoarding* deck
- any proposed construction equipment such as mast-climbing work platforms, construction hoists and suspended *scaffolds* (swing-stage) proposed for placement on the deck of Type-B *hoardings* (subject to specific consideration and *City* approval - see **1.5**).

(ii) section sizes, details of connections/ties including site fence, deck, vehicle and worker access gates, etc. and elevation/s including any required bracing for lateral stability, (and screening) counterweighting (and connection to columns) and *hoarding* fascias including bracings for high fascias;

(i) structural certification for design. Where *scaffolding*, *site sheds* and other structures are proposed to be placed on the deck a Type-B *hoarding*, the drawings must indicate this and certification confirming that the *hoarding* is capable of supporting all superimposed loads and not exceed the loads specified in the *SafeWork NSW* 'Code of Practice: Overhead Protective Structures' (refer to **2.8** for certification requirements, **3.8.5** for details on footings to support *temporary structures*, **3.11.6** for deck design and **4.5.6** regarding scaffolding placement on hoarding decks);

(j) the site plan must clearly and accurately show in plan and elevation the location of *street trees* including accurately specifying the height and canopy volume/diameter and significant branches of all *street trees* in the vicinity of the proposed *temporary structure*. If trees are likely to be affected, the structure must be designed to accommodate the tree/s without the need to prune major branches or limbs;

(k) where it is not possible for a *hoarding* design to accommodate tree canopies, applicants must contact the *City's* Tree Management Officer prior to finalising design drawings and lodging an application to discuss any design constraints and conditions of consent (see **3.17.3** for details relating to *street tree* protection requirements);

(l) street furniture and other infrastructure – The site plan must accurately indicate all street furniture including litter bins, bench-seats, bus-shelters, bollards, public telephones, poster panels, smart poles/power poles, street parking signage stems and the type of parking signage (if *approval* is to be sought for temporary removal), bike racks and utility access hatches in the *footway*.

(m) an assessment of the likely impacts (obscuring viewing of the *public space*) on *City*-controlled CCTV cameras/systems (see **Figure 2.3**), traffic monitoring cameras and private CCTV surveillance cameras required by a condition of *development consent*, must also be shown;

(n) details of *City*-operated CCTV cameras and other *City* monitoring infrastructure - where cameras:

(i) are likely to be affected particularly where a *temporary structure* will be in place for lengthy duration; and/or

(ii) the site is located in a high-risk and/or high pedestrian density area.

Notes (to consider in designing a *temporary structure*):

1. The *City* may require a camera to be relocated or an additional camera installed for the duration that the *temporary structure* is in place. All costs associated with relocating or installing additional cameras are to be borne by the applicant (see **2.17** regarding the installation and use of private CCTV security/surveillance cameras on *temporary structures*).
2. Where other monitoring equipment such as electronic pedestrian counting equipment is impacted, the device may need to be re-mounted on the *hoarding* or moved to an alternative position (with costs borne by the applicant).
3. Where *temporary structures* are likely to impact on parking signage stems, parking ticket machines, litter bins, seating and/or cause a reduction in the clear space for safe and convenient pedestrian movement, the *City* may require the temporary removal or relocation of the infrastructure at the applicant's cost. Any required adjustments must be identified in the application.

   Where removal/relocation of items listed above are necessary the works must be undertaken by the *City*'s contractors and fees paid in accordance with the *City's Revenue Policy (Fees and Charges)*.

   Separate specific *approval* for changes to street furniture and other infrastructure is required in addition to obtaining an *approval* (permit) to install a *temporary structure* (*see* **3.8.7**).

Figure 2.5: A *hoarding approval* (permit) does not include an *approval* to use the *roadway* for the loading and unloading of building material and equipment. A separate *approval* must be obtained (refer to the 'Code of Practice: Hoisting and Construction Activities On and Above Roads' for further details).

Photo: Peter Conroy / City of Sydney

2.9.3 Additional documents and fees that must be lodged prior to an approval being issued

The following must be provided:

(a) a *performance bond* (see **1.15**) for all Type-B *hoardings* and any other *temporary structures* as determined by the *City*. The amount will be determined in accordance with the *City's* Revenue Policy (Schedule of Fees and Charges) available on the *City's* website. The bond will be used to recover all costs incurred by the *City* in repairing damaged infrastructure or undertaking maintenance to a *temporary structure* where the applicant fails to undertake the work and also for other purposes (see **2.15.1**). The applicant should assess the condition of the *footway* and document (photograph) any defects prior to installation of *temporary structures*;

(b) evidence of a current *public liability insurance* policy held in the name of the applicant (see **1.16**);

(c) payment of a *footway/roadway* occupation fee. Occupation fees vary depending on the location (*city-centre* and *non-city-centre*) and whether sheds and/or traffic barriers are included.

The map at **Figure 1.1** shows the boundary of the *city-centre* and *non-city-centre* areas. The fees and *performance bond* will be determined as part of the assessment process. A *hoardings* fee and bond estimator is available on the *City*'s website.

Applicants will be advised of the required monies payable when a determination (*approval*) is ready to issue. An *approval* will not be issued and have no effect until all fees and bonds are paid; and

(d) payment of any required construction industry long service leave levy that may apply.

2.10 Cycleway network

Figures 2.6: Proponents must check with the *City* to establish that the construction of the *cycleway* network will not be impacted through the installation of a *temporary structure* (see **2.11.4**).

Photo: Brendan Read / City of Sydney

An extensive *cycleway* network exists across the city and works continue to expand the network.

It is important that *temporary structure* placement does not interfere with the network and future works. *Hoarding* placement near or above *cycleways* must also not interrupt or affect bicycle movement and safe passage (see **3.8.6**).

2.10.1 Cycleways and the design of hoardings

The design, installation and use of *temporary structures* (*hoardings)* must accommodate the three principal *cycleway* designs including satisfying all requirements of this Code relating to the safe and convenient passage of cyclists including pedestrians and vehicles.

To achieve acceptable outcomes for cyclists and other *road* users several specific design requirements apply (see **3.8.6**).

2.10.2 Shared pedestrian/cycleway paths

Hoardings erected in shared pedestrian/*cycleway* paths require special consideration. There are no 'deemed-to-comply' criteria for *shared paths*. In these circumstances applicants will need to discuss their proposal with the *City's* Cycling Unit to resolve any design aspects before proceeding with the preparation of drawings and lodgment of an application.

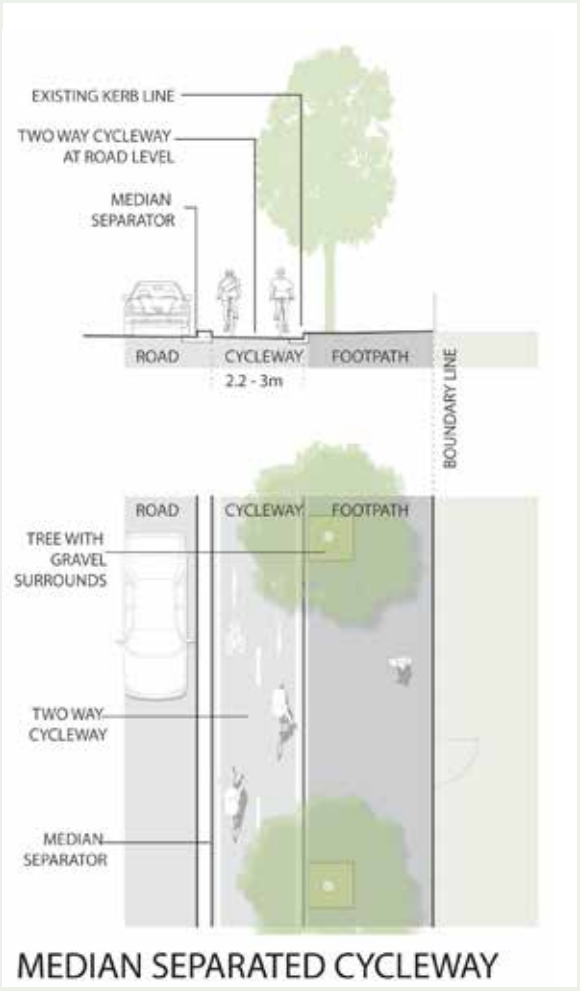


Figure 2.7: There are three principal *cycleway* designs. This design separates the *cycleway* from traffic lanes using a median separator. Refer to **Figures 3.24** and **3.25** for details when placing *hoardings* above *cycleways*.

2.11 Temporary structure installation, removal, notification and certification

After receiving *approval* for a *temporary structure* installation there are several other considerations and separate *approvals* required prior to proceeding with installation. The following requirements apply:

2.11.1 General considerations when making an application

(a) Before installing an *approved temporary structure*, separate *approval* will, in most cases,

be required for the *approved* days and times for the works. The separate *approval* is also necessary to regulate:

(i) the installation of temporary barricading to control pedestrians and traffic at the *worksite* in which the *temporary structure* will be erected (and dismantled). This is particularly relevant where works will require the use of the *road* or where works above a *road* which may cause overhead protection issues); and

(ii) *hoisting* actvities (*temporary structure* and/or components) to and from a vehicle standing on the *roadway* within authorised kerbside parking spaces or *approved* allocated space for the temporary standing of a vehicle.

The application must include a traffic (pedestrian) guidance scheme for the site. Clear *accessible* walking paths must be provided past the *worksite* with any detour distances minimised.

Accredited traffic and pedestrian controllers must be used during the installation, repair/modification and removal of a *temporary structure*. Refer to the *City*'s 'Code of Practice: Hoisting and Construction Activities On and Above Roads' for further details.

(b) Consultation with the *City* is recommended to identify any issues that may be relevant to the particular site such as:

(i) any requirements of the *City's* Local Pedestrian, Cycling and Traffic Calming Committee such as *works zone* or specific *road* usage requirements;

(ii) current or proposed city infrastructure works including *footway* reconstruction/resurfacing (refer to the *City*'s 'Code of Practice: Hoisting and Construction Activities On and Above Roads');

(iii) construction of the *cycleway* network and maintenance of the light rail transport system /rail corridor (see **2.11.4** and **Figure 2.8**); and

(iv) restrictions on the installation and removal of *temporary structures* during the Christmas and New Year holiday periods (refer to the *City*'s 'Code of Practice: Hoisting and Construction Actvities in Public spaces' for further details).See also **1.19** for other *approvals* that may be required.

Figure 2.8: Before installing a *temporary structure* in the light rail corridor the agreement of the rail operator must be obtained and written evidence provided to the *City*.

Photo: Peter Conroy / City of Sydney

Note: When installing a *temporary structure* near aerial electricity power cables and within the light rail corridor all applicable safety requirements must be followed including the requirements of the relevant electricity authority and/or utility owner and the light rail operator.

Figure 2.9: Where plywood sheeting is required to shield *temporary structures* from aerial electricity cables all sheeting must be painted in a colour and tone that matches the *scaffolding* containment mesh (see 'Note' below).

Note: The *SafeWork NSW* 'Code of Practice: Overhead Protective Structures' includes requirements in relation to the proximity of electricity transmission cables to *hoardings* and *scaffolding*.

Real myth by Captain Pipe
Photo: Peter Conroy / City of Sydney)

Figure 2.10: The preferred finish for *scaffolding* is black mesh installed on the outer surface (see **Part 04** for further details).

Photo: Peter Conroy / City of Sydney

2.11.2 Installing and removing temporary structures

The following requirements apply and must be satisfied:

(a) installation and removal of a *temporary structure* must be undertaken safely and not damage infrastructure including *footways*, kerbing, *street trees* and street gardens;

(b) upon installation or removal work commencing, the process must be carried out without undue delay in a continous manner (subject to weather conditions or specific directions of the *City*). This is necessary to minimise the period of *footway* or laneway closure and disruption to pedestrians, in addition to wider environmental impacts such as noise generation, particularly when works are being carried out on weekends and/or at night and/or in the vicinity of residential landuses;

(c) as a general requirement the *City* expects *temporary structures* to be installed by man-handling components or *hoisting* structures onto a *footway* or site directly from a truck standing legally on the adjoining *roadway* (kerbside lane); and

(d) In cases of *hoarding* installation/removal where there are site constraints preventing *hoisting* and placement from a *roadway* such as street awnings or where there is restricted clear access along the kerb due to *street trees* or infrastructure, forklift operation on *footways* to install *hoardings* will be permitted during installation and removal subject to the following:

(i) the size (mass) of the forklift or other similar equipment including the load must not exceed 7 tonnes;

(ii) forklift movement along *footways* must be minimised;

(iii) where existing *vehicular crossings* are not available in close proximity to the *worksite* for forklift access, appropriate and suitable temporary kerb ramps must be used for mounting a kerb to access the *footway* and *worksite* (to prevent kerb damage);

Photo: Brendan Read / City of Sydney

Figure 2.11: *Street trees* and gardens must be protected during the installation and removal of *temporary structures* including the full duration of the development or work. *Performance bonds* can be used to recover costs associated with rectifying damage or replacing trees (refer to **1.15**).

Photo: Karen Sweeney / City of Sydney

(iv) 17mm (minimum thickness) structural grade plywood sheets complying with AS/NZS 2269.0 must be placed on the *footway* surface to assist in distributing loads and to prevent damage to asphalt/stone surfaces (particularly as a result of wheel twisting), cracking or subsidence of stone or brick paving;

(v) utility service hatches/lids in the *footway* must be assessed for adequacy of loadbearing pressures and where necessary, suitable temporary steel plates placed over pits. Glass block footway lights must not be traversed; and

(vi) plywood sheets and steel plates required by (iv) and (v) must have a smooth transition (chamfered edges) at the interface with the *footway* surface to avoid trip hazards for people walking, under supervision and assistance, through the *worksite*.

Note: *Hoisting* activities when installing and removing *temporary structures* requires a separate *approval* (see **2.11.2**).

2.11.3 Certification of installed temporary structures

(a) Installation certification and completed checklist must be provided as follows:

(i) lodging the *City's* standard certificate template for structural aspects within 24 hours of completing the installation or part thereof where staging of installation is *approved* (see **2.8**); and

(ii) using the checklist (for *hoardings, compounds* and *scaffolding*), fully complete by physically inspecting the installation, sign the document confirming compliance, and email the checklist to the *City*.

(b) An *authorised person* will inspect the completed structure for compliance with the *approval*. *Temporary structures* must not be used (for overhead protection to meet required work health and safety requirements or the placement of *approved sheds*/equipment) until the required certification is provided and accepted by the *City*.

(c) Any incidents involving damage being sustained to a *temporary structure* that could:

(i) affect its structural integrity;

(ii) expose the public to injury); and/or

(iii) damage the *footway/roadway* surfaces;

must be reported to the *City* (see **1.16.5**).

2.11.4 City access to roads to undertake works (where temporary structures are in place)

In giving *approval* to allow the placement of *temporary structures* on *roads* (*footways* and *roadways*), the *City* reserves the right to require a structure to be temporarily removed or modified to allow infrastructure works to be carried out.

In proposing and designing *temporary structures*, proponents should make themselves aware of planned major works that may impact on the area of installation. This includes major works such as the construction of the *cycleway* network. The following matters apply and must be noted and considered:

(a) where planned *City* works in the vicinity of a *temporary structure* are obstructed and access is required for any purpose including access by *City* contractors or utility service providers in order to undertake works, the *temporary structure* must be temporarily removed or modified where so directed; and

(b) where (a) applies, the holder of an *approval* must:

(i) obtain all *approvals* to remove the structure and to reinstall the structure (following the completion of infrastructure work); or

(ii) lodge an application to modify parts the structure to accommodate the required infrastructure works.

All associated costs will be borne by the holder of the permit.

In meeting the above requirements, the *City* will consider any statutory responsibility the *permit-holder* has in controlling the *worksite* and *workplace* under the Work Health and Safety Act to protect persons in the *public space* before directing removal or substantial modification of a *temporary structure*.

2.11.5 Removal of temporary structures

Irrespective of the expiry date specified in a permit, a *temporary structure* must be removed as soon as practicable after it is no longer required for public safety and/or work purposes. A separate *approval* to dismantle a *temporary structure* must be obtained prior to such work commencing (see **2.11.2** for requirements when working in *public spaces*). Refer to the *City's* website and permit conditions for details regarding seeking *approval*.

2.11.6 Managing activities and impacts associated with temporary structures and usage

The city, particularly the very busy *city-centre* zone, has high activity and pedestrian densities that must be properly managed to minimise impacts when installing/removing temporary structures. The following matters set out some of the requirements to mitigate impacts:

(a) truck outriggers for *hoisting* activity must not be placed on *footways* or kerbing unless there are site constraints that prevent outriggers being positioned on the *roadway* (a more stucturally stable surface that has greater bearing pressure capacity). Where outriggers must be placed on *footways* the loads must be evenly distributed over the *footway* surface using 5mm thick 1.0m square steel plates;

(b) *approval* to install a *temporary structure* does not allow the use of the *roadway* for general loading and unloading to and from vehicles. A separate *works zone* application must be lodged and *approval* obtained where long-term use of a *roadway* is required (refer to the *City*'s 'Code of Practice: Hoisting and Construction Activities On and Above Roads' for further details);

(c) where a proposed *works zone* adjoins a *cycleway* and requires temporary lane diversions to accommodate the *works zone* when in operation, the *City* may, in high traffic volume *roads* and/or other key *roadways*, restrict the operational times of the zone to off-peak traffic periods (refer to the *City*'s 'Code of Practice: Hoisting and Construction Activities On and Above Roads' for further details);

(d) hoisting activity using mobile cranes must not be undertaken in a *public space* without formal *approval* (refer to the *City's* website for further details including *City*'s 'Code of Practice: Hoisting and Construction Activities On and Above Roads') and application form;

(e) building material and equipment including construction waste bins associated with a development site must not be stored in the *public space* or on the deck of Type-B hoardings, unless specifically *approved* (see **3.11.5**);

(f) construction waste chutes installed over a *public space* are not permitted - refer to the *City*'s 'Code of Practice: Hoisting and Construction Activities On and Above Roads';

(g) *footway* and *roadway* surfaces must be fully maintained by the *permit-holder* to ensure a safe and tidy condition at all times including during the installation and dismantling stages of *temporary structures* (see **2.11.2** and Figure **2.12**); and

(h) the *footway* or *roadway* must not be used as a platform for construction, demolition or maintenance work on a building without the prior written endorsement of the *City.*

Refer to the *City*'s 'Code of Practice: Hoisting and Construction Activities On and Above Roads' for further details.

2.12 Maintenance of temporary structures and the public space adjoining worksites

Continuous maintenance of *temporary structures* and the condition of *public spaces* must be carried out whilst a *temporary structure* is in place to ensure that installations and the *public space* surfaces remain structurally sound, safe, accessible, clean and tidy. The following specific provisions apply as a minimum.

2.12.1 General requirements

(a) The Roads Act requires a person who has benefit of a *temporary structure approval* on or over a public *road* to maintain the structure in a satisfactory state of repair and condition (see 'Notes'). Penalties apply where structures are not properly maintained.

(b) The *permit-holder* must notify the *supplier* of a *temporary structure* of any defects or maintenance issues that arise with a structure throughout a project so that remedial works can be undertaken by the owner/*supplier* of the structure (to satisfy Work Health and Safety Act provisions).

(c) The *City* will vigorously monitor the condition of *temporary structures* including displayed graphics. If structures are inadequately maintained the *City* will give directions to rectify defects. Permit renewals will be withheld where structures are found non-compliant or unsafe.

(d) The general condition of the *public space* in the vicinity of *temporary structures* and the *worksite* must be kept tidy and clear of overgrown vegetation, dust, debris and litter that can accumulate around structures and on nature strips. This is particularly important as access by the *City's* cleansing and parks services teams may be restricted by the structures. Street gardens including affected community gardens must also be kept tidy and maintained including watering in circumstances where a *hoarding* spans over gardens.

Figure 2.12: *Temporary structures* on *footways* and *roadways* can obstruct access by the *City*'s cleansing services team particularly mechanical *footway* sweeper plant. The person in control of a *workplace* must therefore keep the *public space* clean and tidy at all times.

Photo: John Dennis / City of Sydney

(e) Where maintenance or repairs *are not undertaken* a formal direction may be issued to require defects to be rectified. A direction to the owner/*supplier* of a *temporary structure* can also be given. A penalty infringement notice (fine) may be issued where a direction is not complied with. The *approval* for the structure may also be revoked. If revoked (see 'Notes'), the structure will immediately be deemed unauthorised and its removal can be required.

(f) The holder of a permit must ensure that the structural adequacy of a *temporary structure* is monitored regularly and is fully maintained for the duration that it is in place (see **2.8.9** regarding periodic certification).

(g) The owner of a *temporary structure*, typically the *supplier* or contractor, may be held responsible for the removal of a structure where an *approval* lapses or is revoked and the holder of the permit fails to arrange/undertake removal. Refer to the *performance bond* provisions in **1.15.1** in relation to cost recovery by the *City*.

(h) The *City* may require proof of current compliance with the relevant Standards at any time (beyond the provisions of **2.8.9**). Where the *City* considers that the design or installation of a *temporary structure* may be inadequate and/or is non-compliant with this Code, the *City* may commission an independent engineer or other person to audit the submitted drawings and/or installation to determine the acceptability or otherwise of the structure.

Notes:

1. A direction to remove a structure can be issued under s107 of the Roads Act 1993.
2. Section 108 of the Local Government Act 1993 allows the City to revoke an approval for any circumstance set out in s109. Under s140 of the Roads Act 1993 the City can also revoke an approval at any time and for any reason.

2.12.2 Graffiti on hoardings, compounds and other temporary structures

(a) Site fences must be kept free of graffiti and bill posters and the structural frame of Type-B *hoarding*s must be kept clean, tidy and in good condition, as determined by the *City*.

(b) Graffiti and bill posters must be removed within 24 hours of being applied on site fences or structures. Where surfaces have been damaged they must be repaired and re-painted. In cases of damage to *approved* graphics, the replacement of damaged sections will be required. General wear-and-tear on site fences and the structure will require periodic inspection and likely re-painting for the duration of a project.

(c) In cases where a *structure* does not have graphics displayed and is repeatedly targeted by bill poster attachment the fixing of steel mesh to site fences may be permitted subject to meeting minimum design requirements (see **3.10.7**). Meshing will only be permitted in problematic areas and in extreme cases of continual poster attachment. Endorsement to use mesh must be obtained from the *City* prior to installation.

(d) Where maintenance is not carried out to an acceptable standard as directed by an *authorised person* including directions to maintain graphics and/or remove graffiti and bill posters, infringement notices (fines) may be issued.

Note: where *temporary structures* are in place for more than 6 months, certification must be provided in accordance with **2.8.9**.

2.12.3 Maintenance of scaffolding (see also Part 04)

(a) *Scaffolding* structures must be fully maintained to ensure continued compliance with AS 1576.1 'Scaffolding – General requirements'. Refer also to Clause 225 of the Work Health and Safety Regulation (see also **4.4.5**).

(b) Any modifications to a *scaffold* will require the approval, inspection and certification of an appropriately qualified and licensed *scaffolder*.

(c) Where *scaffolding* is in place for more than 6 months (see **2.8.9**) the structure must be fully checked by an an appropriately qualified and licensed *scaffolder* and/or engineer and certification provided in accordance with **2.8**. See also **2.12.1 (h)**.

2.12.4 Maintenance of screening systems and scaffold wraps

Screening systems and/or graphics (wraps) on *scaffolding* must be fully and properly maintained for the full duration of installation including the following:

(a) keeping the screening mesh or fabric taut to minimise impacts of wind actions on the structure and to display the content in a visually acceptable manner;

(b) general screening systems being maintained in good condition and to an acceptable standard as determined by the *City*;

(c) for lengthy *scaffold* wrap installations, consideration must be given to durability of the printing inks and mesh particularly on elevations with high solar exposure such as north-facing orientation. The longterm condition of a wrap display such as the accumulation of atmospheric particulates/pollutants and dust from the *worksite* must also be considered. This includes appropriate maintenance plans being developed and implemented;

(d) ongoing effective maintenance and the repair of graphics/mesh;

(e) the *City* will monitor the condition of a wrap and if necessary can require wrap replacement and/or cleaning to be undertaken to maintain an acceptable standard of condition and appearance; and

(f) *scaffolding* wraps must satisfy the design and installation requirements set out in **Part 06**.

2.12.5 Other temporary structures

All other forms of *temporary structures* must be maintained in accordance with the manufacturer's and/or *supplier*'s specifications.

2.13 Protecting excavations - fencing and other barriers (hoardings)

2.13.1 General

The Work Health and Safety Regulation 2017 requires the person undertaking excavation work and the principal contractor (*PCBU*) to manage all risks and comply with Clause 305 of the Regulation. This includes potential hazards to pedestrians in *public spaces* such as risks of persons accidentally falling into an excavation (see **Figure 2.14**).

The *PCBU* responsible for a *worksite* and *workplace* and the owner/*supplier* of a *hoarding* must also satisfy any other requirements such as relevant *SafeWork NSW* codes of practice. The following matters also apply:

(a) risks associated with motor vehicles crashing through *hoardings* and falling into deep excavations must be considered when assessing risks to the public (see **3.9.1(a)**). In assessing the risks and determining the extent and form of required safety measures, the *PCBU* must consider, as a minimum:

(i) vehicle speeds based on signposted maximum limits;

(ii) size (mass) of likely vehicle-types (including trucks/buses and light rail) using the *road/s* in the locality of the site;

(iii) road configuration such as road intersections (signalised and non-signalised), bends and kerb-side lane usage; and

(iv) openings in the site fence (see also **(c)** below);

(b) section 103 of the Roads Act allows the *City*, as a *roads* authority, to direct an owner or occupier of land to install barriers where it considers that an excavation poses a sufficiently dangerous risk or condition to threaten the safety of persons using a public *road* adjoining a *worksite*. This is particularly relevant for sites adjoining very busy *roads* and at *road* intersections that present increased risks of vehicle collision and/or loss of vehicle control;

(c) the *City* may, irrespective of any risk assessment undertaken by the person in control of a site, require appropriate safety barriers to protect an excavation including at access openings, particularly at truck access openings/gates (see **3.15**);

(d) where a risk assessment establishes that safety barriers are required, or the *City* requires protection, the system of protection must, where practicable, be placed within the allotment boundaries (not on the *roadway* or *footway*). Where this is not possible protection barriers may be located on *City*-land subject to **(f)**;

(e) barriers must be designed to the established loading conditions based on the findings and recommendations of any pedestrian/traffic risk assessment (see also **(a)**) that has been undertaken to satisfy relevant requirements of the Work Health and Safety Act and Regulations including any appliable codes of practice; and

(f) the *City's* expectation is to avoid fixing barriers to *footway/roadway* surfaces, however, where the risk assessment establishes that fixings are required to achieve the necessary impact load resistance the proponent must contact the *City* to discuss the form of proposed fixing and its appropriateness for the area and surfaces. This will include consideration of potential adverse impacts such as sandstone and bluestone kerbing and other significant public domain fabric.

Figure 2.13: A Type-A *hoarding* braced to a concrete Jersey kerb and protecting an excavation.

Photo: Peter Conroy / City of Sydney

Figure 2.14: Sites undergoing deep excavation can pose a significant safety risk to the public including occupants of motor vehicles. Where an assessment by the *person conducting a business or undertaking* and/or the *City* identifies that a risk exists and *control measures* such as a need for physical barriers is necessary, the standards for their location must comply with this Code.

Photo: Peter Conroy / City of Sydney

Photo: Peter Conroy / City of Sydney

2.13.2 Impacts of public crowding on site fences and access doors/gates

The *PCBU* including the designer and *supplier* of a *hoarding* must consider the loads imposed on *hoarding* site fences and/or gates resulting from live actions of public crowding (pushing against the barrier). This is particularly important in the *city-centre* where large gatherings associated with major public events take place.

2.13.3 Caution signage - excavations

Caution signage (see **Figure 2.15**) must be securely fixed at each end of a site fence warning of a deep excavation behind the fence (where more than 1.5m below the footway/*roadway* surface). For long frontages (greater than 30m) additional intermediate signage can be displayed on the site fence (and be appropriately positioned to minimise visual impacts on graphics - see **Part 06**).

Figure 2.15: For *hoardings* associated with an excavated site (deeper than 1.5m), caution signage must be displayed indicating a deep excavation behind the site fence. Signage should be appropriately positioned to avoid placement over graphics (see **Part 06**).

Photo: Peter Conroy / City of Sydney

2.13.4 Stability considerations - ground erosion and subsidence associated with excavations

The design and positioning of *temporary structures* particularly support columns of Type-B *hoardings* and traffic/pedestrian safety barriers protecting excavations, must consider and take into account risks associated with:

(a) partial settlement of the public *road* surface; and

(b) major subsidence/collapse of the *roadway*/surface resulting from excavation works which may impact on *temporary structure* stability. This includes assessing and considering:

(i) shoring, ground anchoring, retaining walls etc.;

(ii) impacts of rainwater accumulation in excavations, rainwater run-off from *hoarding* decks and surrounding *public spaces* into sites (erosion of supporting earthen foundations at the perimeter of the site/excavation);

(iii) erosion of supporting foundation material in the event of ruptured water supply pipes; and

(iv) other elements and events that may detrimentally impact the stability of a *temporary structure*.

Note: The *SafeWork NSW* Code of Practice: Overhead Protective Structures has provisions relating to stability of temporary protective structures.

2.14 Fire safety – risk management and design requirements for temporary structures

Photo: Tom Conroy

2.14.1 Purpose

For the purposes of this clause including subclauses, 'temporary structure' means:

- a Type-B *hoarding* (with or without *site sheds*, *scaffolding*, equipment and other items placed on a *hoarding* deck);
- a *cantilevered work platform*, (but not a materials landing platform);

- a cantilevered overhead protective deck (as a barrier to address objects that may fall from a *worksite* onto a road), erected on or above a *road*;
- other temporary structure/s, as determined by the *City*.

2.14.2 Potential fire risks and other impacts when placing a temporary structure on or above a road

When proposing to place a temporary structure on or above a *road*, there are potential fire and public safety risks that need to be considered and addressed as part of the design process including considering the proposed usage. There are several aspects that a persons conducting a business or undertaking (*PCBU*s) and *supplier*s of temporary structures must consider. They are:

(a) risks associated with the spread of fire vertically on a building above a temporary structure particularly in circumstances where *site sheds*, *scaffolding* and other material/ equipment storage are placed on the deck of a Type-B *hoarding*;

(b) potential spread of fire to and from the *worksite* including occupiable decks and surrounding buildings via a temporary structure including other items placed on the deck of a Type-B *hoarding*;

(c) emergency egress from both a *worksite* and surrounding buildings particularly when exits discharge into a laneway over which there is a temporary structure (the necessity to maintain safe pathways beneath a structure to reach spaces that are fully open to the sky); and

(d) firefighting operations such as adequate access for firefighting appliances particularly in laneways including safe unencumbered access to hydrant and sprinkler booster connections (of the *worksite* and surrounding buildings) and access for the effective application of water onto fire-affected area/s.

These four fire safety considerations are addressed in the Building Code of Australia (BCA) as fundamental principles relating to fire control and occupant safety associated with building design. Although the application of the Code is primarily for the purpose of prescribing minimum standards for the construction of new buildings and works to existing buildings, the principal objectives of the Code in these areas can be applied to temporary structures erected on and above roads to facilitate work activities. In this regard, there are three BCA objectives that are important when designing a temporary structure, its planned location and proposed purpose including usage, as follows:

(1) Preventing the spread of fire

Performance provision C1P2 in the BCA (spread of fire) deals with fire both within and between buildings. The aim is to avoid circumstances where fire either endangers occupants evacuating by way of exits or impedes the capacity of emergency services personnel when accessing buildings for firefighting and search and rescue operations.

Fire in a *worksite* and/or on a temporary structure can impact adversely on fire compartmentation objectives of the Code. This is particularly important when temporary structures are associated with works on existing buildings and potential off-site impacts on surrounding buildings, including the difficulty of accessing the seat of a fire located above a temporary structure, particularly when installed in and above laneways thereby restricting access.

The BCA sets out key factors that apply in the design of a building to restrict the spread of fire which can also be applied as considerations when assessing risks and designing a temporary structure. This includes:

(i) the likelihood or risk of a fire occurring;

(ii) the expected size, load or intensity of a likely fire;

(iii) the difficulties of evacuation (occupants in a building undergoing change and/ or workers accommodated in *site sheds* placed on a *hoarding*);

(iv) exposure to fire and the spread of fire from (and to) a *worksite* and *workplace* via a temporary structure;

(v) the fire safety systems in a building which can affect the rate of fire-spread, e.g. if an automatic fire suppression system is installed, it will either extinguish the fire or reduce its growth rate; and

(vi) firefighting operations of the fire brigade (Fire and Rescue NSW).

(2) Egress to a safe place

Emergency exits in buildings typically discharge occupants directly to public *roads* that are open to the sky and therefore deemed to be a safe place.

Note: The BCA also permits exits to discharge to 'open space' on an allotment which must then provide direct egress to a *road*. "Open space" is defined in the BCA as: 'a space on the allotment, or a roof or similar part of a building adequately protected from fire, open to the sky and connected directly with a public road.'

Discharging occupants beneath a temporary structure particularly when located in a laneway can present safety risks. Fire occurrence on a *worksite* (including on temporary structures) or in surrounding buildings could hamper evacuation including occupants reaching a safe place such as a primary *road* connected to a laneway. There are also potential operational issues for firefighters (see **(c)** below.

The BCA recognises the need to maximise safety by ensuring persons can reach a public space (*road*). The Code further recognises that the area of discharge from an exit (to a *road*) must be open to the sky.

(3) Firefighting operations

The Code requires egress (and access) from (and to) fire control centres and sprinkler valve enclosures to a public *road* or open space. Similar to exit discharge points of buildings (the importance for occupants to reach a space that is open and safe), the same needs of firefighting personnel must also be considered when placing structures above firefighting facilities including hydrant and/or sprinkler booster connection points.

The Code also recognises that a significant number of fires occur in buildings during their construction or in existing buildings undergoing major alteration/refurbishment. As a result, suitable means for firefighting operations must be available to allow initial fire attack by construction workers and for fire brigade usage.

Clause E1D16 in the BCA provides deemed-to-satisfy provisions as a means to the comply with the performance criteria. This includes the availability of portable fire extinguishers and, once a building has reached an effective height of 12 metres, the installation of fire hose reels and fire hydrants within the building. Hydrant booster connections at street level located in compliant positions must also be provided including satisfying the following:

(i) be readily available to firefighters;

(ii) temporary structures must not obstruct fire truck movement and pumping operations; and

(iii) where required by FRNSW, be separated from the building under construction/ alteration by fire-resisting/construction (radiant heat protection) to dimensions as specified by the brigade.

Further guidance on the needs and requirements of FRNSW is available in the document: 'Fire Safety Guideline: Access for Fire Brigade Vehicles and Firefighters'.

2.14.3 Role and responsibilities of PCBUs and suppliers of temporary structures

Photo: Peter Conroy / City of Sydney

(a) When designing and proposing to install a temporary structure on a *footway* or above a *roadway* such as a laneway, the *PCBU* and the *supplier* of the temporary structure must assess the risks of:

(i) a fire occurrence on a temporary structure including an occupied *hoarding* deck and safe egress for workers (see **2.14.6**);

(ii) a fire occurrence on a *worksite* and spread to a temporary structure including any temporary structures/equipment proposed on a *hoarding* deck;

(iii) the spread of fire (via a temporary structure) to and from surrounding buildings; and

(iv) impacts on fire brigade access and firefighting operations;

(b) Fire risks are compounded when *site sheds* and other combustible items such as material and equipment are placed on the deck of a Type-B *hoarding*. This must therefore be given special consideration including emergency egress for workers (and any other requirements and responsibilities that may apply through the NSW Work Health and Safety Act and codes of practice).

If it is established that there is a potential for fire-spread, the design must address these risks including any planned usage of the deck – see **3.11.5** and **5.4.1** in relation to any likely impacts on firefighting operations of Fire and Rescue NSW (FRNSW). This is particularly important in circumstances where:

(i) an existing building is undergoing change and remains occupied;

(ii) the building, and surrounding buildings, are not fitted with automatic fire suppression systems (sprinklers); and

(iii) existing older surrounding buildings that may not comply with the principal fire protection provisions of contemporary building regulations (the Building Code of Australia); and

(c) Building classification and usage such as residential and hotel/tourist accommodation (sleeping occupants) must be given special consideration and addressed as part of the risk assessment/management process.

Note: Attention is directed to the Work Health and Safety Act (including sections **17, 19, 21, 22** and **26**).

2.14.4 Measures to reduce fire-spread risks to surrounding buildings

Design and risk management measures may need to be implemented to address fire risks including, but not limited to, the following:

(a) temporary structures (Type-B *hoardings*) needing to be fully non-combustible;

(b) locating *site sheds* on *hoarding* decks in appropriate positions such as away from likely fire-risk sources or potential fire-spread pathways;

(c) in circumstances where a temporary structure is not constructed fully of non-combustible material such as the deck/platform, fascia and site fences, the increased risk of fire that this therefore presents; and

(d) installing a temporary automatic fire suppression system (sprinklers) on the underside of a deck and any *site sheds* or other combustible items. This will assist in delaying the intensity of a fire (and potential fire-spread) until the arrival of FRNSW personnel.

Note: The BCA (Part E1) can provide guidance on firefighting equipment including mandatory firefighting systems for buildings under construction (see E1D16 in the BCA).

Compliance with **2.14.7** will address the above matters.

2.14.5 Firefighting appliances and operations – impact and considerations

Photo: Peter Conroy / City of Sydney

As part of the site assessment and establishment processes including the necessity to provide overhead protection of *public spaces* to satisfy any work, health and safety obligations, the design process for a temporary structure must address the operational needs of FRNSW including, but not limited to, the following:

(a) temporary structures erected over *roadways* (particularly laneways) must be assessed for any potential adverse impacts on firefighting and search/rescue operational needs. This includes fire occurrences in floors of a buildings located above the level of a *hoarding* deck and sheds or cantilevered platform that could result in adverse impacts on the use of access ladders and aerial firefighting appliances;

(b) for substantial installations in laneways (lineal distance and/or with multiple *site sheds* placed on a Type-B *hoarding*), the applicant may need to consult FRNSW to address any potential operational impacts and incorporate any recommendations in the design of a temporary structure before an application is lodged; and

(c) the operational needs of FRNSW in relation to accessing and using hydrant/sprinkler booster connections on the *worksite* required by the BCA including booster connections of surrounding existing buildings that are impacted.

Compliance with **2.14.7** will satisfy the above requirements and not require consultation with FRNSW.

2.14.6 Emergency egress and control measures

The *PCBU* must assess the risk of a fire occurrence and other emergency events on a temporary structure including occupiable Type-B *hoardings* (housing *site sheds* and/or other approved structures or material including occupiable *scaffolding* systems). Any *SafeWork NSW* requirements must also be addressed. The following must be considered when establishing the type and extent of any required *control measures*:

(a) the distance to egress points (such as stairways) on a *hoarding* deck for workers to reach a safe place and the distance between alternative exits, where necessary;

(b) the design and width of emergency egress pathways (corridors, passageways and stairways) to facilitate effective evacuation to a safe place in the event of a fire or other emergency;

Note: Access doors/gates must not open over a *footway* or *roadway* - refer to **3.12.1** regarding design requirements for access stairways and enclosures on *footways* including setbacks from *road* kerbs and clear pathways for pedestrians.

Photos: Peter Conroy / City of Sydney

(c) the types and extent of combustible materials and structures (*site sheds*) placed on a *hoarding* deck and whether portable fire extinguishers, hose reels, automatic fire suppression systems (sprinklers), smoke detection/alarm systems and illuminated exit signage are necessary including the number and location of portable extinguishers/hose reels; and

(d) the impacts on occupants of surrounding buildings that have emergency exits discharging onto a *road* (particularly a laneway) that has a temporary structure erected above exits and the egress pathways along a laneway to reach a connecting primary *road* or alternative safe place such as an open public square.

Subclause (d) is satisfied through complying with **2.14.7(a)**.

2.14.7 Design controls when placing a temporary structure on and above a laneway

The following design controls apply when proposing to install a temporary structure in a laneway:

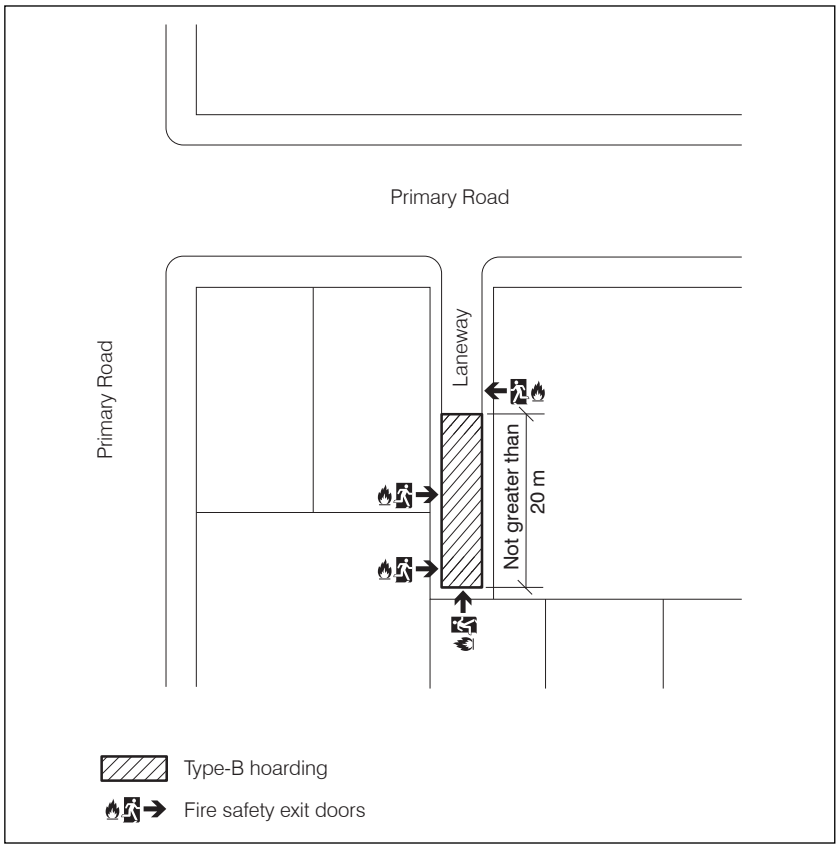
(a) for effective and appropriate access for firefighting operations by FRNSW and for safe egress of occupants from surrounding buildings including workers on the *worksite* and *workplace* (on the *hoarding* deck), the maximum permitted length of a temporary structure built above the laneway is:

(i) 20m where the laneway has a single access to the primary street (e.g. a dead-end); and

(ii) 40m where the laneway has two or more access points to primary street/s.

Refer to **Figure 2.16**.

Figure 2.16: Maximum lengths of *temporary structure* installations in laneways (refer to **2.14.7**)



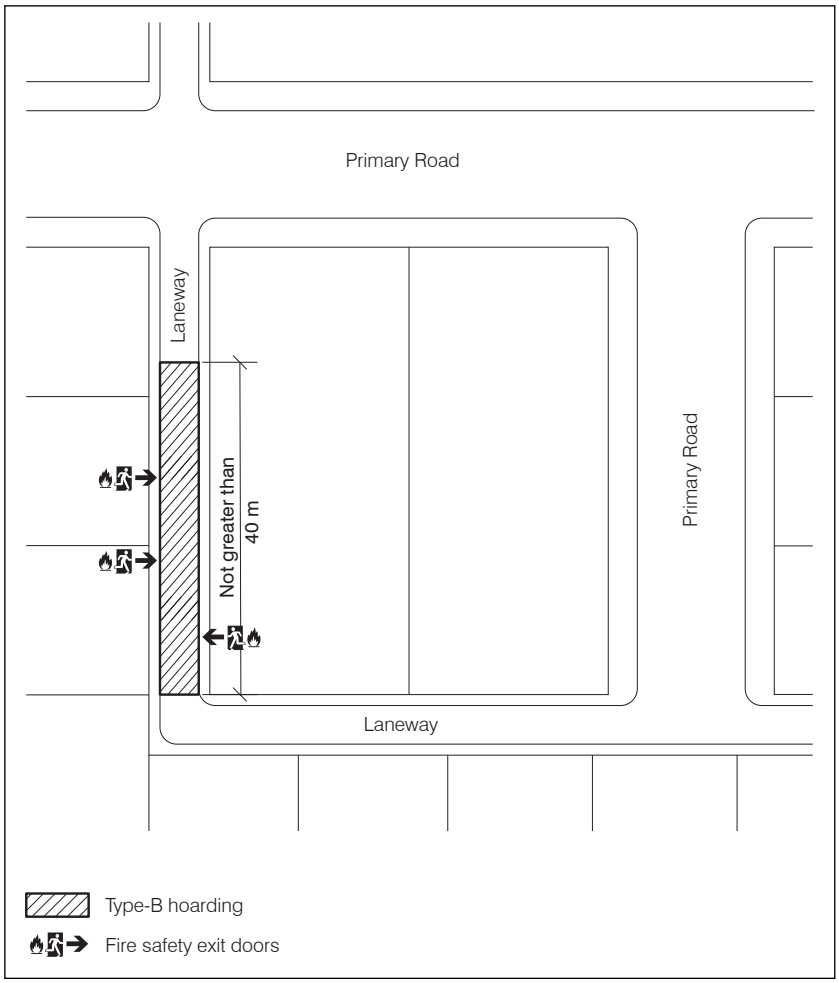


Figure 2.17: Examples of *hoardings* in laneways with automatic sprinkler protection. The lower image shows a booster connection at the junction of a laneway with a primary road.

Photo: Peter Conroy / City of Sydney

Photo: Peter Conroy / City of Sydney

Where the above criteria are exceeded the proponent (*PCBU*) must consult FRNSW prior to lodging an application to seek their written endorsement for a hoarding length exceedance. Written evidence of such consultation and feedback received including the incorporation of any required design changes must be included with the temporary structures application;

(b) irrespective of the:

(i) size (length) of a temporary structure as set out in (a);

(ii) positioning and form of a temporary structure; or

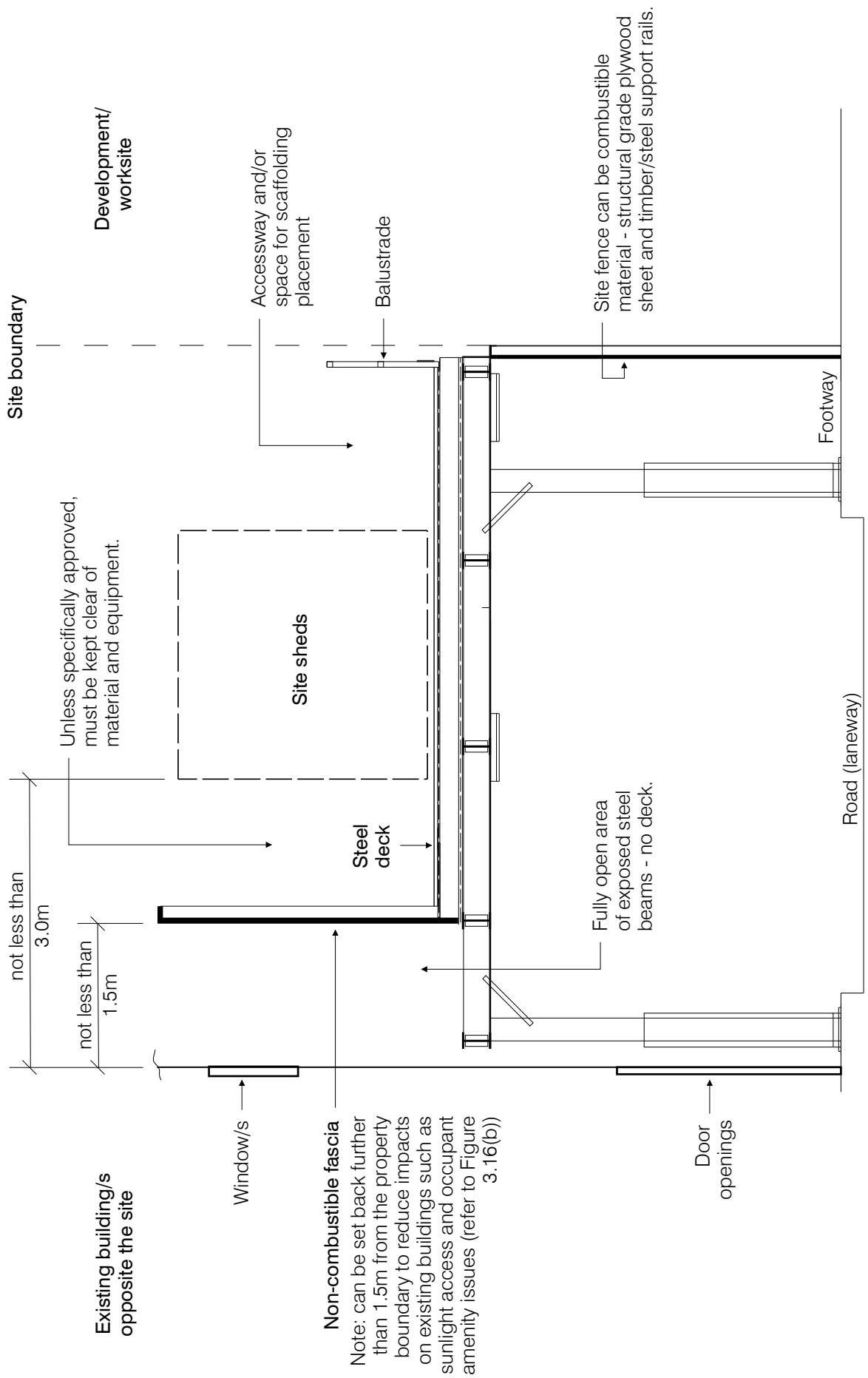
(iii) setback distances of a temporary structure from the property alignment/s on the opposite side of a laneway (subject to consideration of **2.15**),

where a deck is formed using combustible material (as defined in the BCA) such as timber boards and/or timber-based sheeting, an automatic fire suppression system (sprinklers) complying with AS 2118.1 must be installed on the underside of the protective deck and extend to all combustible objects placed on the deck (refer to the 'Note');

(c) a temporary structure of steel deck construction may extend to a setback point of 1.5m from the property alignment on the opposite side of a laneway (see **Figure 2.18**) subject to consideration of **2.15** and compliance with the following:

(i) all elements (except a site fence of a *Type-B hoarding*), must be fully non-combustible (as defined in the BCA); and

Figure 2.18: Section detail showing a Type-B *hoarding* installation in a laneway – fire safety design features (refer to **2.14.7**)



(ii) combustible objects such as site shed/s, equipment and building materials, (specifically allowed and *approved*) on the deck must not be placed within 3.0m of the property alignment opposite the site.

Where the above requirements are not met an automatic fire suppression system (sprinklers) complying with AS 2118.1 must be provided on the underside of the deck and extend to all permissible combustible items proposed for placement on the deck (refer to the 'Note').

Note: In circumstances where part of the deck of a Type-B *hoarding* is supported by open/exposed steel beam members projecting fully over a laneway to connect with supporting columns, sprinkler protection of the structural members (that are open to the sky) is not required.

2.14.8 Alternative compliance pathways – fire safety

(a) Where there are site and/or temporary structure design constraints preventing compliance with **2.14.7**, the Code allows a performance-based design option (see **1.11.1**).

(b) A performance-based design must satisfy the objectives in the Code (see **3.7**). If a performance-based design solution is to be sought, a report may need to be commissioned from a registered fire engineer providing an assessment of the site circumstances against the principal fire safety matters set out in **2.14.2** (as a minimum) and include any recommendations.

(c) Certification of a performance-based design solution must be provided in accordance with the City's requirements which includes a statement that the certificate is issued under the provisions of Section 93 of the Local Government Act 1993.

2.15 Impacts of temporary structures on building occupants and usage

The installation of a *temporary structure* has the potential to impact building occupants, commercial/retail premises and the surrounding *public space* including access to buildings. In designing a *temporary structure*, the proponent must consider these matters and minimise potential adverse impacts.

2.15.1 Existing buildings undergoing change

A *temporary structure* installation (typically a *hoarding*) associated with an existing building has potential to impact access, usage and businesses at ground level. Visibility of existing *business identification* signage and access/use of *footway* dining spaces can also be impacted. To address these matters and minimise impacts the following provisions apply:

Photo: Peter Conroy / City of Sydney

(a) it is the responsibility of the proponent and/or property owner to identify and minimise any potential adverse impacts on the use and operation of premises within the building by:

(i) advising owners, occupants and business operators of the proposed works and the duration;

(ii) where concerns are raised, discussing the issues with affected parties and seeking to resolve their concerns;

(iii) where existing *business identification* signage is likely to be impacted (for example, if sightlines to existing signage will be obscured), inform business owners/operators that temporary *business identification* signage can be displayed on a *temporary structure* (refer to **2.16** for further details); and

(iv) business identification signage must be appropriately incorporated within a hoarding graphics display (where required) – refer to **6.1.7** and **Table 2** in **Part 06**;

(b) a minimum of seven (7) days' notice must be given to property owners/tenants and businesses prior to the commencement of installation work.

Note: The *City*, in deciding to allow an installation, has no responsibility to notify building tenants of proposed works nor the lodgement of an application *seeking approval* to install a *temporary structure*.

Figure 2.19: *Temporary structures* must not encroach on frontages of adjoining properties unless specifically approved by the *City*.

Koala 4 ever by Elin Matilda Andersson
Photo: Peter Conroy / City of Sydney

2.15.2 Properties adjoining and surrounding work sites and temporary structures

(a) Where a *temporary structure* is proposed to span a laneway (see **3.11.4**), or project in front of adjoining properties the proponent must:

(i) brief likely affected parties and consult property owners to establish if there are any potential impacts;

(ii) address issues or concerns raised and attempt to minimise any identified and agreed impacts; and

(iii) incorporate any agreed adjustments in the design including any agreed planned work processes associated with the use of the proposed *temporary structure*.

(b) As a minimum, consultation required by **(a)** must be in accordance with the *City's* requirements.

(c) To assist and inform the *City* as part of the application assessment process, the following must be provided:

(i) details of consultation undertaken (property addresses as a minimum);

(ii) written confirmation from such parties consulted (using the *City's* standard template - available on request) that no objection is raised; and

(iii) where confirmation/s could not be obtained, the property address details.

Figure 2.20: When planning to place a *hoarding* over a laneway special design considerations must be given to the potential impacts on surrounding buildings and occupants including fire-related aspects (see **2.14**). Consultation with likely affected parties must also be undertaken.

The New Nature of Experience by Tom Blanchford and Jessica Njoo
Photo: Peter Conroy / City of Sydney

2.15.3 Assessment and considerations

(a) The matters in **2.15.2** and **5.5** in relation to proposed site shed placement and any planned deck usage must be addressed prior to the lodgement of an application.

(b) In assessing an application, the *City* will consider the details provided, however, reserves the right to:

(i) formally notify likely impacted property owners of the application/proposal; and/or

(ii) require changes to the proposed design.

Figure 2.21: Examples of temporary replication and relocation of *business identification signage*

Photo: Peter Conroy / City of Sydney

2.16 Impacts on existing business identification signage

Temporary structures installed in *public spaces* (typically on *footways*) can sometimes obscure business shopfronts including *business identification signage*. The *City* will allow the replication of impacted signage.

2.16.1 Notice to affected business operators

To address potential impacts on business operators notice must be given in accordance with **2.15** including specifically, **2.15.1 (b)(iii)**.

2.16.2 Displaying replicated business identification signage

City approval, via the temporary structures application process, must be given for the display of temporary signage and will be subject to the following:

(a) the temporary signage replicates the content of impacted signage (colour, font style etc.) including being no larger than the existing signage;

(b) where the existing signage is illuminated, the replicated sign/s may be temporarily illuminated subject to specific *City* consideration and endorsement; and

(c) the location of replicated temporary signage must be assessed by the *City*.

Note: All costs associated with replicating and displaying signage is a matter between the *permit holder* for the *temporary structure* and affected parties.

2.16.3 Relocating and fixing existing business identification sign on a temporary structure

A business operator may request the relocation of an impacted (obscured) existing *business identification* sign for attachment to a *temporary structure*, subject to:

(a) agreement of the *permit holder*; and

(b) consideration and agreement of the *City*.

2.17 Temporary wayfinding signage

(a) Where a *temporary structure* obstructs viewlines to entrance/s of an existing building, business/retail premises, railway/metro stations and the like, temporary wayfinding signage may be displayed on the structure with the endorsement of the *City*.

Photo: Peter Conroy / City of Sydney

(b) The size, number and content of signs must be sympathetically designed and appropriately positioned to minimise visual impacts on graphics required to be displayed in accordance with **Table 1** in **Part 06**.

2.18 Installation and use of private CCTV surveillance cameras on temporary structures

The installation and use of CCTV surveillance cameras (optical surveillance devices) on *temporary structures* for site security purposes is not regulated through this Code.

Dancing fig trees by Richard Briggs
Photo: Peter Conroy / City of Sydney

In circumstances where surveillance cameras are proposed to be installed, the *permit-holder* for a *temporary structure* has a responsibility to ensure that the surveillance equipment and use complies with the NSW Surveillance Devices Act 2007 and the NSW Workplace Surveillance Act 2005.

It is an offence to knowingly install, use or maintain optical surveillance devices on land (*roads*) without the consent of the landowner (the *City*).

2.19 Pollution control in a public space (dust, noise, water and litter)

2.19.1 Pollution controls

Adequate site controls must be implemented to prevent pollution of a *public space*. This includes but is not limited to the following:

(a) General litter – maintain the *footway/roadway* area and remove any litter that accumulates around a *temporary structure* (see to **2.12.1(d)**);

(b) Noise – comply with any conditions of *development consent* that regulate noise generation associated with the development site or, where applicable, the NSW State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 (see also **1.4.1** and **1.10**);

(c) Hours of operation – comply with the *development consent* and any conditions imposed through other approvals issued by the *City* or other government agency. See also provisions in the *City*'s 'Code of Practice: Hoisting and Construction Activities On and Above Roads';

(d) Dust and debris – contain dust and debris to the *worksite* and where necessary, provide a physical barrier or screening such as fabric or screening mesh to encapsulate the *worksite*; and

(e) Water – collect and dispose of rainwater falling on the deck of Type-B *hoardings* in accordance with **3.11.3**. Where water and/or cleaning agents are used to wash buildings or undertake other activities, all wastewater must be collected and disposed of to the sewer system (subject to meeting any Sydney Water requirements) or collected and disposed of by a licensed liquid waste contractor.

Liquids, other than uncontaminated rainwater falling on and draining from the deck of a Type-B *hoarding*, must not be allowed to flow into the street gutter and stormwater drainage system.

2.19.2 Pollution offences

In granting *approval* to erect a *temporary structure* on *City* owned land applicants must, in addition to complying with this Code and conditions of *approval*, comply with the State's environmental protection laws (Protection of the Environment Operations Act 1997) and relevant Regulations. Penalties may apply where offences occur.

2.19.3 Noise and vibration

Persons in control of a *workplace* must comply with the *City's* requirements regarding noise minimisation including, where applicable, the conditions of *development consent* that apply to a *development* site or *worksite*.

Photo: Peter Conroy / City of Sydney

Poly Ubiquitous by Cynthia Schwertsik
Photo: Peter Conroy / City of Sydney

Part 03 Hoardings – design requirements

3.1 Hoarding design requirements – overview

This Part sets out the design requirements and controls for two forms of *hoardings:* Type-A and Type-B structures.

The aims are to achieve a high standard of design quality for *hoardings*. It is expected that this quality standard will also be attained notwithstanding the variable circumstances of individual sites. The design solutions must address specific conditions including problems posed by narrow laneways and *footways*, local traffic and bicycle conditions including site access constraints.

Detailed 'deemed-to-comply criteria' and 'objectives' where a performance-based design approach is proposed, are set out in each of the ten key component elements that makeup the design of a *hoarding*.

Figure 3.1: The design and placement of *temporary structures* must address the special needs of the high pedestrian density *city-centre* and other major commercial and retail centres. The placement of *hoarding* support columns at kerb ramps and at level threshold crossings including tactile ground surface indicators must be avoided.

Photo: Peter Conroy / City of Sydney

Figure 3.2: The design of *temporary structures* at busy pedestrian intersections and bus-stops must be given special consideration to minimise impacts on circulation and queuing spaces to ensure safe and convenient pedestrian movement.

Photo: Peter Conroy / City of Sydney

3.2 Minimising impacts

(a) The high density city-centre and other major commercial and retail centres have special needs in terms of *accessible* pedestrian movement, convenience and amenity.

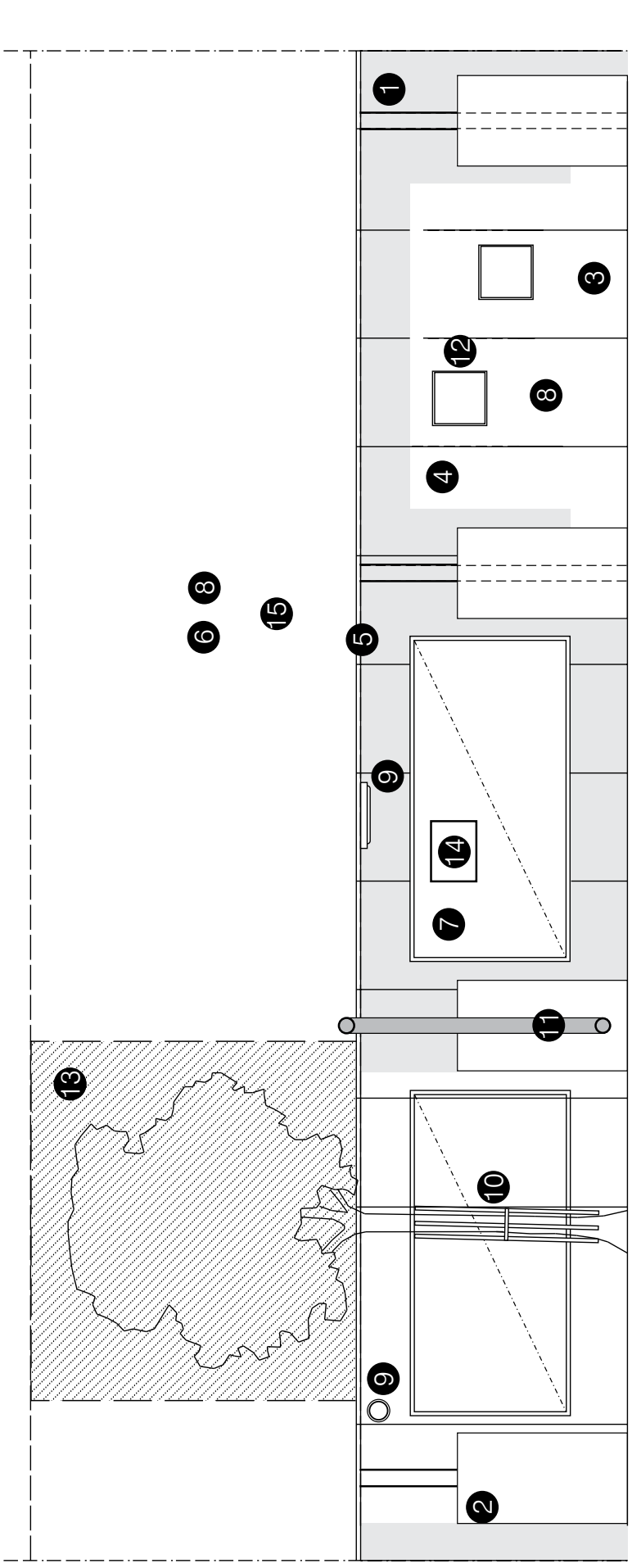
(b) *Minor footway* obstructions resulting from the placement of *hoardings* are often a necessary part of construction and building maintenance activity. The *City* will therefore allow limited *temporary structure* encroachment subject to minimum design and operational requirements being met and implemented (see **3.7** and **Part 04**).

(c) In allowing the installation of *hoardings* in *public spaces* it is essential that they have the least impact possible on the local area including residents, workers, visitors and business activity. through both ensuring access to premises and the visibility of *business identification signage* (see **2.16**). The provision of safe, *accessible* and convenient pedestrian and cycling movement is also important and must be achieved.

(d) Construction sites have significant visual impacts in the streetscape therefore it is important that *hoardings* and other structures incorporate quality design features to minimise impacts and screen sites at street level. This includes the display of appropriate graphics (see **Part 06**).

(e) *Hoardings* are visually and physically imposing structures at street level therefore strict design controls apply that must be met. The diagrams at **Figures 3.3** and **3.4** set out the key design elements and features of a Type-B *hoarding*.

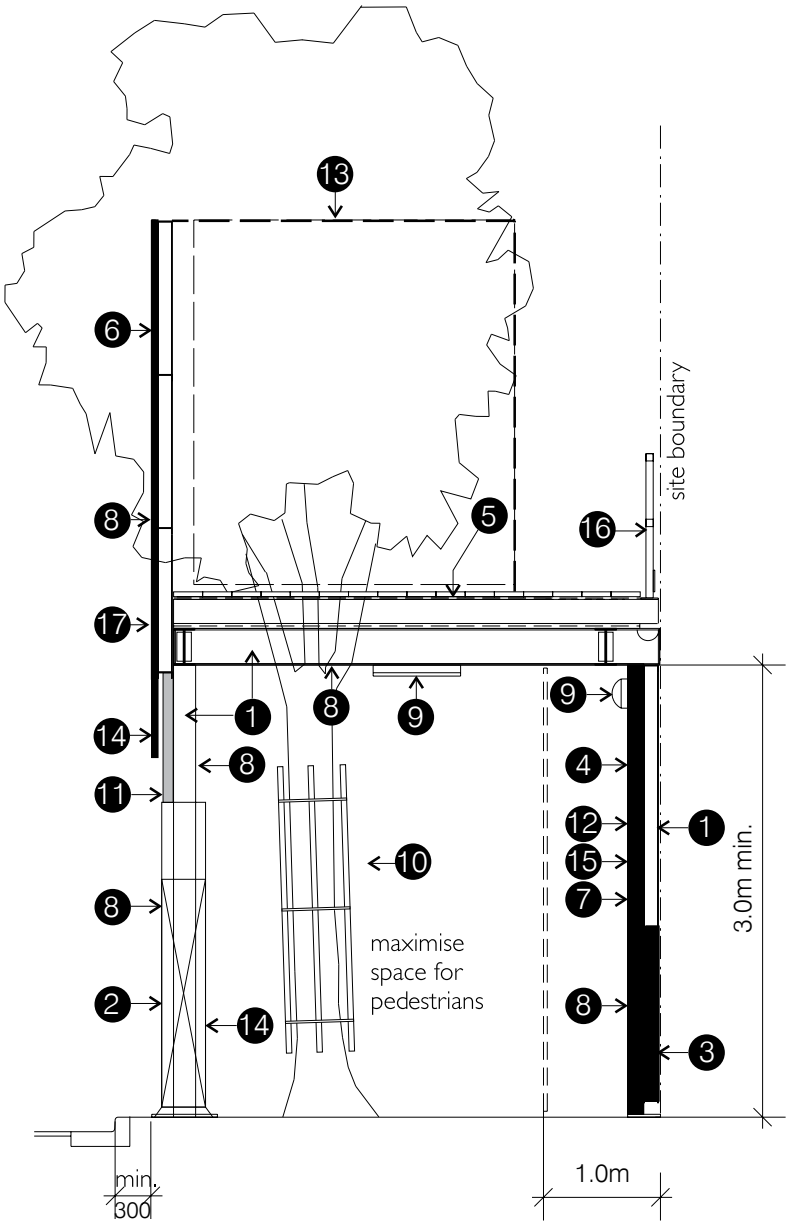
Figure 3.3: Typical features of a Type-B *hoarding* (elevation).



Compulsory elements

1. Structure
2. Counterweight
3. Traffic/pedestrian barrier (behind site fence)
4. Site fence with graphics
5. Deck (overhead protection)
6. Fascia to screen site sheds and longitudinal bracings with display graphics (where required)
7. Information panel
8. Colour - painted surface or graphics (where provided or required)
9. Lighting to fence or underside of the deck
10. Street tree trunk protection
11. Concrete pumping static line (overhead)
12. Windows to view in-ground works
13. Fascia setback (to accommodated street tree canopy)
14. Copy of the hoarding permit and Builder's details
15. Property number/address

Figure 3.4: Typical features of a Type-B *hoarding* (section).



Greater setbacks are required in certain circumstances (refer to 3.8.4).

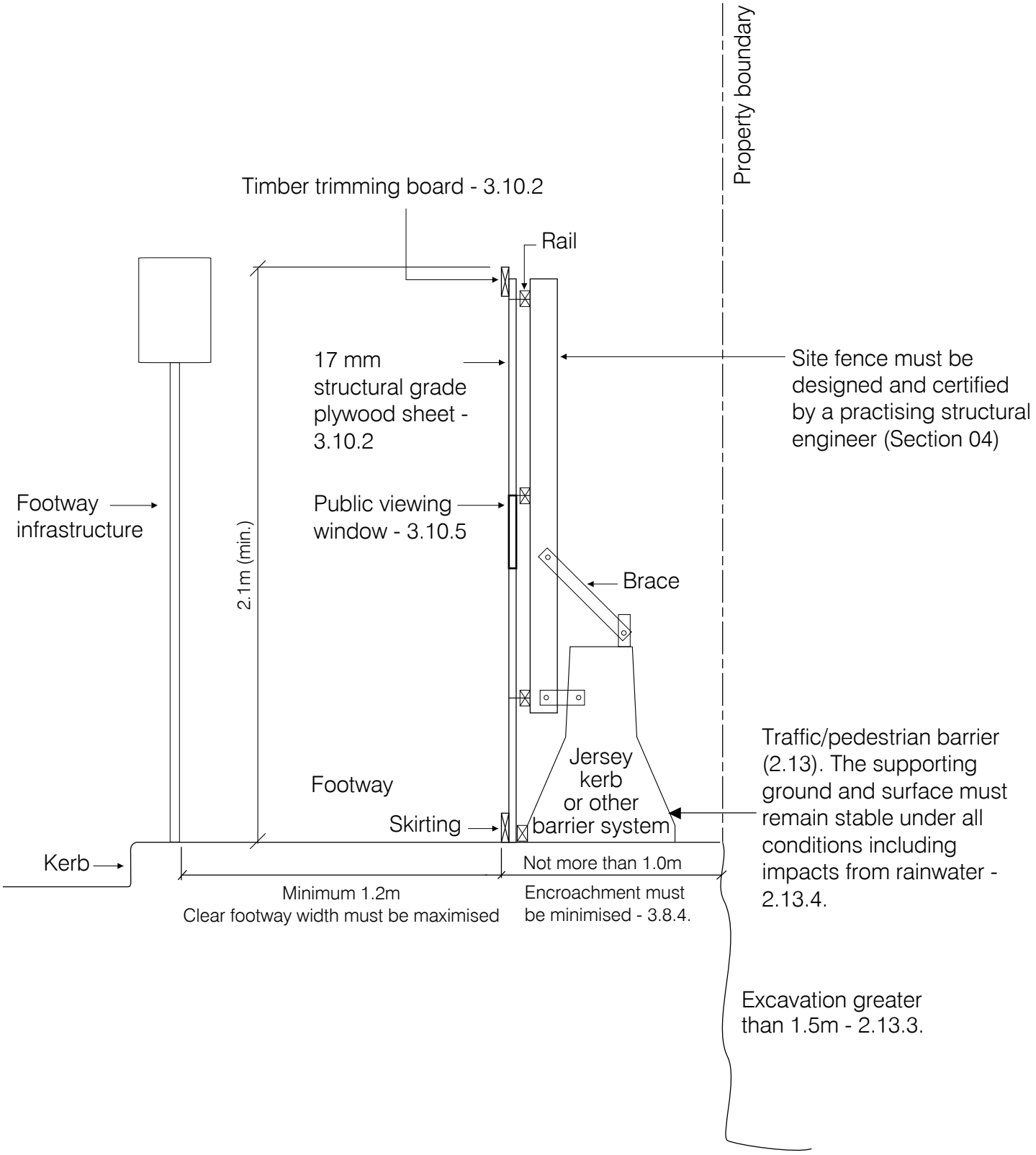
Maximum intrusion of the site fence onto the footway. In some cases a lesser encroachment will be required particularly in the city-centre.

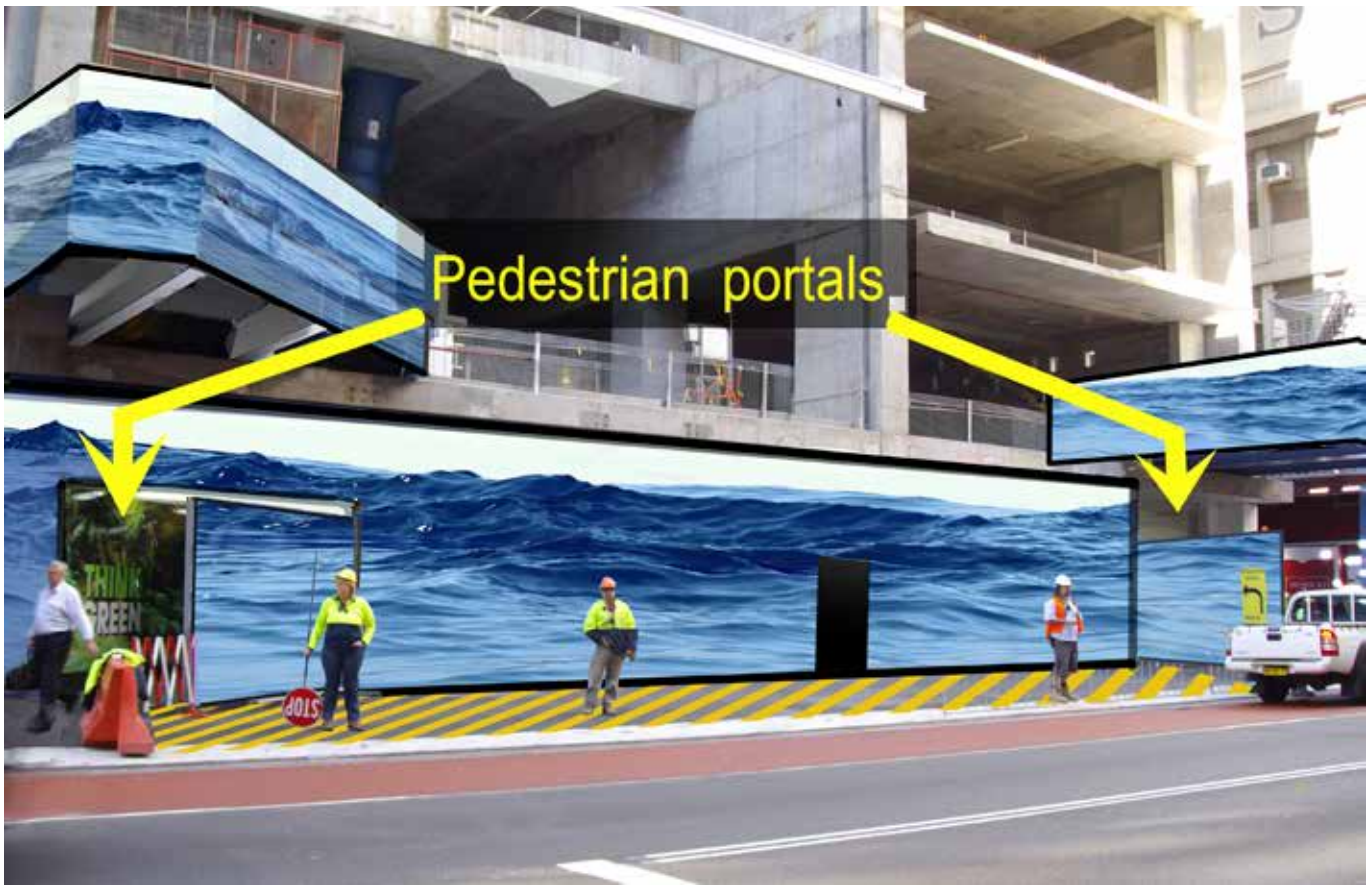
Note: Where a site fence is proposed to encroach onto the footway full justification for such an encroachment must be provided with the hoarding application (Clause 2.9.2).

Compulsory

1. Structure
2. Counterweight
3. Traffic/pedestrian barrier (rear of fence)
4. Site fence
5. Deck (providing overhead protection)
6. Fascia (to screen site sheds and longitudinal bracings)
7. Information panel
8. Colour - site fence and fascia
9. Lighting (fence-mounted or to underside of deck)
10. Street tree protection (timber battens around trunk)
11. Concrete pumping static line (overhead)
12. Public viewing panels to in-ground works
13. Fascia setback (to accommodate street tree canopy)
14. Fascia extension to screen longitudinal bracing elements
15. Fall-safety balustrade (min. 1.0m)
16. Property number/address

Figure 3.5: A typical cross-section of a Type-A *hoarding* incorporating a traffic barrier protecting a deep excavation (with the barrier located behind the site fence).





Equivalence by Ash Garwood
Photo: Peter Conroy / City of Sydney

3.3 Hoardings and works zones - temporary pedestrian diversion

Hoardings are typically installed on *footways* to afford overhead protection to the *public space* (and people using a *footway* that adjoins a *worksite*).

In some very busy traffic streets, particularly in the *city-centre*, the establishment of a *works zone* in the kerbside lane adjoining a *worksite* may not be possible. In these circumstances all vehicle loading and unloading should take place within the site. Where this is not available due to site constraints, the *City* may allow a *works zone* to be established on the *footway*. If permitted, time restrictions will apply and temporary pedestrian diversion through the construction site via a tunnel-like safe pathway around the *works zone* will be necessary.

Further details of this form of *work zone* and pedestrian diversion is available in the *City's* 'Code of Practice: Hoisting and Construction Activities On and Above Roads'.

Figure 3.6: The hatched area indicates a *works zone* on a temporarily closed *footway* (operational only during *approved works zone* times). A pedestrian by-pass is available through a fully enclosed protective tunnel within a construction site (refer to the City's 'Code of Practice: Hoisting and Construction Activities On and Above Roads' for further details).

Equivalence by Ash Garwood
Photo: Peter Conroy / City of Sydney

3.4 Type-B hoardings in or adjoining open spaces such as squares, malls, reserves and other similar land parcels

Photo: Katherine Griffiths / City of Sydney

Where the *City* establishes that the open space beneath the deck of a Type-B *hoarding* is not necessary for pedestrian passage and overhead protection, the *City* can require the space to be fully sealed off from public access using plywood-sheeting complying with the applicable standards applying to the site fence controls in **3.10** and graphics displayed in accordance with **Part 06**.

The site fence and the fascia at deck level must, unless otherwise permitted, be in a single plane to provide a level and smooth surface for the display of graphics over the entire surface.

3.5 Hoardings: key design features (Type-A and Type-B)

3.5.1 Objectives

The following objectives apply to the design and installation of Type-A and Type-B *hoardings*:

(a) provide a safe and structurally stable *temporary structure* in accordance with the relevant regulations, applicable *SafeWork NSW* Codes of Practice and applicable Australian Standards;

(b) structures are designed for easy and effective maintenance through the use of durable and appropriate materials and finishes;

(c) avoid or minimise unnecessary *footway* encroachments, obstructions and clutter to maintain safe, accessible and convenient public passage including cyclists;

(d) maintain the highest possible standard of pedestrian access, amenity and safety past a *worksite* and *workplace* including effective lighting and barrier fencing to screen works in accordance with the City's Accessible Public Domain Guidelines;

(e) for Type-B *hoardings*, provide a watertight deck that is fully graded and effectively drained to afford weather protection for pedestrians and cyclists;

(f) ensure *hoardings* contribute positively in the streetscape and screen all *temporary structures* and equipment placed on *hoarding* decks;

(g) display high quality graphics (artwork or historic images) where proposed or required by this Code;

(h) avoid or minimise impacts on utility access pits and hatches, street furniture, *street trees* and other infrastructure; and

(i) protect and prevent damage to *street trees* and street gardens.

3.5.2 Mandatory design elements and features for Type-A and Type-B hoardings

Type-B *hoardings* must provide visual transparency of the *footway* (and *cycleway*) through minimising the number and positioning of columns and counterweights including maintaining a nominated minimum height clearance to the underside of *hoarding* decks and, in the *city-centre*, provide vertically placed counterweights.

The following design requirements apply:

(a) obstruction of the *footway* must be minimised (see **3.8.4** and **3.10.3**). Columns and counterweights of Type-B *hoardings* must be located no closer than 300mm to the kerb edge;

Note: Columns and counterweights set back more than 300mm from the kerb require special consideration (see **3.8.2** and **3.8.4**).

(b) the site fence must be positioned as close as practicable to the site property boundary;

(c) *site sheds* and equipment *approved* for placement on Type-B *hoardings* must be fully screened on the side/s and ends viewable from *public spaces* and display high quality graphics (see also **5.5**);

(d) high standards of design and detailing are to be applied to all *hoarding* elements including finishes;

(e) where proposed (and permitted) information about the development must co-ordinate with any required graphics (see **Part 06**);

(f) in-ground works are viewable by pedestrians (provision of windows as part of the site fence);

(g) high quality and effective lighting of ground surfaces beneath Type-B *hoardings* is provided to enhance safety and amenity for pedestrians, cyclists and to illuminate displayed graphics (see **3.16**);

(h) weather protection is provided for pedestrians and cyclists (Type-B *hoardings*) through the provision of watertight graded decks and appropriate/effective discharge of rainwater to the site or street gutter (see **3.11.3**); and

(i) timber and timber-based products including site fences and fascias are sustainably sourced.

3.6 Component elements and finishes of hoardings (Type-A and Type-B)

Hoardings are fabricated, constructed and finished utilising multiple elements. These are discussed in detail in the following sections (**3.8** to **3.17**). The key elements are:

1. **Structure**

   The primary framework of a *hoarding* consisting of steel columns, beams and bracing elements for Type-B *hoardings* and a timber or steel frame for Type-A *hoardings* including, if necessary, bracings, counterweights, vehicle impact and pedestrian barriers behind the fence.

2. **Counterweights**

   Counterweights stabilise a *hoarding* particularly when sheds and other items are *approved* for placement on *hoarding* decks (see **5.4**) and/or where *hoardings* are exposed to high wind actions in the locality. Counterweights can also assist in affording structure stability (massing).

3. **Site fence**

   The primary element of a Type-A *hoarding* and often also part of Type-B *hoarding*. Fences isolate a *worksite* from the a *public space* forming a safety and site security barrier. Fencing also visually screens the site. It also provides a surface for the display of graphics and mandatory builder information including site safety signage.

4. **Deck and overhead protection**

   Located over a *public space* (*footway, roadway*, *cycleway*) to afford protection to pedestrians, cyclists and vehicles from objects that may fall from a *worksite.* The deck can also provide a platform for *site sheds* and *scaffolding* and, where specifically approved, the parking of suspended *scaffolds* (swing-stage) and hoists.

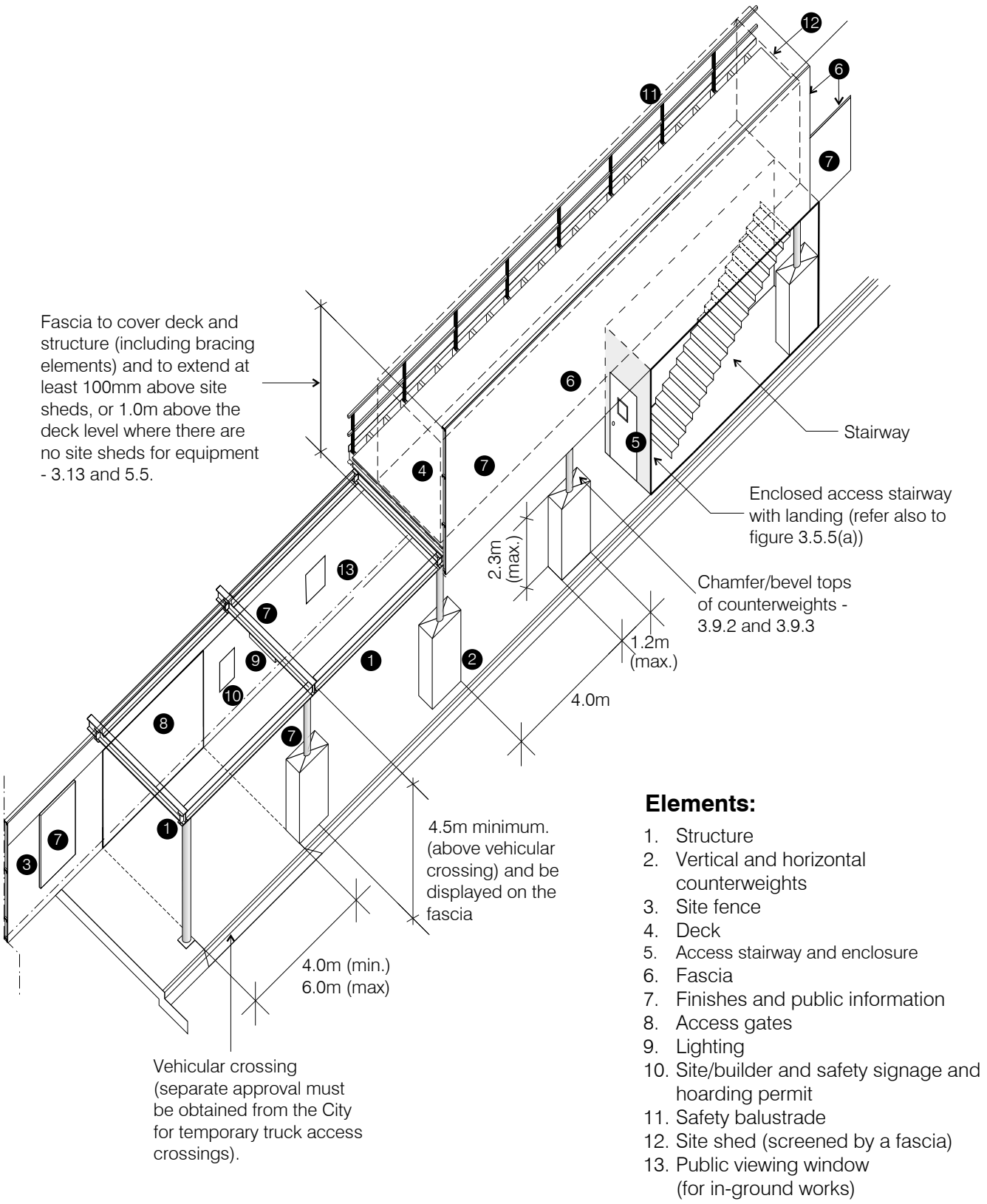
5. **Access stairway and enclosure**

   Access (stairways) to a hoarding deck and *scaffolding* directly from the *public space* is sometimes necessary. Where permitted, access stairs should always be located behind a site fence. Where site constraints do not allow this or there is no site fence (such as works on existing buildings), access directly from the *public space* in the form of an enclosed stairway may be permitted.

6. **Fascia**

   A fascia provides a screen and fall barrier on the *public space* side of Type-B *hoarding* decks to provide fall protection for workers on trafficable decks. A fascia also screens *site sheds*, spandrel beams, truss members and longitudinal bracings. A fascia can also act as a vertical protective barrier to arrest and contain objects that may fall from a *worksite* (minimising risks of objects ricocheting into the *public space* after hitting the deck).

Figure 3.7: A typical Type-B *hoarding*. The location and design of counterweights is critical to minimise pedestrian obstruction and to enhance openness along the kerb in the *city-centre* and other busy commercial areas (see **3.9**).



Elements:

1. Structure
2. Vertical and horizontal counterweights
3. Site fence
4. Deck
5. Access stairway and enclosure
6. Fascia
7. Finishes and public information
8. Access gates
9. Lighting
10. Site/builder and safety signage and hoarding permit
11. Safety balustrade
12. Site shed (screened by a fascia)
13. Public viewing window (for in-ground works)

7. **Finishes and public information**

   To minimise adverse visual impacts and add interest in the streetscape including increasing the presence of creativity in *public spaces* through the display of required graphics.

   Standard colours and finishes apply (black on the frame, counterweights, site fence, stairway enclosures and fascia with white to the underside of the *hoarding* deck and bandings on columns/counterweights).

8. **Access gates and doors**

   Gates and doors in site fences and stairway enclosures allow access for construction personnel, vehicles and machinery. Gates/ doors must be imperforate (solid), extend to the underside of the deck of *hoardings* at vehicle entry points, be securable and open inward or slide internally.

9. **Lighting**

   Located at high level on the site fence or on the deck soffit of Type-B *hoardings* to provide a well illuminated and safe pathway for pedestrians. Where *hoardings* are installed over *roadways* and *cycleways* lighting also provides for safe movement including the effective sighting of pedestrians.

10. **Street trees and street garden protection**

    Street trees are an important part of the streetscape and can contribute to the visual screening of *temporary structures*. *Hoarding* designs must accommodate all affected *street trees* to avoid removal and the need for branch pruning. Locating support columns away from tree bases and setting fascias back from tree canopies can reduce impacts. Trunk and limb protection must also be provided.

    Street gardens must be maintained and all works must be carried out to prevent damage to them.

3.7 Applying the objectives and deemed-to-comply criteria when designing and using a hoarding (see also 1.11)

The design of a *hoarding* must satisfy the 'performance objectives' for each design element set out in **3.8** to **3.17**. Compliance with the objectives is automatically satisfied through designing a *hoarding* that meets the 'deemed-to-comply criteria' allowing an *approval* to be granted (see **1.18.3**).

If compliance with the 'deemed-to-comply criteria' cannot be achieved due to specific site or building constraints, applicants must clearly show that an alternative design solution meets the performance objectives. This must be clearly described in the application including details of how the objective provisions will be met.

Photo: Peter Conroy / City of Sydney

3.8 Element 1 - Structure (Type-A and Type-B hoardings)

Objectives

1. *Hoardings* are designed to be stable and structurally adequate for the specific site and locality conditions including:

   (a) addressing the potential for vehicle impacts on the structure (proximity of columns and effective design redundancies including risk assessment by the PCBU and hoarding supplier);

   (b) the adequacy of the bearing surfaces and subsurface conditions to support the structure (see also **2.8.6**) that complies with relevant structural design standards; and

   (c) work health and safety legislation and applicable Codes of Practice. Refer to the *SafeWork NSW* Code of Practice: Overhead Protective Structures for further details.

2. The open character of a *footway* below a Type-B *hoarding* is maintained including the quality of natural light reaching the *footway* through the positioning of decks and the height of columns.

3. Proposed site fencing is integrated with the structural frame of a Type-B *hoarding*.

4. Pedestrian amenity is provided through pedestrians being readily visible from the *roadway*, clear walking pathways and widths are maintained, including between columns.

5. Safe and convenient pedestrian movement and amenity is maintained by providing access to and from vehicles parked in the kerbside lane through minimising the number of support columns (and counterweighting) and considering their positioning as part of the design.

6. Physical access for maintenance of the *footway*, including regular cleaning, is not significantly impacted by *hoarding* design and placement.

7. Physical encroachments and obstructions of the *footway* are minimised to ensure safe, accessible and convenient passage, including access by people with disability (wheelchairs and mobility scooters).

8. Fire-safety impacts and risks are mitigated particularly in relation to occupied buildings including when installing *hoardings* in laneways.

9. Safe and convenient access along *cycleways* including unencumbered clear width, height, column setback and column spacings is maintained.

10. Safe, *accessible* and convenient access and egress to and from occupied buildings adjoining a *hoarding* is provided.

11. Structures are appropriately designed and finished to minimise adverse visual impacts in *public spaces*.

12. Access to utility pits in *footways* and fire-fighting services such as sprinkler and hydrant booster connections located on building facades is maintained.

Deemed-to-comply criteria

The following requirements apply:

3.8.1 Height and clearances

(a) The minimum height clearance to the underside of a Type-B deck structure including beams is 3.0m measured above the *footway* and *roadway* (see **Figure 3.4**). A reduced height clearance may be allowed in some circumstances such as demolition sites where there is a low first floor, an existing low street awning or *footways* with steep gradients (see **3.11.2(d)**). Proposals for heights less than 2.7m will generally not be permitted.

(b) Knee-bracing and other essential lateral bracing elements (see **3.8.8** and **3.8.9**) must not be less than 2.5m above the *footway* and the size and extent of bracing is to be minimised and/or placed at the rear of the *hoarding*.

(c) Where a Type-B hoarding spans over a *roadway*, a minimum clearance of 4.5 metres must be provided (see **Figure 3.16**), measured from any point on the *roadway* surface vertically to the underside of all parts of the structure, excluding minor knee bracings on the outer kerbside edges.

(d) At truck entrances to sites, a height above the *footway* appropriate to the size of vehicles accessing the site is required. Minimum height clearance signage must be clearly displayed on the fascia above the opening.

(e) For a Type-B *hoarding*, where a site fence is proposed or required, it must be integrated with the frame of the Type-B *hoarding* structure and fixed to the front (public side) of the rear columns (see also **3.10.2(h)**). The fence must not be a freestanding Type-A fence or other form of freestanding fence.

3.8.2 Column spacings and location

(a) Columns and/or column/counterweight units located along the kerbline must be positioned with a minimum clear spacing of:

(i) 4.0m in the *city-centre* with a greater spacing for *hoardings* erected over *cycleways* (see **(ii)** below) in areas outside the *city-centre*;

(ii) 2.5m outside the *city-centre* except where it is determined that there are site-specific needs to require a greater spacing or where a *cycleway* is present in which case columns must be placed at 4.0m clear spacings (min.);

(iii) columns must not be placed on or in close proximity to utility service pits/hatches/chambers (bearing pressure impacts) - see **3.8.11** and **3.10.9**; and

(iv) where works require the installation of a Type-B *hoarding* adjoining a heritage-listed building or architecturally significant street awning, the *City* will allow the installation of specially designed *hoardings* where beams are partially supported from the building and span across the *footway* to the support columns along the kerbline (see **Figure 3.12**).

(b) Columns and/or column/counterweight units must be located at equal spacings wherever possible unless this would conflict with *street trees*, furniture, utility pits access to kerbside parking or other site constraints (refer to the following 'Notes').

Notes:

1. Reduced or irregular column spacing may be unavoidable in situations where the column setout must accommodate bus-stops, utility pits, existing building features, *footway* lightwells to basements, driveways, laneways, *street trees*, steep *footway* gradients and other features in *public spaces*. *Hoardings* may also need to be stepped and/or decks notched to accommodate existing *street trees*.

   In these circumstances columns must be positioned in the most advantageous locations that minimise impacts on pedestrian movement but must also satisfy risk assessments and *SafeWork NSW* requirements. Refer to **Note 2** below.

2. The *SafeWork NSW*` Code of Practice: Overhead Protective Structures requires a *hoarding* to be designed to maintain structural stability and integrity in the event of vehicular or other impact (see **2.8.6(d)**, **2.13** and **3.9**).

(c) Columns must not bear on nor be placed in close proximity to glazed pavement lights - see **Figure 3.10**. The adjoining and surrounding *footway* surfaces must be assessed for structural adequacy (potential sub-surface basement spaces) and general bearing pressure adequacy (see **(e)** below).

(d) No more than three columns are to be grouped. Where additional structural capacity beyond three abutted columns is required a larger single steel section column should be used. (continued on page 85)

Figure 3.8: Exposed beams and other elements beyond the deck perimeter must be painted black.

Photo: Peter Conroy / City of Sydney

Figure 3.9: Appropriate *hoarding* column positioning on private land at junction/s with a public *footway* is important to ensure safe, convenient and *accessible* movement of people. This must be considered as part of the *hoarding* design process.

Dancing Fig Trees by Richard Briggs
Photo: Peter Conroy / City of Sydney

Figure 3.10: Glazed pavement lights provide natural light to basements of older buildings. They are a significant historic feature and must be protected. Column positioning must address setbacks from pavement lights and consider potential basement voids beneath the *footway* (for adequate bearing capability).

Photo: Peter Conroy / City of Sydney

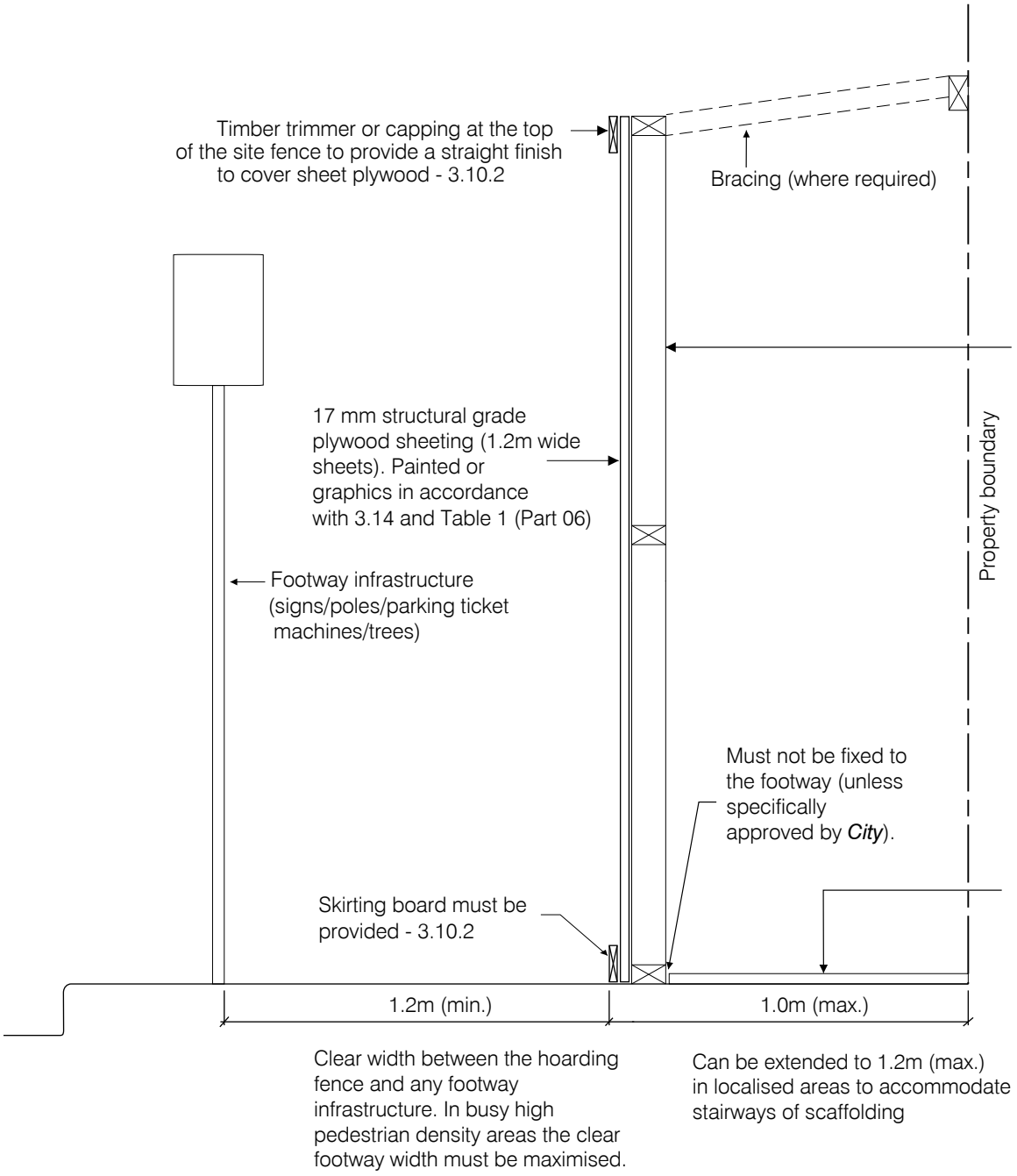
Figure 3.11: Clear column spacings of not less than 4.0 metres is required in the *city-centre* (refer to map at **Figure 1.1a**) however, this can be varied for special site-specific needs (see **Figure 3.12**) and steeply sloping *footways*.

Time Forms by Lisa Sammut
Photo: Peter Conroy / City of Sydney

Figure 3.12: Consideration will be given to allow reduced column spacings in the *city-centre* where there are special needs such as undertaking work on heritage-listed buildings that have significant street awnings that cannot be altered to accommodate column penetrations.

Photo: Peter Conroy / City of Sydney

Figure 3.13: Cross-section of a typical Type-A *hoarding* (without counterweighting or lateral bracing at the base).

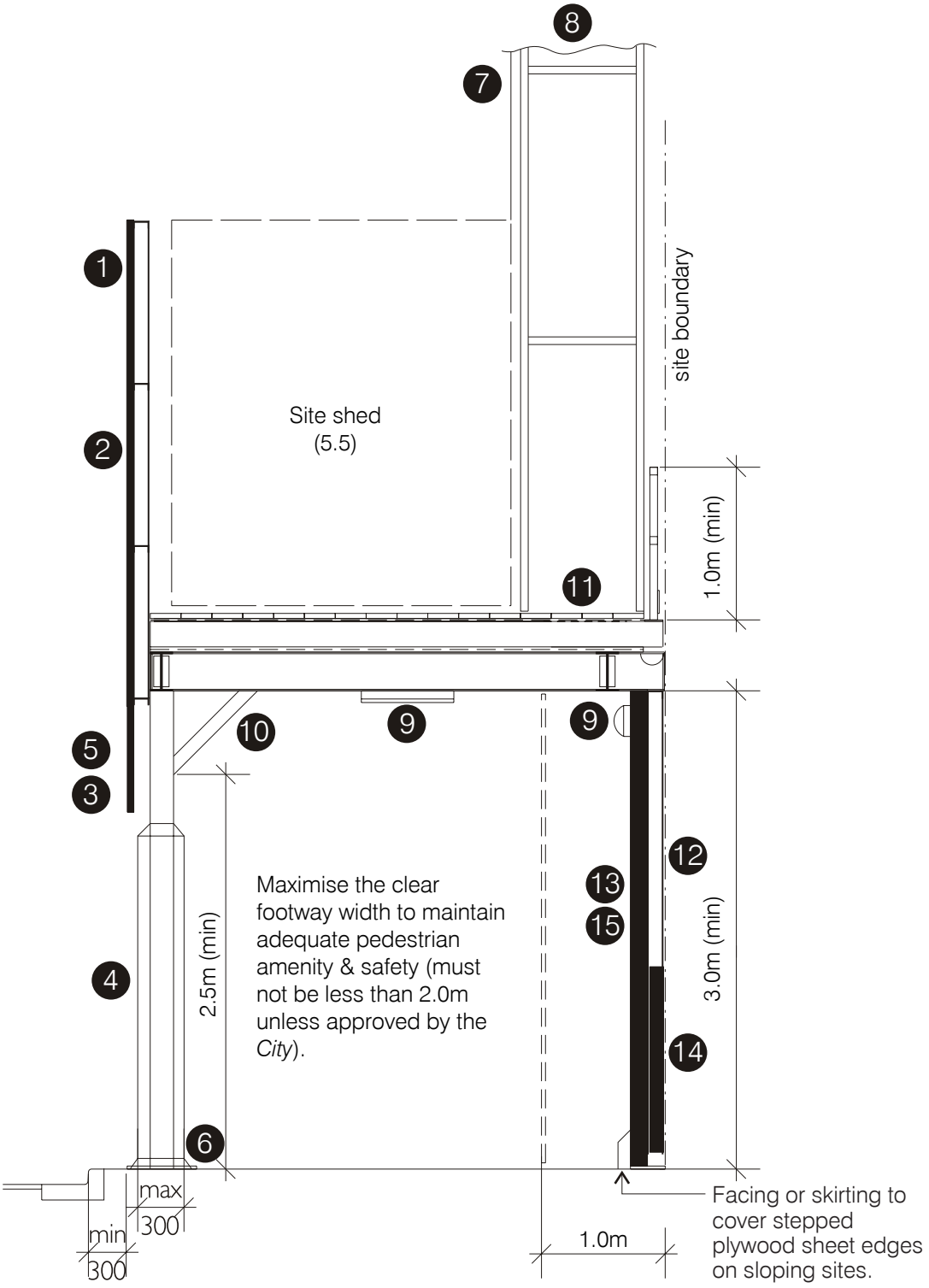


'Type-A' hoarding site fence

- frame must be durable and structurally sound; and
- must be designed to withstand wind actions in the locality including high wind loads caused by surrounding high-rise buildings and where a building has been demolished

Protective 12 mm thick plywood sheets are permitted (where work is to be undertaken on granite paving) and must be installed on a durable plastic membrane - refer to the 'note' in 3.10.2

Figure 3.14: Elements of a Type-B *hoarding* (section). See **page 84** for diagram annotations.



(full height of the hoarding including the fascia)

Minimise the intrusion of the site fence during excavation &/or construction. Encroachments up to a maximum of 1.0m may be permitted for site specific requirements. Justification for any encroachments must be included with the hoarding application.

Note: In areas with high pedestrian volumes (as determined by the *City*) the site fence &/or hoarding structure encroachment may need be removed once construction progresses beyond the ground floor.

Figure 3.14: legend and notes

1. Fascia (3.13)

- must fully screen site sheds
- where sheds are not installed a half fascia panel must be provided (minimum height 1.0m) for fall protection.
- screen elements of custom-built Type-B hoardings **(3.13.2(a))**

2. Standard finishes and graphics (3.14 & Part 06)

- must provide suitable graphics to enhance the streetscape
- fascia & site fence must be painted

3. Steel structure (3.8)

- must be of steel and painted black.

4. Counterweights (3.8.2 and **3.9)**

- wherever possible to be vertical and integrated with the *hoarding* column
- maximium dimensions 1.2m (along kerb) by 300mm; minimised depth (across the footway) 300 mm; and maximum height of 2.3m
- tops must be chamfered or sloped to avoid the collection of refuse where the top of the counterweight is less than 2.0m high
- must have a high quality smooth finish
- clear distances between counterweights 4.0m in the city centre (greater for cycleways)
- corners must be bevelled or rounded

5. Bracing elements (3.8.8 and 3.8.9)

- Fascia extension to screen longitudinal bracing elements

6. Soleplates 3.8

- must be of the least possible length & width & align parallel with the footway
- must be designed to minimise trip hazards

7. Construction wrap (Part 06)

- where scaffolding is to be in place for a significant period and/or where it is located in a prominent position, graphics printed on mesh fabric may be required
- If a wrap is not required or proposed the preferred scaffold screening is plain black mesh fabric

8. Scaffolding (Part 04)

- scaffolding (if proposed) must be shown on certified hoarding drawings

9. Lighting (3.16)

- must meet minimum illumination standards
- provide additional lighting over temporary ramps and disrupted footway paving

10. Knee bracing (3.8)

- must not be less than 2.5mm above the ground & the size must be minimised

11. Deck & protection (3.11)

- must be impenetrable to water and drain rainwater to the site or road gutter
- the underside of the deck must be painted white to enhance illumination at night and public amenity

12. Access openings and gates (3.15)

- height clearance of the hoarding 4.5m (min.) at truck entry points
- access gates/doors must be solid and open inward or slide (internally)
- access gates/doors must extend fully to the underside of the hoarding deck

13. Site fence (3.10)

- must extend to the underside of the hoarding deck (freestanding fence, at least 2.1m)
- 1.2m wide structural grade plywood sheets having a thickness of at least 17 mm
- sheets must be butt-jointed and all fixings must be countersunk
- incorporate graphics where required
- painted black

14. Motor vehicle and pedestrian barriers (2.13)

- excavations greater than 1.5m must have an effective behind the site fence
- barriers must be steel or concrete

15. Signage & display of hoarding permit (Part 06)

- display the company name and 24 hour contact number of the person in control of the site
- a copy of the front page of the hoarding permit must be displayed.
- display temporary business identification signage on hoardings where sight-lines to existing signage is impacted (see **2.16** and **Table 2** in **Part 06**)

(e) An assessment of the bearing surface material and subsurface ground conditions must be made to establish structural adequacy to afford full support and stability of the structure and loads imposed on the deck. In meeting this requirement checks and assessments must also be carried out in relation to:

(i) any basements of adjoining buildings;

(ii) pedestrian tunnels, rail concourses, and other spaces beneath the proposed positioning of *hoardings*; and

(iii) proposed excavations, shoring, ground anchoring and retaining walls (proposed removal or retention). See also **2.8.8**.

(f) Column setbacks from the kerb must be considered in relation to pedestrian safety (see **3.8.4**).

(g) Where a site fence is not installed, columns at the rear of the *hoarding* must be placed in close proximity to the building/property boundary alignment to prevent pedestrians walking between columns and building frontages.

(h) Where a *hoarding* without a site fence adjoins an open pedestrian area on private land such as a forecourt, pedestrian circulation area or plaza, the number and positioning of columns along the interface should be appropriately and carefully positioned to minimise impacts on safe and *accessible* pedestrian movement between the public *footway* and the private land space (see **Figure 3.9**).

(i) Where site circumstances require closer column spacing, for example at intersections or where footway infrastructure cannot be relocated, consideration will be given to reduced spacing along the kerb-line. Notwithstanding this, all columns must be at least 600mm apart to allow safe pedestrian passage between them.

3.8.3 Column bases and soleplates

(a) Steel baseplates of columns and vertical counterweights placed on stone paving must be separated from the paving using a layer of heavy duty plastic membrane (or similar) to prevent rust staining of surfaces particularly stone paving. The use of structural grade plywood should be avoided as it increases the overall height of the baseplate which can create a trip hazard. Material must be cut flush with the column plates/counterweights. See also **2.8.8** in relation to the safe load capacity of *footways*.

(b) Columns must have levelling devices or be cut level with the *footway surface*. The height of levelling screws above soleplates must not exceed 150mm. Packing under soleplates to level the structure is not generally allowed unless required to address special needs such as steeply sloping *footways*/*roadways*. In these circumstances a maximum packing of 50mm is permitted with edges painted 25mm white markings to clearly identify the raised edges to address pedestrian safety (trip hazards). Soleplates are to be:

(i) of the least possible thickness and dimensions to avoid trip hazards and are to be aligned parallel with the *footway*/kerb; and

(ii) columns centrally placed on soleplates and designed to ensure that all loads from the *hoarding*, *site sheds* and other structures are evenly distributed to avoid damage to the *footway* (see also **3.11.5**) regarding material and equipment storage on hoarding decks).

(c) Edges of soleplates may in some cases require a colour contrast (white) with the *footway* surface to clearly distinguish the plate to enhance pedestrian safety (see **(b)**).

(d) Hardwood timber sole-boards are permissible in circumstances where columns bear onto unsealed surfaces such as grass nature strips or garden beds and the design engineer is satisfied with the ground conditions. Specific approval for the use of sole-boards on unsealed surfaces must be obtained. Consideration must be given to timber durability where a hoarding is to be installed for a lengthy duration. Timber sole-boards must be recessed into the ground and made level with the surrounding surface to eliminate trip hazards.

Figure 3.16 (a): Section detail of a Type-B *hoarding* erected over a *roadway*. Potential impacts on adjoining properties and vehicles including vehicle access to driveways must be considered in the design.

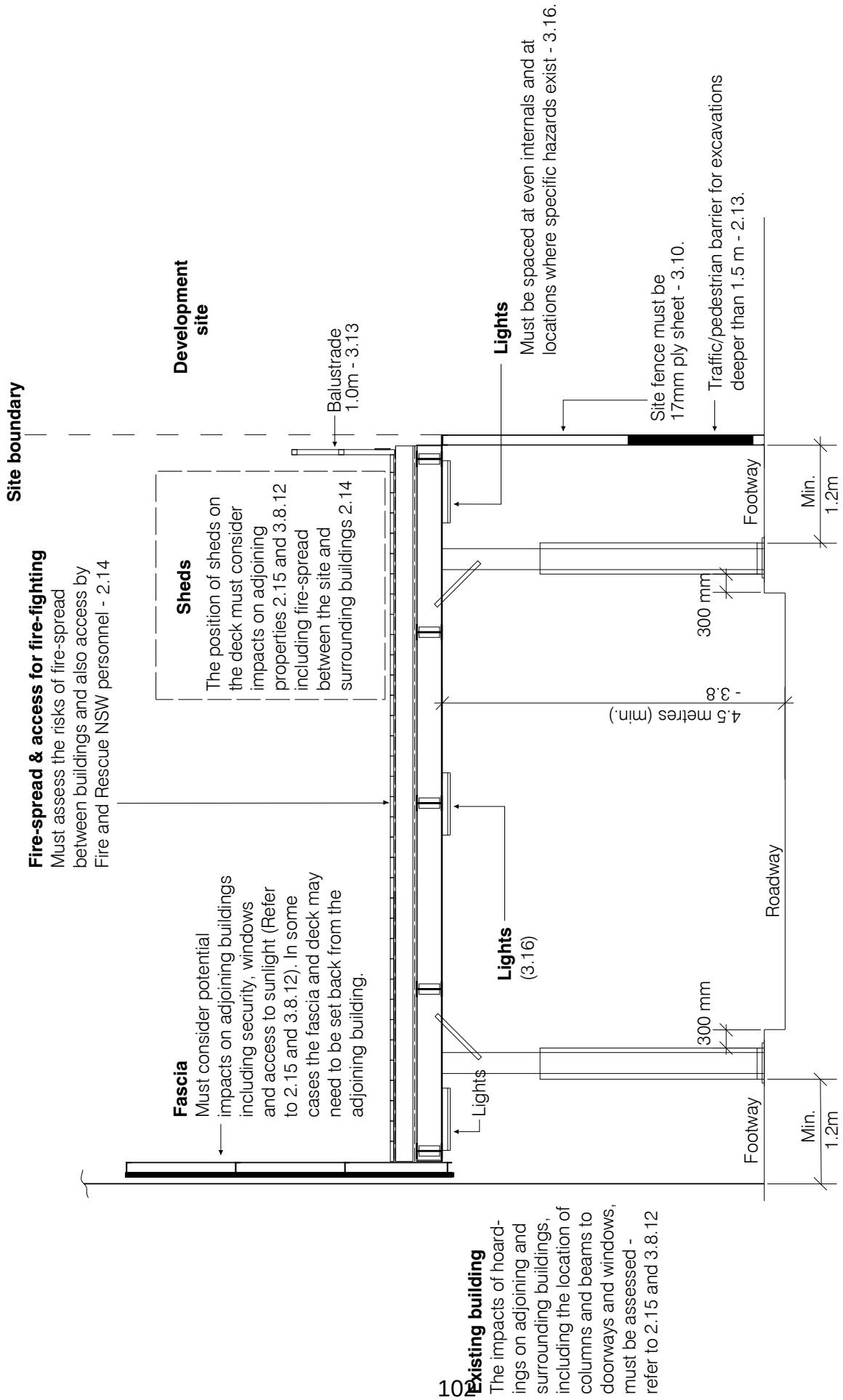


Figure 3.16 (b): Where the *City* determines that a *hoarding* deck over a *roadway* will have unacceptable impacts on occupants of adjacent properties such as loss of sunlight, visual amenity, privacy and noise, the deck and fascia must be set back from the adjacent building/s.

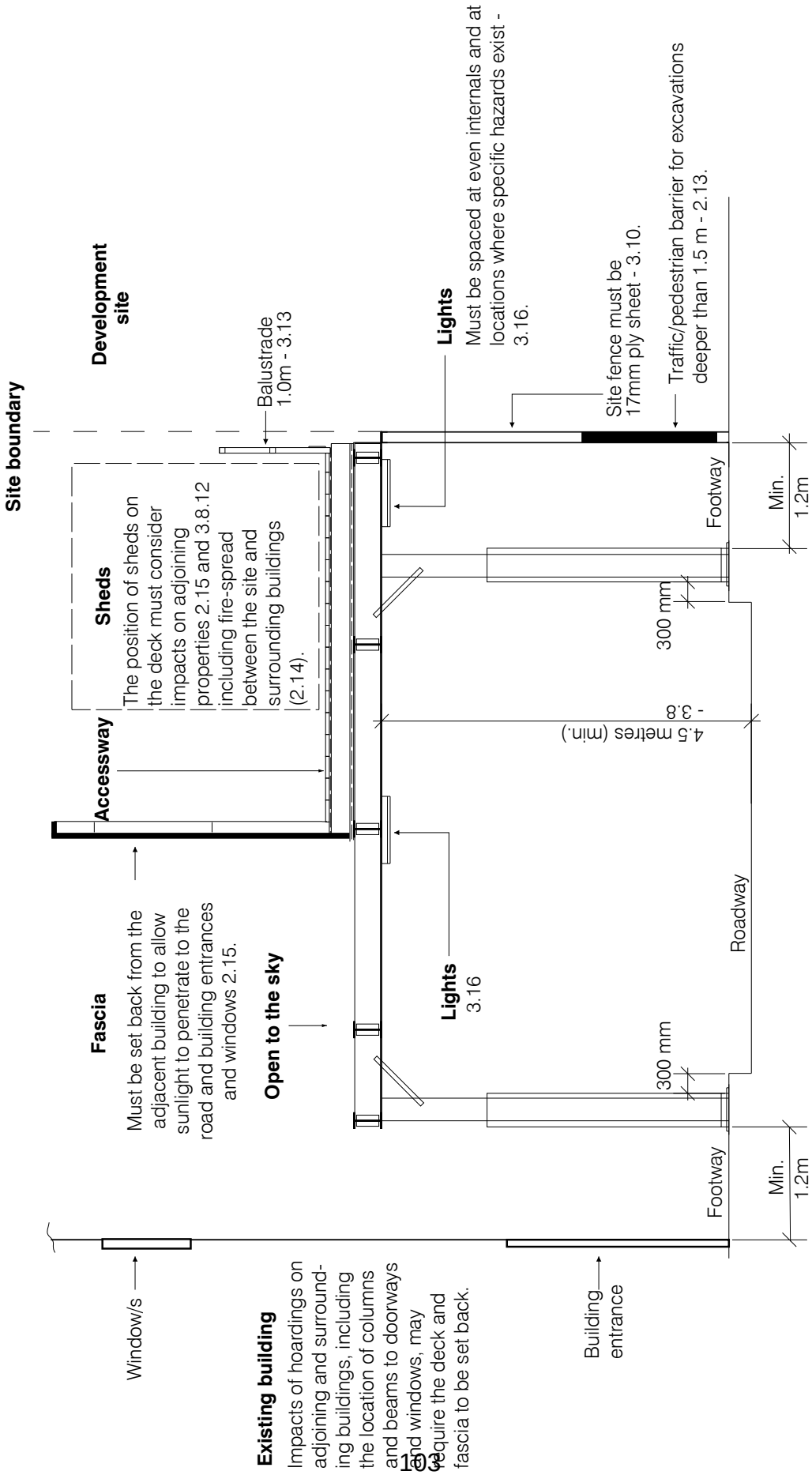


Figure 3.15: The use of hardwood timber soleboards on unsealed ground surfaces to support columns must be assessed and approved by a practising engineer. Soleboards must be periodically checked for continued acceptable durability and stability throughout the installation period. The use of multiple layers of plywood is not permitted. After removal, the nature strip or street garden must be reinstated to a condition acceptable to the *City*.

Photo: Peter Conroy / City of Sydney

(e) Footings, bolts, ground anchors or spikes must not be inserted into the *roadway, footway* surfaces or nature strips, unless specific *approval* is given by the *City* and the relevant utility service provider where services are located in close proximity to a *hoarding* (see **3.8.5**).

3.8.4 Clear pedestrian width

(a) The clear span across a *footway* must be maximised. The minumum clear width is 2.0m (typically for standard width *footways* of 2.4m and 3.6m). For narrower *footways* (1.8m), a minimum width of 1.2m applies.

(b) In all cases a site fence encroachment must be minimised. For Type-B *hoardings*, the positioning of the *hoarding* structure including fascia and column locations at the kerb, must be at least 300mm from the kerb edge (subject to **(e)**). Corner sites with signalised crossings and pedestrian queuing require special attention and consideration for both fence encroachment and column positioning along the kerb.

Notes:

1. In busy and high pedestrian density areas of the *city-centre*, other major commercial areas, major *road* intersections and crossings, a minimum width of 2.0m may not be sufficient and therefore a reduced *footway* width will not be allowed.

2. The *City's* primary objective is to minimise adverse impacts on safe pedestrian movement and amenity adjoining *worksites* and *workplaces*. To meet this aim it is generally required that the site fence and columns of Type-B *hoardings* be moved closer to a site's property alignment once the development has been constructed to first floor level or for other works such as when shop-front alterations or refurbishment are completed.

(c) Where site circumstances demand a special design to address the requirements in **(a)**, a standard modular gantry *hoarding* may not be appropriate therefore a bespoke design (custom-built system) will be necessary to maximise the spanning distances over a *footway* including minimising the number of columns, particularly at street corners (see **Figure 3.34**).

(d) Where a *footway* is wider than the standard width (typically about 3.6m in the *city-centre* and major roads) and it is not proposed or practicable to span the full width, the applicant and/or the *PCBU* will need to assess any risks to pedestrians from any objects that may fall from the *worksite* onto the unprotected area (as required by the *SafeWork NSW* Code of Practice: Overhead Protective Structures - refer to the 'Note'). Consideration must also be given to pedestrian obstruction (columns) placed within the main pedestrian flow pathway and the risks of impact/injury (persons inadvertently walking into a column).

Note: Clause 54 'Management of risks of falling objects' in the Work Health and Safety Regulation 2017 applies (see also **2.5.1**).

Figure 3.17: The use of cantilevered deck extensions along busy kerblines particularly at bus-stops can assist in minimising column obstructions and reduce impacts on commuter loading and unloading.

Photo: Peter Conroy / City of Sydney

Figure 3.18: The positioning of *hoarding* columns along the kerb and at bus-stops (passenger loading and unloading areas) must be given special design consideration (see **2.8.4(f)** for details).

Photo: Peter Conroy / City of Sydney

(e) In some localities it may also be necessary to set the *hoarding* back more than 300mm from the kerb for site specific needs such as:

(i) minimising impacts on bus-lanes/ transitways (risk of side mirror impacts);

(ii) at bus-stops (safe loading and unloading of passengers); and

(iii) bus manoeuvring at the kerb (see **(f)**).

In these circumstances and where overhead protection is required by the *PCBU,* a *hoarding* incorporating a cantilevered deck extension may be appropriate (see **Figure 3.17**).

(f) Where the adjacent *roadway* lane is used by buses at any time the following applies:

(i) the setback of hoarding columns/ counterweights and other parts of a hoarding from the kerb must be given special consideration;

(ii) where the site conditions such as *footway* width and infrastructure placement permit, hoarding elements must be setback at least 600mm from the kerb to afford the safe and *accessible* passage of pedestrians when walking between the kerb and the columns (to mitigate risks - see **(g)** below); and

(iii) where necessary, such as to maintain safe, *accessible* and convenient pedestrian *footway* width and movement, the setback distance may be reduced with consideration of *road* alignment, lane width, lane surface, crossfall/camber and frequency of bus usage.

Proponents should discuss the proposed design with Transport for NSW.

(g) After receiving feedback from TfNSW the proponent must consult the *City* to discuss any design recommendations made to establish the condition of the site (*footway*) and consider whether setbacks greater than 300mm can be accommodated. Consideration will include the following:

(i) for a standard width *footway* of 3.6m a clear width of at least 2.0m must be provided, however, this is subject to site specific assessment and *approval* based on local pedestrian conditions and volumes. Variations to this requirement will only be considered where valid reasons for a lesser width are provided;

(ii) the risk of injury resulting from people walking inadvertently into columns placed within the main thoroughfare;

(iii) risks associated with people walking between the outer side of the columns/ counterweights and the kerb and inadvertently stepping off or accidentally falling off the kerb onto the *roadway* (risks of being hit by passing vehicles particularly buses and trucks). Impacts from side mirrors must also be considered and appropriately addressed.

All agreed design aspects must be fully detailed in the *hoarding* design and application;

(h) Where *hoardings* are required to be notched around *street trees* and other infrastructure, support columns must be minimised through the use of bridging beams to support the deck structure - see **Figures 3.63** and **3.67**.

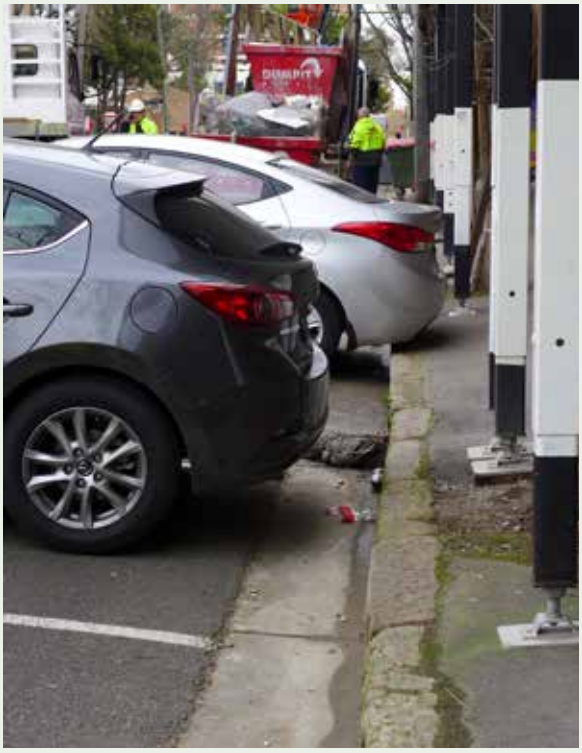


Figure 3.19: Temporary vehicle wheel-stops or other *approved* measures must be provided when columns are placed close to the kerb where non-parallel kerb parking is present.

Photo: Peter Conroy / City of Sydney

(i) Columns must be painted with a 1.0m high white band commencing 500mm above the *footway* surface to clearly identify the *footway* obstruction (see **Figure 3.23**). This is particularly important at night and for people with low vision.

Where vertical counterweights are incorporated with columns, the leading corners must be painted with a white 1.0m high marking (see **Figure 3.23**). In some cases it may also be necessary to provide additional lighting (refer to **3.16**).

3.8.5 Columns supported on footway subsurface concrete footings

In special circumstances the *City* may consider the use of fixed column placement on concrete footings within the subsurface of a *footway*). Where permitted, the following must be provided with an application:

(a) detailed drawings of the footing system designed and certified by a practising structural engineer (see **2.8**);

(b) a full survey to identify subsurface utility services and basements;

(c) the footing system must not interfere with any services. Where located in close proximity to or within the zone of influence of services, the formal approval of the utility owner must be obtained and evidence of such approval provided; and

(d) Where *street trees* are located near proposed footings, an Arboricultural Impact Assessment (AIA) must be prepared by a qualified Arborist (AQF Level 5) in accordance with AS4970 to confirm that there will be no impact from the footing(s). The footing design and AIA report must be accepted by the *City's* Tree Management Officer (see **3.17** for details in relation to *street trees*); and

Where *approval* is given to allow support footings and partial pavement removal, a separate *road opening* application and *approval* is required (refer to the *City's* 'Code of Practice: Hoisting and Construction Activities On and Above Roads' for further information).

Upon removal of the *hoarding* structure the footings must be removed to a depth of at least 1.5 metres below the *footway* surface and the *footway* reinstated to the *City's* specifications and satisfaction. *Performance bonds* will apply and can be used to rectify unacceptable works (see **1.15**).

Figure 3.20: The use of fixed columns on footings placed within a *footway* is generally not allowed. Where there are clearly demonstrated site-specific needs for concrete footings, approval (through lodgement of a *road opening* application) may be given, subject to stringent design and removal requirements (see **3.8.5**).

Figure 3.21: An assessment of the locality (street infrastructure and *footway* width) and pedestrian densities must be made as part of the *hoarding* design process. Site fence and column encroachments must be minimised to maintain safe, convenient and *accessible* passage of pedestrians, delivery workers and users of wheelchairs and mobility scooters.

Acts of kindness by Michael Landy/Caldor Art Projects
Photos: Peter Conroy / City of Sydney

Figure 3.22: Where ground or surface conditions have insufficient bearing capacity to support a *temporary structure* the *City* will consider allowing recessed steel plates within the *footway* subsurface to provide support. Concrete footings may also be considered (see **3.8.5**). The area surrounding recessed plate/s (or on top of the plate) must be backfilled and evenly finished with material specified and approved by the *City*. A separate *approval* (*road opening* permit) must be obtained prior to undertaking any work.

Figure 3.23: Columns and the corners of vertical counterweights must include white bandings to assist pedestrians in sighting the *footway* obstructions.

3.8.6 Hoardings over cycleways

(a) Where a *cycleway* adjoins a *worksite* and it is proposed to establish a *works zone*, the *hoarding* must be designed to accommodate the *cycleway* in addition to the needs of pedestrians. The duration of *hoarding* placement over a *cycleway* must be minimised to reduce adverse impacts on the *cycleway* and cyclists. This may require staging the *hoarding* systems such as:

(i) a Type B-*hoarding* being in place during demolition of a building;

(ii) removing the *hoarding* over the *cycleway* during in-ground works such as excavation and installing a Type-A *hoarding* on the *footway* to secure and isolate the site; and

(iii) reinstalling a smaller section of Type-B *hoarding* over the *cycleway* and footway if overhead protection is necessary such as to undertake localised crane *hoisting* activity from a *works zone* or to install a concrete pumping static line over the hoarding deck to reach the site.

Where a *hoarding* is proposed to be placed over a *shared path* refer to **2.10.2** for further details and requirements.

(b) A *hoarding* must span the full width of a *cycleway* including providing column setbacks of at least 300mm on both sides of the *cycleway*. Where a *footway* has sufficient width for safe and convenient movement of pedestrians, a greater setback of columns from the cycling kerb may be required.

(c) The preferred location for column placement adjoining a *cycleway* with a median separator is to locate columns on the traffic lane side of the kerb (see **Figures 3.24** and **3.25**). Where there are constraints preventing this, the *City* may consider permitting columns to be placed on a median separator and a reduced setback from the edge of the *cycleway* being allowed if it is considered that:

(i) the median separator foundation/footing is adequate to support the bearing pressures/ loads from the *hoarding* structure and any additional loads from *site sheds* and/or *scaffolding* (and other loads); and

(ii) the *cycleway* pathway line markings can be adjusted to provide an acceptable and safe setback from columns for cyclists (see **Figure 3.25**) and columns are provided with white bandings (see **Figure 3.27(a)**). Tiger-tailings at the portals of the *hoarding* must be installed to clearly identify the potential hazard.

If this design solution is sought, full structural details must be provided with the application confirming the structural adequacy of the median separator to support the *hoarding*. The endorsement of the *City's Cycleway* Unit must also be obtained regarding cyclist safety. This will be undertaken in-house.

Note: Refer to **3.8.2** for column spacings along the kerb.

(d) Where the design solution includes columns on the *roadway*, traffic lane diversions will require the endorsement of the *City's* Traffic Operations Unit (see **Figure 3.24**). Where a *works zone* application is made any required lane diversions must be included in the application documentation.

(e) Cyclist/pedestrian warning and caution signage complying with (**Figure 3.24, 3.25** and **3.27(a)**) must be displayed at each end of a *hoarding* to provide sufficient notice to cyclists that they are entering a construction area, (to be alert and watch for pedestrians and site workers crossing the *cycleway*).

(f) Both sides (*footway* and *roadway*) of a *cycleway* must remain open and accessible (except at locations where Jersey kerbs are required to protect support columns). This is necessary to allow people to cross the adjoining *roadway* to reach the safety of the *footway*. Caution signage in accordance with **Figure 3.27(b)** must be provided to alert pedestrians that they are entering a *cycleway* and to watch for cyclists.

Figure 3.24: A sectional detail of a Type-B *hoarding* design for installation over a *cycleway* (see also **Figure 3.25**).

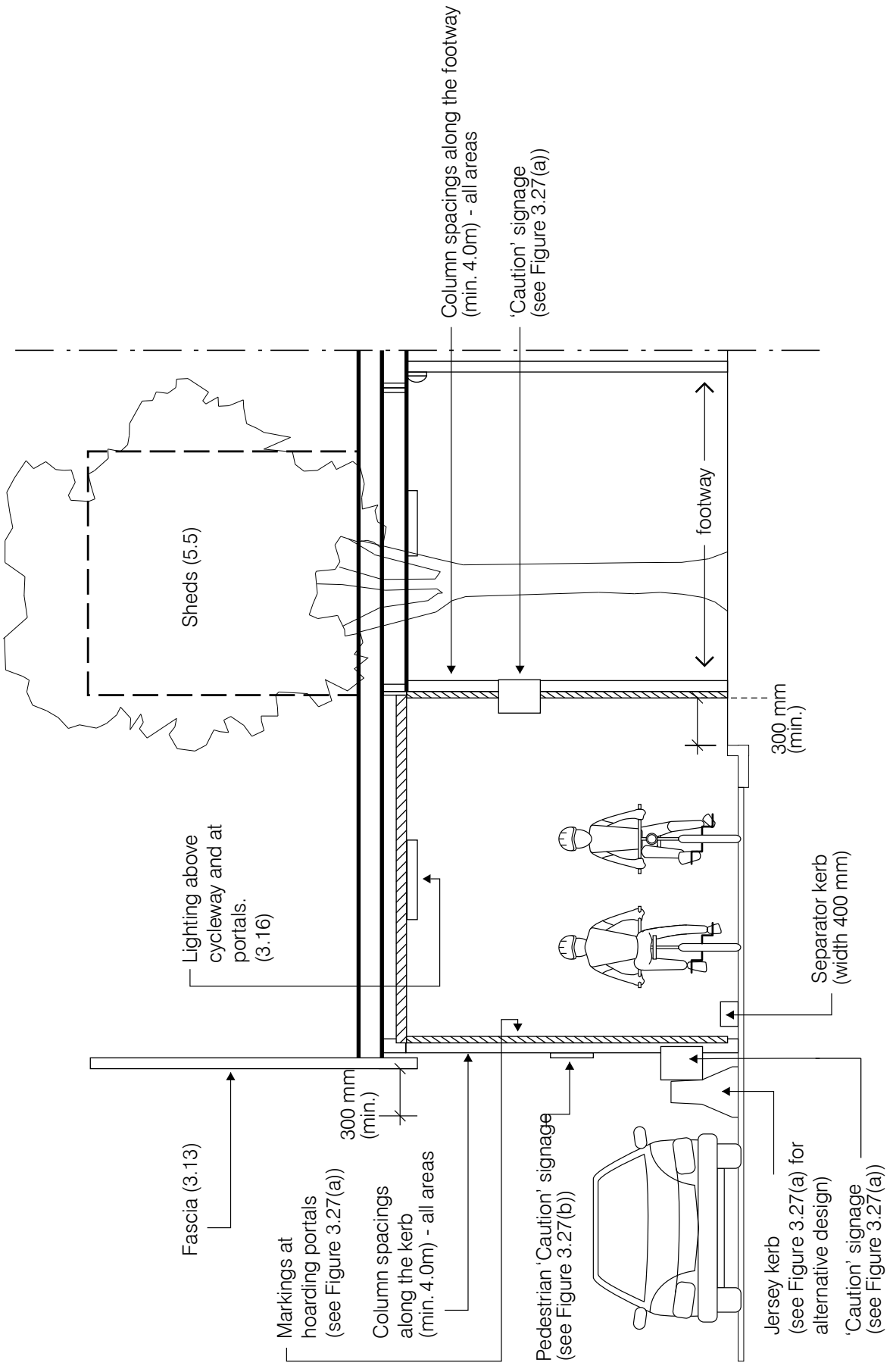


Figure 3.25: Alternative Type-B *hoarding* design for installation over a *cycleway* where, due to local *road* and traffic conditions, it is not possible to comply with the standard design in **Figure 3.24**.

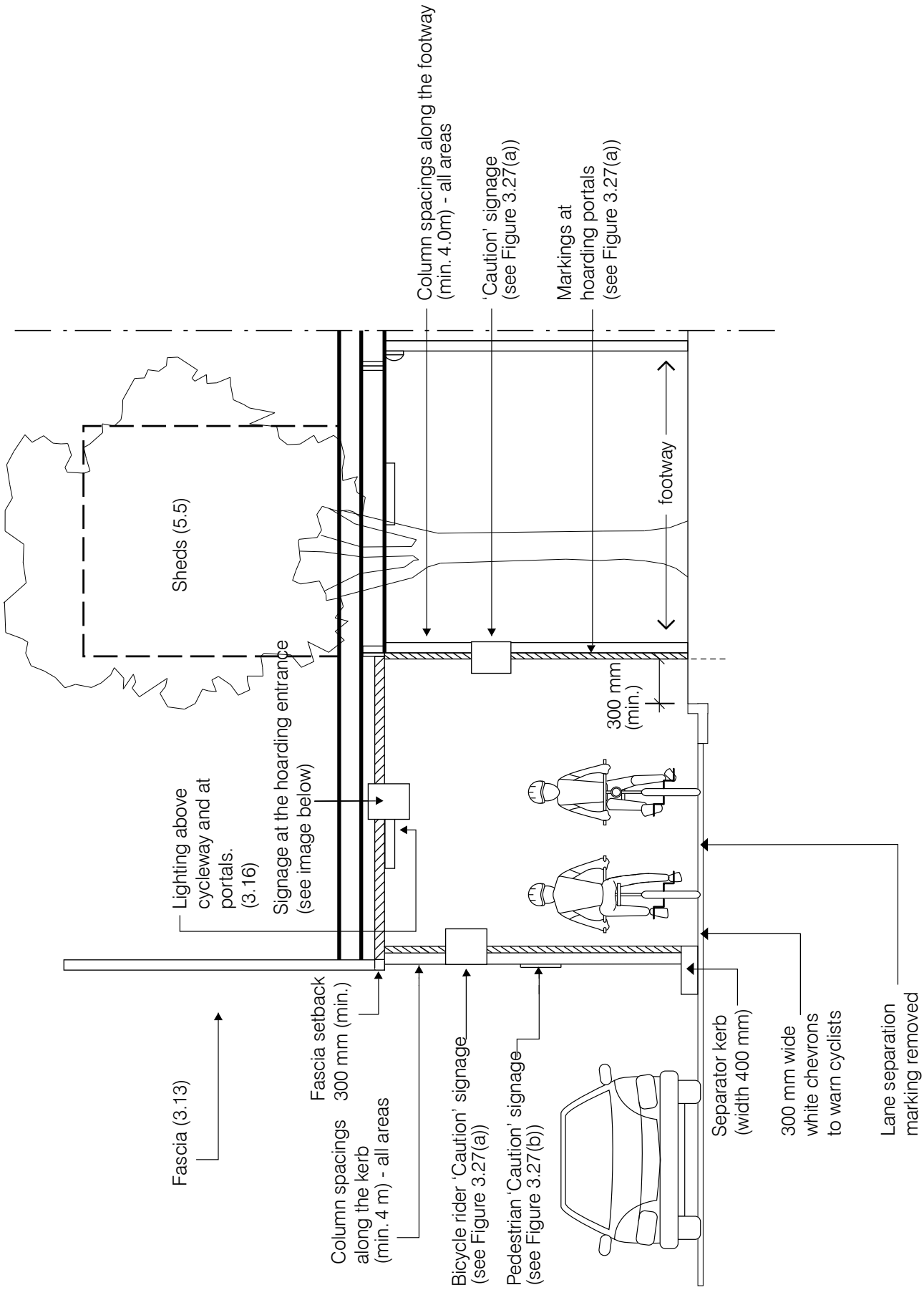


Figure 3.26: Convex mirrors at vehicle entry/exit driveway crossings (for sighting cyclists and pedestrians) and caution signage may be displayed on hoardings, with *City approval*.

Photo: Peter Conroy / City of Sydney

(g) The person in control of the site must ensure that the area of the work activity including *temporary structures* and work activity in the *public space* is carried out in accordance with the requirements of the Work Health and Safety Act and Regulation. This must include instructing workers, contractors, and truck drivers using a *works zone* and/or entering and leaving a site to take care and watch for cyclists and pedestrians.

(h) At truck access points to a site concertina control gates must be installed at each side of driveways and be appropriately manned to prevent cyclists moving through the driveway zone/s when vehicles are entering and exiting (see **3.15.4**). Traffic and pedestrian controllers must wear distinctive uniforms or vests in accordance with the requirements of Transport for NSW.

(i) The *cycleway* beneath a *hoarding* must be provided with lighting systems complying with **3.16**.

(j) The surface of the *cycleway* must be maintained in a safe condition including being kept clear of material, debris and litter at all times.

Note: Muddy surfaces in cycleways can be particularly dangerous therefore special attention must be given to keeping the surfaces clean at all times.

(k) The *hoarding* deck over both the *footway* and *cycleway* must be impervious to liquids including rainwater with all water being collected and drained in an approved manner (see **3.11.3**).

(l) Ramps over concrete static lines are not permitted in *cycleways* (see also **3.8.16**).

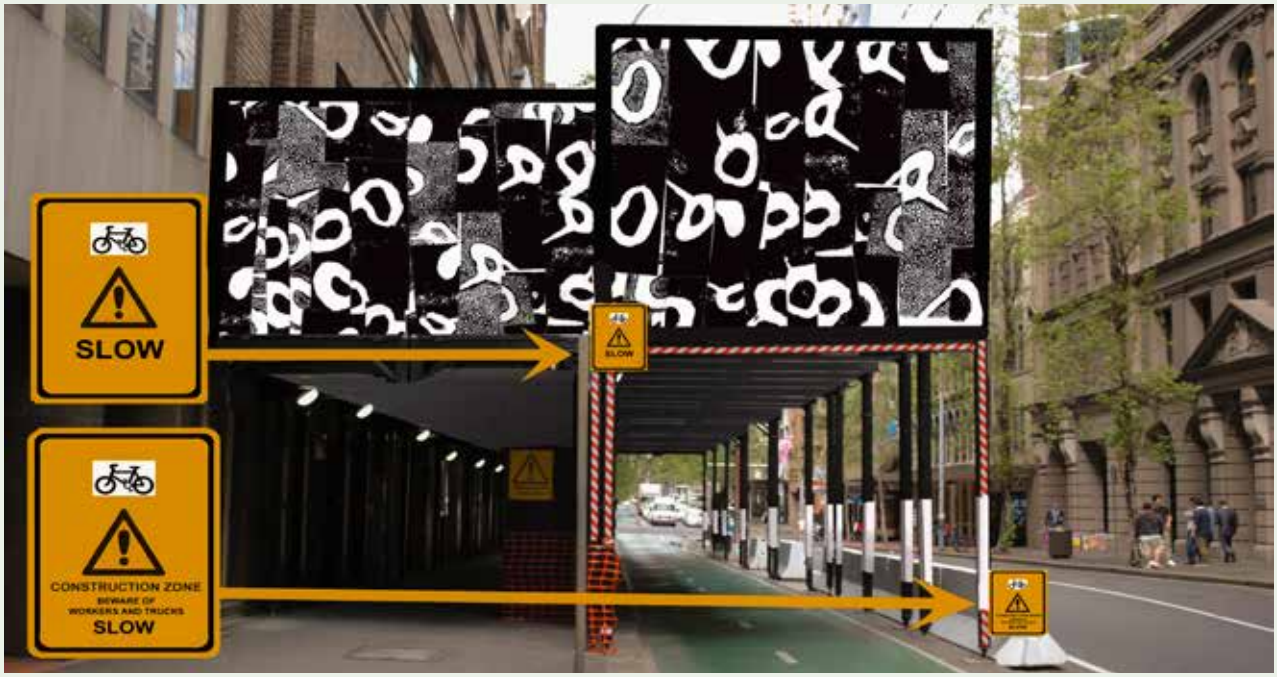


Figure 3.27(a): Type-B *hoardings* erected over *cycleways* must satisfy special design and operational requirements including caution signage and distinctive markings on columns at the portals.

yarra yarra yarra by Suzy Evans
Photo and image modification: Peter Conroy / City of Sydney

Figure 3.27(b): Cautionary signage must be installed along the *cycleway* kerb to alert pedestrians of cyclists.

yarra yarra yarra by Suzy Evans
Photo and image modification: Peter Conroy / City of Sydney

3.8.7 Temporary removal or relocation of infrastructure

Where *footway* infrastructure such as parking ticket machines, bus-stop shelters, bicycle racks and other street furniture need to be temporarily removed or relocated to accommodate a *hoarding* or to enhance safe pedestrian movement and amenity, specific *approval* must be obtained. Costs associated with the removal, storage and reinstatement of infrastructure must be borne by the applicant.

3.8.8 Longitudinal cross-bracing (full height between columns)

Where longitudinal bracing of a Type-B *hoarding* is required to provide structural stability the bracing elements must:

(a) be located behind the site fence;

(b) where (a) is not achievable because a site fence is not required/proposed or additional bracing is required on the kerbside, the preference is to place bracing elements directly beneath the deckline and maintain a clear height of at least 2.5m above the ground surface beneath (see **3.8.9** for further details on this form of bracing);

(c) where full-height bracing of a *hoarding* bay is necessary it is to be located at the rear of the *hoarding*. Where this is not possible such as obstruction of glazed facades of operational businesses requiring bracing to be provided at the kerb, the bracing is to be restricted to bays that are least likely to restrict pedestrian movement and access to the kerb (e.g.: place bracing within an *approved* designated *works zone* as a partial mitigation measure*);*

(d) where permitted on the kerbside under **(c)** bracing must be fully plywood-sheeted (both sides) with water-resistant plywood (min 12mm) and not be located near pedestrian crossings, bus-stop zones and/or *road* intersections (to avoid sightline impacts). Graphics complying with **Part 06** must be applied on both surfaces; and

(e) the size of all secondary structural bracing members below deck level are to be minimised and be located at least 2.5m above the ground surface (see **3.8.9**).

3.8.9 Longitudinal bracing (below deck level)

Where longitudinal bracing elements are incorporated in a Type-B hoarding the following design requirements apply:

(a) their use and size must be minimised;

(b) horizontally placed black-painted single steel ties between columns along the kerbside and at the ends of *hoardings* (maximum 75mm angle or hollow section are permitted without screening);

Ngaarr by Lucy Simpson
Photo: Peter Conroy / City of Sydney

Photo: Peter Conroy / City of Sydney

Figure 3.28: Some forms of bracing elements must be screened from view when located on the kerbside and painted black below the deck (see **3.8.8**).

Bahloo and Bila by Wayne Quilliam
Photo: Peter Conroy / City of Sydney

(c) plywood fascia screening required under **(e)** is required except where horizontal element consists only of bracings between vertical elements more than 1.0m clear apart (including over high-bay gantry modules) must be plywood-sheeted across the full width (space+supports) and graphics displayed (where required by **Table 1** in **Part 06**), subject to **(e)**;

Note: Column spacings less than 2.5m / 4.0m (see **3.8.2**) require a variation request. Where specifically *approved*, any proposed counterweights (**3.9**) must, where practicable and structurally capable, be placed within the narrower sections to maximise the openness of the main hoarding bays along the kerb.

(d) required plywood sheet screening (**Figure 3.28**) must:

(i) be water-resistant;

(ii) have a thickness of not less than 12mm;

(iii) be appropriately fixed to prevent warping;

(iv) have a surface plane that aligns/matches the deck fascia finish to provide a quality even finish for the display of uninterrupted graphics;

(v) be designed and checked by the engineer certifying the *hoarding* including specifying fixing details to address all loads, localised wind actions, including beneath the *hoarding* deck (potential canopy effects); and

(vi) be painted black on all surfaces including the bracing elements (see **Figure 3.28**).

(e) bracings along the kerb and at the ends of *hoardings* must be positioned no less than 2.5m above the *footway* surfaces beneath. In circumstances such as on steeply sloping *footway*s, with or without reduced column spacings, (see **3.8.1(a)**), a height variation will be considered.

3.8.10 Bracing elements across a footway

Where lateral bracing elements (with or without cross-bracings) span between the kerb and *worksite*, the following applies:

(a) where bracings have horizontal bottom chords, the height clearance above the ground surface must be not less than 3.0m;

(b) where cross-bracings do not have bottom chords and it is not possible to achieve a height clearance of 3.0m measured at the column connection point, a minimum height fixing of 2.5m is permitted at the column junction (see figure below);

(c) in all cases, under **(b)** the section size of bracing elements must not exceed 75mm; and

(d) all bracing elements must be painted black.

Photo: Peter Conroy / City of Sydney

3.8.11 Impacts on utility service pits

If it is not possible to avoid placing a *hoarding* site fence/*scaffolding* over minor utility pits the affected section of the *hoarding* fence must be designed to be easily removable and *scaffolding* must be installed to provide safe and convenient access in the locality of the pit for utility service personnel.

Where major service pits are affected including electricity services pits and subsurface substations, the owner of the utility must be consulted and any requirements for access or conditions of installation imposed by the utility owner must be submitted with the *hoarding* application (see also **2.8.8**) in relation to pits and bearing pressures.

3.8.12 Impacts of temporary structures on surrounding properties

Where a *temporary structure* such as a *hoarding*, *scaffolding* or *cantilevered work platform* extends in front of an adjoining building or spans a *roadway* (laneway), special design considerations are necessary to minimise potential impacts on affected properties including, but not limited to, the following:

(a) security issues;

(b) reduction of natural light to windows;

(c) whether access by Fire and Rescue NSW to hydrants and booster connections including impacts on the use of aerial fire-fighting and rescue appliances will be impacted (see **2.14**);

(d) potential for the spread of fire between buildings via the *temporary structure* and sheds (see **2.14** and **5.5**);

(e) access and egress to and from affected buildings including emergency egress of workers from the *worksite* (see **2.14.2**);

(f) access for delivery trucks and waste collection vehicles (height of overhead structures);

(g) obstruction to shop-fronts and building/ *business identification signage* (see **2.16**);

(h) the use, number and location of *site sheds* on *hoardings.* In some cases it may be necessary to position sheds away from adjoining buildings and/or cut-back decks from windows of affected buildings (see also **5.5**); and

(i) to accurately and fully establish potential impacts and determine any required mitigation measures, consultation requirements with likely affected parties apply (see **2.15** for details).

3.8.13 Traffic control signals

Lines-of-sight to traffic control signals and signs must not be obstructed. An assessment of potential impacts on control signals must be undertaken prior to lodgement of an application and where necessary, the *temporary structure* design adjusted to accommodate signals and signs.

Figure 3.29: The design of *temporary structures* must maintain viewlines to traffic signals. In cases where signals need to be modified and/or temporarily repositioned the approval of Transport for NSW must be obtained.

Photo: Peter Conroy / City of Sydney

Where control signals need to be repositioned to address site specific constraints, the applicant or *hoarding* contractor must consult Transport for NSW and obtain approval.

3.8.14 Barriers protecting excavations

(a) Where a site is excavated and is in close proximity to the property alignment with a *public space*, the *PCBU* must consider safety (fall) risks to the public. Refer to **2.13** for details relating to the protection of excavations and safety barriers.

(b) Any required pedestrian (crowd) and vehicle impact barriers should be incorporated into the *hoarding* structure. Freestanding barriers such as concrete barriers provided between the site fence and the edge of an excavation can also be used. Where a barrier is required it must be of concrete or steel, designed to AS1170.1 and satisfy any required pedestrian and traffic risk assessment recommendations. Any requirements under the NSW Work Health and Safety Regulations and *SafeWork NSW* Code of Practice: Excavation Work, must also be considered.

3.8.15 Barriers at hoisting locations (works zones)

Where there are clearly demonstrated construction and pedestrian safety needs adjoining *hoisting* areas particularly where high-bay *hoardings* are used, plywood sheeting of the upper section of a *hoarding* will be allowed subject to complying with the following:

(a) be painted black;

(b) be set back at least 300mm from the kerb (except where **3.8.4 (e)** and **(f)** require consideration);

(c) may commence not less than 2.5m above the ground surface directly beneath;

(d) preferably not extend more than one (1) semi-trailer tray length within the approved *works zone*;

(e) the plywood sheet surface aligning/matching the surface plane of the *hoarding* fascia at deck level; and

(f) graphics displayed as required by **Table 2** in Part **06**.

Photo: Peter Conroy / City of Sydney

Note: If additional pedestrian safety measures are considered necessary by the *PCBU* for *hoisting* large or complex loads, the *City* may consider allowing the establishment of *footway* pedestrian control measures to temporarily pause the movement of people past the *hoisting* zone during the initial *hoisting* action/s from and to a truck tray.

3.8.16 Concrete pumping static lines and screening

Keeping *footways* clear of ramps is important for pedestrian safety and amenity particularly for persons with physical disability, vision impairment and/or with reduced mobility. This aligns with the aims and objectives of the City's `Inclusive and Accessible Public Domain Guidelines'. The use of ramps is therefore generally not supported, particularly in high pedestrian traffic areas.

Figure 3.30: Concrete pumping connection points and riser-pipes attached to Type-B *hoardings* are permitted where an approved *works zone* is in place on the adjoining *roadway* and the *hoarding* is structurally capable of withstanding additional dynamic loads. *Permit-holders* have work health and safety obligations to protect the public when undertaking pumping operations including complying with *SafeWork NSW* requirements (see **1.13** for further details).

Photo: Peter Conroy / City of Sydney

(a) In very busy pedestrian areas ramps over static lines will generally not be permitted (except for in-ground works and where clearly justified). In all other cases a Type-B *hoarding* must be provided to allow for static-lines to be placed on the hoarding deck (see **(b)**).

Figure 3.31: Axonometric view of the design of a Type-B *hoarding* showing column / counterweights and the location of kerbside bracing which must be given thorough consideration particularly in the *city-centre* and other major centres with high pedestrian densities.

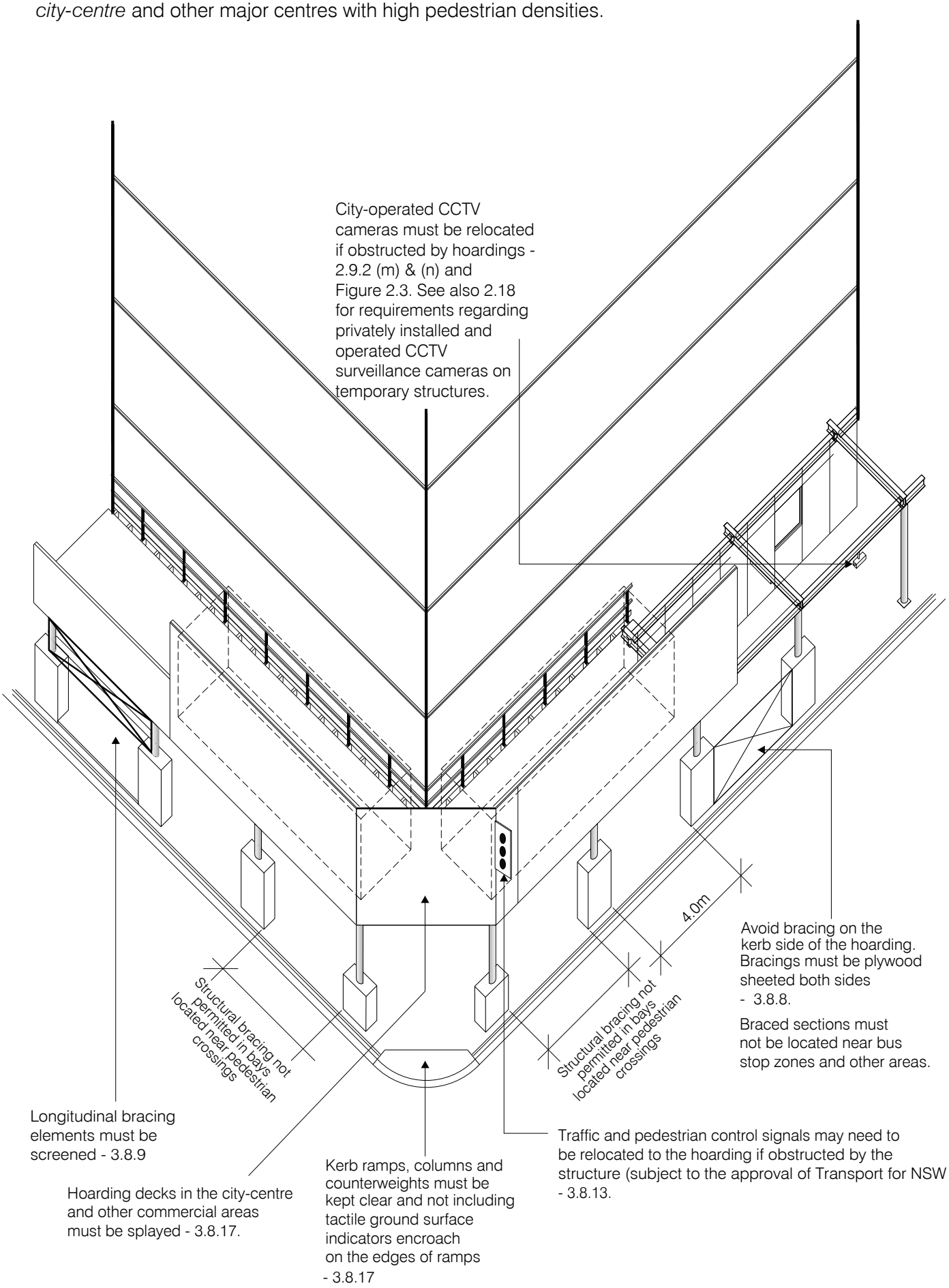


Figure 3.32: Design details for pedestrian ramps over concrete pumping static lines (see **Figure 3.33**).

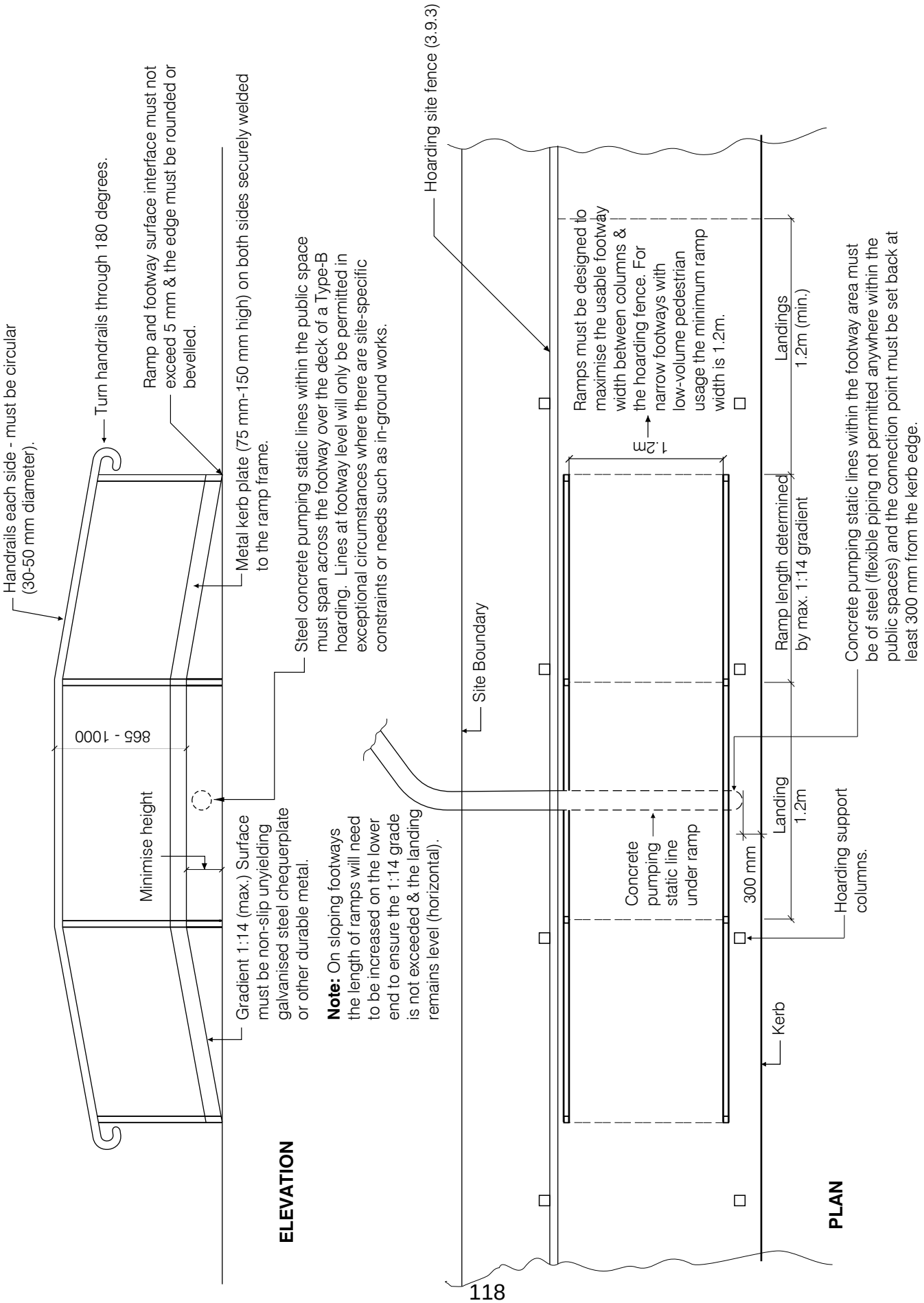


Figure 3.33: Where specific *approval* is given to install a concrete pumping static-line across a *footway*, a durable metal pedestrian ramp complying with the minimum design criteria must be provided (see **Figure 3.32**).

Photo: Peter Conroy / City of Sydney

(b) Steel pipe concrete static-lines must be placed on and over a Type-B *hoarding*. In areas of low pedestrian movement, *approval* may be given to allow a static line at grade with a ramp over. Refer to the `Code of Practice: Hoisting and Construction Activities On and Above Roads' for details regarding ramps and usage. Once building construction reaches the first floor level static lines and ramps must be removed from the *footway* and the line placed on the deck of a Type-B *hoarding*. In these circumstances, and for general pumping in a *public space*, the following provisions apply:

(i) permanently fitted static-lines and connection points (see **Figure 3.30**) will be permitted subject to an *approved works zone* being in place and there being no obstruction to traffic and pedestrians; and

(ii) a *PCBU* and pump operator must consider all risks of pumping in *public spaces* including whether *control measures* such as the shielding or sheathing pump hoppers, static-lines and couplings are necessary to address potential risks of plant and pipe/coupling failure (impacts on the public from concrete spraying/projecting onto *footways, cycleways* and *roadways*).

Note: Refer to the following webpages about *control measures* to protect the public in vicinity of pumping equipment and operation. See also **1.13**:

- *SafeWork NSW* `Concrete Placing Equipment' and
- Safe Work Australia `Guide to Managing Risk in Construction: Concrete Pumping'.

3.8.17 Other requirements

(a) Kerbstones and gutters must not be cut or damaged to accommodate or install a *hoarding*. *Approval* for the removal of kerbstones and/or part of a gutter such as for temporary vehicle *crossings* must be obtained by completing and lodging a vehicle *crossing* (driveway) application (refer to the 'Code of Practice: Hoisting and Construction Activities On and Above Roads' for further details).

(b) The kerb gutter must be kept clear of structures at all times unless otherwise specifically *approved*, and be maintained clean and free of debris.

(c) Pedestrian crossings and kerb ramps must be kept clear of obstructions and be maintained in a safe and *accessible* condition at all times. This is particularly important for persons with low vision or are blind, mobility restrictions, users of wheelchairs, mobility scooters, strollers and delivery workers using trollies. *Hoardings* should, where practicable, be splayed at intersections (see **Figure 3.34**) to minimise column placement near kerb ramps and improve pedestrian queuing space at signalised crossings.

(d) The design of a *temporary structure* must accommodate all existing *street trees* and consider other physical constraints of the site. Refer to Element 10 – 'Street Tree Preservation' (see **1.15**, **2.9** and **3.17.3**) for details regarding tree protection and *performance bonds*.

Figure 3.34: Always design hoardings to keep columns well away from kerb ramps and tactile ground surface indicators. At busy intersections it may also be required to splay the site fence and beam over the pedestrian queueing area (supported on columns placed fully clear of all ramps). This is particularly important at pedestrian signalised scramble intersections.

Sydney Opera House at Night by Emily Crockford
Photo: Peter Conroy / City of Sydney

Unvanished by Kent Morris
Photo: Peter Conroy / City of Sydney

3.9 Element 2 - Counterweights (Type-A and Type-B hoardings)

Objectives

1. Minimise the height, width and footprint of counterweights to mitigate impacts on safe, *accessible* and convenient pedestrian movement.
2. Maintain the visual openness of *cycleways* and *footways* including pedestrian viewlines to the *roadway/cycleway* and views of graphics displayed on site fences.
3. Integrate high quality finished counterweights and connections, columns, pedestrian and motor vehicle safety barriers within the design of a *hoarding*.
4. Provide required stability to the structure.

Deemed-to-comply criteria

The following requirements apply:

3.9.1 General

(a) As general practice counterweights should be placed vertically to provide a fully open *hoarding* along the kerbline and maintain required openness (spacings) between support members (columns). In the *non-city-centre* area, horizontal counterweights may be permitted subject to controls (see **3.9.4**).

(b) Counterweighting is primarily for the purpose of providing structural stability with the least possible impact on the width and openness of *footways*.

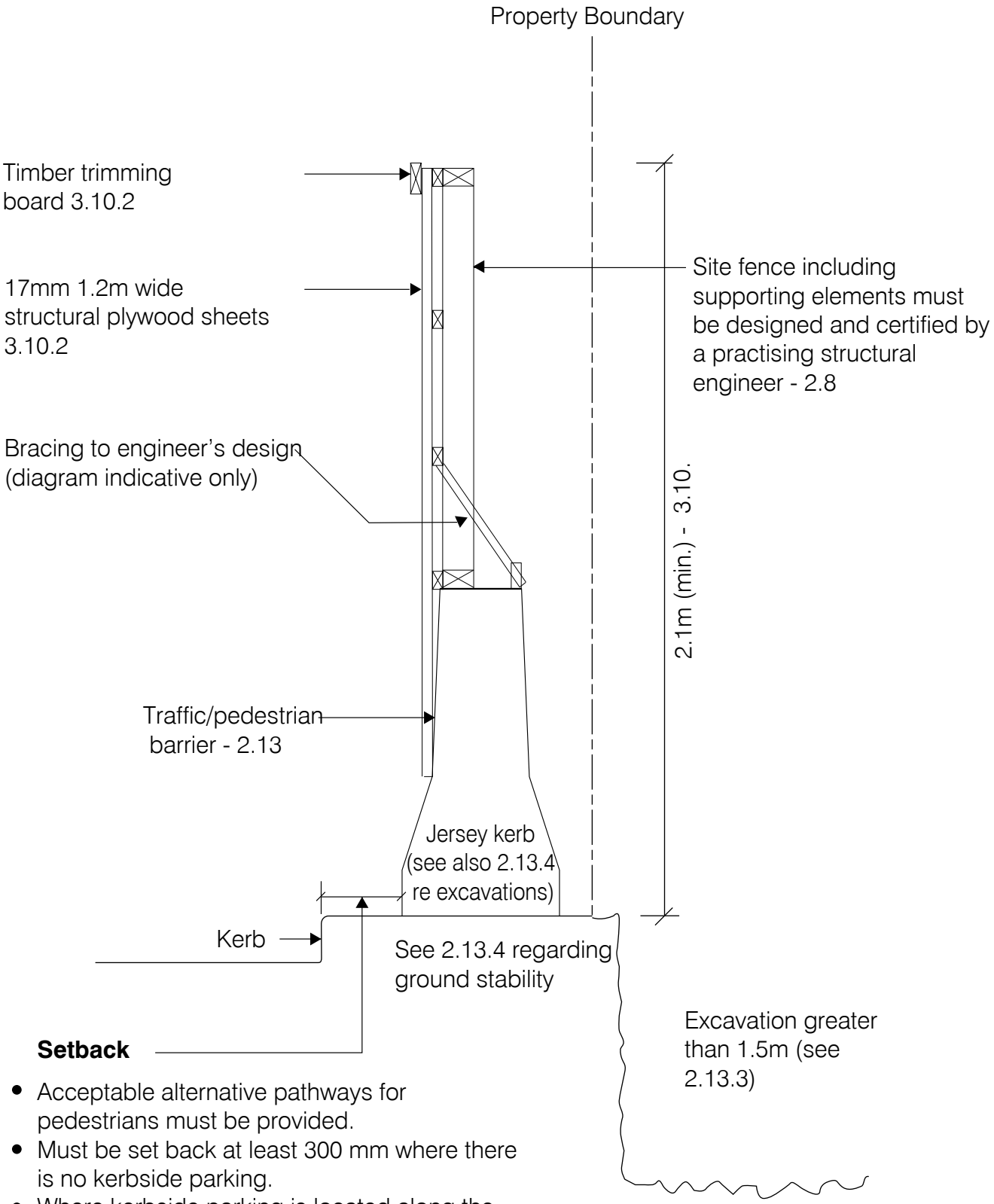
(c) *Hoardings* (counterweights) must:

(i) achieve and maintain structural stability and adequacy including impacts of all types of motor vehicles using the adjoining roadway (refer to **2.8.6(d)**);

(ii) withstand wind actions that prevail or are expected in the locality particularly after a building is demolished (loss of wind-shielding);

(iii) for substantial structures and lengthy duration of installation, consideration must be given to the suitability and potential alternatives to kerbside counterweights. This may include stabilisation by fixing to the shoring system or bracing to the first floor of a building structure (new building construction only) where the design of the building can safely accommodate the structural and overhead protection requirements applying to the *temporary structure*; and

Figure 3.35: Section detail of a Type-A *hoarding* integrated with a traffic barrier. This design is only permitted in circumstances of a narrow *footway* or laneway where vehicular access and maneuvering (swept paths) to and from garages/driveways opposite can be provided and maintained. Note: The preferred design outcome is for site fences to positioned as shown in **Figure 3.5**.



- Acceptable alternative pathways for pedestrians must be provided.
- Must be set back at least 300 mm where there is no kerbside parking.
- Where kerbside parking is located along the frontage, the setback should be at least 600 mm to allow safe and convenient access to and from vehicles (see 3.10.4). If variation is required due to site circumstances (e.g. reduced footway width) this will be considered as part of the application.

(iv) where **(iii)** above cannot be satisfied, and kerbside counterweight units are necessary to deal with various loads and impacts, they must, within the *city-centre*, be isolated units (not continuous horizontal counterweights or barriers between columns unless otherwise specifically permitted).

Figure 3.36: Where counterweighting/ column placement exceed the prescribed maximum dimensions they must be plywood-sheeted and graphics displayed (see also **Figure 3.38**).

Bahloo and Bila by Wayne Quilliam
Photo: Peter Conroy / City of Sydney

Figure 3.37: Typical concrete block counterweight with lateral bracings.

Photo: Peter Conroy / City of Sydney

3.9.2 Specific requirements

(a) Counterweight width/thickness must not exceed 300mm.

(b) Must have a high quality smooth finish with minimum 50mm 45 degree bevelled edges or equivalent radius corners to minimise the risk of pedestrian injury.

(c) Painted the standard colour (black - see **3.14**) with white vertical visual bandings on all corners of vertical counterweights (see **Figure 3.23**).

(d) Connection systems to columns must be of a high quality structural design with minimum protrusions (fixings) that are not dangerous to passing pedestrians or cyclists (preferably concealed or recessed to minimise sharp edges).

(e) Minimum setback of 300mm from the kerb face is maintained including to all other vertical parts of the structure including the fascia (see also **3.8.4(e)** and **3.13**).

(f) Spacings along the kerb must comply with **3.8.2**.

3.9.3 Vertical counterweights

(a) Exposed vertical columns (not located behind a site fence) must not exceed 1.2m (length along the footway) inclusive of columns, 300mm (width across footway), and a height not more than 2.3m above the ground surface. In cases where additional counterweighting is necessary to address wind loads on tall *hoardings*, fascias and other *temporary structures* counterweights up to 1.5m length (including column/s) may be allowed subject to compliance with the minimum spacings between columns/counterweights outlined in **3.8.2**. Counterweights and columns must be plywood-enclosed and graphics displayed on all four surfaces (**Figure 3.38**).

Figure 3.38: Counterweights exceeding the prescribed maximum dimensions including height must be fully enclosed and graphics displayed on all surfaces. The top image shows large counterweights prior to enclosure and the bottom image shows a properly enclosed counterweight.

Photo: Peter Conroy / City of Sydney

(b) In circumstances where visual impacts are important particularly in relation to lengthy installation periods or custom-built *hoardings* are proposed, the *City* may require support columns to be fully integrated (cast) within counterweights.

(c) Counterweights should always be placed at ground level. Where additional weighting is needed such as being placed on the deck of a Type-B *hoarding* to address wind actions in highly exposed sites, weights may be permitted subject to a risk assessment being undertaken by the proponent and/or *supplier* of the *hoarding* addressing potential impacts by site plant and/or motor vehicle/s in relation to stability aspects on the structure and dislodgement of weights on and from the deck.

(d) It is expected that when deck-mounted counterweights are no longer required they be removed from the deck.

(e) Where multiple support columns and counterweights in **(b)** are necessary for site-specific needs, plywood sheet enclosure/ screening of the elements to improve visual appearance and to enable the display of graphics on all four surfaces.

(f) Where the tops of vertical counterweights are located less than 2.3m above the ground surface, they are to be chamfered or sloped to avoid the collection of dirt and placement of litter.

(g) Vertical counterweights are permitted to be placed (supported) in contact with the *footway* surface subject the compliance with **3.8.3**.

(h) Counterweights (for bracing purposes) of Type-A *hoardings* are typically of a formed concrete block or Jersey kerb configuration with cast-in connection/bracing points (see **Figure 3.5** and **3.37**). Alternatives may be allowed such as the use of sand or sandbags placed within durable secured containers e.g. steel tubs or drums fitted with sealable lids and capable of being securely fastened to the *hoarding* fence/frame.

(i) Continuous counterweights may be used adjacent to the site boundary provided that they are screened from the *footway* by a site fence (see **3.10**).

(j) Counterweights, particularly vertically proportioned counterweights, must have connections to columns that are designed to withstand dislodgment resulting from vehicle impacts (see **2.8.6**).

Note: Refer to Clause 305 of the Work Health and Safety Regulation 2017 and *SafeWork NSW* - Code of Practice - Construction Work in relation to managing risks associated with excavations.

3.9.4 Horizontal kerbside counterweights

(a) Horizontal placement of counterweights is generally permitted in the *non-city-centre* area although where there are site-specific conditions that require a different treatment due to pedestrian densities, building usage, kerbside parking needs and other factors, vertical counterweighting can be required (see **(d)**).

(b) Horizontal weights must be supported at least 150mm above the *footway* or ground surface using appropriately designed support systems (brackets fitted to columns). Supporting counterweights from the ground surface is not permitted (to prevent the excessive accumulation of litter and debris around the base and to allow easy cleaning of *footways*). Timber blocks or other similar systems to support counterweights are not allowed.

(c) Counterweighting will only be permitted in every second bay (min.) between columns to allow safe and convenient pedestrian access between the kerb/*roadway* and the *footway*. This may be varied for site-specific needs (to be clearly justified by the proponent as part of the application process).

(d) In setting out the positioning of counterweights consideration must be given to the impacts on kerbside parking including safe and convenient access for persons alighting and entering vehicles (excessive obstruction). Pedestrian access between the *footway* and *roadway* interface must also be considered. Where necessary the *City* may require vertical weights or more open bays between columns.

(e) The top surface of horizontal counterweights must not exceed 1.2m above the *footway*/ ground surface.

(f) The dimensions (thickness) of weights and surface finishes must comply with the applicable design provisions in **3.9.2**.

One Circular Quay by Mark Hanham
Photo: Peter Conroy / City of Sydney

3.10 Element 3 - Site fence (Type-A and Type-B hoardings)

Objectives

1. Ensure the *worksite/site* is effectively screened, enclosed and secured from the *public space*.
2. Minimise the impact of *hoardings* (*footway* encroachments) to provide safe pedestrian movement and high quality amenity including for persons using mobility assistance devices (wheelchairs and mobility scooters) and people who are blind or have low vision.
3. Seal/isolate the *worksite* to contain debris and dust within the site.
4. Act as a noise attenuation barrier to pedestrians.
5. Visually screen works at street level.
6. Ensure fence sheeting, framing members, battens and fixings are structurally adequate for the type of work to be undertaken including the prevailing wind actions in the locality and the ability of the structure to withstand the weather for the proposed duration of installation. They are also to be structurally adequate to protect the *public space* from construction and demolition activities and from the possibility for ballistic impact caused by projectiles penetrating the fencing.
7. Provide a well constructed and finished fence (plumb and true) with an even surface throughout that will be suitable for the display of quality graphics (where these are required).
8. Ensure materials are sturdy, durable and allow easy maintenance including repainting and cleaning.
9. Provide pedestrians with a view of the site (in-ground works) through the incorporation of viewing windows in the fence.
10. Where practicable, re-use or recycle fencing materials.

Deemed-to-comply criteria

The following requirements apply:

3.10.1 General

A key design requirement applying to site fences is to minimise the encroachment of the *worksite* on *footways* and *roadways* to ensure that adequate space is provided for the safe, convenient and *accessible* movement of people, cyclists and vehicles passing a work site.

Figure 3.39: Temporary traffic barriers are required where a *temporary structure* is located within 300mm of the kerb. Where this cannot be achieved, barriers placed in the kerb gutter may be permitted where there are no impacts on turning and manoeuvering pathways at vehicle crossings and entrances to properties/garages. Applicants will need to verify compliant vehicle turning paths using swept-path diagrams templates (refer to AS/NZS 2890.1).

Photo: Peter Conroy / City of Sydney

3.10.2 Site fence

(a) For site fences of Type-B *hoardings* the fence must extend to the underside of the deck. Fences of Type-A *hoardings* must have a minimum height of 2.1m. Where there are construction and/or security needs or, if seeking to avoid cutting sheets, a Type-A fence can be taller than 2.1m and may extend to the underside of street awnings (where existing) - see **Figure 3.43**.

(b) Site fences must be finished neatly top and bottom. The top edge of a Type-A *hoarding* must be capped or finished with a trimming board. Skirting boards must be provided at the base (refer to **Figure 3.44**). The trimming boards and capping must be not less than 90mm and painted the same colour as the fence.

(c) Where *hoardings* are associated with occupied buildings, safe access to building entrances must be maintained. Any alcoves in fences should be minimised to ensure the safety of pedestrians from persons secluding themselves from view. Where necessary, alcoves may need to be provided with lighting at night. See also **2.17** for permissible wayfinding signage on *hoardings*.

(d) Site fencing, including access gates/doors (if plywood is to be used), must be constructed of solid durable materials consisting of a timber or steel frame and structural-grade plywood (compliant with AS/NZS 2269-2012). The stress grade of plywood must be determined based on a risk assessment of the site and proposed works. As a minimum the thickness must not be less than 17mm.

For some Type-A *hoardings* associated with minor works such as facade cleaning, maintenance, shopfront replacement and painting; and when securing the base of a scaffold associated with minor works, a fence thickness of 12mm using water-resistant plywood may be permitted subject to satisfying applicable work, health and safety codes of practice and risk assessments.

For both 12mm and 17mm plywood the surface finish grade must be at least CD and be suitability weather durable for the degree of exposure and duration of installation.

Note:
The *City* may consider the use of other forms of composite board on a case-by-case basis provided that the material satisfies the objectives of **3.10**.

(e) Irrespective of the minimum thickness of plywood fencing in **(d)**, a *PCBU* and/or *supplier* of a *hoarding* (site fence) must ensure that the plywood covering is of sufficient rigidity and strength to prevent projectiles penetrating the fence based on the type of work (risks) to be carried out onsite.

Figure 3.40: Where *hoardings* are erected on narrow footways it may be necessary to indent hoarding fences and scaffolding (using ladder beams) to provide clear minimum widths around infrastructure (signage stems, parking ticket machines, light poles etc.) and *street trees*. A clear height of at least 2.4m must be provided in the recessed sections.

Photo: Peter Conroy / City of Sydney

(f) All fencing must be constructed plumb and smooth-finished using plywood sheets flush-finished (butt-jointed). Overlapping sheets and gaps formed when using fixing cleats of *scaffolding* standards are not permitted.

Faraway gums by Billy Ryan
Photo: Peter Conroy / City of Sydney

Figure 3.41: Fire brigade booster connections behind site fences must be kept available. Graphics fabric must be neatly trimmed/finished around openings.

Faraway gums by Billy Ryan
Photo: Peter Conroy / City of Sydney

(g) A site fence, including any vehicular and personnel access door, must be painted/finished in accordance with the Code (see **3.14**): and be maintained in a tidy and clean condition throughout the full duration of *hoarding* placement.

(h) The fence of Type-B *hoardings* must cover all structural elements (framing and support columns on the public space side - refer also to **3.8.1(e)**) and the surface must be smooth finished and capable of accommodating graphics (see **Part 06**). Complying knee-bracing at deck level is permitted to project through the site fence, however, the preferred finish is to have all structural elements fully covered.

(i) Site fence plywood sheeting (including access doors or gates) must be securely fixed to a structurally sound and adequate frame based on a risk assessment of the site conditions and the type of work being carried out. Bugle screws should be used. The gauge and length

of the fixings should be addressed in the risk assessment.

The risk assessment should also address:

- the locality (wind actions);
- the duration of the installation (weathering); and
- the potential for accidental penetration of the fence from the *worksite* activities.

Fasteners must not protrude past the fence surface i.e. are to be finished flush or countersunk to prevent injury to passing pedestrians and/or damage to clothing caused by potential snagging points.

Note: Nail fixing is not permitted.

(j) The re-use of suitable quality material in the construction of site fencing is encouraged. The further re-use and/or recycling of the material is also encouraged when the hoarding is removed.

Figure 3.42: Where it is not feasible or practicable to keep a *footway* open, particularly in cases where narrow *footways* will be impacted, temporary pedestrian pathways and kerb ramps may be used where the *roadway* has sufficient width to safely accommodate the encroachment (temporary pathway). This design solution must be endorsed by the *City's* Traffic Operations Unit.

Photo: Peter Conroy / City of Sydney

3.10.3 Footway encroachments

Encroachments up to 1.0m may be permitted for site-specific needs, however, the extent of encroachment permitted for Type-A *hoardings* will depend on the width of a *footway* and the degree of pedestrian density and vehicular movement in the locality (see '**Note 3**'). Encroachments must always be kept to a minimum and will be considered for such activities as:

- shop-front replacement or alterations
- minor construction
- minor demolition works
- excavation particularly where shoring or piling is required along a property boundary and/or to afford public protection including importantly deep excavations.

Site fence encroachment provisions also apply to fences of Type-B *hoardings*.

The following requirements apply:

(a) encroachments on *footways* must be minimised in all cases including stairway/ ladder access enclosures to the deck of Type-B *hoardings* (see **3.12**). Where a *footway* has sufficient width, intrusions up to 1.0m may be permitted (see **'Notes' 2** and **3**);

(b) localised intrusions exceeding 1.0m for access stairways/ladders of scaffolds and to the deck of Type-B *hoardings* (see **3.12** for stairway enclosures), will only be considered in special circumstances and where the *footway* conditions permit including clear widths, pedestrian density, *footway* infrastructure and duration of installation (see also **(d)**);

(c) all proposed intrusions must be fully justified in an application and must include details of how acceptable pedestrian safety, movement and amenity will be maintained past the *worksite*. This is particularly important in high pedestrian density areas of the city-centre and other busy local neighbourhood commercial areas (see 'Notes'). Fencing design must satisfy **(d)** and **(e)**;

(d) intrusions up to 1.2m will generally only be permitted in localised circumstances e.g. stairway access to *scaffolding* or hoarding deck (see **3.12**). Ladder access can generally be accommodated within a 1.0m encroachment. cases where access cannot be accommodated:

Figure 3.43: Section detail of a Type-A *hoarding* for site specific needs such as dust and/or noise control. Site fences may extend to the underside of street awnings (see **Figure 6.15** in relation to surface finishes).

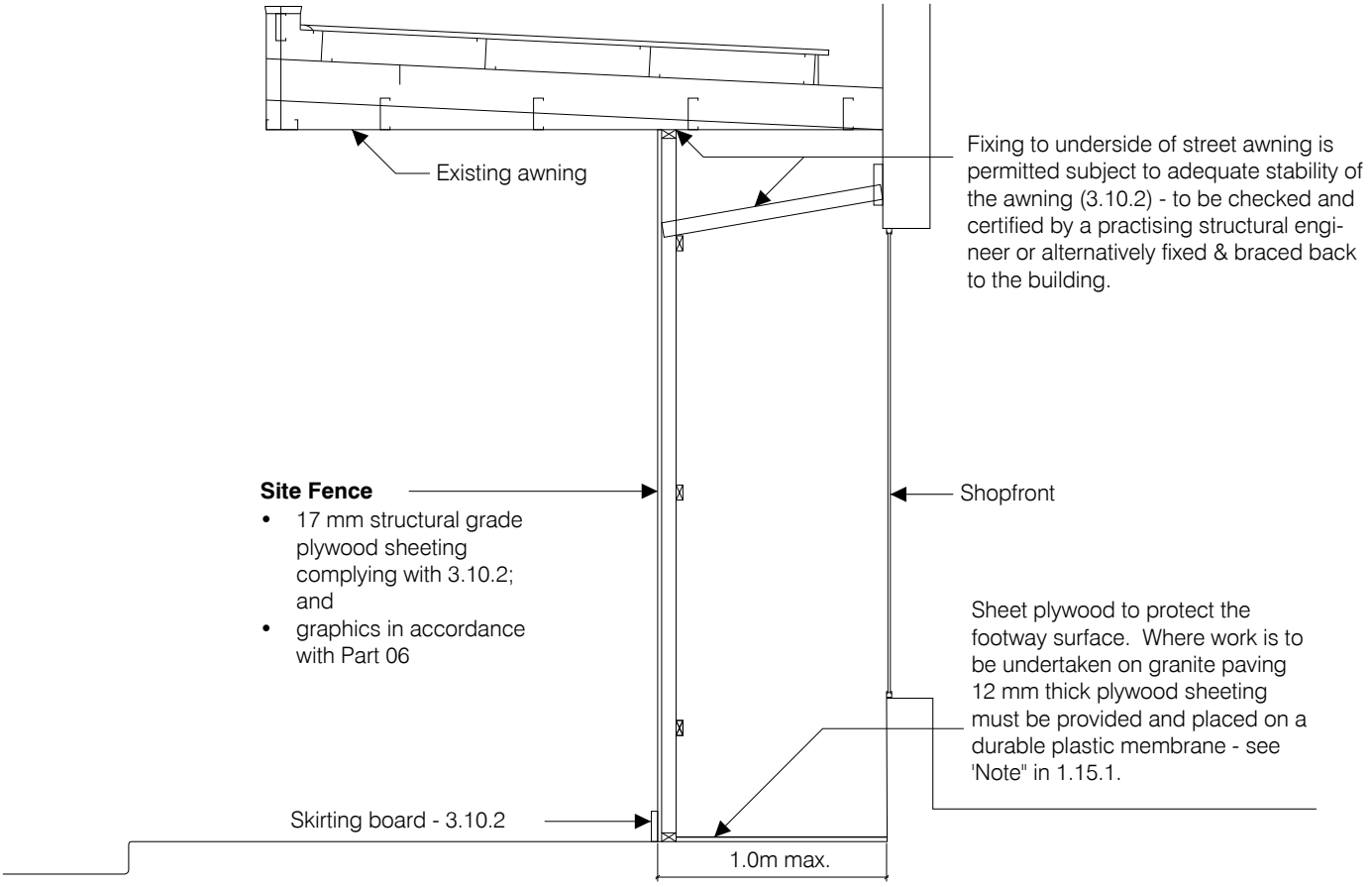


Figure 3.44: A typical Type-A *hoarding*. All surfaces must be painted black and the top and bottom of the fence capped and trimmed. Graphics must be displayed where required by **Table 1** in **Part 06**.

Photo: Peter Conroy / City of Sydney

- within the permissible maximum 1.0m intrusion; or
- from within the property/site; or
- where original glazed-block pavement lights (providing natural illumination to basements) are installed in the *footway* (see also **3.8.2** regarding column placement); or
- for special construction or work safety needs, *approval* will only be given where there will be no adverse impacts on safe and convenient pedestrian movement (see also **(e)** below). Refer also to **'Notes' 3** and **4**).

(e) for Type-B *hoardings,* when the development has been constructed to first floor level the fence encroachment may need to be reduced (see **Note 1**), unless there are clearly demonstrated site or construction needs to require the encroachment for the full duration of the development;

(f) full and detailed consideration must be given to the design of a *hoarding* to allow for its easy relocation and/or modification to satisfy **(e)** above. This must be detailed in the application.

(g) where a Type-A *hoarding* fence is proposed on a narrow *footway* and it is not possible to provide a Type-B *hoarding* to keep the *footway* fully open, the *City* will expect (and require) the method of work and/or *hoarding* to be designed to minimise the site fence encroachment; and

(h) where *scaffolding* is supported from a *footway* and it is not possible to reduce the encroachment to maintain a clear minimum *footway* width (generally 1.2m in low pedestrian volume areas) past trees, posts, parking ticket machines and other *footway* infrastructure, the site fence may need to be adjusted or recessed such as between *scaffolding* standards in the locality of the *footway* obstruction (see **Figure 4.5** in **Part 04**).

Notes:

1. In areas with high pedestrian volumes particularly in the *city-centre*, a site fence must be located as close as possible to the site boundary alignment. Once the development has reached a stage where the fence intrusion is no longer required the fence should, where practicable, be relocated to the building alignment or other agreed position.
2. As determined by the *City*, the end-panels of a site fence may need to be splayed at an angle of 45 degrees (or other *approved* angle) to provide enhanced and safe passage of pedestrians, including persons who are blind or have low vision, past the *hoarding*.
3. Encroachments for the purpose of creating a material/equipment storage or other usage will be classed as a *work compound* (see **5.3**). *Footway* occupation fees will apply on a square metre rate in accordance with the City's Revenue Policy (Schedule of Fees and Charges).
4. It is unlikely that *approval* will be granted for significant encroachments for the full duration of the development in areas of high pedestrian traffic, at busy intersections, and/or where the *footway* width is particularly narrow.

3.10.4 Temporary closure of footways

(a) In cases where the work and/or *scaffolding* cannot be modified to limit the site fence encroachment or the *footway* is very narrow, approval may be given to allow temporary closure. This design solution is not preferred and will only be considered in low pedestrian and vehicular movement *roads*.

(b) The following requirements apply to the consideration of any temporary closure of footpaths:

(i) the locality, number and type of pedestrians (children, persons with restricted mobility and the elderly) that are likely to use the footway;

(ii) the width and appropriateness of the *roadway* to safely accommodate an alternative barricaded pedestrian pathway width of 1.8m (preferred). Where this width cannot be achieved a minimum width of 1.2m must be available (or a width that at least matches the existing *footway* to be closed). Temporary kerb ramps and circulation space is also required.

(iii) The *City*'s Traffic Operations Unit will consider alternatives to the above such as:

- whether there is a satisfactory alternative *footway* on the opposite side of the *roadway* and whether appropriate and effective safety measures can be incorporated to ensure the safe and accessible crossing of people (such as pedestrian management systems);

- the type of carriageway (one-way or two-way traffic movement) and the type and volume of vehicle usage in the street; and
- the proximity of the *hoarding* fence and/or *scaffolding* to the kerb and whether the safe passage of vehicles, particularly in narrow laneways and at laneway intersections will be possible.

(c) where the *City* is satisfied that pedestrian safety, *accessibility* and convenience can be adequately accommodated through a temporary closure of a *footway* and use of alternative pathways, *approval* may be given to allow a *temporary structure* to take-up the full width of a *footway.* **Figure 3.45** shows a typical acceptable alternative pedestrian pathway arrangement past a *worksite* that would apply.

3.10.5 Impacts on street parking and vehicle access

The following requirements apply if street parking is affected:

(a) where a temporary closure of a *footway* is allowed and a *hoarding* fence is to be located along the kerb the following matters must be addressed in the design and preparation of an application consideration of a proposal:

(i) the potential impacts on kerbside parking including access restrictions caused to persons to easily and safely enter and alight vehicles (generally a clear width of at least 600mm is required to allow safe access);

(ii) the potential need to temporarily remove on-street kerbside parking and the impacts of loss of kerbside parking (see **(b)**);

(iii) the need to place barriers such as Jersey kerbs in the kerb gutter to prevent vehicles impacting the site fence, and *scaffolding*, where installed;

(iv) potential impacts on vehicle access to garages and driveways including mitigation measures:

- the need to provide sufficient space for vehicle maneuvering (swept path) for both entering and exiting properties in vicinity of the site/*temporary structure*;
- scaled and accurate drawings must be prepared by an independent qualified traffic engineer (not associated with the *hoarding* contractor) showing compliant access (vehicle swept paths) in accordance with AS 2890.1;

Where acceptable vehicle manoeuvring cannot be achieved the *hoarding/scaffolding* design will need to be modified unless **(b)** applies.

(b) where the *City* agrees to the temporary removal of kerbside parking to accommodate a *hoarding*, including accommodating compliant swept paths for vehicles, a letterbox-drop in the locality must be undertaken by the applicant to notify the community of the temporary loss of parking and the duration of the project. Letter-drop requirements including the extent of notification will be specified as a condition of *approval*;

(c) where ticketed street parking spaces are affected, payment for the loss of spaces and income will be required in accordance with the *City's* Revenue Policy (Schedule of Fees and Charges);

(d) where a parking ticket machine is affected by a *hoarding*, full access must be maintained and appropriate signage installed on the *hoarding* fence identifying the machine's location. Where a *hoarding* obstructs illumination of the machine from the street lighting system, the area or alcove must be provided with a vandal-proof lighting fixture powered from the site; and

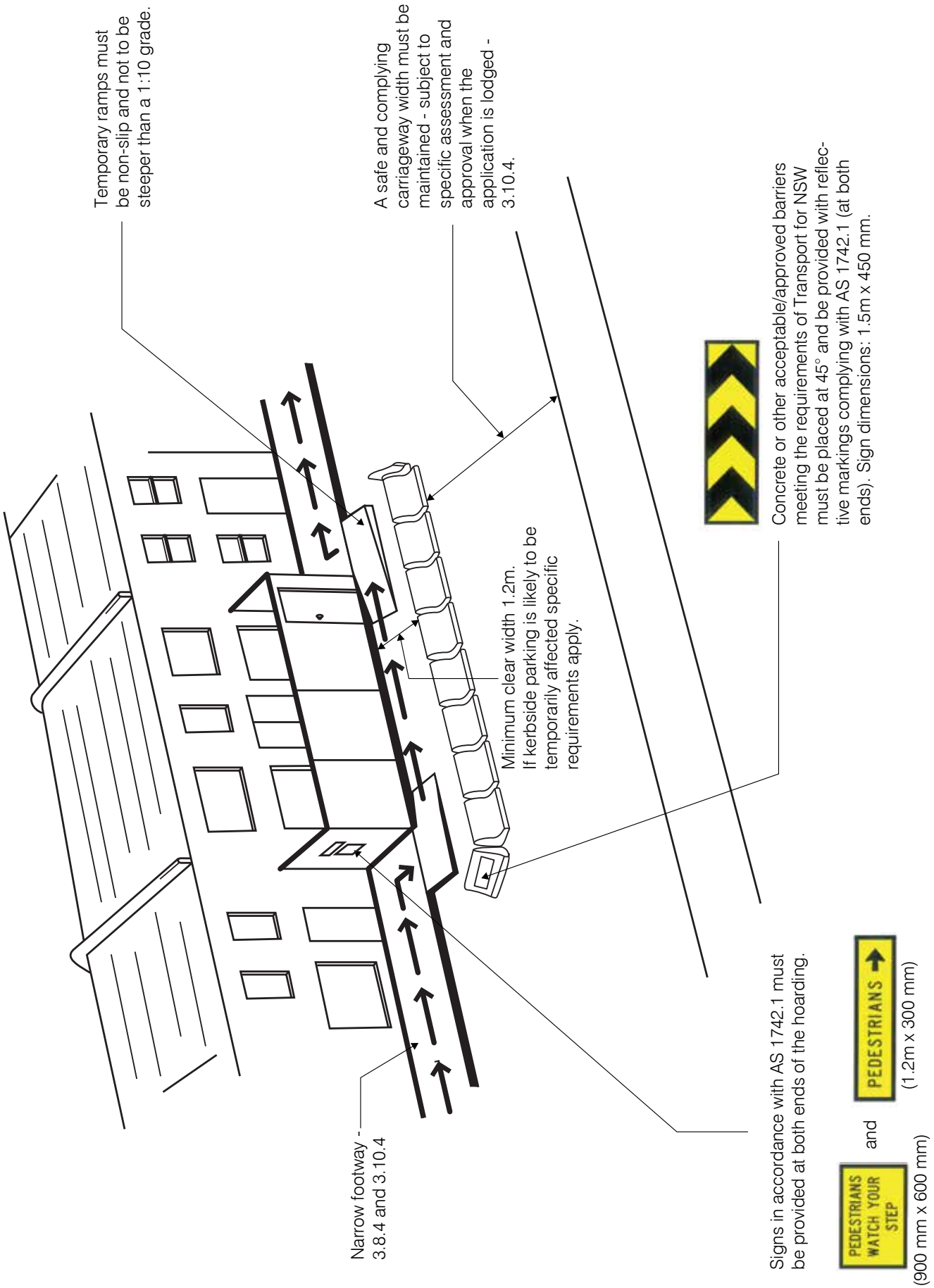
(e) in circumstances where a ticket machine cannot be retained under **(d)** and needs to be temporarily removed or relocated, the approval of the *City's* Parking Services Team must be obtained. If a machine removal/relocation is feasible, all costs (in accordance with the *City's* Revenue Policy) will apply. The *City's* contractor will undertake the necessary works.

3.10.6 Viewing windows in site fences (in-ground works)

Where work involves excavation (deeper than 1.5m) and in-ground works, provision must be made for the public viewing of the excavation works as follows:

(a) at least one viewing window must be provided per frontage to allow the public to view works and construction up to ground level. For

Figure 3.45: An example of a typical temporary pedestrian pathway past a *worksite* (refer also to **3.10.4**.



long frontages windows must be located at spacings of approximately 20m. Viewing windows must be 500mm square with the bottom edge located approximately 1.0m above the *footway* surface (see **Figure 3.46**).

(b) windows must be of a clear durable material such as polycarbonate or laminated glass having a minimum thickness of 12mm, trimmed neatly against the site fence surface, securely fixed and maintained/cleaned regularly to provide good site visibility and safety. Where a hoarding:

(i) adjoins a narrow *footway*; or

(ii) adjoins a high pedestrian density *footway*; or

(iii) is located on a *roadway*; or

(iv) could impact on convenient pedestrian movement,

the *City* may dispense with the requirement for windows (or reduce the number) to avoid excessive obstruction to pedestrian movements (where the fence is located close to the kerb) or prevent viewing from a *roadway*.

(c) windows for in-ground works must be removed or screened once the development is constructed to ground level and painted or finished to match the site fence (generally black).

3.10.7 Bill poster attachment and control (all forms of fencing)

(a) In circumstances where bill posters are repeatedly attached to *hoardings* (in circumstances where graphics are not required to be displayed) the *City* may require the installation of steel grid mesh on the fence (see **Figure 3.47**) to prevent poster attachment. Where meshing is allowed or required the following provisions apply:

(i) the mesh must be galvanised;

(ii) the wire aperture must be not less than 25mm square and have a wire diameter of 3-4mm; and

(iii) the mesh must be securely fixed to the site fence using plated 'U' nails or other low-profile fixings and the perimeter trimmed neatly with rebated battens to fully cover the wire end-edges (for pedestrian safety).

Figure 3.46: Where sites are to be excavated deeper than 1.5m viewing windows for the public must be provided in the site fence at the required dimensions, height and number.

Suspended figures by Prudence Stent and Honey Long
Photo: Peter Conroy / City of Sydney

Figure 3.47: For problematic sites in the *non-city-centre* area that are regularly impacted by bill poster attachment, the display of graphics in accordance with **Part 06** may be necessary. Alternatively, meshing of site fences may be permitted subject to meeting minimum prescribed standards and obtaining the approval of the *City*.

Photo: Peter Conroy / City of Sydney

(b) meshing is not the preferred treatment to manage bill poster attachment. For problematic sites where it is clearly demonstrated by the builder that repeated poster removal and re-painting has failed to control poster attachment or the builder fails to control posters, the *City* may require the installation of graphics (see **Part 06**) or meshing at the *City's* discretion and at the *permit-holder's* cost.

3.10.8 Access doors, gates and turnstiles

(a) The number of access doors and gates in site fences must be minimised and comply with **3.15**. The following also applies:

(i) doorway openings and widths must be minimised;

(ii) doors must swing inwards only or slide internally parallel to the *hoarding* fence;

(iii) turnstile access is permitted where site access and security controls are required subject to the turnstile not encroaching beyond the *approved* line of the site fence; and

(iv) doors that exceed 2.0m in width must display graphics in accordance with **Part 06**.

(b) The use of roller-doors at access openings is generally not allowed, however, where permitted must be of a satisfactory standard of design and durability including aspects of acceptable ongoing maintenance (easy cleaning and where necessary, repainting). Door widths greater than 2.0m will not be allowed due to the requirements to display graphics.

Note: It is an offence to allow a gate or door to open over a *road* (Clause 18, Roads Regulation 2018).

3.10.9 Utility services (pits and hatches) and metering equipment

(a) Utility services pits and hatches must not be obstructed. Where a *hoarding* fence cannot be positioned to avoid pits the fence must be constructed to allow access or fencing designed to permit easy removal to allow access. Utility service providers must be consulted if access pits are impacted and comply with their requirements (subject to consultation with the *City*).

(b) Where utility service pits are located behind a site fence or within a compound and/or obstructed in any way the approval of utility owner must be obtained which may require the display of appropriate signage on the fence to indicate the pit location/s and type of utility service. Easily removable panels in site fencing to access pits may also be required.

(c) Electricity metering equipment and switchboards should be located within a site. Where the local electricity supplier/authority requires the installation of metering equipment at the site boundary (access as part of the site fence), the meter cabinet must:

(i) be recessed within the site fence to ensure that the closed door does not project past the fence surface plane;

(ii) have frames and latches/locks that do not protrude forward of the fence surface (to avoid snagging and injury of passing pedestrians);

(iii) have signage affixed to cabinet doors indicating the type of utility service;

(iv) have cabinets lockable at all times except when being accessed by authorised personnel; and

(v) comply fully with any requirements of applicable Australian Standards and the local electricity supply authority.

Stone Jewels by Fiona Currey
Photo: Peter Conroy / City of Sydney

3.11 Element 4 - Hoarding deck, usage and overhead protection (Type-B hoardings)

Objectives

1. The open character of a *footway* below a Type-B *hoarding* is maintained and the amount and quality of natural light reaching the *footway* is preserved (and supplemented with artificial illumination during daylight hours) if necessary.
2. Allow a *person conducting a business or undertaking* to provide an overhead barrier to protect the *public space* from objects that may fall from a *workplace*.
3. Items placed on the deck can be contained safely.
4. Pedestrians are protected from rainwater and other liquids that may fall onto a deck.
5. Water is collected and drained from the deck in a controlled, effective and appropriate manner to prevent nuisances to the *public space* and pedestrians.
6. Provide a cleanly detailed, smooth/even surface and painted soffit including junctions of the deck to beams that is resistant to corrosion and staining.
7. In cases where a *hoarding* spans a *roadway*, to ensure that decks do not cause excessive loss of sunlight and privacy to windows of neighbouring buildings.
8. Safe and convenient pedestrian movement and amenity is maintained by providing a structurally sound protective deck (from objects that may fall from a *worksite*) and which is appropriately detailed and finished on the deck underside.
9. Safe and appropriate access and egress to and from a deck is provided (see Objectives under **3.12**).
10. Ensure items and deck usage (*site sheds*, *scaffolding* and construction *hoisting* equipment such as mast-climbing devices, suspended scaffold (and hoists) do not cause adverse visual and environmental (noise) impacts.

Deemed-to-comply criteria

The following requirements apply:

3.11.1 General

The primary purpose of a *hoarding* is to provide overhead protection to the *public space* (not for general construction-related use). This requirement is set out in **2.2.9**. Where *approval* is given for deck usage, the deck must not be used as a work platform or for associated activities other than *approved*:

(a) *site sheds* (where permissible under **5.5**);

(b) *scaffolding*;

(c) associated minor ancillary structures such as awnings to provide weather protection to access walkways and stairways (and that are fully screened by the fascia); and

(d) parking of hoists and suspended *scaffolds* (swing-stages) that have the specific *approval* of the *City* (refer to the City's 'Code of Practice: Hoisting and Construction Activities On and Above Roads').

Note: The storage of materials and equipment (other than listed above) on hoarding decks is generally not allowed unless there are clearly justified site-specific needs (see **3.11.5**) and specific *approval* is given by the *City*.

Figure 3.48: When placing a *hoarding* over a laneway special design considerations must be given to the potential impacts on surrounding buildings and occupants including fire-related aspects. Consultation with likely affected parties must also be undertaken (see **2.14** and **2.15** for further details).

Photo: Peter Conroy / City of Sydney

3.11.2 Primary features and requirements

(a) The underside of the deck is to be painted white in accordance with Element 7 - 'Standard finishes and public information' - **3.14**.

(b) The deck and steel beam interfaces are effectively designed and finished to prevent corrosion and staining of surfaces (water leakage at plate joins and/or condensation forming at the junctions).

(c) Fully lined deck soffits (see **Figure 3.52**) are permitted subject to any inspections required for mandatory six-monthly certification being able to be undertaken (accessing and sighting elements including connections). The *City* reserves the right to require fully lined soffits on a site-specific basis.

(d) Where *hoardings* are installed on sloping *footways* and the deck is stepped with the gradient of the *roadway* or *footway*, the height of the deck at the lowest point may be reduced to 2.7m subject to the vertical openings at *hoarding* segment junctions being fully sealed to provide an impervious deck structure including being painted white (see **Figure 3.50**).

(e) The ends of highbay gantries at truck entry points must be fully sealed by steel or plywood sheeting (fascia-type finish) to fully protect the *public space*.

(f) Where decks are trafficable such as to access *site sheds* and/or *scaffolding*, balustrades must be provided on stairways and openings to prevent falls (see **3.12** stairway enclosures).

(g) All services such as wastewater drainage pipes, rainwater pipes and other similar pipes must be installed above the deck (not beneath) nor project through the fascia.

3.11.3 Deck watertightness and drainage

(a) The deck must be impervious to liquids and designed to collect and drain rainwater via a drainage system discharging to the site (behind the site fence when one is provided) or *road* gutter (a minimum 2 per cent deck gradient must be provided).

(b) Where water is discharged to the *footway* adjoining a street gutter:

(i) the downpipe/s must be attached to columns;

(ii) the discharge point must be located within 100-150mm of the ground surface;

Figure 3.49: Deck drainage pipes must be attached to columns and painted to match the column.*

Figure 3.50: *Hoardings* on sloping sites that need to be stepped with the gradient of the footway must have the vertical openings infilled using 17mm thick structural plywood. The infill panels must be painted to match the white deck soffit.*

Figure 3.51: Suspended scaffolds (swing-stages) require approval for both use and parking/placement on a hoarding deck.*

Figure 3.52: Fully lined *hoarding* soffits are permitted subject to mandatory six-monthly inspection by a structural engineer able to be undertaken.*

Offering by Elizabeth West
Photo: Peter Conroy / City of Sydney

Figure 3.52(a): A Type-B *hoarding* showing a section of open deck (located away from the *worksite*) to maintain solar access to the building opposite. Proponents must consult with affected property owners as part of the hoarding design process. The placement of sheds on decks in these circumstances is discouraged. Refer to **5.5** for further requirements.*

*Photo: Peter Conroy / City of Sydney

(iii) water must flow freely to the street gutter (or a garden bed/grass nature strip adjoining a column); and

(iv) the downpipe/s painted black and white to match the finishes of the columns (see *Figure 3.49*).

(c) Rainwater must be effectively collected and disposed of without impacting on pedestrians including along the building-line where a site fence is not installed.

(d) Access gate openings in the fence of a Type-B *hoarding* must have appropriate gutter and water discharge systems to collect water from the deck and prevent water falling onto *public spaces*.

(e) Decks must be checked periodically to ensure they remain impervious to liquids. Where a deck is accessible there is a greater risk of damage to membranes and sealants. Regular checking of deck watertightness must be undertaken and necessary repairs carried out promptly.

3.11.4 Decks spanning roads (laneways)

(a) Where a *hoarding* spans a *road* (laneway) and potentially impacts neighbouring properties the proponent must consider the following in the design and positioning of the *temporary structures* including proposed *site sheds* and *scaffolding*:

(i) potential loss of sunlight to windows;

(ii) privacy impacts (workers using decks);

(iii) security issues (unauthorised access to the deck from *public spaces*) allowing access to private property; and

(iv) the positioning of *site sheds* and potential impacts of noise from workers and additional loss of sunlight and/or overshadowing of windows and balconies (see **2.15** and **5.5**).

(b) To minimise impacts the *City* may require part of a *hoarding* deck to be set back and the fascia positioned away from windows to a distance as determined by the *City* to provide acceptable solar access and to reduce other potential impacts on affected buildings (see **Figures 3.16(b), 3.52(a)** (and **3.13.2(a)** for fascia design)).

(c) Surface treatments of the fascia (colour and/or a graphics) will be determined by the *City* as part of considering potential impacts and mitigation measures for affected properties.

Credit: The New Nature of Experience by Tom Blachford and Jessica Njoo

Photo: Peter Conroy / City of Sydney

(d) Aspects relating to potential fire-spread across laneways and building frontages via *hoardings* and access by fire-fighting personnel must be considered and addressed by proponents (see **2.14**).

3.11.5 Deck usage - storage and work platforms

(a) The primary purpose of a *hoarding* deck is to form a barrier to objects that may fall from *a worksite* and thereby prevent objects impacting in the *public space*. The use of decks for site shed accommodation and/or as a work platform including the placement of material, equipment and hoists must not be assumed as being permitted.

Any proposed deck usage must be fully justified by proponents and be specifically *approved* by the *City* - see **5.5** for shed accommodation (worker facilities e.g. ablution facilities, lunchroom, first-aid etc.) for further details.

(b) Where the *City* determines that there are sufficient grounds to allow a deck to be used as a work platform and/or for material/ equipment storage, a site operation and management plan must be lodged with the *hoarding* application. The plan must provide details of the type/s of activity to be undertaken on the deck including the proposed loads, and be assessed by the engineer responsible for the design of the *hoarding* including addressing the following matters:

(i) determine the adequacy of the *footway/ roadway* to carry the proposed loads and activities (impacts in the public space and/ or damage to City-owned infrastructure and services);

(ii) consider the type/s of material, equipment and work including the type of movement to, from and on the deck and any recommendations and required *control measures* to address identified risks;

(iii) clearly specify on the drawings the extent and location that material and equipment can be placed on the *hoarding* deck to ensure that maximum load limits are not exceeded;

(iv) determine whether operational procedures and conditions of use including any *control measures* and *SafeWork NSW* requirements, apply and which must be followed in addition to the site management plan; and

(v) certify the design of the *hoarding* against the proposed (and *approved*) usage plan.

(c) The person in control of the *worksite* (typically the *PCBU*) must manage the placement and movement of material, equipment and undertaking of work to ensure that the ongoing structural capability and stability of the *hoarding* is fully followed and maintained and that compliance with any operational conditions specified by the design engineer, and required as part of a *hoarding approval,* are complied with at all times.

(d) Where *approval* is given, all material and equipment must be screened from the *public space* (see **3.13** for requirements in relation to general fascia design and **3.13.2(a)** for fascia designs on custom-built hoardings).).

(e) Fuel storage tanks for site cranes and other equipment including temporary electricity generators and air compressors must not be placed on *hoarding* decks unless specifically approved by the City after the consideration of relevant site conditions and constraints.

3.11.6 Superimposed loads

(a) Superimposed loads including sheds and *scaffolding* are not permitted to be placed on *hoardings* unless shown on the certified drawings accompanying an application and forming part of an *approval*. Refer to **5.5.4** for maximum loading requirements in relation to *site sheds* and **2.8** in relation to structural design including the provisions set out in the *SafeWork NSW* Code of Practice: Overhead Structures that also addresses superimposed loads.

(b) Dynamic loads associated with equipment usage on decks (**Figure 3.51**) such as suspended scaffold (swing-stage), materials and personnel hoists, mast-climbing platforms must also be included in the certified *hoarding* drawings.

Giant bonsais by Garry Trinh
Photo: Peter Conroy / City of Sydney

3.12 Element 5 - Access stairways and enclosures (Type-B hoardings and scaffolding)

Objectives

1. Minimise impacts on safe pedestrian movement and amenity including for people using mobility assistance devices (wheelchairs and mobility scooters) and people who are blind or have low vision.
2. Fully screen and house access stairways and *hoarding* columns within an enclosure that has smooth surface finishes.
3. Secure a stairway by enclosure to prevent unauthorised access to the deck and/or scaffold.
4. Ensure an enclosing structure (framing members and rails) are structurally adequate.

BADABABABABBAT-DA by Tegan Wotton
Photo: Peter Conroy / City of Sydney

5. Access stairways and enclosures are well constructed, sturdy, plumb and true with finished surfaces suitable for the display of graphics (where required by **Table 1** in **Part 06**).
6. Enclosures are set back an appropriate distance from kerbline to allow for the safe passage of vehicles (to avoid impacts) and provide safe and convenient access to and from parked vehicles at the kerb.

Figure 3.53: Access stairs must be fully enclosed and appropriately finished to allow the display of graphics in a single panel at the kerbside and on other surfaces with the exception of the access door and panel. as required by **Part 06**.

Photo: Peter Conroy / City of Sydney

Deemed-to-comply criteria

The following requirements apply:

3.12.1 General

Access to and from a *hoarding* deck and *scaffolding* should always be from within the *worksite* and not from the *public space*. This is necessary to:

- minimise encroachments on the clear width of *footways*;
- to maintain safe, convenient and accessible pedestrian movement past *worksites*; and
- keep the kerbside of the hoarding open to the roadway to avoid pedestrian and vehicular obstructions including maintaining natural light and illumination to the *footway*.

Where there are site constraints that prevent access from within the site, alternative means and location of access from the *public space* may be considered as part of the overall design of a *hoarding* and *scaffolding*. This must be justified as part of the application process.

Proposals seeking access to the *worksite* from a *public space* will need to take into account the configuration, constraints and usage of *footways* including:

(a) the available *footway* width;

(b) the locality in relation to pedestrian needs and densities (safe and convenient passage, including disability access);

(c) restrictions due to *footway* infrastructure (lighting poles, parking control signage stems, furniture/litter bins, *street trees* and other infrastructure);

(d) the use of kerbside lane (through-traffic movement or parking) adjoining the site;

(e) the design of the proposed *hoarding* (column positioning and spacings and counterweighting etc.); and

(f) other factors specific to the site conditions and *hoarding* design including any work health and safety requirements.

Where access from a *footway* is the only option available, both the proponent (typically the builder or PCBU) and the designer of the *hoarding* or *scaffold* (the *supplier*), must consider and address the matters in **3.12.2**.

3.12.2 Design factors to minimise impacts

As a minimum, the following matters must be addressed in the design against the *public space* conditions and proposed work:

(a) whether stairways should be located at ground level behind a site fence (where provided);

(b) whether stairways and their enclosures have a minimal footprint;

Figure 3.54: The placement of an access stairway on a *roadway* will require the *approval* of the *City*'s Traffic Operations Unit.

Photo: Peter Conroy / City of Sydney

(c) is there sufficient available space (width) on the *footway* to maintain convenient, *accessible* and safe passage of pedestrians see **3.8** and **3.10**;

(d) can the stairway be removed when construction or work conditions reach a point that would allow direct access from the work site to the *hoarding* deck or *scaffold* (to enable the removal of *footway* obstructions to improve pedestrian movement).

3.12.3 Stretcher stairs (for emergency services personnel)

In circumstances where a larger stairway footprint is required (stretcher stair) to provide access for emergency services personnel and to remove injured workers (to satisfy work, health and safety obligations), special design considerations will be necessary including considering alternative means of access and egress.

The locality constraints (of the *footway*/*roadway*) may not permit a stretcher stair because of unacceptable impacts on safe and convenient pedestrian movement. This may include very high pedestrian densities and need for safe wheelchair/mobility scooter access past the site. These matters and other factors must be considered early in the *hoarding* design and site establishment planning phases.

Where a stretcher stair cannot be accommodated satisfactorily on a *footway*, alternative measures for removing an injured and immobilised worker to street level will need to be addressed. Potential alternative solutions that could be considered (subject to satisfying relevant work health and safety provisions) include:

(a) using a site crane (where available) to hoist an injured worker within a first-aid box to street level;

(b) where *scaffolding* is supported on the deck of a *hoarding*, incorporate a stretcher stair as part of the *scaffold* design to facilitate the movement of an injured worker to deck level for transfer to street level via an acceptable vertical movement device such as an elevated work platform available on site. This may require the safe and easy removal of a *hoarding* fascia panel to access the EWP at deck level;

Note: This method will require input from *hoarding* designer/*supplier*.

(c) for sites with more than one frontage, establish a stairway on a less congested *footway* or which has a wider width to transfer the injured worker along the deck to access the stairway for transfer to street level; and

(d) establishing a stretcher stair within the kerb-side lane (where feasible and available to do so) – see **Figure 3.54**. This will require consultation with the *City's* Traffic Operations Unit including their *approval*. This solution could also be considered in conjunction with the establishment of an *approved works zone*.

3.12.4 Stairway design requirements (general)

Where the *City* determines that a proposed stairway enclosure has a minor impact and may be permitted, the following design requirements apply:

(a) the footprint must be kept to a minimum and adjoin the building/property alignment or form part of the site fence (where provided) and extend fully to the underside of the *hoarding* deck;

(b) where a stairway enclosure adjoins and forms part of a projection to site fence, the end-panels of the stair enclosure section must be splayed at an angle of 45 degrees to the primary fence to improve pedestrian movement past the enclosure (particularly important for people who are blind or have low vision);

(c) only one access stairway is permitted, unless additional stairways are required such as for emergency egress (travel distance), in which case not more than one stairway per street frontage is permitted (unless otherwise specifically justified and *approved*);

(d) the site fence provisions (refer to **3.10**) in relation to plywood sheeting, access doors and surface finishes must be met;

(e) where compliance with **(a)** is not feasible and or practicable due to factors such as:

  (i) the proposed use of the deck (shed and/or scaffold placement, parking of swing-stages/mast-climbing platforms or other permitted equipment); and/or;

  (ii) adverse impacts on buildings that remain operational including retail premises/shop-fronts, requiring the stairway enclosure to be placed at the kerbside, the specific design requirements in **3.12.5** apply; and

(f) a scaffold stairway at road level that projects through the *hoarding* deck and connects to the scaffolding above must comply with **4.5.6(c)**.

3.12.5 Specific design requirements

The diagram at **Figure 3.55(a)** should be used in meeting the following design requirements:

(a) the footprint of the stairway/enclosure must be kept to a minimum and not exceed 1.2m in width along a *footway*. Subject to *footway* constraints and pedestrian densities it may be necessary to reduce the footprint (length) of an enclosure by lining the underside of the stairway from a height of 2.2m above the ground surface to reduce the length of the enclosure required.

Note:

AS 1657:2018 'Fixed platforms, walkways, stairways and ladders – Design, construction and installation' has design provisions for stairways that may be helpful in designing a stairway to minimise the enclosure footprint on the footway. *SafeWork NSW* also has guidance material for stairway design.

(b) all *hoarding* columns, soleplates, enclosure framing elements, stairway and handrails must be placed wholly within the plywood-sheet enclosure extending to the underside of the deck to:

  (i) form a safety barrier to the *public space* to contain errant objects within the stairway and *worksite*;

  (ii) minimise impacts on pedestrian movement (maintaining smooth uninterrupted external surfaces);

  (iii) enhance visual appearance through the display of graphics (see **(i)** below);

  (iv) minimise impacts on vehicle driver viewlines particularly where enclosures are located near property driveways/carpark entrances (see **(d)** below).

(c) unless specifically *approved*, the stairway enclosure must not be used for storage purposes (the *PCBU* must consider risk of a fire occurrence within an enclosure that may impact on safe egress from the *hoarding* deck and/or *scaffold*);

(d) where driver viewlines are impacted a stairway enclosure may need to be positioned away from driveway/s and/or other measures implemented such as the installation of convex mirror/s to assist drivers exiting onto a *roadway/ cycleway*. Where mirrors are proposed as a safety measure specific consideration and endorsement by the City's Traffic Operations Unit will be required;

(e) if columns and/or counterweights are within 600mm of a stairway/landing the stairway enclosure must extend to include these elements;

(f) where a stairway is installed wholly beneath a *hoarding* deck, the enclosing wall on the kerbside should (where possible) align with the surface plane of the fascia and kerbside *hoarding* columns. Where this is not possible the enclosure fence at the kerb must be in a single plane with the fascia. The tops of the stairway screening walls are to be horizontally configured - not stepped or sloping with the stairway flight gradient above the deck (see **Figure 3.53**);

Figure 3.55: Where a stairway enclosure is located beneath a hoarding deck the stairway enclosure must extend fully to the underside of the deck. Any hoarding columns or counterweights within 600mm of the stairway must be included in the enclosure.

Photo: Peter Conroy / City of Sydney

(g) must be setback from the kerb to align with the column setbacks (see **3.8.4**). Where columns are positioned less than 600mm from the kerb and vehicle parking is permitted adjacent to a proposed stairway enclosure that will prevent occupants from safely alighting and entering vehicles, the City's Traffic Operations Unit may consider allowing changes to parking control signage to prevent vehicle parking adjoining the stairway enclosure;

(h) where a stairway enclosure adjoins a bus transitway and/or bus stopping zone the enclosure setback from the kerb will require special consideration (refer to **3.8.4** for further details including consultation with bus operators); and

(i) all enclosure surfaces with the exception of the access door and minor surface area above the door opening must have graphics displayed where the hoarding is required by **Table 1** in **Part 06** to display graphics. Any mandatory safety/ contractor signage may be displayed on the access door;

(j) access doors can be hinged (inward opening only) or sliding (internally). Refer to **Note 1** below. In both cases, suitably dimensioned landings at the base of the stairway must be provided to accommodate an inward door-swing and afford safe use of the stairway.

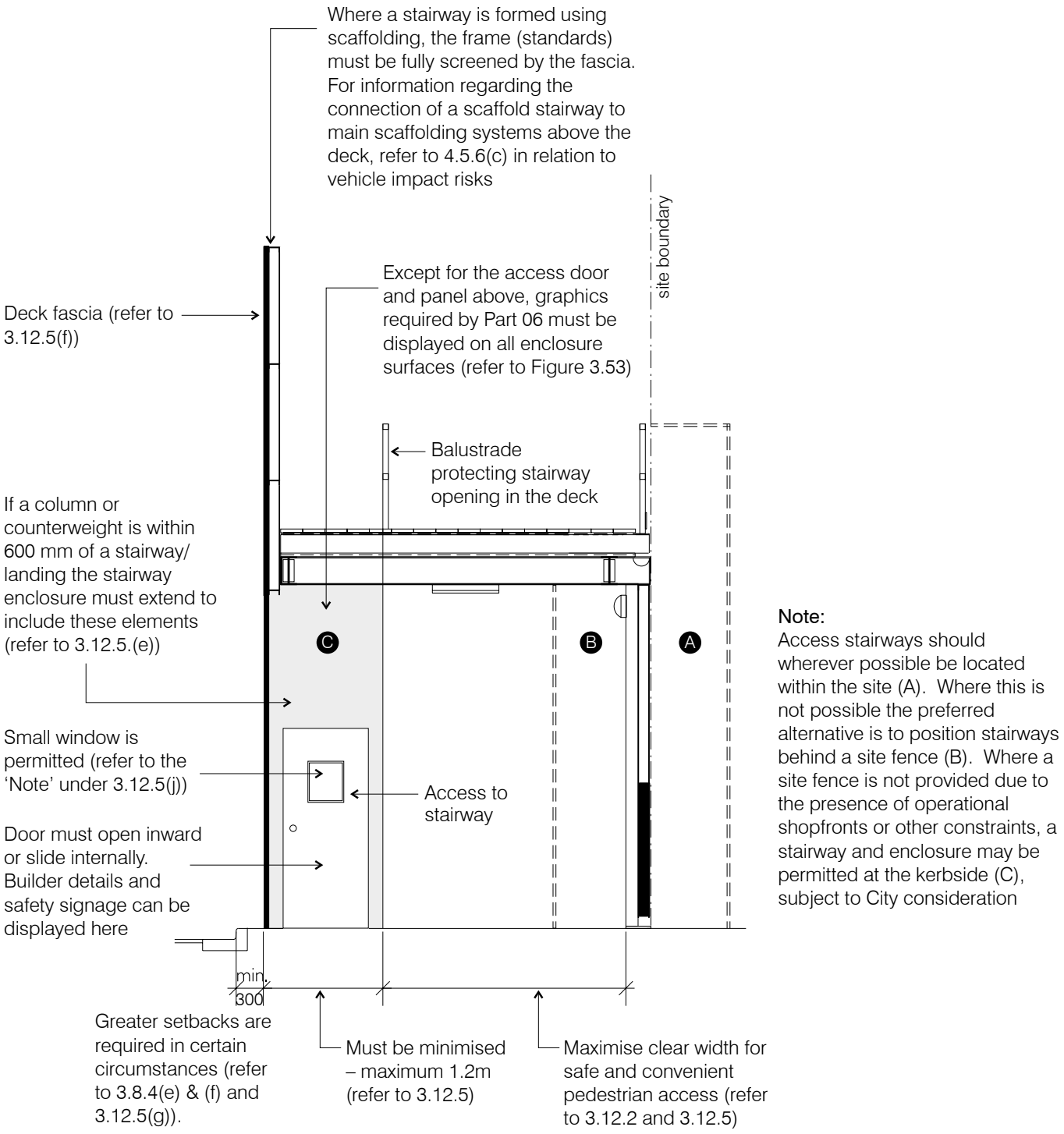
Note:

1. It is an offence under Clause 18 of the Roads Regulation 2018 to allow a door or gate to open outwards into a *road* including a *footway*.

2. A small viewing window (for worker safety) in an access door is allowed subject to:

- the size of the window opening not exceeding 500mm square
- the window material being 12mm thick (min.) polycarbonate sheet or laminated glass
- the window surrounds/frame being neatly trimmed and finished.

Figure 3.55a: Section detail showing stairway and enclosure options/design features for accessing the deck of Type-B *hoardings* (refer to **3.12.4** and **3.12.5**)



Eyes on the horizon by Reg Mombassa (a.k.a. Chris O'Doherty)
Photo: Peter Conroy / City of Sydney

3.13 Element 6 - Fascia (Type-B hoardings)

Objectives

1. Ensure fascia design is structurally adequate and takes into consideration the potential impacts of prevailing wind actions in the locality and the ability of the fascia elements to withstand weathering for the proposed duration of installation.
2. Minimise the size (height, bulk and scale) of a fascia by restricting deck usage to reduce visual impacts in the streetscape and nearby buildings.
3. Effectively and fully screen *approved site sheds* and other *approved* equipment from a *public space* to minimise adverse visual impacts.
4. Capture and contain objects on the deck that may fall from a *worksite* and minimise the risk of falling objects ricocheting from a *hoarding* deck into a *public space*.
5. Provide a barrier to prevent workers falling from a deck.
6. Effectively screen structural elements (see also **3.8** and **3.9**).
7. Provide appropriately detailed, configured, smooth and even surfaces to allow for the effective display of graphics.
8. Minimise impacts of fascia design, positioning and height on surrounding occupied buildings.
9. Where practicable, re-use or recycle fascia materials.

Deemed-to-comply criteria

The following requirements apply:

3.13.1 General

Where sheds, materials, equipment and *hoisting* plant are *approved* for placement on decks, a fascia must fully screen the items to at least 100mm above the top of sheds (see also **5.5**), equipment and the base section and car of hoists when viewed from any part of a *public space*. Refer to the City's 'Code of Practice: Hoisting and Construction Activities On and Above Roads' for further details.

Figure 3.56: A fascia must cover all structural members of custom-built hoardings and any sheds, *approved* equipment and/or material storage (see **3.13.2(a)**). Note that the fascia of modular gantry systems does not need to screen perimeter beams and knee bracings at column connections.

Polyubiquitous by Cynthia Schwertsik
Photo: Peter Conroy / City of Sydney

3.13.2 Design requirements

(a) The fascia of custom-built/site-assembled *hoardings* must extend below the *hoarding* deck to fully cover the deck structure, beams knee-bracing and bracings (see **(b)** below and **3.8.9**).

Where installed in a laneway and the deck structure covers only part of the *road*, exposed sections (beams that are open to the sky (see **Figure 3.16(b)**) do not require fascia screening subject to all beams (including tie members between columns positioned in the same plane as the beams) being painted black (see **Figure 3.8** as an example).

(b) Where supplementary structural beams, longitudinal bracings and truss members are used on gantry *hoardings*, the fascia must fully cover these members and extend along the full length of the hoarding including end/s, in a consistent straight horizontal line (except on sloping sites requiring the stepping of *hoardings*).

Figure 3.57: Example of a non-compliant design. Fascias must extend to cover the structural members in a single plane to allow graphics to extend over the entire surface (circled yellow). Note also that all structural members to the soffit of the deck are to be painted white.

Photo: Peter Conroy / City of Sydney

(c) Fascia panels must be constructed from durable impervious material such as structural plywood or sheet steel that is capable of accommodating graphics (see **Part 06**). Other material may be permitted where it can be clearly demonstrated that it meets the objectives of **3.13**, can effectively accommodate graphics and comply with any applicable provisions of work safety codes of practice.

The design of a fascia and materials used must be risk assessed based on the site works and any usage of a hoarding deck.

(d) Fascia panels must be neatly butt-joined with minimal openings/gaps. For tall fascias (exceeding 1.0m) the fascia must have no or minimal openings/gaps to allow for quality presentation/display of graphics. Refer to **3.16.2** (site fences) for details of fixings and required surface quality and finishes.

(e) The fascia design must be consistent in height to provide a quality surface finish particularly for the effective display of graphics.

(f) On sloping sites a fascia may be stepped (see also **3.11.2(d)**). Any stepping must be minimised to maximise the surface area and horizontal plane of each panel to ensure a high quality presentation of graphics. Generally, fascia panels must be levelled where the difference in height between two adjoining panels is less than 200mm.

(g) Fascias and associated bracings to the deck must be designed to withstand all likely imposed loads including wind actions in the locality. This is particularly critical where *hoardings* are located in expansive open areas such as:

(i) near parks, reserves and squares;

(ii) harbourside locations;

(iii) vacant sites;

(iv) sites on which buildings are proposed to be demolished (loss of wind-shielding); and

(v) where concentrated wind forces (including wind-funnelling caused by tall buildings in the locality) are likely e.g.: in the *city-centre* and other areas with surrounding multi-level buildings.

(h) Fascias must be fully and securely braced using durable and structurally adequate elements (based on site risk assessment) including appropriate and durable fasteners (screws/bolts are mandatory) Nailing is not permitted; and

(i) Fascias must be designed and installed to fully accommodate *street tree* canopies. Where this is not possible and minor branch trimming is required, refer to **3.17** for further details.

(j) The re-use of suitable quality material in the construction of a fascia is encouraged. The further re-use and/or recycling of the material is also encouraged when the hoarding is removed.

Photo: Peter Conroy / City of Sydney

3.14 Element 7 - Standard finishes and public information (Type-A and Type-B hoardings)

Objectives

1. Provide a surface suitable for the display of high quality graphics to enhance the *public space*, add visual interest in the locality and mitigate adverse visual impacts of construction sites in the streetscape.
2. Minimise adverse visual impacts of *temporary structures*.
3. Establish consistent colour standards and finishes that enhance the *public space*.
4. Provide for variations to the colour standards in specific circumstances.
5. Provide for the legible, well designed and appropriately placed public information about the development or work.
6. Provide community information (where appropriate in the locality) and specific public art where required by the *City* and this Code.

Deemed-to-comply criteria

The following requirements apply:

3.14.1 General

(a) The standard colours that must be used are:

(i) steel frame structure; fascias; screening over longitudinal bracing; counterweights; and site fence: black, with white bandings and markings on columns and corners of counterweights; and

(ii) soffit of the *hoarding* deck; beams; and vertical infill panels (see **Figure 3.52**) – white.

(b) Non-standard colours may be permitted subject to site-specific consideration and *approval*. Corporate colours or colour tones similar to corporate colours, are not permitted. Refer to the City's 'Creative Graphics Design Guide for Temporary Structures (hoardings and scaffolding)' for further information and requirements.

3.14.2 Graphics

(a) Graphics must be displayed in accordance with **Table 1** in **Part 06** and comply with the City's 'Creative Graphics Design Guide for Temporary Structures (hoardings and scaffolding)';

(b) Displays on *hoardings*/*scaffolding*/compounds must meet the following:

(i) exhibit a vibrant artistic content or historic images (associated with heritage-listed buildings);

(ii) display permissible information of community benefit or interest in accordance with **Table 2** in **Part 06**;

(iii) display other material or public information as required by the *City;* and

(iv) be installed on all surfaces including end-panels of the site fence and fascia, large access doors and gates (greater than 2.0m in width). Refer to the *City's* 'Creative Graphic Design Guide for Construction-related Temporary Structures (hoardings and scaffolding)' for further details.

Note: The *City* as owner of the land on which a *temporary structure* is installed, may require an applicant to install specific public art and/or community information on site fences and/or the fascias of *hoardings* including on *scaffolding* (see **Part 06**). The *permit-holder* is also responsible for maintaining the graphic for the full duration of required placement or for the full period of the *temporary structure approval*.

3.14.3 Signage

(a) A prominent and water-resistant sign containing the information listed below must be displayed at the boundary of the site in accordance with the relevant Regulations and conditions of *approval*:

(i) that unauthorised entry is prohibited;

(ii) the name of the principal person in control of the *worksite* and who is responsible for the site and the *hoarding*; and

(iii) a 24 hour emergency contact name and telephone number of the person in control of the site.

(b) The property number and the building name (where applicable), must be clearly displayed on the fence or fascia of a Type-B *hoarding* or on the site fence of a Type-A *hoarding* where the property number on the building is obscured.

Photo: Peter Conroy / City of Sydney

Obstacle Course by Elliot Bryce Folkes
Photo: Peter Conroy / City of Sydney

Photo: Peter Conroy / City of Sydney

(c) A copy of the front page of the *hoarding approval* determination (the permit) placed within a durable waterproof clear covering or plastic sleeve must be securely affixed in a prominent position such as near the site access doorway in the *hoarding* fence.

(d) The excessive display of a developer's or principal contractor's name on *temporary structures* is not permitted. Where signage is proposed it must comply with **Table 2** in **Part 06**.

(e) Real estate sale and leasing signage including agent/developer contact details must not be displayed on *temporary structures* unless *development consent* is first obtained.

(f) Information about the development or site can form part of the community information panel as set out in **Table 2** (**Part 06**).

(g) Other than the name and 24/7 contact details of the hoarding *supplier*, the names of sub-contractors, material/equipment *supplier*s or other similar signage must not be displayed unless specifically *approved* by the *City*. Refer to **Table 2** in **Part 06** for permissible corporate signage/branding and development information.

(h) Where specific approval is given to allow the illumination of graphics and public information (additional to standard lighting systems applying to Type-B *hoardings*), the lighting system must not cause adverse impacts such as glare in the locality particularly to residential buildings. Where necessary, luminaires are to be shielded to the City's requirements/ directions. Flashing lights or signs are not permitted.

(i) All surfaces, graphics and information panels must be fully maintained to an acceptable standard as determined by the *City*. See **Part 06** for installation requirements.

(j) See **2.16** for provisions regarding temporary *business identification signage* on *hoardings* and **2.17** relating to wayfinding signage.

3.14.4 Advertising

Commercial advertising on *temporary structures* is generally not supported. The focus for *hoarding* surface finishes is to support Australian artists and promote the display of public art and city history in *public spaces* on which *hoardings* are installed and used. Where the display of advertising content is sought:

(a) *development consent* must be obtained for any proposed advertising on *hoarding* fascias, site fences or *scaffolding* through the lodgement of a development application; and

(b) where advertising is *approved* through a *development consent* and will produce a financial return to the owner/occupier of the site, the *City* as landowner over which the *temporary structure* is erected or proposed to be erected, will require the owner or occupier of the site to negotiate with the *City* an appropriate percentage distribution of the advertising income.

People. Places. Culture. by Noni and David Cragg
Photo: Peter Conroy / City of Sydney

3.15 Element 8 - Access gates and pedestrian/cyclist/ traffic control (Type-A and Type-B hoardings)

Objectives

1. Fully secure the site from the *public space* and protect the public from activities on the *site*.
2. Ensure access gates and doors are structurally sound and securely fixed using appropriate and durable hinges, door rollers, guides and fasteners.
3. Minimise the number of access points/ openings to a site, particularly vehicle access openings, to minimise impacts such as impeding the free flow of pedestrian passage through stoppages at pedestrian and cyclist control gates.
4. Maintain safety for pedestrians and cyclists at truck access points when vehicles are entering and exiting a site.
5. Minimise impacts on *cycleways* adjoining *worksites*.
6. Minimise pedestrian obstructions and mitigate risks/impacts on pedestrian and cyclist movement.
7. Ensure that the sheeting to gates and doors, framing members, battens and fixings are structurally adequate and meet the objectives for site fencing.
8. Provide smooth surfaces on access gates and doors for the display of graphics.
9. Truck access openings in *hoarding* site fencing during excavation or in-ground works are adequately protected to resist impact loads from the *public space* side of the fence.

Figure 3.58: Large access doors/gates in site fences must be adequately framed, finished and supported. Doors, hinges and roller systems including connections must be specified, checked and certified by the design engineer.

Photo: Peter Conroy / City of Sydney

Deemed-to-comply criteria

The following requirements apply:

3.15.1 General

(a) The number of access points (gates and doors) must be minimised to reduce impacts on the public *footway* (site personnel and vehicles entering and exiting a site) and to provide a clean and uninterrupted surfaces on the site fence for the display of graphics.

(b) Effective rainwater gutters and water discharge systems must be installed above truck access openings in the site fence of Type-B *hoardings* to collect water from the hoarding deck (preventing 'water-falling' onto the *public space* surface below) - see also **3.11.3** for further details.

3.15.2 Design requirements

(a) Vehicle and personnel access gates in a site fence must either slide internally or open inward.

Note: It is an offence to allow a gate or door to open over a *road* (Clause 18, Roads Regulation 2018).

(b) Roller-shutter doors on access openings are generally not permitted. Where specific *approval* is given a door must

(i) be painted black;

(ii) meet acceptable durability standards and maintenance requirements (effective ongoing cleaning and where necessary, re-painting); and

(iii) satisfy any work safety requirements including any applicable codes of practice published by *SafeWork NSW*.

(c) Access gates must be lockable and remain closed when access is not required.

3.15.3 Vehicle access gates

(a) Access gates must:

(i) be of solid durable plywood (structural grade complying with **3.10.2(e)**) or sheet steel (subject to satisfying any work health and safety codes of practice). Chain-link or welded mesh gates are not permitted;

(ii) be securely fixed to a structurally sound frame and door roller beam (sliding gates); and

(iii) for a Type-B *hoarding*, extend to the underside of the deck and be close-fitting to the frame and the ground surface to prevent unauthorised access, contain debris within the site, and afford protection to the *public space*.

Time Forms by Lisa Sammut
Photo: Peter Conroy / City of Sydney

(b) To ensure safe man-handling of large access gates particularly at high-bay truck access openings, the mass of doors/gates can be reduced by using sliding or two-leaf side-hinged doors. Barn-type doors are also allowed subject to the doors being close-fitting. To reduce door mass, steel sheeting in lieu of 17mm structural grade plywood sheeting is permitted subject to satisfying any risk assessment and work health and safety requirements including *SafeWork NSW* codes of practice. Refer also to **3.10.2(j)**.

(c) Gates/doors at truck access points must comply with the following:

(i) generally a minimum height clearance of 4.5m to the underside of Type-B *hoardings* must be provided. For sites where small truck access only is proposed, a reduced height is permitted;

(ii) minimum height clearance signage must be displayed on the *hoarding* beam or fascia above the driveway; and

(iii) unless otherwise specifically approved, access gate width must, match the width of the approved temporary construction *vehicular crossing* (generally 6.0m wide) - refer to the City's 'Code of Practice: Hoisting and Construction Activities On and Above Roads' and construction standards.

(d) Vehicles entering and exiting a site must be under traffic control complying with the 'Guide to Traffic Engineering Practice' and to the current AS 1742 - Part 3 'Manual of uniform traffic control devices – Traffic control devices for works on roads'. Further details are available in the City's 'Code of Practice: Hoisting and Construction Activities On and Above Roads'.

(e) Where access openings are in proximity to deep excavations and/or in-ground works, special consideration including risk assessment in accordance with work health and safety obligations must be made. Where potential hazards are identified the design and location of the opening will need to be modified to prevent vehicles falling into the excavation. Refer to **2.13** for details.

3.15.4 Pedestrian and cyclist control gates

(a) Pedestrian and *cycleway* control gates (concertina fences not higher than 1.0m) at truck access points (see **Figure 3.59**) must be used to ensure the safe movement of people walking and cycling past a site when vehicles are entering and exiting. Control gates must be placed on each side of an access driveway and are to be manned by appropriately accredited persons.

Figure 3.59: Concertina gates to control pedestrian and cyclist movement at truck access points are mandatory in the *city-centre* and in other busy pedestrian areas outside the city-centre. Gates must be provided on each side of *vehicular crossing*s including *cycleways*. Specific *approval* of the *City* must be obtained before installation/ usage.

Photo: Peter Conroy / City of Sydney

(b) Concertina gates are to be removed from the *public space* at the end of each days' work or be secured in place (locked back) to prevent unauthorised use outside of standard work times. Gates must not encroach on the clear *footway* and *cycleway* width when not in use.

(c) Concertina control gates on *cycleway*s must be separate to the pedestrian control devices and be controlled by accredited persons (see **Figure 3.59**).

(d) A pedestrian and *cycleway* management plan must be included with the *hoarding* application where a *works zone approval* is not in place or proposed for the site.

(e) Where truck access is required and an existing *vehicular crossing* is proposed to be used, an assessment of the structural adequacy and dimensions of the *crossing* (to fully accommodate all truck wheels) must be provided to the *City* and *approval* given before commencing use (refer to the 'notes').

Notes:

1. An application must be lodged for the construction of temporary *vehicular crossings* or any required or proposed modifications to an existing crossing - refer to the City's 'Code of Practice: Hoisting and Construction Activities On and Above Roads' for further information. The *City* must also endorse the use of an existing *vehicular crossings* for excavation/construction-related purposes.
2. Where a *works zone approval* is to be sought, a pedestrian and *cycleway* management plan must be included as part of the construction traffic management plan (CTMP) - see also the *City's* 'Code of Practice: Hoisting and Construction Activities On and Above Roads' for further details.

Photo: Peter Conroy / City of Sydney

3.16 Element 9 - Lighting (Type-B hoardings)

Objectives

1. Ensure the effective illumination of *footways* and *roadways* with a minimum shadowed areas to maintain the safety and amenity of pedestrians.
2. Provide adequate and effective illumination of *cycleways* with a minimum shadowed area to ensure the safe passage of cyclists and also to afford effective visual sighting of pedestrians crossing *cycleways* at night.
3. Provide effective illumination of graphics on the site fence of Type-B *hoardings*.
4. Minimise light-spill and glare impacts on surrounding properties.
5. Ensure that electrical cabling is installed in accordance with applicable standards; the *SafeWork NSW* Code of Practice: Overhead Protective Structures; and is appropriately protected from impact.

Deemed-to-comply criteria

The following requirements apply:

3.16.1 General

(a) Lighting systems and illumination levels beneath a *hoarding* must comply with the following:

(i) luminaires (light fittings) are mounted on the site fence or the underside of the hoarding deck (or both), subject to **(d)** and **(g)**;

(ii) achieve an illuminance not less than:

- for *footways* and *roadways*, 30 lux average with a minimum at any point of 10 lux; and
- for *cycleways*, 40 lux average with a minimum at any point of 10 lux with external lighting over each portal to adequately illuminate the *hoarding* portal elements and caution signage (**Figures 3.61**), in accordance with AS/NZS 1158.3.1: 2020 'Lighting for *roads* and public spaces' and the *City's* Sydney Light Code.

Figure 3.60: In areas of disrupted *footway* grades such as at truck access crossings and where temporary pedestrian ramps are installed (see **Figure 3.32**), greater illumination intensity must be provided to improve pedestrian safety.

Photo: Peter Conroy / City of Sydney

Figure 3.61: Lighting systems over a *cycleway* must meet a greater illumination standard than that applying to *footways*.

Photo: Peter Conroy / City of Sydney

(b) Where luminaires (light fittings) and wiring conduits are installed on the site fence, they must be mounted high on the fence to ensure that the minimum coverage controls for graphics is achieved (see **Part 06**).

(c) Where there are site-specific hazards such as:

(i) *approved* pedestrian ramps over concrete pumping static lines;

(ii) disrupted (temporary) *footway* paving or surfaces;

(iii) an approved temporary construction truck access *crossing*;

(iv) *hoarding* columns located more than 300mm from the kerb or placed within the main pedestrian thoroughfare;

(v) long lengths of enclosed *hoardings* (where *approved*) including at access stairway enclosures on *footways*; or

(vi) *hoardings* that span a wide *footway* (greater than 3.6m),

luminaires may need to be mounted on the underside of the *hoarding* deck along the centre-line to maximise illumination of the *footway* or alternatively, greater lighting intensity and/or additional luminaires installed on the site fence to adequately illuminate the full width of the *footway* surface to achieve minimum illumination levels in **(a)**.

(d) Where a Type-B hoarding is installed above a street awning and there is no lighting system or insufficient lighting below the awning, luminaires must be installed on the hoarding site fence, columns or on the underside of the awning to adequately illuminate the *footway* and supporting columns/counterweights.

(e) Luminaires must be LED.

(f) Luminaires illuminating a *cycleway* must be mounted on the *hoarding* soffit above the centre-line of the *cycleway*.

Figure 3.62: All wiring for lighting systems must be placed within conduits complying with the applicable wiring standards. Conduits on site fences must be painted to match the background colour surface (black). Where installed on the underside of the deck, conduits must be white or grey.

Photo: Peter Conroy / City of Sydney

(g) Cabling of lighting systems (including proposed additional street lighting systems (see **3.16.5**), must be housed within conduits complying with applicable Australian Standards and the *SafeWork NSW* Code of Practice: Overhead Protective Structures.

(h) Wiring/conduits must be securely and neatly fixed to the *hoarding* structure.

(i) Conduits must be painted to match the colour of the site fence (typically black) or of a light colour (white or grey) when installed on the underside of the deck (white) - see **3.14**.

3.16.2 Operation and maintenance

(a) Lighting systems must be checked at least weekly to ensure all luminaires remain operational.

(b) Lighting systems must operate as follows:

(i) where a *hoarding* spans over a *cycleway* and *footway* or a laneway, the lighting systems must operate at all times;

(ii) for all *hoarding* installations other than in **(i)**, lighting systems must be controlled by:

- daylight sensors located under a hoarding to ensure the system operates automatically when there are low levels of natural light; or
- timers programmed to commence operation at least one (1) hour before sunset and turn-off not less than one (1) hour after sunrise (and the timer adjusted at least fortnightly);

(iii) in areas with low levels of natural light such as in locations surrounded by tall buildings and/or dense *street tree* canopies the lighting system may need to operate at all times.

3.16.3 Light-spill

(a) Lighting systems must not result in excessive light-spill where *hoardings* adjoin or are located opposite residential-type buildings. Where nuisances arise the *City* may require modification of the system.

(b) There must be no upward light-spill into open space.

(c) Lighting glare must be controlled in accordance with AS/NZS 4282:2023.

3.16.4 Lighting during hoarding installation

Lighting systems (permanent or temporary) must be installed and made operational at the end of each hoarding installation work shift/installation stage to illuminate the area beneath the *hoarding* to ensure the safe passage of pedestrians and cyclists throughout the hoarding installation phases.

3.16.5 Impacts on existing street lighting

Where a *temporary structure* impacts on street lighting poles and systems the *City* may require (or the builder may request) adjustments and/or mounting of temporary lighting systems including support frames on a *temporary structure*. Where permitted, the following will apply:

(a) at the full cost of the proponent/applicant, modify the pole and/or luminaires to ensure there is no loss of *road* illumination in the locality;

(b) where replacement luminaires are proposed to be mounted on a *temporary structure*, details (including drawings) must be included with an application together with certification from the design engineer for the *temporary structure*;

(c) in cases where a *temporary structure* is *approved* and it is later found that street lighting illumination levels are adversely impacted requiring the mounting of temporary luminaires (with or without any supporting structures on the *temporary structure*) an application to seek amendment to the permit must be lodged for assessment (and *approval)*; and

(d) lighting and illumination levels are subject to compliance with existing light levels and light-spill provisions set out in **3.16.3**.

Note: It is an offence under Clause 13 of the Roads Regulation 2018 to obscure a street light. Lighting systems must therefore provide adequate illumination of the *public space* at night.

Photo: Adam Hollingsworth / City of Sydney

3.17 Element 10 - Street tree and street garden protection and maintenance (Type-A and Type-B hoardings)

Objectives

1. Provide effective protection of *street trees* at *workplaces*.
2. Minimise adverse impacts on trees including the need for pruning by accommodating tree canopies as part of a *temporary structure*'s design;
3. Monitor and maintain the health and general condition of *street trees* and street gardens throughout a project; and
4. Monitor tree-protection systems and repair/ rectify where required.

Deemed-to-comply criteria

The following requirements apply:

3.17.1 General

(a) Where *street trees* adjoin a development or *worksite* the following must be addressed and satisfied:

(i) their location, height, canopy volume/ diameter, health and condition must be ascertained when preparing a temporary structures application;

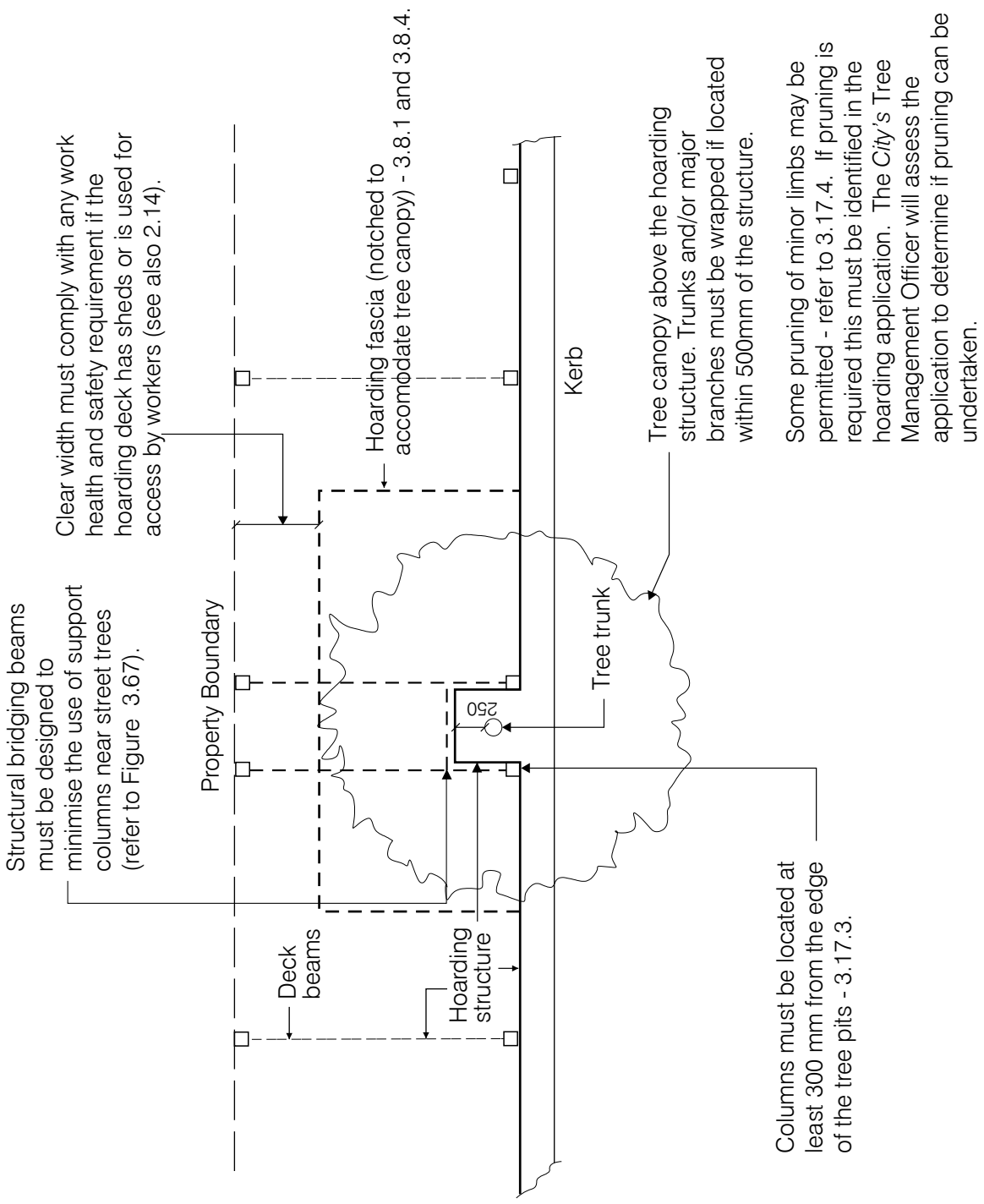
(ii) tree trunks, branches and canopies must be accommodated as part of the design process;

(iii) the proponent and/or the *supplier* of the *temporary structure* must obtain advice from a suitably qualified arborist in relation to necessary clearances required between the tree/s and the *temporary structure* in order to minimise the need for pruning and to protect the health of the tree/s, particularly when lengthy construction timeframes are anticipated (see also **(b)** below); and

(iv) where an assessment finds that the design cannot fully and satisfactorily protect the tree unless minor pruning is required this must be clearly identified in the application and accompanying reports.

(b) Additional to **(a)**, where *street trees* and/or street garden beds are likely to be affected applicants must detail in the *temporary structures* design and application all mitigation measures to be implemented. This may require the submission of a report from a qualified arborist to enable the *City's* Street Tree Officers to thoroughly assess and determine potential impacts.

Figure 3.63: Plan view. Where *street trees* are affected by *hoardings* minimum design elements and treatments must be incorporated and implemented. Type-B *hoardings* must be designed and installed to accommodate *street trees* including notching decks and fascias around trunks and canopies. This may require the use of bridging beams (see **Figure 3.67**). Multiple support columns around trees are not permitted.



Specific additional protection measures may also be required through the *development consent* and/or *temporary structures approval*.

(c) *Temporary structures* must be designed and installed to prevent impact on trees. Plans must clearly and accurately show the position of trees in relation to a proposed *temporary structure* and demonstrate how affected trees will be protected. Required tree protection must be installed before a *temporary structure* is installed (see **Figure 3.64**).

Figure 3.64: Tree trunks must be fully protected prior to the erection of the *temporary structure* and unless specifically directed by the *City*, remain in place for the full duration of the development or work. Timber battens protecting trunks must be securely fixed using flexible steel or durable fabric banding and the band-ends finished neatly to avoid protruding sharp edges. The *City's* preference is for fabric strapping to be used (securely fixed and maintained tautly).

Photo: Peter Conroy / City of Sydney

Figure 3.65: *Hoardings* must be designed to minimise impacts on tree canopies. Penetrations in fascia elements is permitted to accommodate limbs and branches.

Dancing Fig Trees by Richard Briggs
Photo: Peter Conroy / City of Sydney

Figure 3.66: Where *street tree* surface roots are exposed and the use of the tree pit is needed to increase the width of the pedestrian passageway past a *hoarding*, temporary minor ramping using non-slip plywood sheeting to span over roots may be permitted.

Photo: Peter Conroy / City of Sydney

(d) For trees with large trunks and canopies it may be necessary to notch the *hoarding* structure and/or fascia to accommodate a tree canopy or to minimise the amount of branch pruning that may be required. Where pruning is required this must be identified in the application.

(e) Where specific *approval* is given to allow decks to be used for material/equipment storage (see **3.11.5**) high fascias adjoining tree canopies may need to be designed to avoid impacting on the tree/s. In some cases the use of hoarding decks and tall fascias near tree canopies may not be allowed.

Faraway gums by Billy Ryan
Photo: Peter Conroy / City of Sydney

Figure 3.67: *Hoardings* must be designed to minimise impacts on tree canopies and maintain clear pedestrian passage. This can be achieved by designing a system of strategically placed columns and bridging beams (see also **Figure 3.63**).

Waves Like Trees You Can't Imagine by Zev Tropp
Photo: Peter Conroy / City of Sydney

(f) Where a *hoarding* deck is required to be set back to accommodate *street trees*, multiple columns around the tree to support the deck are not permitted. The deck must be supported by a system of bridging beams at the deck level (see **Figure 3.67**).

3.17.2 Removal of street trees

(a) The removal of *street trees* simply to allow for the installation of a *temporary structure* will not be permitted. Where trees are in poor health and/or condition and it is demonstrated that they must be removed to accommodate specific site needs, the *City* may allow tree removal subject to the applicant agreeing to replace affected trees and maintain them for a prescribed period after the *temporary structure* is removed.

(b) All costs associated with the removal of trees and their replacement and maintenance (see **3.17.7**) must be borne by the applicant and will be subject to the lodgment of a *performance bond* and/or advance payment (see **1.15.2**).

3.17.3 Street tree protection

(a) Tree trunk and major limb protection must be undertaken prior to installation of *temporary structures*. The protection systems must be installed by a qualified arborist (AQF Levels 2 or 3) including satisfying the following:

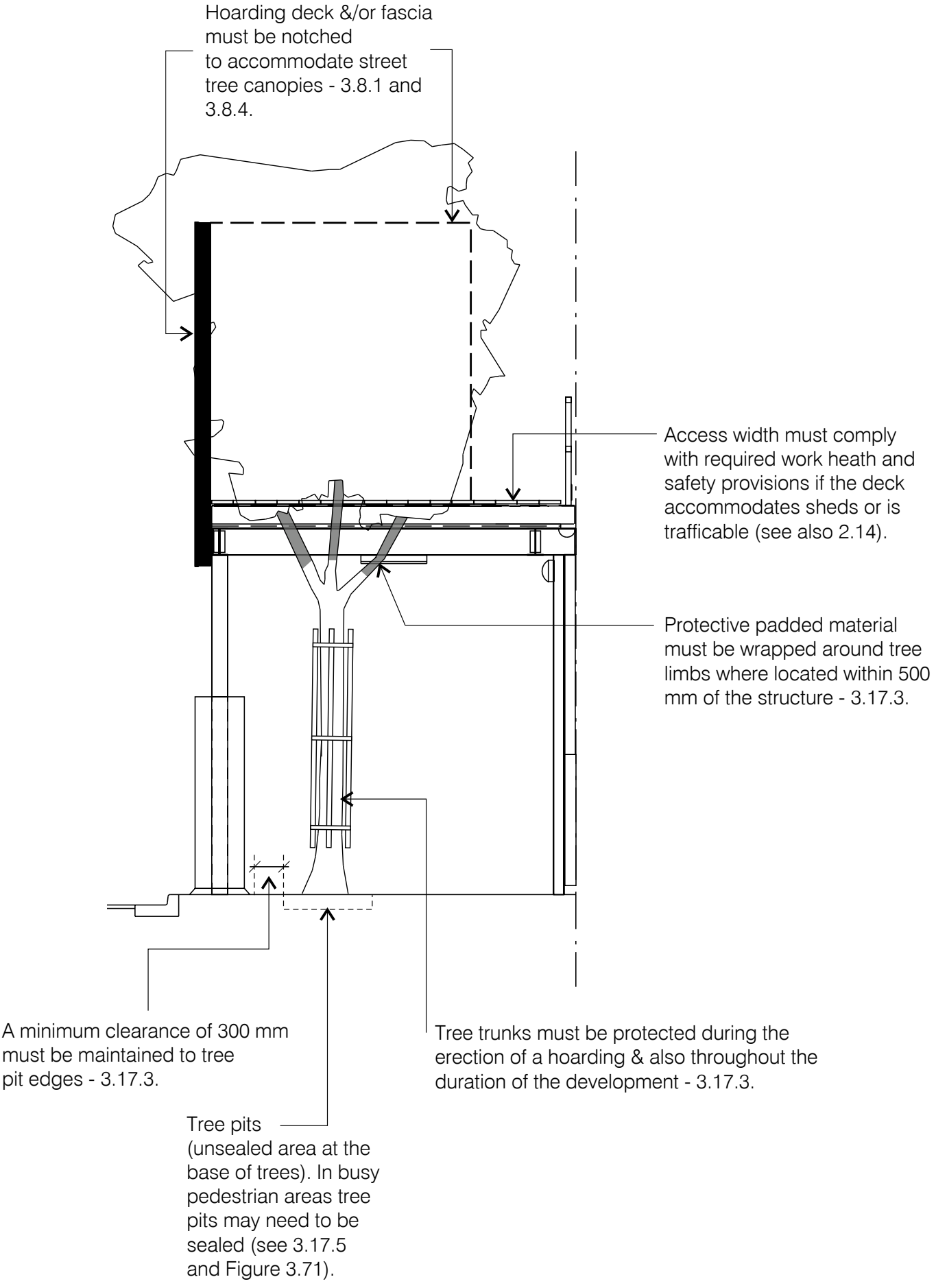
(i) an adequate clearance, (minimum 250mm), between the structure including *site sheds* and *hoarding* fascias tree branches, limbs and trunk must be maintained at all times;

(ii) tree trunks and/or major branches located within 500mm of any part of a *temporary structure* must be wrapped with protective padded material (hessian is not acceptable) to prevent tree injury;

(iii) timber battens (50mm x 100mm or similar) must be placed around tree trunks with battens spaced at 100mm intervals and fixed against the trunk using metal or durable plastic strapping with connections appropriately finished or covered to protect people from snagging injury (see **Figure 3.64**). The padding fabric and timber battens must not be fixed to the tree; and

(iv) tree trunk and major branch protection are to remain in place whilst the *temporary structure* is in place and must be removed at the completion of the project.

Figure 3.68: Section detail - Where *street trees* are affected by *hoardings*, minimum design elements and treatments must be incorporated.



(b) For *temporary structure approvals* exceeding 6 months, 3-monthly reports from a qualified arborist (min AQF Level 5) must be submitted to the *City's* Tree Management Officer to assess whether the tree protection and mitigation measures are being fully and effectively implemented to maintain the healthy condition of the tree/s.

(c) All supporting columns of *temporary structures* or *scaffolding* must be placed at least 300mm from the edge of existing tree pit edges so that no subsidence or damage occurs. If this is not possible appropriate *approved* measures must be implemented to distribute the loads to prevent damage to the tree surrounds.

Figure 3.69: The positioning of support columns must accommodate *street trees* including minimum setbacks from trunks, roots and tree pits. Street gardens must also be maintained (kept clean and tidy) for the full period of installation.

Photo: Peter Conroy / City of Sydney

Figure 3.70: Where damage occurs to *street tree/s* the *City* must be notified. A Court Attendance Notice to seek prosecution may be commenced by the *City*. The *performance bond* held against the *approval* (permit) will also be used to replace damaged trees including costs for required maintenance over a period of at least 12 months.

Photo: Peter Conroy / City of Sydney

3.17.4 Tree pruning

(a) The consent of the *City* must be obtained prior to the undertaking any *street tree* pruning works (including tree roots). Only minor pruning works will be *approved* to accommodate *temporary structures*; and

(b) Any pruning that is *approved* must be carried out by a qualified arborist (min. AQF3 Level 3) in accordance with AS4373 'Pruning of Amenity Trees'.

3.17.5 Protection of native wildlife

Where *street trees* are present in the area of a proposed *temporary structure* installation such as a Type-B hoarding and/or scaffolding, and tree pruning is proposed to accommodate the structure/s, the following must be satisfied:

(i) an assessment/search for tree wildlife including the presence of nests must be undertaken; and

(ii) where there is evidence of wildlife, a detailed assessment must be carried out by a trained wildlife handler; and

(iii) the findings must be discussed with the *City's* urban ecology coordinator.

3.17.6 Maintaining clear pedestrian pathways

(a) Where a *hoarding* site fence is *approved* to encroach onto a *footway* that results in a reduction in the available clear pedestrian width and there are unsealed *footway* surfaces at the base of trees, the tree pit surface (if not flush with the *footway*) must be made safe and level using stabilised decomposed granite.

(b) Where a temporary surface is installed it must be maintained in a sound and safe condition level with the *footway* surface for the duration that the *hoarding* is in place. The *footway* surface must be swept regularly to remove any crushed granite material walked or scuffed from the tree pit.

(c) For sites where a *hoarding* will be in place for more than 12 weeks or is located in a high pedestrian traffic area, the *City* may require the tree pit surface to sealed using resin-bonded porous paving to a depth of 50mm or otherwise as specified by the *City* (see **Figure 3.71**).

Figure 3.71: Where a *temporary structure* is in place for a lengthy period (as determined by the *City*) and there is a need to maximise the available *footway* width, resin-bonded porous granular paving may be required to stabilise and level tree pits.

Photo: Peter Conroy / City of Sydney

Figure 3.72: *Temporary structures* must be designed to prevent unnecessary pruning of *street trees*. Where essential pruning is necessary this must be identified in the application form.

Photo: Karen Sweeney / City of Sydney

3.17.7 Tree and street garden damage

(a) Where the *permit holder* fails to undertake required works, maintenance or supply information (reports) on affected trees and garden beds, the *performance bond* will be used to:

(i) undertake remedial repairs to damaged trees, garden beds and other areas;

(ii) obtain an arborist's report on the condition of trees and any required remedial repairs;

(iii) replace *street trees* or shrubs resulting from negligent or accidental damage associated with the *temporary structure's* placement; or

(iv) install or maintain required tree protection devices as required by this Code and/or a condition of *approval*.

Throughout the duration of a *temporary structure* placement the condition of the tree pits must be monitored for safe condition and be appropriately maintained to mitigate potential trip and slip hazards. Damaged or sunken tree pits resulting from the development, *temporary structure* or work activity on the site that are not repaired may be rectified by the *City* and the costs associated with this work will be recovered from the *performance bond* held against an *approval*.

(b) Any damage sustained to *street trees*, street garden beds or landscaping as a result of the *temporary structure* installation is to be reported immediately to the *City's* Tree Management Officer to determine the appropriate action for maintaining the health and structural integrity of the tree/s and safety of pedestrians.

Note: The *City* will enforce the Tree Management Controls contained within the Sydney LEP 2012 and the Sydney DCP 2012 in relation to damage to trees, with fines of up to $100,000 in the Local Court and $1,100,000 in the Land & Environment Court. In addition, the Court may also require the person or corporation having the benefit of an *approval* to replace damaged or destroyed tree/s and to maintain replacement tree/s to maturity (see **3.17.8**).

3.17.8 Tree replacement and maintenance

(a) All replacement *street trees* must be maintained by a qualified horticulturist or arborist (minimum AQF Level 2) for a minimum period of twelve (12) months. Maintenance must conform with the technical planting details of the *City's* Street Tree Master Plan.

(b) The maintenance period will commence from the date of inspection by the *City's* Street Tree Contracts Coordinator who will confirm in writing that the tree/s have been planted in accordance with the *City's* specifications. Should the tree/s die or be substantially damaged within the 12 months maintenance period replacement tree/s must be planted by the applicant at their cost and the 12 months maintenance period will recommence.

At the end of the maintenance period formal notice must be given to the *City* seeking handover. Trees will be assessed and if confirmed as satisfactory, the *performance bond* will be returned.

Photo: Peter Conroy / City of Sydney

Photo: Peter Conroy / City of Sydney

Part 04 Scaffolding

4.1 Scaffolding installations - overview

This Part sets out the design and installation requirements for typical longitudinal modular-bay *scaffolding systems*.

Scaffolding is often required to ensure safe and effective worker access to the facade of existing buildings for maintenance work, for the construction of new buildings or for alterations/additions to existing buildings.

Scaffolding is also used for the encapsulation of a *worksite* during demolition as a dust and minor debris *control measure*.

Scaffolding can take several forms when erected in *public spaces*. The main form of *scaffolding* used in the city is a system erected:

- directly on a *road* (typically a *footway*) with a Type-A *hoarding* fence at the base of the scaffold to secure the site and prevent unauthorised access; or
- wholly or partially on the deck of a Type-B *hoarding*.

Other less common *scaffolding* systems and installations are:

- self-supporting systems cantilevered from a building or other structure or placed and supported on needle beams/platform; and
- hanging scaffolds.

These two forms of *scaffolding* are dealt with in **Part 05**.

4.2 Objectives for scaffolding systems

The following objectives apply to *scaffolding* systems:

1. Provide a safe and structurally stable *temporary structure* in accordance with the relevant regulations, applicable Australian Standards including *AS/NZS 1576.1: 'Scaffolding – General requirements', SafeWork NSW* Codes of Practice and any requirements/directives issued by *SafeWork*;
2. Minimise obstructions and clutter on *footways*;
3. Provide the highest possible standard of pedestrian amenity, *accessibility* and safety when passing *scaffolding* structures;
4. Ensure *scaffolding* screening systems (containment mesh) is of a quality condition (including reused mesh) and is applied neatly, securely fixed and maintained tautly to contribute positively in the streetscape;
5. Graphics (*scaffolding* wraps) are appropriate for the location and the duration of the *scaffolding* installation; and
6. Ensure physical connections and impacts (fixings) on the fabric of heritage-listed buildings and other significant structures are minimised and appropriate for the material of the facade.
7. Ensure the installation and maintenance of scaffolding systems do not adversely impact *street trees* - refer to **3.17** for tree protection provisions.

4.3 Mandatory design elements and features

(a) *Scaffolding* systems must not be placed directly on *footways* that have high pedestrian volumes such as in the *city-centre* (see map at **Figure 1.1**), or where the width of a *footway* is of insufficient width to ensure safe, *accessible* and convenient pedestrian passage. In these circumstances the *scaffolding* system must be placed on the deck of a Type-B *hoarding* to maximise the clear *footway* width for pedestrians.

Proponents should discuss their proposal with *City* officers before proceeding with an application for proposed *scaffolding* placement directly on *footways* in busy parts of the city.

Figure 4.1: *Cantilevered work platforms* and other *temporary structures* located over or on private land are not regulated through this Code nor approved by the *City*. It is the responsibility of the person undertaking the works to obtain an access agreement from affected landowner/s. Access orders under the Access to Neighbouring Land Act 2000 can be sought through the Courts where agreement with neighbouring landowners cannot be obtained.

Photo: Peter Conroy / City of Sydney

Figure 4.2: *Cantilevered work platforms* and *scaffolding* are generally not allowed. In narrow laneways where traffic and pedestrian movement must be maintained, *approval* may be given subject to systems being fully engineered and certified (see **2.8**). Note: Externally installed black screening mesh is the preferred finish (see **4.4.3(e)**).

Photo: Peter Conroy / City of Sydney

(b) In visually prominent locations or busy pedestrian areas, as determined by the *City*, *scaffolding* must be screened from the *public space* by mesh and/or graphics (see **Table 1** in **Part 06**). The *City*'s preference is to have mesh fitted to the outside face of the *scaffolding* frame (see also **4.4.3**).

(c) Any graphics incorporated as part of screening systems (whether mesh or fabric) must be of a high quality that meets the *City*'s requirements (refer to **Part 06**).

(d) Screening systems and wraps must be installed and maintained in a clean, tidy, secure and taut condition to the *City*'s satisfaction throughout the installation period.

4.4 Specific design requirements for scaffolding systems

The key design requirements for elements of *scaffolding*, installation and meshing sysyems are set out below.

4.4.1 Scaffolding frame

Scaffolding must be designed, erected and maintained in accordance with AS/NZS 1576.1.

4.4.2 Fixing to building facades including architecturally significant buildings and heritage-listed buildings

Fixing *scaffolding* to masonry elements is to be avoided wherever possible. *Scaffold* ties fixed through window openings should be used where practicable and safe to do so.

Where the physical anchoring of *scaffolding* ties to significant facades such as heritage-listed buildings and other architecturally important buildings is unavoidable the following measures must be implemented (subject to satisfying any *SafeWork NSW* codes of practice and directives):

(a) where possible and structurally acceptable, fix at locations of existing wall penetrations or where a masonry surface is already damaged to minimise the amount of new drillings into sound masonry;

(b) the fixing must be designed to be fully reversible by using an expansion-type fixing that can be fully removed provided:

(i) there is no risk of splitting the masonry; and

(ii) the method of fixing complies with any codes of practice and/or engineering design requirements that may apply to the building and/or *scaffolding* design;

Figure 4.3: *Scaffold* fixings to heritage-listed buildings should be avoided but where necessary, comply with the provisions in **4.4.2**.

Photo: Peter Conroy / City of Sydney

Figure 4.4: The preferred colour for *scaffolding* mesh is black although for older buildings, including heritage-listed buildings, other colours that are sympathetic to the building and locality may be required.

Photo: Peter Conroy / City of Sydney

(c) where reversible fixing is not achievable a chemical anchor or non-removable expansion anchor that is inset at least 100mm into the masonry to allow a 100mm plug/biscuit infill; and

(d) the fixing point must be made good as the *scaffolding* is dismantled by:

(i) inserting a 100mm thick masonry plug or biscuit that matches exactly the type and colour of the surrounding original stone masonry. The repair must be tight-fitting with a hairline joint; and

(ii) if the repair is to sandstone, the orientation and porosity of the grain/bedding pattern of the repair plug/biscuit must match the surrounding original stone.

See also **4.5.4** for other requirements when fixing to building facades.

4.4.3 Screening and meshing

(a) The preferred method for screening *scaffolding*, including all diagonal bracing, is to install durable mesh or fabric on the outer surface (*public space* side) of the frame including at the end-returns to the building (see also **(b)** below).

(b) In cases where *scaffolding* will be in place for a significant duration (as determined by the *City*) or it is determined that the locality is significant in terms of visual aesthetics, it will be mandatory for the screening mesh to be installed on the outer surfaces (see also **Table 1** in **Part 06**).

(c) Mesh (for containment purposes and wraps) must meet minimum flammability performance criteria required by an Australian Standard and directives issued by *SafeWork NSW*.

(d) Mesh screens must:

(i) be in good condition (when reusing mesh it must not have significant permanent creases or warping) and this must be checked/confirmed by the *permit-holder* prior to installation;

(ii) have a consistent colour throughout with black being the preferred finish. A beige colour may be suitable for sandstone facade heritage buildings (see **(e)**);

(iii) be properly and neatly fixed including quality joining at seams;

Photo: Peter Conroy / City of Sydney

(iv) be fitted tightly and tensioned to the *scaffolding* frame to provide an even high quality finish throughout;

(v) during progressive dismantling such as during demolition, the mesh must be suitably contained and handled and not be allowed to hang untethered from the *scaffolding* frame;

(vi) be fully and effectively fixed to withstand likely wind actions in the locality and to ensure that the mesh/fabric is installed and maintained in a taut condition throughout the full duration of the installation;

(vii) proponents must consult with the *scaffolding* designer/contractor and take into account any additional wind loads and impacts on the *scaffold* as a result of perimeter meshing and *scaffolding* wraps (see **4.4.4**) and design the scaffold accordingly; and

(viii) in cases where standard printable 'wrap mesh' cannot be used on scaffolds due to issues associated with providing adequate bracing connections to a building (such as a heritage-listed building) to address wind actions, the *City* may allow the use of an alternative open-weave printable mesh.

Figure 4.5: Where *hoardings* are erected on narrow *footways* and associated with minor works it may be acceptable to indent *hoarding* fences and *scaffolding* (using ladder beams) to provide clear minimum widths around infrastructure (signage stems, parking ticket machines, light poles etc) and *street trees*. A clear height of 2.4m must be provided in the recessed sections and the soffit sealed to prevent any objects and liquids falling onto the *footway*.

Photo: Peter Conroy / City of Sydney

(e) The preferred colour of containment/screening mesh is black. Other neutral colours may be permitted subject to the colour being appropriate to the development site and locality, particularly where *scaffolding* is installed on or near older significant buildings including heritage-listed buildings (see **Figure 4.4**).

4.4.4 Artwork and images on screening systems of scaffolding structures (wraps)

(a) Where *scaffolding* is used to encapsulate a building or development site, the *City* encourages the installation of quality graphics on *scaffolding* particularly for projects of a lengthy duration.

(b) Where a development site is in a prominent location and/or the *scaffolding* will be in place for a lengthy period, the *City* may require the *scaffolding* frame to incorporate an agreed integrated artwork or image display (see **Table 1** in **Part 06**).

Neo Geo 2 by Daniel Hollier
Photo: Peter Conroy / City of Sydney

(c) The *City* reserves the right, as owner of the land on which a *temporary structure* is to be erected, to require an applicant to install an *approved* mesh or fabric covering to a specified standard over the *scaffolding* as a surface to allow the projection of digital content such as public art and/or community information onto a *scaffold (*refer to **Part 06***)*.

4.4.5 Maintenance and inspections

(a) *Scaffolding* systems must be inspected and checked regularly (see also Clause 225 of the Work Health and Safety Regulation 2017). This is necessary to ensure that the *scaffold* remains stable and has not undergone any unauthorised changes from the certified *approved* design, specification and installation.

(b) Where *scaffolds* are altered the work must be authorised and inspected by a licensed *scaffolder* (holding the appropriate class of licence for the *scaffold*) and which satisfies Clause 225 of the Regulation (see also **4.5.3**).

(c) Periodic inspections must be carried out as required by applicable regulations and this Code but in any case not less than at six-monthly intervals (see **2.8.9**). Inspections must be undertaken by an appropriately qualified practising structural engineer or licensed *scaffolder* holding appropriate authority and licence for the installed scaffold (see **2.8**).

(d) Certification must be provided in accordance with the *City's* standard form and submitted after having incorporated and re-inspected any required remedial works.

4.5 Placement of scaffolding in a public space

4.5.1 General

(a) The use of a mobile work platform (*scaffolds*) up to 4.0m in height on a *footway/roadway* requires the *approval* of the *City* (through a temporary works application). Refer to the 'Code of Practice: Hoisting and Construction Activities On and Above Roads' for further information.

(b) For all other *scaffolding* proposals on or over a *public space, approval* is required. Documentation in accordance with **2.9** must be provided with an application.

Figure 4.6: Section detail of a typical Type-A *hoarding* fence attached to a scaffold frame.

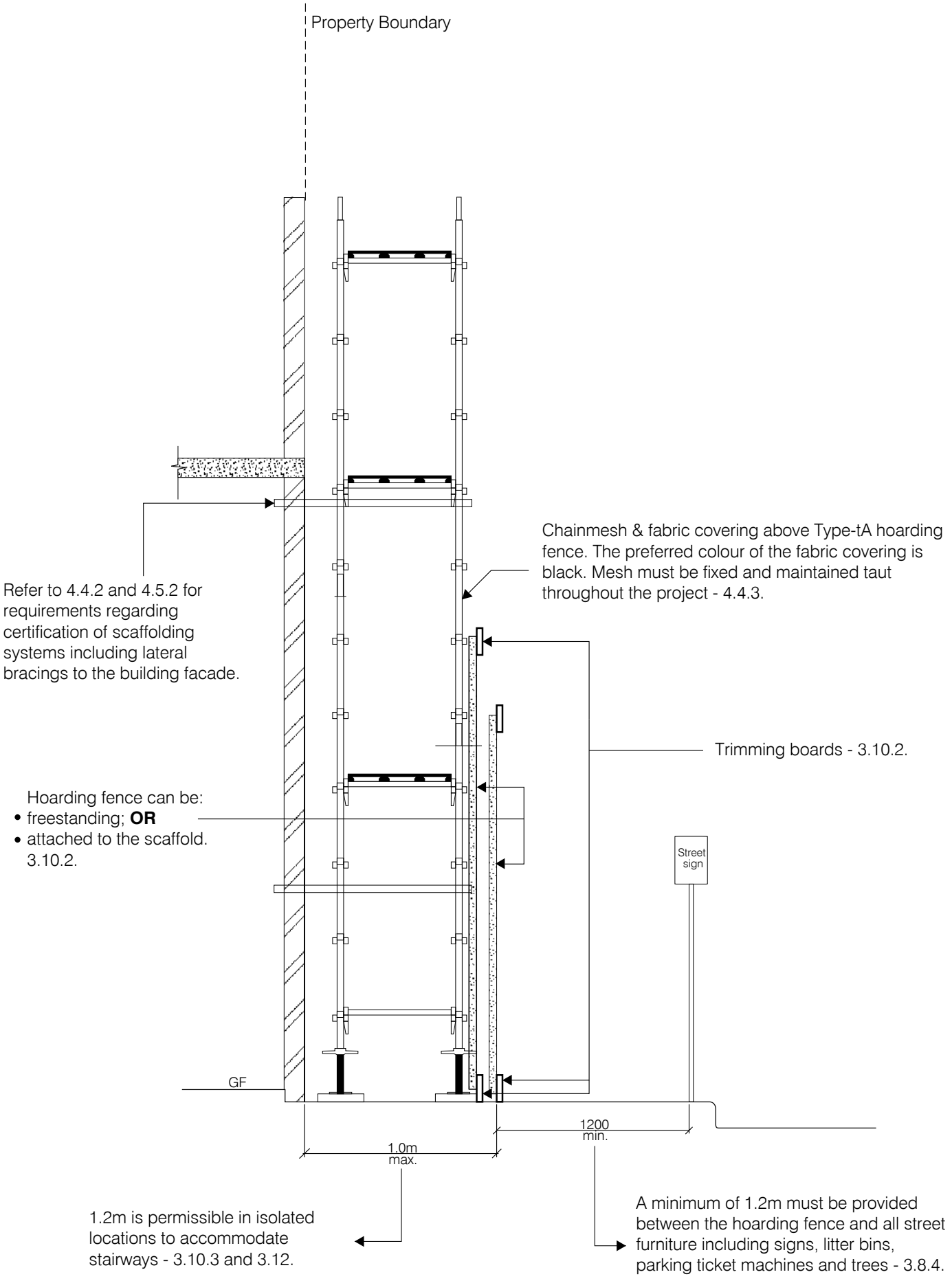
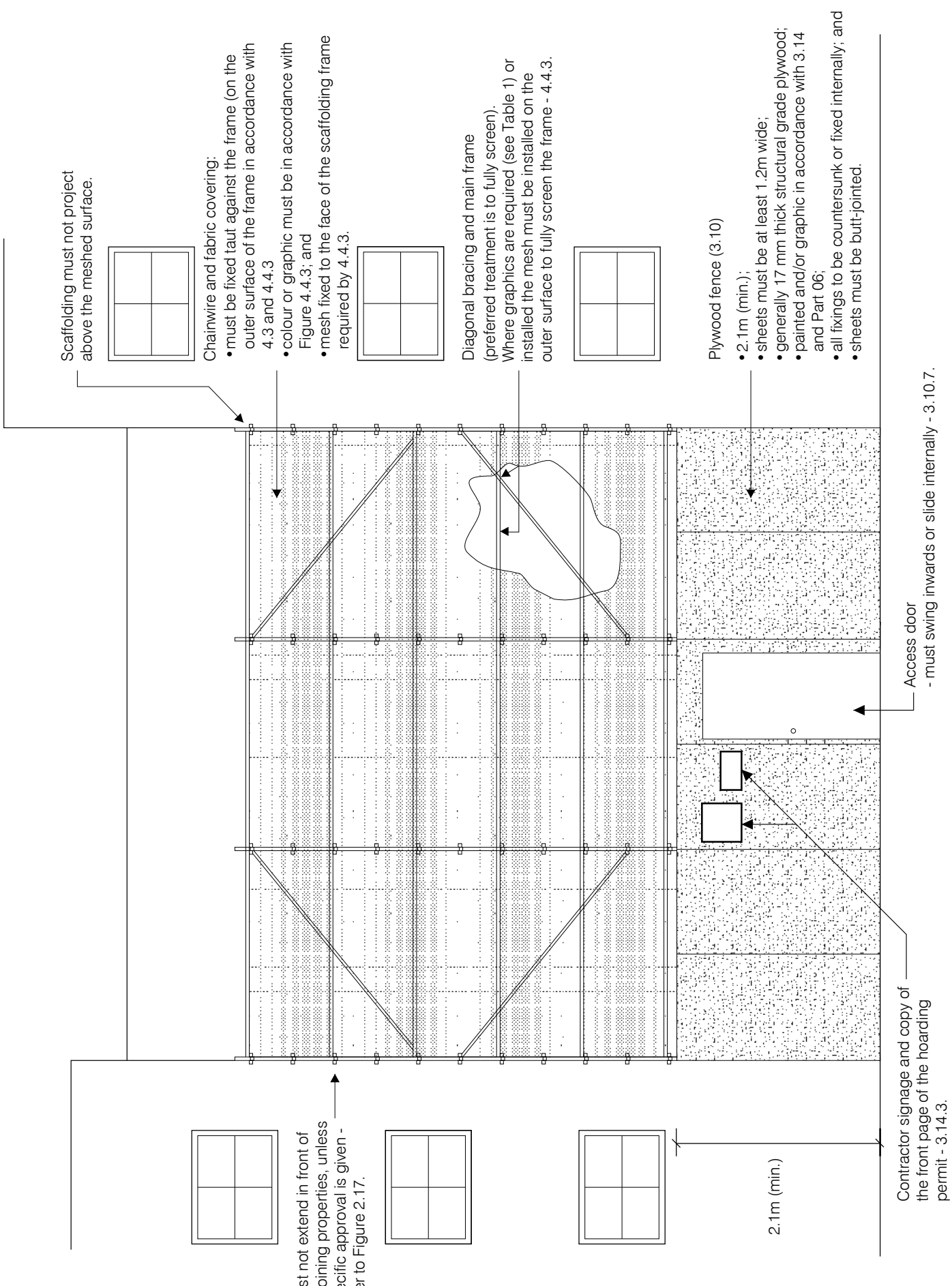


Figure 4.7: Elevation showing the key design features for scaffolding and Type-A *hoardings*.



4.5.2 Public space access and safety

(a) *Scaffolding* associated with a Type-A *hoarding* fence at ground level must consider the needs of pedestrians moving past the structure to provide safe and clear acceptable *footway* widths (see **3.10** for further details).

(b) In laneways, consideration must be given to safe and convenient passage of pedestrians and the potential impacts such as needing to temporarily close a narrow *footway*. The safe passage of vehicles particularly in relation to potential impacts (damage to passing vehicles and loss of structural stability of the *scaffold* - see **3.10.4**) must also be considered.

(c) Vehicle movement in laneways including vehicle access to building carparks and driveways/garages on private land must be be considered particularly in relation to minimum required vehicle swept path dimensions (refer to **3.10.5** for further details).

(d) A *scaffold* must not be used until it has been inspected by a licensed *scaffolder* and/or structural engineer and certification provided to the *City* (using the *City's* standard certification form) confirming that the *scaffold* complies with the Australian Standards and is structurally sound and safe (for the public at street level) in the vicinity of the *worksite*.

(e) During the erection of a *scaffold* the *PCBU* and/or person with management or control of the site/*scaffold* must prevent unauthorised access (climbing on the *scaffold*). Adequate measures must be implemented to secure the base of a *scaffold* including when left unattended during the erection process.

(f) The base of the *scaffold*, if installed at ground level, must have a Type-A *hoarding* fence installed as a minimum (see **3.10**). The *PCBU* and/or *supplier* of a scaffold must assess the risks of unauthorised access to the scaffold/ site and if necessary implement additional control measures (with the *City* being informed in terms of its role as the roads authority and whether any approval is required for these measures).

Note: *Scaffolding* (and *hoardings*) installed near aerial electricity power cables must comply with all applicable safety requirements that may apply (such as *SafeWork NSW* codes of practice, guidelines or directives) including utility operator requirements during the installation and dismantling stages.

4.5.3 Certification - scaffolder

(a) Certification by a *SafeWork NSW* licensed *scaffolder* in accordance with the *City's* standard form must be provided within 24 hours of the completion of a *scaffold* structure (and any required site fence).

(b) For *scaffolding* that is erected and/or altered in stages during construction or work the *PCBU* (typically the principal contractor) must obtain and retain installation and scaffold modification certification from the *scaffolding contractor.* The *City* reserves the right to require, at any time, evidence (copies) of progressive certification documentation for a *scaffold* structure.

4.5.4 Attachment of scaffolding to certain buildings - assessment and certification

The structural adequacy of a building to which *scaffolding* is proposed to be fixed or braced must be assessed to determine its structural capacity or performance to sustain all likely imposed lateral loads including live actions and wind actions. The following specific requirements apply:

(a) where *scaffolding* is proposed to be fixed or braced to reinforced concrete or reinforced masonry elements the *City* may rely solely on certification of structural adequacy from a licensed *scaffolder;*

(b) where *scaffolding* is to be laterally supported (fixed) to non-reinforced masonry building (walls and/or parapets) an assessment of structural adequacy of the wall by a suitably qualified person (such as a practising structural engineer) will be required. In some circumstances proof-testing of tie anchorages and other forms of lateral support to the structure may be necessary (see also **2.8.4** for certification requirements); and

(c) in any case as set out in (**a**) and (**b**), where required by the *City*, a suitably qualified structural engineer must certify a *scaffolding* design and the method of attachment to a building including the adequacy of the building to support the proposed *scaffold.* Required certification must be provided prior to the issuing of an *approval* or otherwise as permitted by the *City* (see **2.8** for certification requirements).

4.5.5 Building demolition and perimeter scaffolding

Where *scaffolding* is used to enclose a building undergoing demolition and the ground level section of the *scaffold* structure is to be retained to support a Type-A *hoarding* fence to maintain security of the site post-demolition, adequate counterweighting must be installed to provide full stability to the *temporary structure* particularly under all expected wind actions and velocities in the locality (see **Figure 4.8**).

Figure 4.8: *Scaffolding* encapsulating a building undergoing demolition and later used as a *hoarding* site fence must be adequately counterweighted. Wind actions in the locality including potential extreme wind velocities from surrounding buildings must be considered by the person in control of a *worksite* and the *scaffolding* contractor. Excavated sites must also be protected using appropriate pedestrian and traffic barriers (see **2.13**).

Photo: Peter Conroy / City of Sydney

4.5.6 Scaffolding supported on the deck of Type-B hoardings

(a) The engineer responsible for the design, installation and inspection of a Type-B *hoarding* must certify that the *hoarding* is capable of supporting any proposed *scaffolding* to the requirements of relevant Acts, Regulations and codes of practice including the maximum superimposed load provisions set out in the *SafeWork NSW* Code of Practice: Overhead Protective Structures.

(b) If supplementary spreader beams on the deck to support the *scaffold* are required by the *hoarding* designer/engineer, details must be specified and included as part of the *hoarding* design and form part of the certified drawings.

(c) *Scaffold* access stairways from a *footway* to the main *scaffold* installation above a *hoarding* deck must be structurally independent of each other to isolate the structure from vehicle impact loads that may lead to a loss of structural integrity of the stairway below the *hoarding* deck (see also **3.12.4(f)**).

(d) Stairways to the deck must also be fully enclosed by plywood sheeting (see **3.12**).

(e) A certificate in accordance with the *City's* standard form must be completed and submitted to the *City* prior to handover and the commencement of site work and use of a *scaffold/hoarding* (see **2.8**).

4.5.7 Scaffolding supported from street awnings

(a) Many street awnings throughout the city are old structures that are unlikely to meet current structural safety standards (AS/NZS 1170 series). Structural capacity and adequacy to allow the placement of *scaffolding* on an awning to access a building facade above can be difficult to verify for both workers and risks/suitability in terms of public safety beneath an awning. The placement and support of *scaffolding* directly on street awnings is therefore generally not permitted because:

(i) many existing awnings do not comply with the Building Code of Australia including the structural loading standards and therefore any additional loads may adversely affect the structural adequacy and stability of an awning;

(ii) difficulties in satisfactorily establishing (through visual inspection) the structural condition an awning particularly an older awning in respect to its capacity to support additional loads and the impacts of live actions (loads) of *scaffolders* and other workers moving about on an awning;

(iii) concentrated loads from *scaffolding* components placed an awning awaiting erection or during dismantling may cause an awning to be overloaded and collapse (fully or partly);

(iv) difficulties in effectively managing a *worksite* to control and mitigate risks particularly controlling individual worker practices and dynamic actions when operating an awning; and

(v) the significant risks to the public should a supporting awning fail and collapse. This is particularly critical in the busy *city-centre* and other commercial districts with similar high pedestrian densities including *footway* dining spaces beneath street awnings.

(b) An alternative method for accessing facades subject to appropriate risk assessment under the work health and safety provisions, may include:

(i) *where scaffolding* standards are supported from the *footway* surface with standards projecting through openings made in the awning (only considered allowable in some circumstances - see **(d)** below); and

(ii) the section of *scaffolding* below the awning is enclosed with plywood sheeting along the full *scaffolding* frontage/installation. The enclosing plywood must extend to the underside of the awning, unless otherwise varied by the *City* with the *PCBO* and/or *supplier* considering whether counterweighting is necessary).

(c) Where the design solution in **(b)** is not possible or feasible due to awnings having architectural significance, heritage-listing or being built of reinforced concrete, the *City* may allow *scaffolding* to be placed on an awning with supporting *scaffolding* placed beneath the awning soffit.

This will only be considered where *scaffolding* support systems can be set back a sufficient distance from the kerb and/or appropriate motor vehicle impact barrier protection (based on a risk assessment by the PCBU which must include the local designated speed limit and vehicle usage/types). Additionally, sufficient space on the *footway* for the safe and convenient passage of pedestrians past the *worksite* and *workplace* must also be available (see **2.8.6** in relation to structural certification).

(d) Where a proponent wishes to utilise a street awning solely to support *scaffolding (*partially or fully) including the parking of a swing-stage (refer to the *City*'s 'Code of Practice: Hoisting and Construction Activities On and Above Roads'). As a minimum the following must be satisfied for the *City* to consider granting an approval:

(i) the awning must comply with the current loading standards (AS/NZS 1170 series);

(ii) a full and detailed assessment of the structural condition of the awning as prescribed by an experienced practicing structural engineer meeting the qualification provisions in **2.8.3** and which includes a thorough visual inspection of:

- all concealed structural members; and
- the cantilever rod support connections and anchor-points to the facade (including considering potential non-visible corrosion within the wall of the facade).

Figure 4.9: Example of scaffolding supported on a street awning. Note that the *City* will only consider permitting this in limited circumstances (refer to **4.6.7(d)**).

Figure 4.10: Under some circumstances the *City* will allow *scaffolding* to be installed on a street awning if satisfactorily supported from the *footway* below. These designs must be fully engineered and a detailed assessment made of the structural condition and adequacy of the existing awning. This must be fully documented and certified and included with an application (see **2.8** for certification requirements).

Photo: Peter Conroy / City of Sydney

(iii) the engineer must hold industry qualifications and registration to verify the adequacy of the awning and supporting building structure to carry all proposed imposed loads including live actions and concentrated loads from the temporary placement of *scaffolding*/*swing-stages* during the erection and dismantling processes;

(iv) the engineer must prepare a site management work plan setting out any required *control measures* to address all potential and assessed risks to the public;

(v) fully engineered design drawings, inspection report of the awning and details of the Australian Standards used in the certification of the awning and imposed loads including:

- details of any required spreader beams sole-boards
- site management procedures to control the placement of equipment and/or *scaffolding* and material supported on the awning
- certification in accordance with the *City's* requirements that includes a statement that it is issued under the provisions of Section 93 of the Local Government Act 1993, must be lodged with an application.

4.5.8 Structural certification - eligibility

For the eligibility of a structural engineer to certify *temporary structures* (and existing street awnings in relation to **4.5.7**) including *scaffolding* in the circumstances set out in this section, see **2.8**.

Photo: Peter Conroy / City of Sydney

Photo: Peter Conroy / City of Sydney

Part 05 Other temporary structures

5.1 Other forms of temporary structures - overview

This part identifies several other common forms of *temporary structures* that may be associated with building construction and maintenance activities on buildings.

Where a proposed *temporary structure* is not listed in this Part and it is to be placed on or above a *road*:

(i) an application must be lodged;

(ii) the proposal will be considered against the applicable legislation including the Local Government Act; and

(iii) the principal objectives of this Code will form part of the *City's* consideration and assessment. Refer to **5.6** for further details.

5.2 Design considerations and requirements for cantilevered/overhanging structures above a road

5.2.1 Temporary (full or partial) closure of footways

(a) Where a *footway* has insufficient width to allow a *hoarding* and/or *scaffolding* to be placed on a *footway* the required overhead protection may:

(i) span a protective deck across the full width of a minor *roadway* (laneway);

(ii) provide a deck consisting of steel beams cantilevered from the building (see **5.2.2**).

The appropriate design solution for a particular site will need to be discussed with the *City* early in the design and site establishment processes.

(b) Other methods that may also be appropriate include the temporary closure of a *footway*. This will only be considered under certain circumstances such as:

(i) in minor streets (generally laneways) with low levels of traffic movement;

(ii) where safe and *accessible* redirection of pedestrians to the *footway* opposite the site or a protected pathway on the *roadway* can be accommodated; and

(iii) where the potential for pedestrian inconvenience and any other traffic/pedestrian safety issues in the locality is minor including not increasing the walking distance people need to travel (see **3.10.4** for further details).

Either of these methods will require consideration and endorsement by the *City*'s Traffic Operations Unit.

5.2.2 Cantilevered work platforms/hung scaffolds

Photo: Peter Conroy / City of Sydney

Photo: Peter Conroy / City of Sydney

(a) Where maintenance works (such as repointing brickwork, cleaning, repainting) or replacement of minor facade elements (balcony balustrades, windows/glazing) are necessary and it is not feasible or practicable to undertake the work from a scaffold erected from the *public space* below, consideration will be given to allow *cantilevered work platform* or *hung scaffold*.

For more major works such as *cantilevered platforms* consisting of needle beams to support *scaffolding* may be allowed.

(b) The *PCBU* must be aware that establishing an exclusion zone at ground level below the *worksite* to allow for the installation of these *temporary structures* has various complexities and difficulties in terms of maintaining acceptable pedestrian and vehicle movement in a busy city environment necessitating minimum impact. It is therefore unlikely that *approval* will be given to form a long-term exclusion zone.

(c) The *City* may however allow a short-term exclusion zone to be established to facilitate the installation of a *temporary structure* and thereafter the use of the structure without an exclusion zone in place subject to:

(i) the *PCBU* meeting all statutory obligations of the Work Health and Safety Act including risk assessment regarding objects that may fall from the *worksite* during the period of installation and works;

(ii) the *public space* being effectively barricaded (with a specific *approval* from the City for barricading) to exclude pedestrians, cyclists and vehicles from the area below the *worksite* (including any additional safety exclusion zone that may be required) during the installation (and removal) of a *temporary structure*; and

(iii) the area of the work on the building can be effectively enclosed to contain material, tools and any other items.

(d) Certification in accordance with **2.8** must be lodged with an application and upon completion of an installation.

Notes:

1. In proposing a cantilevered *temporary structure* it is the responsibility of the *PCBU* to satisfy the relevant provisions of the Work Health and Safety Act 2011 and Regulations in relation to public safety below a *worksite* (see **1.13**).

2. *Cantilevered work platforms* erected over adjoining private property are not regulated by the *City* nor through this Code and therefore cannot be approved under the Local Government Act or Roads Act. Proponents and/or the *PCBU* will therefore need to obtain access agreements from affected landowners (see **Figure 4.1** in **Part 04**). Further details are set out in the Access to Neighbouring Land Act 2000.

5.2.3 Catch-scaffold and netting capture systems

A temporary system typically of scaffold components with wire mesh and/or fabric netting projecting from the face of a building typically at an angle which forms a fall capture structure.

Obstacle Course by Elliot Bryce Foulkes
Photo: Peter Conroy / City of Sydney

(a) Generally aimed at arresting small objects that may fall from height into a *public space*, these structures or systems can form a system of overhead protection that a PCBU relies on to satisfy, wholly or partially, their work health and safety obligations (see 'Notes' below).

(b) These structures or systems must be certified in accordance with **2.8** and relevant *approvals* obtained from the *City* prior to installation and the repositioning of capture systems. Approval is also required for the establishment of exclusion zones.

(c) Where capture structures/systems are proposed and used throughout the various phases of a project the following must be satisfied:

(i) be installed and used in accordance with manufacturer's/*supplier's* and/or engineer's specifications including any structural engineering details; and

(ii) where a structure/system is to be progressively repositioned comply with the following:

- be carried out by person/s nominated by the design engineer and/or by the manufacturer/*supplier* of the system including any specifications that may apply; and
- be verified by an appropriately qualified/ competent person that the systems are fully secured and compliant with *supplier* and/or engineering instructions/details.

Photo: Peter Conroy / City of Sydney

Notes:

1. In utilising a cantilevered capture structure to afford protection to the *public space* the proponent and/or the *PCBU*'s attention is direct to **1.13.3** in relation to statutory obligations under the Work Health and Safety Act.

2. Catch-*scaffolding*/netting systems are not permitted to form part of or attachment to a Type-B *hoarding* to achieve an extended or greater surface area of overhead protection (refer to **2.3** in relation to prohibited temporary structures).

3. If extended overhead protection is required such as projecting over a wide *footway* or *roadway*/*cycleway*, a cantilevered deck extension as part of a Type-B *hoarding* deck structure may be permitted. The City will consider matters such as height clearance of the deck (typically 4.5m min.) when placed near or above a *roadway* (see **Figure 3.17** in **Part 03**) and compliance with **3.8** and **3.11**.

5.2.4 Facade-mounted cantilevered materials landing platform/s

This form of *temporary structure* (plant) is typically a proprietary system that is attached to the face of a building under construction or an existing building undergoing alteration which, for the purposes of the Code, projects over a *road* and therefore requires *City approval*. Platform/s can incorporate a retractable function.

Photo: Peter Conroy / City of Sydney

(a) Used for the purpose of landing/removing material and equipment (*hoisting*) to and from a building via a site-based crane or a mobile crane at street level. For *hoisting* activities over *roads* including seeking *approval*, refer to the *City*'s 'Code of Practice: Hoisting and Construction Activities On and Above Roads'.

(b) In granting *approval* for the installation of platforms that project over a *road* the following requirements, as a minimum, must be met:

  (i) platforms must be erected and used, including maximum design loads not being exceeded, in accordance with manufacturer's/*supplier*'s/engineer's specifications and any structural engineering details including the capability of the building structure to support cantilevered platforms;

  (ii) be fully maintained in accordance with the design specifications and/or the *supplier*'s requirements;

(iii) maintain a valid *approval* for the operation (*hoisting*) of the crane (site-based or mobile) above or on the *road*;

(iv) each time a cantilevered material landing platform is moved/repositioned on the building, the installation must:

- be checked by an appropriately qualified person as nominated by the design engineer and/or the manufacturer's / *supplier*'s specifications; and
- be verified to the requirements of the *PCBU* or other appropriate person such as the *supplier* of decks (plant) confirming that the platforms are fully secured and compliant with the design specification/*supplier*'s instructions.

(c) the installation, repositioning and removal of the platform/s must:

(i) be carried out within the day and time restrictions as specified in the *development consent* and the *works zone approval*; and

(ii) all work/activities must comply with the *City*'s noise requirements.

Notes

1. *SafeWork NSW* has guidance material on platform installation and safe usage - refer to *SafeWork NSW*'s website for details: 'Use of cantilevered crane loading platforms'.
2. Where platforms are proposed to be installed and used above a State '*classified road*' the concurrence of Transport for NSW under Section 138(2) of the Roads Act 1993 must be given before an *approval* is granted.

5.2.5 Cantilevered overhead protective platforms/decks

This form of overhead protection is typically a system of structural steel frame and deck that projects (cantilevers) from the perimeter of a building above a *public space* for the purpose of forming an overhead protective system (deck) to the *public space* below the *worksite*.

Photo: Peter Conroy / City of Sydney

Photo: Peter Conroy / City of Sydney

(a) The general practice for providing overhead protection from objects that may fall from a *worksite* is to install a Type-B *hoarding* at ground level, typically on *roads* (and predominately on *footways*). In some circumstances this may not be effective or practicable due to:

(i) insufficient width of the *footway* including adverse impacts on pedestrian movement resulting from a *hoarding* placement;

(ii) site conditions, the type of work and/or other constraints; and

(iii) a *hoarding* at street level may not be suitable as an effective means to establish a protective barrier due to the type of work being undertaken or risk assessment by the *PCBU*.

(b) In some cirumstances *PCBUs* may wish to establish a more localised protective barrier and object capture system by cantilevering a platform or deck from a building. The cantilevered structure may also be used as a work platform such as to support *scaffolding*.

(c) Where there are clearly demonstrated site constraints or construction needs preventing a conventional Type-B *hoarding* placement at street level, the *City* may consider allowing this form of temporary overhead protective structure subject to the following:

(i) full details being lodged with the *temporary structures* application setting out reasons why a conventional Type-B *hoarding* is not suitable for a site;

(ii) the time required for the installation and later dismantling of a cantilevered *temporary structure* (impacts on pedestrian and vehicular movement will form part of the *City's* consideration - see 'Note');

(iii) if it is determined that a cantilevered deck can be constructed, an application and details as set out in the application form must be lodged for formal assessment; and

(iv) certification as set out in **2.8** must be provided with the application.

Note: These forms of *overhead protective structures* instead of a typical gantry Type-B *hoardings* are generally not supported by the City due to their more complex nature of installation (construction and dismantling) that can require the closure of *footways* or *roadways* for multiple and significant periods resulting in disruption to pedestrian, cyclists and vehicular movement at street level.

(d) The appropriate design solution for a particular site will need to be discussed with the *City* early in the design and site establishment processes to consider aspects in relation to use of the *road* for the installation of a platform.

(e) Where this form of *temporary structure* is allowed it will be a condition of an *approval* that the structure must be inspected and certified not less than at six (6) monthly intervals (or at a lesser period as determined by the *City*) using the *City*'s template form to verify the satisfactory ongoing condition and structural adequacy of the structure.

(f) Other methods/solutions may be appropriate including the temporary closure of a *footway*. This will only be considered:

(i) in minor streets with low pedestrian and traffic movement such as laneways and where the safe redirection of pedestrians to the *footway* opposite the site can be accommodated. This will be subject to consideration of pedestrian flow patterns, the potential for pedestrian inconvenience and any other traffic/pedestrian safety issues in the locality; and/or

(ii) closing part of the *roadway* to accommodate a *temporary structure* and directing pedestrians past the site via a protective temporary pathway on the *roadway*.

These solutions will require input and the endorsement of the *City*'s Traffic Operations Unit.

(g) Where specific endorsement is given to allow pedestrians to use an alternative acceptable route/pathway (on the opposite side of the *roadway*), appropriate temporary access kerb ramps, barriers and signage must be provided (see **Figure 3.45**).

Notes

1. *Cantilevered work platforms* erected over adjoining private property are not regulated by the *City* nor through this Code and therefore cannot be approved. Proponents will need to obtain access agreements from affected landowners (see **Figure 4.1** in **Part 04**). Further details and requirements are set out in the Access to Neighbouring Land Act 2000.
2. In utilising a cantilevered overhead structure to afford overhead protection to a *public space* the proponent's and/or the *PCBU*'s attention is directed to **1.13.3** in relation to statutory obligations under the Work Health and Safety Act.

5.2.6 Building perimeter construction shutters, fall-safety screens, jump-forms, slipforms and other similar temporary elements or plant

Typically these *temporary structures* are a proprietary system of screens, shutters or formwork located on the perimeter of a building undergoing construction and which may overhang a *road* such as where a building is constructed to the property alignment with a *road*.

The devices are used to facilitate the construction process and/or as a safety barrier to prevent worker falls. They can also be used as a containment system to prevent objects falling from a *worksite* into a *public space* including containing objects within the construction area/floor (wind actions and impacts on open floors at the perimeter).

Photo: Peter Conroy / City of Sydney

Photo: Peter Conroy / City of Sydney

Irrespective of overhead protective systems provided at ground level, temporary perimeter construction-related structures and systems must be appropriately designed, installed, inspected and maintained to further mitigate public safety risks and any work, health and safety obligations and meet the following requirements:

(a) in granting *approval* for the installation of temporary perimeter construction plant/systems that project over a *road* the following must, as a minimum, be met:

(i) plant/structures must be installed and used in accordance with manufacturer's/*supplier*'s and/or engineer's specifications and any structural engineering details; and

(ii) each time plant/structures are relocated (when not associated with a jump-form operation/system), the installation must:

- be checked by an appropriately qualified/competent person as nominated by the design engineer and/or the manufacturer's/*supplier*'s specifications

- verified that the systems are fully secured and compliant with *supplier*/engineering instructions/details.

(b) The installation, repositioning and removal of the systems must be carried out within the day and time restrictions as specified in the *development consent*.

Note: Plant and *temporary structures* erected over adjoining private property are not regulated by the *City* nor through this Code and therefore cannot be approved under the *Local Government Act* or Roads Act. Proponents and/or the *PCBU* will therefore need to obtain access agreements from affected landowners (see **Figure 4.1** in **Part 04**). Further details are set out in the Access to Neighbouring Land Act 2000.

5.2.7 Tower cranes (structure)

(a) In the majority of cases site crane structures and elements are fully located within the property/site allotment boundaries. In these cases *approval* under the Local Government Act and Roads Act is required for *hoisting* activities and/or operations when the crane boom movement takes place above a *road*. Refer to the *City's* 'Code of Practice: Hoisting and Construction Activities On and Above Roads' for further information.

Photo: Peter Conroy / City of Sydney

(b) The *City's* strong preference is to have all crane installations/components located within the boundaries of a site. This must therefore form a key aspect of the site establishment and construction planning processes.

(c) The *City* acknowledges however that there may be circumstances where a crane structure (mast and/or the body/motor) need to encroach on or above a *road*. In these circumstances *approval* is also required for the crane plant/structure to be placed on or above *City* land (*road*), for example when the crane structure is:

(i) to bear directly on footings within a *roadway* or *footway* (or both); and

(ii) to be supported (fully or partially) from the deck of a Type-B *hoarding* or is supported from a cantilevered structural system at the outer perimeter of a building (under construction or existing building undergoing alterations/additions/demolition).

(d) As part of preparing an application (and the *City* accepting an application and considering to give *approval*), the following matters (as a minimum) must be addressed by the proponent:

(i) the reason why it is necessary to locate the crane wholly or partly on or above *City* land;

(ii) the alternative designs explored to place the crane structure within the site and reasons why they are not the preferred solution;

(iii) reasons why the preferred design solution is considered acceptable and why the *City* should allow the proposal;

(iv) risk assessments undertaken in terms of ensuring public safety including risk aspects of objects falling from the site/work activity and any overhead protection to the *public spaces* required through the Work Health and Safety Act;

(v) if the crane is to bear on and be supported from the deck of a Type-B *hoarding*, formal confirmation that this will be compliant with all applicable *SafeWork NSW* adopted codes of practice, guidelines and/or directives;

(vi) certification of structural design and adequacy in accordance with **2.8** being provided; and

(vii) providing any other supporting information at the application stage and/or required during the *City's* assessment processes.

(e) As part of the *City* assessing a proposal and considering to grant *approval* to use *City* land, aspects relating to the terms of *approval* may require the proponent to enter into a lease or licence agreement for the use of the land (*road*). Fees (including use of the airspace) will also apply.

5.3 Work and storage compounds

5.3.1 General

(a) In all cases construction-related activities and *temporary structures* should be undertaken and located within the allotment boundaries of a development or *worksite* to keep *public spaces* clear of structures to maintain quality public access and amenity past *worksites* and *workplaces*.

In some circumstances the *City* will allow the installation of *temporary structures*, typically *hoardings*, to address public safety needs (such as overhead protection) that *PCBUs* must satisfy in complying with provisions of the NSW Work Health and Safety legislation. Work and storage compounds in *public spaces* are not essential for public safety purposes and therefore the *City* is generally not supportive of such structures and their usage.

Photo: Peter Conroy / City of Sydney

(b) Builders and contractors must consider and address the matters in **(a)** early in the site planning and/or tendering processes to ensure that the works can proceed without undue delays associated with site space constraints.

(c) Where there are clearly demonstrated needs such as:

(i) site conditions and constraints preventing the placement of facilities on the site including meeting any mandatory work health and safety requirements/obligations; and

(ii) there are no feasible and/or satisfactory alternatives for off-site facilities on nearby private land, the *City* may consider proposals for the establishment of a *work compound* in a *public space* adjoining a *worksite*, subject to **5.3.2**.

5.3.2 Work compounds in public spaces

(a) The establishment of *work compounds* in *public spaces* will only be considered if it can be clearly demonstrated by the proponent and confirmed by the *City* that there will be:

(i) no potential adverse impacts on the city community and the general public including maintaining *accessible*, safe and convenient passage of pedestrians, bicycle riders and motor vehicles past a proposed compound;

(ii) no potential adverse impacts on business owners and occupiers including operators of residential and tourist accommodation-type premises located in the vicinity of a proposed compound; and

(iii) the compound and any sheds (generally restricted to single-storey sheds only) can be fully secured and screened from the *public space* and surrounding properties by plywood sheet fencing (Type-A *hoarding* complying with **3.10**) including displaying approved graphics in accordance with **Part 06**.

(b) Where *approval* is given for a *work compound* in a *public space* the *City* may require the display of temporary way-finding signage (see **2.17**) on the compound to allow pedestrians, couriers and others to continue to locate businesses.

Bespoke artwork by Luca Ionescu
Photo: Peter Conroy / City of Sydney

Photo: Peter Conroy / City of Sydney

5.4 Facade retention structures

Objectives

1. The design is structurally sound;
2. Limit the physical encroachment on the *footway* to maximise the space available for safe, convenient and accessible pedestrian pathways;
3. Maintain visual openness of the *footway*;
4. Provide a cleanly detailed structure that has a visually acceptable appearance;
5. Structures are appropriately maintained and monitored; and
6. When used jointly as an *overhead protective structure* (Type-B *hoarding*), satisfy the objectives in **3.8** and **3.11** that apply to *hoardings*.

5.4.1 General considerations

(a) Façade retention structures are typically associated with older existing buildings to provide lateral support using several methods and systems of custom-built fabricated steelwork. They are typically used to preserve and support architecturally important or fragile building frontages during works behind the façade but can also be used to support fire-damaged and/or structurally unstable external walls.

Structures can be:

(i) a combination of existing and new structural elements within a land allotment;

(ii) temporary elements (structures) erected in a *public space*; or

(iii) a combination of (i) and (ii).

(b) In some circumstances the property owner, *PCBU* and/or the design engineer may propose to use a façade retention system as a dual-purpose structure to form both lateral support to the façade and overhead protection (a Type-B *hoarding*) where pedestrian access is to be maintained past the site and through the retention structure. The *PCBU* is responsible under the Work Health and Safety Act to assess all risks including risks to the public from falling objects (overhead protection) when determining the acceptability of a dual-purpose structure.

Note: The *SafeWork NSW* 'Code of Practice: Demolition Work' has provisions relating to façade retention during demolition works.

(c) Façade retention systems require several forms of *approval*:

(i) for structures located in, on and above a *road*, an application and *approval* under the Roads Act and Local Government Act; and

(ii) other *approvals* such as *development consent* and a construction certificate may be required for the works to the retained façade.

5.4.2 Requirements

(a) In considering an application for a façade retention structure in a *public space* the documentation as set out in this Code and the application form is required. This includes having an appropriately qualified and competent person assess the nature of the proposed work and structure including identifying and addressing all associated potential risks to public safety in conjunction with the *PCBU.* This includes:

(i) vehicle impacts (structural stability aspects and potential injuries to vehicle occupants, refer to **2.8.6**); and

(ii) potential risks/fire occurrence in the building behind the façade that could compromise the structural integrity of the façade retention system and *public place*.

Photo: Peter Conroy / City of Sydney

(b) The design documentation must incorporate any recommendations from the risk assessment.

(c) Other matters for consideration are set out in the *SafeWork NSW* 'Code of Practice: Demolition Work'. This includes

(i) the necessity to monitor the condition of the façade for any movement; and

(ii) cracking, which may require remedial works and/or further investigation throughout the duration of installation (see also **5.4.7**).

(d) Where pedestrian access is maintained through and beneath a façade retention system, the structure must be designed to meet the minimum design standards that apply for a Type-B *hoarding* set out in this Code including **5.4.6**.

(e) Full compliance must be given to the *SafeWork NSW* 'Code of Practice: Overhead Protective Structures' including the structural loading and stability requirements where a retention system also affords overhead protection.

5.4.3 Structural design and certification

(a) The design and installation of a façade retention structure must be certified in accordance with **2.8**.

(b) A qualified geotechnical engineer must certify (in accordance with **2.8**) the suitability of the ground conditions to support the *temporary structure* (including any required or proposed footings).

(c) Where footings are proposed below the *footway* surface level, special consideration by the *City* will be required (see **2.8**). The *consent* of all affected utility owners/operators must be obtained and submitted to the *City* with an application. Refer to **3.8.5** for further details regarding subsurface footings.

(d) A structural engineer must assess and confirm the structural adequacy and the condition the façade to be retained and detail any required remedial works in conjunction with the design and placement of the retention system.

5.4.4 Site fencing and infill panels over wall openings

(a) Where a *footway* remains open to the public during the installation period of the retention structure, a site fence complying with **3.10** must be installed at the rear of the structure to isolate the *worksite* from the *public space*. Graphics must also be displayed on the fence (and fascia if proposed) in accordance with this Code (**Part 06**).

(b) Where it is not recommended or practicable to install a fence, any openings in the retained wall must be appropriately boarded-up using painted plywood sheet (black, or other suitable colour approved by the *City*).

5.4.5 Longitudinal bracing

Longitudinal bracing is permitted, subject to the following:

(a) the *City*'s preference is to place required longitudinal bracing elements at the rear of a structure (away from the kerb) to achieve an open, cleanly detailed and uncluttered visual appearance when viewed from a *public space*;

(b) where (a) is not feasible or practicable for structural adequacy purposes, bracing will be allowed along the kerb but must be minimised and meet the requirements for *hoarding* bracing set out in **3.8.8** and/or **3.8.9**;

(c) in circumstances where larger bracing elements are necessary such as cross-bracing members extending to the footway at the kerb, compliance with **3.8.8** must be achieved.

5.4.6 Geotechnical report

The *City* may at its discretion require a detailed geotechnical report addressing the following, as appropriate:

(a) borehole/test pit logs or inspection records;

(b) field/laboratory test results;

(c) general geotechnical description of the site and conditions;

(d) recommended safe bearing pressure values and likely settlements of foundation material;

(e) recommendations for stability and protection of excavations adjoining or in close proximity to a retained wall;

(f) observations/opinions on the effect of the new works on existing retained building/facade and recommendations for any underpinning or other measures required to maintain stability; and

(g) methodology for confirming and assessing foundations, footings, underpinning and/or excavation stability in accordance with the design.

5.4.7 Periodic inspections and maintenance

A retained façade and the façade retention structure itself must be monitored and maintained for the full duration of installation/work. The *City* may at its discretion require the preparation of a 'facade retention monitoring program' that includes provisions for effective on-going maintenance.

Unless directed otherwise by the *City* the program must be designed on the assumption that a façade retention system will be in place for a minimum period of 10 years. If a lesser period is proposed the period will be nominated by the City and the program of assessment/monitoring provisions adjusted accordingly. The program must address and include:

(a) the frequency of inspections and survey monitoring required to reasonably assess any signs of distress early enough to undertake remedial action to prevent any increased risk to public safety and damage to adjoining property including *City*-owned land (minimum interval: every three years); and

(b) a list of items to be considered, inspected and tested including, as a minimum:

(i) the durability of the facade components; mortar, masonry, render, attachments, etc.;

(ii) the durability of any concrete, timber and/or steel attachments/components of the original facade - lintels, window frames, etc.;

(iii) the durability of bolts including any threaded rods;

(iv) compatibility of the facade and supporting frame foundations/footings;

(v) packing members between the frame and façade;

(vi) façade movement;

(vii) ingress of water (moisture buildup in the façade and potential adverse impacts) on the retained structure;

(viii) testing and corrosion of any ground anchors;

(ix) corrosion of steel components of the supporting frame;

(x) description and possible cause of cracks and their propagation;

(xi) recommendations for any required remedial works; and

(xii) any other matters the engineer/s and/or the *City* considers relevant.

5.4.8 Performance bond and public liability insurance

In allowing façade retention and the supporting structure on public land, *performance bonds* complying with **1.15** must be lodged before an *approval* is issued.

Public liability insurance held in name of the entity holding the *approval* must be provided and kept current whilst the retention structure remains in place. Refer to **1.16** for further details and requirements.

5.5 Site sheds - placement on the deck of Type-B hoardings

Photo: Peter Conroy / City of Sydney

5.5.1 General

In seeking *approval* to place *site shed*/s on a *hoarding* or within a work compound in a *public space*, the proponent/applicant must consider the following matters before lodging an application:

(a) in preparing site and construction management plans proponents must not presume that *site sheds* will be allowed. Sheds (and required screening fascia - see **3.13.2**) are bulky structures that are visually prominent when placed on a *hoarding* deck, particularly when double-stacked;

(b) the primary purpose of a Type-B *hoarding* is to allow *PCBU*s to meet their work health and safety obligations. This includes protecting the public in vicinity of a *worksite* by providing overhead protective barriers to objects that may fall from height into a *public space* from a building or from *hoisting* activities carried out above *public spaces*. The placement of *site sheds* on *hoarding* decks is not essential for the purposes of ensuring public safety; and

(c) in all site circumstances the *City*'s preference is to avoid sheds being placed in and above *public spaces* including on the deck of Type-B *hoardings*. Sheds should be located within the allotment boundaries of the property/*worksite*. It is recognised, however, that there may be circumstances where this may not be possible due to:

(i) constraints such as when full site excavation or an entire building footprint

is proposed and will prevent sheds being accommodated within the property boundaries;

(ii) mandatory requirements to provide essential worker facilities on-site such as ablution facilities, lunch rooms and first-aid facilities (see **2.5**).

In these circumstances the *City* will consider allowing the placement of sheds for these essential facilities on the deck of Type-B *hoardings*. The placement and use of sheds for other non-essential facilities may not be allowed (refer to **5.5.2(d)**); and

(iii) the *City* will also consider off-site impacts such as potential adverse outcomes on surrounding properties particularly residential-type buildings. See **2.15** for further details and requirements.

5.5.2 Shed placement on hoarding decks - requirements

A site office shed may be permitted on a *hoarding* for direct administrative needs, however, multiple sheds for general non-essential administrative purposes will generally not be allowed due to the need to minimise the bulk and scale of *hoardings* (including the height of associated fascia screens (see also **3.13.2**)) on surrounding buildings particularly residential and tourist accommodation uses. The following matters and details must be addressed and provided as part of an application:

(a) design drawings must confirm that the *hoarding* is fully capable of carrying all loads, resisting wind loads on the hoarding, fascia and any sheds proposed and complies with this Code. Further details are set out in **2.8, 2.9, 5.5.4** and **5.5.5**;

(b) detailed justification for the placement of sheds on *hoardings* including the proposed uses of the various sheds; and

(c) shed positions must be shown accurately on the certified design drawings (see **2.9**).

5.5.3 Access to decks and sheds

Where access by site personnel is required to a *hoarding* deck the means and location of access must be considered as part of the overall design of a *hoarding* including site management aspects. Direct access to and from the *worksite* (or building) and the deck (including any sheds) is preferred. Proponents must therefore not automatically assume that direct access from *public spaces* to the *hoarding* deck will be permitted.

Further requirements on deck access and stairways can be found in **3.12**. including specifically **3.12.2**.

5.5.4 SafeWork NSW requirements

Other design aspects that must be considered include the *SafeWork NSW* 'Code of Practice: Overhead Protective Structures' that also highlights the safety needs of workers accommodated in sheds (impacts from falling objects including *hoisting* operations above sheds). The *SafeWork NSW* Code further requires that loads on Type-B *hoardings*, including loads from sheds, *scaffolding* and other items, must not exceed 40% of the design live load (generally 10 kPa). See also **1.13.3** and **2.6.1**.

5.5.5 Certification

The placement of sheds must be considered by the structural engineer responsible for the overall design and certification of a *hoarding*. Shed sizes and their positioning on the deck must be clearly and accurately shown in the *hoarding* drawings.

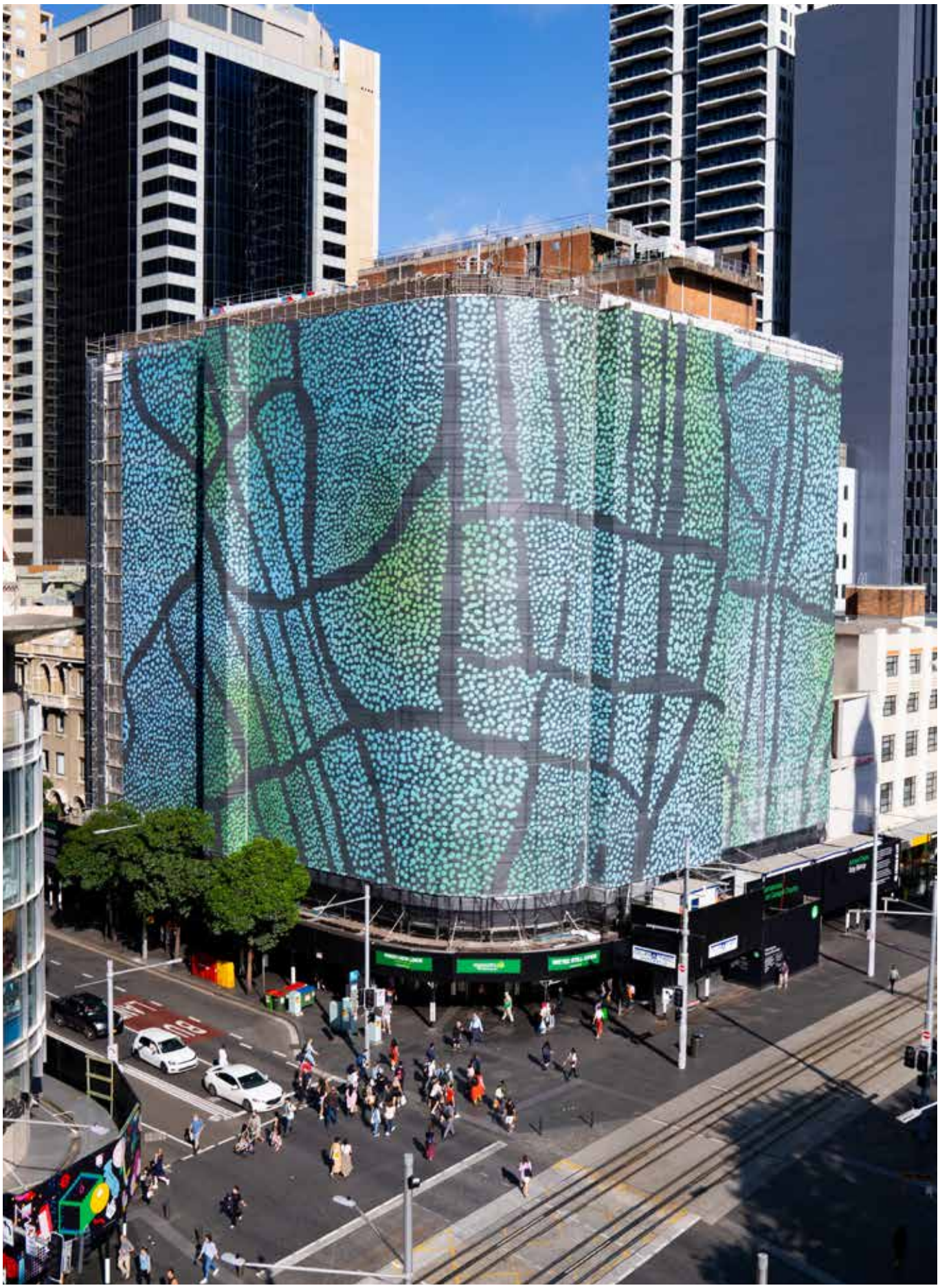
Certification must be in accordance with the provisions set out in **2.8**.

5.6 Other forms of temporary structures not specifically listed in this Code

For *temporary structures* that are not listed in this Code and which are placed in, on or above a *road*, an *approval* as set out in **Part 01** is required from the *City* prior to installation.

In assessing an application the objectives, aims and principles set out in this Code will apply. Additionally, the provisions of Section 89 of the *Local Government Act* ('Matters for consideration') will be considered in the assessment of an application.

The *City* may also require information and details beyond that listed in **2.9**. Certification in accordance with **2.8** may also be required.



Ancient Tracks by Toby Bishop
Photo: Abril Felman / City of Sydney

Photo: Peter Conroy / City of Sydney

Part 06 Graphics

6.1 Graphics and innovative hoarding designs

6.1.1 Overview

The display of graphics on *temporary structures* is a strategic priority identified in the City of Sydney Cultural Policy 2025-2035. The program was established in response to community demand for more street art to enliven spaces and bring creativity into the everyday. This initiative provides opportunities for living Australian artists to showcase their work on a large scale in highly visible locations thereby strengthening the *City*'s creative sector.

The program also requires the display of historic images or site-specific heritage-inspired creative content on *temporary structures* that are associated with heritage-listed properties or located in significant highly intact conservation areas.

The display of graphics also mitigates the adverse visual impacts of *temporary structures* and construction sites, enriching and vitalising public spaces and giving added creativity, interest and meaning to Sydney's culture, vibrancy and history.

Builders, developers and property owners can use artworks licensed by the City of Sydney or commission an Australian artist to create a site-specific bespoke graphic display for their *hoarding*.

Figure 6.1: Finishing site fences and *hoarding* fascias with a 'green wall' installation is an innovative and attractive way to mask development sites in prominent locations and improve streetscape amenity. Where *approval* is given specific conditions will apply including minimum ongoing maintenance requirements.

Photo: Peter Conroy / City of Sydney

6.1.2 Display of graphics

The use of graphics on *temporary structures (hoardings, scaffolding* and work *compounds)* is strongly encouraged. In prescribed circumstances it is mandatory (see **Table 1**).

The use of graphics mitigates adverse visual impacts and discourages graffiti and bill poster attachment on site fences by eliminating blank plywood-sheet surfaces.

A 'Creative Graphic Design Guide for Temporary Structures (Hoardings and Scaffolding)' is available on the *City*'s website to assist graphic design studios and large format printers prepare graphics to meet the *City*'s standards.

Photo: Digital montage / City of Sydney

6.1.3 Mandatory surface treatments on temporary structures

(a) Where required by **Table 1** or a condition of *development consent*, *temporary structures* must, with the exception of *temporary structures* associated with heritage-listed buildings (see **(b)** below), display one of the following surface treatments:

(i) one of the Creative Hoardings licensed artworks viewable on the *City*'s website: www.cityofsydney.nsw.gov.au (note that the display of historic images on non-heritage listed buildings is not permitted); or

(ii) *approved* site-specific high quality bespoke artwork by a living Australian artist commissioned by developers/builders or as required by the *City* that adds visual interest in the streetscape and which is appropriate for the locality. Proponents must discuss their proposal with the *City* prior to commencing a concept artwork design work; or

(iii) vegetated (green wall or part artwork/ vegetated) site fence and/or fascia (**Figure 6.1**). Vegetative finishes will need to include an integrated automatic drip irrigation system. Details of:

- the structural adequacy of the hoarding structure to support a fully irrigated green wall
- the method of attachment and integration with the fence/fascia
- proposed plant species (suitable for the site conditions)
- the irrigation system
- planned and necessary maintenance program,

must be provided with a *temporary structure* application.

Figure 6.2: An example of a bespoke artwork display.

Bahloo and Bila by Wayne Quilliam
Photo: Peter Conroy / City of Sydney

Figure 6.3: A combination of graphic image and 'green wall' may be an appropriate solution to enhance the appearance of *hoarding* fences.

Photo: Peter Conroy / City of Sydney

(b) For works associated with heritage-listed buildings, historic images of the building or locality must be displayed. A selection of historic city images and citations are available through the City's Hoardings Archives self-service webpage accessed via the *City*'s website. A combination of private collection images and images from the City's collection is also allowed. Proponents may also choose to create a bespoke historic display - a site-specific heritage informed and inspired artwork created by an artist or designer.

(c) For temporary structures located in highly intact heritage conservation areas, a display of historic images or bespoke heritage informed content may be required, as above in **(b)**.

Note: Other than *City*-supplied and displayed graphics and public information, the *City* is not responsible for any copyright obligations that the applicant may need to meet.

6.1.4 Site-specific graphics - City initiatives

As *temporary structures* are placed on or above land owned and controlled by the *City* including being regulated through this Code, the *City* reserves the right to require a proponent to display specific graphics. This can include the display of community information about *City* initiatives such as major projects, special events and festivals supported by the *City* and other initiatives undertaken by the *City* from time to time.

Figure 6.4: As *temporary structures* are placed on a land owned by the *City*, the *City* reserves the right to require an applicant to display specific artwork or community information about *City* initiatives.

Photo: Peter Conroy / City of Sydney

Table 1: Graphics required to be displayed on *temporary structures* (*hoardings* & *scaffolding*) (refer to **Parts 03**, **04** and **05**)

Type of temporary structure	Location (refer to map at Figure 1.1)	When required, including installation period	Graphic requirement
Type-A *hoarding* and *work compound*	City-centre	More than 4 weeks	Refer to 6.13 and Notes 1 and 2
	Non-city-centre	More than 12 weeks	
Type-B *hoarding* (with or without single storey *site sheds*)	City-centre	More than 4 weeks	
	Non-city-centre	More than 12 weeks	
Type-B *hoarding* (with double-stacked *site sheds*)	All localities	Any duration	Refer to 6.13 and Notes 1 and 2
Large *scaffolding* systems and/or installations in prominent localities (as determined by the *City* - see Note 3)	All localities	As determined by the City (see Note 3); OR As required by a condition of development consent applying to the development or work	Refer to 6.18 and Note 3

Notes

1. The display of graphics is not required on *hoarding* installations in minor *roadways* such as laneways that are used primarily for local traffic and where the prevailing form of the laneway consists of rear fences, garages, gates, roller doors and the like.
2. Where a *hoarding* is installed on the main frontage of a corner block and the hoarding extends along a secondary side street (typically a laneway) that has a width not exceeding 6.0m measured from the property boundaries, graphics must be displayed for a length of at least 5.0m within the secondary street measured from the corner intersection (see **Figure 6.7**). Where the width of the *road* is more than 6.0m or graphics must be displayed for the full length of a *hoarding*.
3. Graphics displayed on *scaffolding* systems are typically referred to as '*scaffolding* wraps'. They can take several forms - refer to City's 'Creative Graphic Design Guide for Hoardings and Scaffolding' for further details. In determining when a wrap will be required, see **6.1.8**.

Table 2: Signage controls for *hoardings & work compounds* (when signage is proposed)

	Type of signage	Maximum size)	Location & maximum number	Other requirements
A	**Builder or principal contractor (name and logo), safety signage, design consultants' board and hoarding supplier identification.**	• No more than 5% of the aggregate outer surface area* of the hoarding in each street frontage; or • 5 square metres, whichever is the lesser.	• One (1) sign per street frontage; • Not higher than 8 metres above the footway/roadway surface. **Note:** Only permitted on hoardings and compounds.	1. Signage must be sympathetic with the graphic design and placed in accordance with Figure **6.17**; 2. Names of subcontractors and material/equipment suppliers must not be displayed on the hoarding and scaffolding; 3. A small sign stating the name of the hoarding supplier is permitted.
B	**Developer or corporate identification (name/logo).** **Note: Where the developer and the builder are one entity, the provisions under 'A' do not apply and all signage must comply with this part 'B'.**	• No more that 5% (combined) of the aggregate outer surface area* of the hoarding in each street frontage; or • 5 square metres, whichever is the lesser.	• Up to two (2) brandings per street frontage; • Not higher than 8 metres above the footway/roadway surface. **Note:** Only permitted on hoardings and compounds.	1. Must be sympathetic with the graphic design and placed in black panels at the perimeter edges of graphics; 2. Product images or the like must not be displayed; 3. Only minor text messaging associated with logos is permitted; 4. Corporate signage is only permitted when associated with the corporate identity of the current or future principal occupancy of the site/ building; 5. Only one website address can be displayed being a minor component of the corporate name/logo content and not a web address directly containing sales, leasing information or the like; 6. The names and logos of other entities such as property investors must not be displayed.
C	**Community information that may include:** • **details about the development or work;** • **civic or community events;** • **festivals; and** • **public interest messages.**	Type-A • No more than 20% of the aggregate outer surface area* of the hoarding in each street frontage; or • 10 square metres, whichever is the lesser.	One (1) sign per street frontage. Note: Only permitted on hoardings and compounds.	1. At least 50% of the permitted signage area allocated for information about the development or work must display an image of the proposed building or work (refer to **6.1.7** for further details). 2. Signage must be sympathetic with the graphic design and be placed in accordance with Figure **6.17**, preferably at the ends of hoardings fences.
		Type-B • No more than 10% of the aggregate outer surface area* of the hoarding in each street frontage, or • 10 square metres, whichever is the lesser.	One (1) sign per street frontage. **Note:** Only permitted on hoardings and compounds.	
D	**Wayfinding and *business identification signage***	In circumstances where an existing building is undergoing change or maintenance works and a *hoarding* installation affects sightlines to: • building entrances (existing or temporary) - the display of minor wayfinding signage is permitted on hoardings subject to *City* consideration & *approval* (see **2.17**); and • existing *business identification signage* - temporary replicated signage display on *hoardings* may be allowed (see **2.16**).		

Note: *'aggregate outer surface area' is the combined area of the site fence (including access gates/ doors and end panels), access stairway enclosure and the fascia of Type-B *hoardings*.

Figure 6.5: An example of an artwork display on a *hoarding* fascia and stairway enclosure.

BADABABABABBAT-DA by Tegan Watton
Photo: Peter Conroy / City of Sydney

6.1.5 Prominent highly visible sites

For *temporary structures* installed in prominent highly visible locations including commercial districts with high pedestrian densities or major transport corridors/*road*s, the *City* may require specific surface treatments beyond the requirements of **Table 1**.

Figure 6.6: *Scaffold* installation in prominent and highly visible localities may require *scaffold* wraps (refer to **Table 1**).

Photo: Peter Conroy / City of Sydney

6.1.6 Innovative hoarding designs and surface treatments

Variations to the prescriptive design elements for *temporary structures* (see **3.7**) in order to accommodate innovative designs and artwork such as sculptured *hoarding* fences/fascias and hand-painted surfaces (see below), may be permitted subject to site-specific assessment. This will include consideration of the suitability of the locality (*footway* width) including potential impacts on safe and *accessible* pedestrian movement particularly in high pedestrian density areas.

3D hoarding artwork by Trent Whitehead
Photo: Peter Conroy / City of Sydney

Hand-drawn hoarding mural by Jane Becker
Photo: Peter Conroy / City of Sydney

6.1.7 Development/worksite signage displays on temporary structures

The display of signage associated with the development or work is permitted subject to meeting the controls set out in **Table 2** and **Figure 6.16**.

Where sightlines to existing *business identification signage* will be impacted by a *temporary structure* the signage can be replicated and displayed on *hoardings* (refer to **2.16** and **Table 2** for further details).

Real estate sales and leasing information including contact details for agents must not be included as part of the community information panel. A small QR Code may be displayed directing the public to other more detailed information about the development or work.

Figure 6.7: For a corner site adjoining a laneway the installation of graphics on the secondary *road* (laneway with a width not exceeding 6 metres) must extend a distance of at least 5 metres from the primary *road hoarding* frontage as indicated (refer to '**Note 2**' in **Table 1**) and the remainder of the *hoarding* must be painted flat black.

Obstacle Course by Elliot Bryce Foulkes
Photo: Peter Conroy / City of Sydney

Figure 6.8: An example of a *scaffold* artwork wrap.

You rocked my heart Trev by Emily Parsons-Lord
Photo: Peter Conroy / City of Sydney

6.1.8 Scaffolding graphics (scaffold wraps) and other treatments

(a) Where required by **Table 1**, the entire *scaffolding* surface, or a lesser area as determined and *approved* by the *City*, must display a graphic (artwork, historic images or facade replication image) to mitigate the adverse visual impacts of scaffolding on the *public space* and to add visual interest and vibrancy in the streetscape.

Note: The mesh fabric on which graphics are printed for display on *scaffolding* must comply with the Australian Standard for *scaffolding (AS/NZS 1576)*, applicable Codes of Practice and any work safety standards or directives issued by *SafeWork NSW*.

(b) The *City,* as owner of the land upon which the *scaffolding* is placed, reserves the right to require a specific graphic display (see **6.1.4**).

(c) The projection of digital content (artwork/ images) onto a *scaffolding* wrap (mesh) is permissible subject to *City approval*. The *City* may also require a projected digital display.

(d) In determining when a wrap will be required the following factors will be considered:

(i) the prominence of the site and locality;

(ii) the extent of exposure within the *public space* (pedestrian density and extent of vehicle movement past the site), proximity to significant transport corridors (rail and/ or *road)* and transport nodes (rail/metro stations and major bus stops);

Figure 6.9: An example of a facade replication *scaffold* wrap on a heritage-listed building.

Photo: Peter Conroy / City of Sydney

Photo: Peter Conroy / City of Sydney

Figure 6.10: An example of shopfront facade replication on a heritage-listed building.

Photo: Peter Conroy / City of Sydney

(iii) the extent of exposure and visual impact such as vistas from reserves, squares and malls, major *road* intersections and the harbour;

(iv) the proximity to significant landmarks including heritage-listed buildings; and

(v) the duration of scaffold installation. As a general guide/consideration, an installation that is in place for more than six months is a significant determinate, together with the factors listed above.

Figure 6.11: An example of a bespoke historic images graphics display.

Photo: Peter Conroy / City of Sydney

Figure 6.12: Minor wayfinding signage is permitted (with *City approval*) where a *temporary structure* installation interferes with building entrances and retail/business premises (see also **2.16** and **2.17**). Signage can be incorporated as part of a graphics print/display.

Photo: Peter Conroy / City of Sydney

Figure 6.13: Always wrap printed fabric on corners to avoid the use of double vertical sail-tracking.

Suspended Figures by Prudence Stent and Honey Long
Photo: Peter Conroy / City of Sydney

Figure 6.14: Installation of a historic display on a large fascia surface.

Photo: Peter Conroy / City of Sydney

Figure 6.15: Where a *hoarding* depth is more than 0.5m, graphics must be displayed on the end panels. The printed fabric should be wrapped on the corners (to avoid double vertical sail-tracking). Where a historic display is required, the 'From the Archives' panel can be appropriately wrapped on the corner as shown in this figure.

Photo: Peter Conroy / City of Sydney

6.1.9 Printing and installation requirements

(a) For minimum standards and requirements for graphics refer to the *City*'s 'Creative Graphic Design Guide for Temporary Structures'.

(b) The system of installation and attachment of displays to *temporary structures* must consider the long-term durability, appearance and maintenance requirements to ensure that an acceptable quality appearance is provided and maintained.

(c) Printable banner fabric and fixing systems must meet the following requirements:

(i) the *City*'s preference is for banner fabric to be of fully recycled material (see **6.1.10**). Where this is not possible, the material must be banner fabric (such as PVC);

(ii) the material must be attached to the *hoarding* surfaces using pre-painted black powder-coated sail-track or other similar approved track system to ensure an even and taut surface finish is achieved (and maintained). The use of printed eyelet banners is not allowed as this system cannot maintain a satisfactory taut condition for an extended installation period; and

Figure 6.16: A minor information panel listing consultants associated with a development/construction site is permitted (refer to **Table 2**).

Photo: Peter Conroy / City of Sydney

Figure 6.17: All mandatory signage, other than minor caution signage and parking control signage, must be displayed at the ends of *hoarding* fences or next to access doors. Signage must not be placed over graphics.

Faraway gums by Billy Ryan
Photo: Peter Conroy / City of Sydney

(iii) sail-track and banner fabric must be installed in accordance with the *City's* 'Creative Graphic Design Guide for Temporary Structures' to achieve a high quality surface finish (site fence and fascia).

(d) Generally, fixing tracks and graphics must be installed within the internal edges of the perimeter trimming boards. On sloping *footways* this may not be feasible. Tracks and fixing systems must also be designed and installed to eliminate sharp edges at joins and fixings (low profile screw-heads must be used).

(e) The use of self-adhesive/backed material will only be permitted in the following circumstances:

(i) on a Type-A *hoarding* that is weather-protected by street awnings;

(ii) on the site fence of a Type-B *hoarding* where the overhead deck affords weather and sun protection; and

(iii) where the fencing material has a very high quality smooth surface finish to ensure full adhesion, prevent panel shrinkage and to prevent base-board surface imprints on the graphics fabric.

(f) Access doors exceeding 2.0m in width must have graphics applied. In some circumstances such as long duration projects, it is preferable that graphics be printed on or adhered to composite base-board for long-term durability. If vinyl banner fabric on access doors is significantly and/or repeatedly damaged, the *City* can require the graphic to be re-printed on a more durable composite board.

(g) Where an anti-graffiti finish is to be applied over printed content a matte/flat finish is required (gloss finish is not permitted due to excessive and unacceptable ambient light reflectivity impacts).

6.1.10 Recycling/repurposing printable materials (graphics)

Printable materials (banner and mesh) and fixing systems (such as metal sail-track) for the display of graphics must be capable of being reused, repurposed or recycled.

The *City's* preference is for banner/mesh products to contain recycled materials and be used for the display of graphics in a sustainable manner in accordance with the principles of a circular economy (closed-loop system). This includes a commitment to a robust chain of custody systems to ensure high quality traceability and integrity of the recycling processes.

Where recyclable banner material is used and complies with the requirements as set out above, a small (200mm square) standard recycling symbol can be displayed in an appropriate location on the printed banner graphic display.