

2 CITY WORKS GUIDE

Works Impacting City of Adelaide Assets



A guide to roads, footpaths, kerbing, stormwater, lighting and electrical, trees.

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Introduction

All works on City of Adelaide assets, including but not limited to excavation and trenching works, must comply with the City of Adelaide standards. This guide provides information in relation to standards for undertaking works which impact City of Adelaide assets, and the requirements and specifications for excavation, trenching and the protection and reinstatement of assets.

Any third party works which impact City of Adelaide assets, must ensure the assets are reinstated to a standard that equals or improves the existing, pre-development condition.

To carry out excavation or trenching in the City of Adelaide you will be required to apply for a City Works permit* by providing the following:

- A completed City Works application form
- A traffic management/site management plan detailing all dimensions of worksite and excavation/trench area including total m²
- Certificate of Currency for public liability insurance to the amount of \$20million noting City of Adelaide as an interested party
- Dilapidation report (see Planning for Excavation and Trenching)

Depending on the nature, scale and location of works, City

of Adelaide may request the applicant submit a works plan and proposed inspection and test plan demonstrating quality management controls which support how reinstatement works will adhere with specification and quality requirements listed in this document, prior to the issue of a permit.

Additional requirements and further information can be found at: cityofadelaide.com.au/cwg

Standards of Work

All works must comply with the relevant Australian Standards including, but not limited to:

- AS 4970-2009 – Protection of Trees on Development Sites
- AS 2150 – Hot mix asphalt – A guide to good practice
- AS 2891 – Methods of sampling and testing asphalt
- AS3845 – Road Safety Barrier Systems
- AS 1742.3 – Manual Uniform Traffic Control Devices- Traffic Control Devices for Works on Roads
- AS/NZS 1158 Series – Lighting for Roads and Public Safety
- AS 2560 – Sports Lighting
- AS 4282 – Control of the obtrusive effects of outdoor lighting
- AS 3000 – Wiring Rules
- AS 1289 – Methods of testing soils for engineering purposes

All worksites including hoarding are required to be kept clean and free of graffiti and bill posters at all times. Any offensive graffiti must be removed immediately.

Wherever practicable, impacts to local stakeholders, public transport services and infrastructure must be mitigated by either altering the proposed time/day of works, or the way in which the site is set up.

The specifications and requirements in this guide should be considered in addition to any statutory obligations relevant to the work activity or persons conducting the activity. Particular attention should be given to the following:

- *Work Health and Safety Act 2012* and *Work Health and Safety Regulations 2012*
- *The Disability Discrimination Act 1992*
- *Local Nuisance and Litter Control Act 2016* and *Regulations*
- *Development Act 1993, Planning, Development and Infrastructure Act 2016* and *National Construction Code*

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- *Environmental Protection Act 1993*, and all EPA Policies and Guidelines
- *Road Traffic Act 1961*
- *Local Government Act 1999*
- All SafeWork SA requirements and Codes of Practice
- All DPTI requirements and Workzone Traffic Management Standards
- City of Adelaide policies and City Works activity guides 1–6

Impacts to Parking and Smart Parking

Impacts to parking bays should be minimised wherever possible. If works restrict public access to a paid parking zone, the applicant will be required to pay an additional fee to subsidise the loss in revenue for the time the parking is unavailable to the public.

With the introduction of smart parking sensors across the City of Adelaide, any works which restrict access to smart parking bays will be identified as part of your City Works application. This will ensure that the relevant information can be shared with the public. Traffic management plans must be accurate and detailed so that we can identify any impacts to smart parking sensors.

If trenching or excavating in the vicinity of smart parking sensors, you must contact us prior to submitting your application for more information. Alternatively, after receiving your City Works application, our On-Street Parking Management team will be in contact with you. Please note, the removal and reinstatement of smart parking sensors is only to be carried out by the City of Adelaide. The cost of which will be the responsibility of the applicant. For more information, please contact our Customer Service Centre.

River Torrens Heavy Vehicle Bypass

Heavy vehicles over 26 tonnes are not able to use the Albert Bridge (Frome Road), Adelaide Bridge (King William Road) and Victoria Bridge (Montefiore Road).

The Adelaide City Ring Route (R1) is the best way for large and heavy vehicles to avoid the restricted bridges and move between Adelaide CBD and North Adelaide.

The location of the bridges and the Adelaide City Ring Route can be found at cityofadelaide.com.au/bridge-bypass.

Protection of Trees

Where development is to take place in close proximity to any tree/s, that tree's roots, trunk and branches shall be protected by appropriate tree protection measures during the course of the development in accordance with AS4970-2009 'Protection of Trees on Development Sites'.

Therefore prior to commencement of construction a tree protection zone must be established to prevent damage to the trees and the fencing is to be secured to prevent movement. The tree protection zone is normally the area below the trees canopy extending to its drip line. This is the area where a lot of water and nutrient uptake occurs from a multitude of fine near surface roots.

Within the tree protection zone the following is prohibited:

- stockpiling of construction materials
- contamination of the ground with paint, oil, cement or other materials
- use of retained trees for anchorage points
- attachment of notice boards, cables, or other services
- mixing of cement
- movement of plant/equipment or vehicles.

Any pruning of the tree/s required to facilitate site works will only be undertaken by City of Adelaide.

To obtain tree asset information prior to works, or, to report any impacts to trees, whether above or below ground, that has not already been identified and discussed as part of the development planning discussions, please contact the City of Adelaide prior to undertaking any work.

Modifications to City of Adelaide's assets.

Should your planned work require the modification of City of Adelaide assets, as-constructed documentation for those modifications is required to be submitted no more than six weeks post the date of practical completion.

The as-constructed documentation will need to include (subject to agreement with City of Adelaide contact):

- As-constructed drawings that accurately reflect the details of the work as constructed, and based on:
 - the drawings contained in the specifications;
 - a detailed survey of the site after construction of the Works is complete; and
 - City of Adelaide Drawing Guide: cityofadelaide.com.au/standards-guidelines
- A full suite certificates of compliance, testing, warranties and operational manuals for new City of Adelaide assets, sufficient to enable the City of Adelaide to fully operate and maintain the new assets.
- An accurate breakdown of costs, materials and quantities used for the performance of the work in the breakdown structure format supplied by the City of Adelaide for these works.

Planning for Excavation and Trenching

Dilapidation Reports

City of Adelaide expects that at the conclusion of works, all assets are left in the condition they were in prior to commencement of work. Therefore, all work to be carried out in the public realm must have a dilapidation report provided as part of the City Works application which details the pre-development condition of the assets. Dilapidation reports shall contain photos of the condition of any adjoining structures as well as the public realm assets such as roads, footpaths, kerbs, gutters, signage, trees, public lighting, CCTV cameras and any other assets in the area. All damage caused to pavements and other City of Adelaide infrastructure during or in connection with the work activities must be repaired in line with City of Adelaide's

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reinstatement specifications in this guide at the applicant's expense.

City of Adelaide also highly recommends that at the conclusion of any works, post development photos are taken and supplied to City of Adelaide promptly to record the condition of all assets in the area which can be advantageous in avoiding liability for future damage to the assets.

Reinstatement Timeframes

When planning for excavation and reinstatement, applicants must ensure that road and footpath service is fully restored in a timely manner following the completion of service installations and backfill.

This is required to ensure that there is no prolonged and unnecessary disruption to the public, as well as to mitigate the risks associated with a prolonged worksite occupancy.

It is City of Adelaide's preference that the permanent reinstatement of a road or footpath is completed within 24 hours of service installation works. In instances where this cannot be achieved, the road and/or footpath pavement must be temporarily reinstated and have work site hoarding removed, so that the footpath/road can be reopened to the public. Further details regarding the requirements for temporary road and footpath reinstatements can be found within excavation and reinstatement specifications section.

Following the completion of the temporary reinstatement, the permanent reinstatement must then be complete within 10 days, unless otherwise negotiated with City of Adelaide.

The timing of reinstatements (both temporary and/or permanent) must be planned and detailed within the works plan submitted with the City Works permit application.

Where stormwater infrastructure is to be installed or modified, it must be designed and constructed in accordance with City of Adelaide standards and design criteria detailed in the Stormwater Specifications section.

Works Plan and Inspection and Test Plan

Depending on the nature, scale and location of works, City of Adelaide may request the applicant submit a works plan and proposed inspection and test plan with their City Works permit application.

The works plan will detail the proposed staging of the works including temporary and permanent reinstatement timeframes, construction methodology (i.e. typical dimensions, pavement layer thicknesses, materials and plant) with respect to the reinstatement specifications and requirements listed within this document and its attachments.

The applicants proposed inspection and test plan will complement the works plan and is required to demonstrate the contractor's quality management controls to ensure works adhere with City of Adelaide reinstatement specifications and quality requirements.

At the completion of works, the completed and signed inspection test plan shall be submitted to City of Adelaide, city@cityofadelaide.com.au, with any other supporting project completion documentation.

Environmental Precautions

When excavating, precautions must be taken to limit the amount of dust being emitted from the site. Stormwater runoff and sediments must be contained on site. Clean stormwater is to be discharged to the designated stormwater network. Sedimentation barriers must be used where appropriate such as hay bales, sand bags, sediment traps and silt socks.

If sediment is left on road or drain after work is completed, these areas must be routinely swept to ensure that sediment cannot enter the stormwater system via wind or water action in accordance with Environmental Protection Agency guidelines.

Excavation and Reinstatement Specifications

This section of the guide outlines City of Adelaide's requirements for all excavation and reinstatement works carried out by service providers and/or contractors within the City of Adelaide. These works may include excavations on any roadway, footpath or area of the Park Lands maintained by the City of Adelaide that may be required for service installations, relocation of existing services, drainage or other reasons. Use of trenchless techniques can be considered as an alternative to conventional trenching.

City of Adelaide prefers applicants to undertake their own reinstatement activities, however, may choose to provide this service at the applicants cost.

For the City of Adelaide to carry out the permanent pavement reinstatement, an agreement must be obtained before any excavation work commences, as part of the City Works application.

All costs associated with excavation, trenching, damage to City of Adelaide assets, reinstatement of assets, removal of material, supply of new material, compaction testing, rectification of defects for the life of the 24 month maintenance period, whether carried out by the applicant or by City of Adelaide on behalf of the applicant, shall be to the responsibility of the applicant.

The standards and guidelines webpage referenced in this section can be accessed at cityofadelaide.com.au/standards-guidelines.

Detector Loops

Where excavation is undertaken in the vicinity of traffic signals, all necessary care and precautions should be taken to prevent damage occurring to the City of Adelaide's detector loops.

Where damage has occurred, the applicant must notify the City of Adelaide and arrange for the replacement of the damaged detector loops.

Lifting of Pavers

Slate, granite, concrete flagstone and brick paving units must be lifted, not saw cut. Pavers are to be removed along the line of the trench and an additional 300 mm width (minimum) on both sides of the trench to prevent undermining of the edges.

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Pavers should be stacked neatly on the footpath in a location, which will not unduly hinder or compromise the safe passage of pedestrians or vehicles accessing private property. Appropriate safety barriers, with hazard lighting is to be placed around the stockpiled pavers in accordance with [City Works Guide #1 – Works in the Public Realm](#).

When the pavers cannot be stored securely within a worksite, they must be stored securely at an offsite location. This must be documented as part of the City Works application.

When the permanent pavement reinstatement cannot be completed within 24 hours, and the surface is temporarily reinstated, all pavers must be stored safely offsite until the permanent reinstatement is complete.

Any surplus pavers shall be returned promptly to City of Adelaide works depot during business hours.

Saw Cutting

Saw cutting of slate, concrete flagstone, brick or block-paved surfaces is not permitted.

All trenches in asphalt road and footpath pavements should be neatly saw cut on both sides. All saw cutting of asphalt is to be carried out by a masonry saw in straight lines. The applicant should ensure that all saw cutting is dampened by water to reduce dust and that the residue from saw cutting is contained, collected and disposed of in accordance with Environmental Protection Agency Guidelines. Saw cutting residue is not permitted to enter the stormwater drainage system or dry out on the road surface.

Saw cuts should be spaced wider apart than the necessary trench width, by a minimum of 100 mm on each side, to prevent the excavation from undermining the asphalt edge. The trench should be saw cut to the full depth of the existing asphalt surface. Care should be taken to not damage the pavement surface during saw cutting and excavation.

Removal of Excavated Material

Excavated material must not be used to backfill trenches. All excavated material, including but not limited to loose rubbish and foreign material, must be removed from the site and appropriately disposed of by the applicant, including any material that may be classified as contaminated. Shoring may be required to maintain the stability of the soil in line with SafeWork SA guidelines.

Installation of Service Pits

The applicant is required to install new pits within the footpath pavement in accordance with details provided at the standards and guidelines webpage. Service pits shall not be installed within a kerb ramp or kerb and water table.

Where new pits are installed in the road or footpath, the class of the pit lid should be fit-for-purpose and considerate of the site-specific loadings, including City of Adelaide footpath cleansing plant/vehicles.

Levels of newly installed pits must match the existing footpath crossfall level and not be installed flat. Final surface levels must be flush across the newly installed pit, any associated reinstated paving and existing adjacent paving.

Where paver infill pit lids are utilised for adjacent existing pits on the street, the applicant must install new pit lids to match accordingly. City of Adelaide can be contacted for construction details of these pit lids.

Backfill

Backfill of excavated areas must be constructed in accordance with details provided at the standards and guidelines webpage utilising Type 'D' Sand (Sa-D), compacted by mechanical means. The backfill depth is to extend up to the underside of the required pavement reinstatement.

All excavations that have not been permanently reinstated during the working shift must not be left open and shall be temporarily reinstated.

Road Reinstatement

The applicant is required to reinstate the pavement for all excavations within the road, unless approved otherwise by the City of Adelaide.

All construction works associated with the reinstatement of the road pavement must comply with the requirements of the road reinstatement specifications and construction details provided at the standards and guidelines webpage as well as the following standards and specifications:

- AS 2150, Hot Mix Asphalt
- Part R15 – Supply of Pavement Materials (DPTI Roadworks Specification)
- Part R21 – Construction of Unstabilised Granular Pavement (DPTI Roadworks Specification)
- Part R27 – Supply of Asphalt (DPTI Roadworks Specification)
- Part R28 – Construction of Asphalt Pavements (DPTI Roadworks Specification)

Pavements must be reinstated with an even surface finish, flush with the existing adjacent pavement. The reinstated wearing course extents must include the full width of affected lanes, details provided at the standards and guidelines webpage.

Any line marking and bike greening impacted by excavation works must be reinstated as part of the permanent pavement reinstatement.

For road excavations, quarry rubble and hot mix asphalt (AC10) or steel plates must be used where temporary reinstatement are undertaken, depending on the status of the works. It is the applicant's responsibility to ensure that the temporary reinstatement remains in a safe condition, flush with the adjacent pavement surfaces, until the time where the permanent reinstatement works are complete.

Footpath Reinstatement

The applicant is required to reinstate the footpath pavement in accordance with details provided at the standards and guidelines webpage. For all stone paved (i.e. granite and slate) and in-situ concrete areas, the Applicant is required to contact the City of Adelaide for the site-specific reinstatement details. All footpath pavement reinstatements must match existing levels and be flush with

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the adjacent existing footpath surface and any newly installed service pits. Paving must be reinstated to match the original paving pattern.

The reinstatement of paved footpaths may utilise the existing pavers provided that the pavers are not damaged (scratched, cracked or chipped). If any of the existing pavers have been damaged, the applicant is responsible for replacing with new pavers.

For trenching works located within asphalt footpaths, where the footpath has a width less than 1.5 m, the reinstated asphalt wearing course extents must encompass the full footpath width for the length of trenching details provided at the standards and guidelines webpage.

For asphalt footpaths with a width greater than 1.5 m, the asphalt wearing course must be reinstated as a single rectangular shape parallel to the kerb line, which fully encompasses the extent of trenching, with a minimum width of 0.5 m details provided at the standards and guidelines webpage.

For pit installations located within asphalt footpaths, the reinstated wearing course extents must extend a minimum of 300 mm around the edge of the concrete pit surround.

For trenching works and pit installations located within in-situ concrete footpaths (e.g. Rundle Street), each concrete slab impacted by works must be reinstated between each control joints as outlined details provided at the standards and guidelines webpage.

The City of Adelaide reserves the right to undertake permanent reinstatements for specific footpaths at the applicant's cost.

For footpath excavations, quarry rubble and hot mix asphalt (AC7) must be used where temporary reinstatements are undertaken. It is the applicant's responsibility to ensure that the temporary reinstatement remains in a safe condition, flush with the adjacent pavement surfaces, until the time where the permanent reinstatement works are complete.

Kerb and Water Table Reinstatement

The applicant is required to reinstate any impacted kerb and water table in accordance with construction details available from the standards and guidelines section of City of Adelaide's website. For all impacted stone kerb and water table (i.e. granite and slate), the applicant is required to contact the City of Adelaide for the site-specific reinstatement details. All kerb and water table reinstatements must achieve positive grade (minimum 0.35%) and generally match the existing levels.

All new or modified driveway crossovers will require a driveway crossover permit, in addition to the City Works permit process. The applicant is required to install the driveway crossover in accordance with construction details available from the standards and guidelines section of City of Adelaide's website.

Park Lands/Nature Strip Reinstatement

The applicant shall reinstate the top 100mm of Park Lands and nature strips with approved topsoil. The applicant is responsible for any work required, such as seeding and turfing to reinstate the trench, park lands or nature strip to

match existing, to a standard which is acceptable to the City of Adelaide, at the cost of the applicant.

Compaction Testing

It is required that the applicant carry out compaction tests in accordance with the testing methods as outlined in AS1289, to support the quality management controls utilised in the inspection and test plan to ensure works comply with City of Adelaide reinstatement specification's and requirements. A laboratory registered by the National Association of Testing Authorities must carry out any testing that is undertaken.

Copies of test results shall be provided to the City of Adelaide within 14 days of testing.

Compaction testing requirements are as follows for all trenching within the road as well as footpath trenching exceeding 3 m in length:

One compaction test at top of each layer, for up to 40 m of trenching and additional tests on the sub-base and base layers for each additional 40 m increment of trenching undertaken.

Defects Liability Period

City of Adelaide proactively inspect the performance of third-party works undertaken within the city. The applicant is responsible for the cost of any remediation works required to address defects associated with reinstatement works for a 24 month period. All remediation treatments should be agreed with City of Adelaide in writing prior to being undertaken.

Where the applicant is required to undertake additional works due to a defect occurring during the defects liability period, the defects liability period shall be extended from 24 months from when the City of Adelaide is notified of the completion of the additional works. The City of Adelaide may request conformity testing of the additional works.

Stormwater Specifications

This section of the guide outlines the City of Adelaide's requirements for stormwater works associated with private development and within the streetscape/roadways and Park Lands.

Relevant Standards:

All works must be undertaken in accordance with relevant legislation, standards and guidelines including but not limited to AS/NZS 3500.3 Part 3: Stormwater drainage and Australian Rainfall and Run-off.

Certifications and Handovers:

All designs and construction works must be supported by engineering certifications and supporting documents by a suitably qualified Professional Engineer identifying compliance with relevant standards.

Supporting documents include design plans, works as executed plans, survey, engineering calculations, inspection records, CCTV footage, photographic records, and any other relevant information to demonstrate works are fit for purpose and comply with relevant standards.

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Water Quality and Water Sensitive Urban Design (WSUD)

Management and discharge of water must comply with Environment Protection (Water Quality) Policy and relevant legislation and guidelines. Discharge of contaminated water to Council drainage system is not permitted.

Site drainage systems must incorporate the principles of water sensitive urban design in accordance with State-wide WSUD performance principles and targets and the state planning system requirements. For more information refer to "Water Sensitive Urban Design, Creating more liveable and water sensitive cities in South Australia" and Water Sensitive SA website.

Containment

The applicant must ensure that all stormwater runoff from the property is contained within the property boundaries, collected and discharged to the designated roadway(s). Stormwater runoff must not be discharged over the footpath.

Uphill lands

Natural drainage paths and surface flows must be accommodated within private developments. Surface flows must not be blocked or directed to adjoining properties.

Capacity

Property drainage systems must have capacity to transfer the 1% AEP storm runoff through minor system stormwater connections to City of Adelaide's underground stormwater system or roadway and overflow systems to transfer stormwater flows generated by extreme rainfall events.

The minor stormwater system connections to City of Adelaide's underground stormwater system or roadway must be designed to the 5% AEP standard.

Site drainage systems must incorporate on-site detention where capacity of existing Council system cannot accommodate additional discharge.

1% AEP Downstream Conditions

The proposed stormwater drainage system must be designed such that the private drainage system is not influenced by backwater effects or hydraulically controlled by the receiving system and should be designed to provide an appropriate overland flow path/surcharge system to the road.

The design engineering is responsible for determining the downstream conditions. The design should be undertaken assuming the 1% AEP Hydraulic Grade Line (HGL) is at least at the top of kerb level or 100 mm above the invert of the central water table adjacent to the proposed stormwater connection.

Boundary Control Pits

An inspection opening or stormwater pit must be installed at the boundary for all stormwater outlets to provide for overflows and inspection and maintenance.

Property stormwater connection location

New developments must connect to Council's underground drainage system where drainage infrastructure exists within the vicinity of the site.

The underground pipe connection must be made at City of Adelaide's existing stormwater catchpit or manhole.

Note, some of council existing pits are wet sumps. Any new connection must be installed at or above the invert of the outgoing pipe from Council pit.

Where discharge to kerb is approved by Council, use of Checker Plate drains shall be avoided wherever possible.

Any stormwater footpath crossing(s) in the designated roadway are to be installed according to City of Adelaide standard details: cityofadelaide.com.au/standards-guidelines UPVC pipe work is not permitted in the footpath or roadway.

Where checker plates are to be used, checker plate drains are to be located 1 m clear of driveways and street trees, perpendicular to the kerb, and any sumps in the footpath are to be dry.

Kerb Outlet Flow Rate

Maximum stormwater discharge for the kerb outlet or checker plate drain based on a 5% AEP must not exceed 15.01 litres per second.

Number of Kerb Outlets

The number of kerb outlets along a street property frontage is to be kept to a minimum. The applicant must connect to City of Adelaide's underground stormwater system where discharge flows exceed the maximum 15 litres per second (based on the 5% AEP) or where connection pipes are too low to achieve a checker plate drain connection with a 'dry' footpath sump.

Property stormwater connections

The stormwater drainage system upstream from connection to City of Adelaide's underground stormwater system, kerb and watertable or central watertable in the designated roadway is the property owner's responsibility.

All property stormwater connections to Council's underground system shall be a minimum 150mm in diameter (HDPE maximum SDR13.6, encased in minimum 100mm of concrete) and where 225mm or larger shall be a Reinforced Concrete Pipe (RCP) and installed as per section 'City of Adelaide stormwater pipes'.

City of Adelaide stormwater pipes

City of Adelaide stormwater pipes are classified all stormwater pipes within the public realm and easements owned and managed by the City of Adelaide, excluding stormwater property connections.

All City of Adelaide stormwater pipes shall be a minimum of 375mm in diameter and shall be Steel RCP Class 4.

Pipes shall be installed in accordance with the manufacturer's specifications.

The pipe works should be a minimum cover of 200mm below the footpath and 400mm below the finished roadway (at the kerb).

Installation to be a "Type HS2 Support".

Back Fill

All pipe work should be backfilled in accordance with the reinstatement specification for excavations in this guide.

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Direct Connection

New direct connections to City of Adelaide's underground stormwater pipe are generally not permitted.

Where an existing City of Adelaide stormwater or manhole is not located adjacent to the property roadway frontage, and where the property stormwater pipe is greater than 225mm diameter, a new City of Adelaide pit must be constructed to facilitate connection to the City of Adelaide's underground stormwater system.

Where the property stormwater pipe is 225mm diameter or smaller consideration will only be given for direct connections when in accordance with City of Adelaide standard details.

Maintenance of Stormwater Connections

The property owner is responsible for installation and maintenance of all private connections to Council drainage system including, boundary pits, kerb connections, checker plate drain connection to the street water table and stormwater pipe connection from the property boundary to the City's underground stormwater drainage system.

Services

The location of service covers and underground services along the line of the proposed stormwater connection in the designated roadway is the responsibility of the applicant.

Stormwater Connections on Roads without Footpaths

Discharge of stormwater to the surface of a public roadway with a central water table and no footpath must be by way of stormwater pipe connection to the underground system.

Where this cannot be reasonable achieved, discharge from downpipes must be directed into the roadway perpendicular to the property boundary, and discharged horizontal to the road surface flush with the roadway surface. Pipes must not discharge stormwater vertically onto the road surface. Any discharge pipes or downpipes must not protrude across the property into the public road.

Pumped Stormwater Property Connections

Areas below street level must be raised and/or protected from ingress of surface flows such that pump out systems are not required. Discharge of surface flows via pumps is permitted for minor surface areas below street level such as entries to basement ramps.

Sump Discharge

The proposed sump discharge line at the street boundary should be looped above ground level within the site and discharged 100mm above a grated sump to prevent potential back flooding and syphoning of stormwater from the City of Adelaide's stormwater drainage system into the property.

Sewer Discharge Connections

Collected drainage water from landscaped areas, swimmingpools, planter boxes, water features, bin wash rooms, car wash bays and air conditioner units must be discharged to the sewer in accordance with SA Water guidelines.

Groundwater disposal from buildings

Groundwater disposal from buildings is a type of

dewatering activity and must comply with EPA's guideline for Environmental Management of Dewatering during Construction Activities.

Discharge of groundwater to Council underground drainage system is only permitted where no alternative exists, groundwater flows are demonstrated to minimal and intermittent, suitable water quality and free from contaminants from the site. Discharge of groundwater to Council above ground surface drainage system (kerb) is not permitted.

Cleaning Activities

Residue water from cleaning activities within the property must not be discharged into the City of Adelaide's stormwater system.

Grated Inlet Levels

Any existing or proposed open grated pits or inspection openings within the site must have the level of the opening higher than the top of kerb level or 100 mm above the invert of the central watertable adjacent to the proposed stormwater connection in the designated roadway.

Redundant assets

Redundant assets must be completely removed and road reinstated unless otherwise approved in writing by Council Engineer. Where filling of pits and pipes is required, a sand cement mix or similar should be proposed for Council approval.

Standard details

For more information on City of Adelaide's Civil Construction Standards visit: cityofadelaide.com.au/standards-guidelines

Lighting, Electrical, CCTV and Undergrounding

In order to maintain public safety, electrical and associated assets in the public realm must be protected during development constructions. This will ensure safe levels of lighting are maintained throughout the development process. The public realm should be appropriately lit to provide safety and security at night. External lighting within the public realm is designed to meet the requirements of:

- AS/NZS 1158 Series – Lighting for Roads and Public Safety
- AS 2560 – Sports Lighting
- AS 4282 – Control of the obtrusive effects of outdoor lighting
- AS/NZ 3000 – Wiring Rules

All temporary lighting, and permanent reinstatements must meet the relevant Australian Standards as well as City of Adelaide Urban Elements Guidelines – Lighting and Electrical Standards cityofadelaide.com.au/standards-guidelines. To obtain asset information prior to works, or to report any impacts whether above or below ground that has not been identified and discussed as part of the development planning discussions, please contact the City of Adelaide prior to undertaking any work. standards.

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Awnings Over Public Footpaths

An application of a new veranda, awning and other structure covering the area over footpath requires the installation of lighting by the applicant to illuminate the footpath for safety reasons and to contribute to the amenity of the public realm. Refer to City of Adelaide's 'Operating Guidelines – cityofadelaide.com.au/standards-guidelines.

Impacts to Existing Lighting

Prior to the commencement of any removal or relocation of existing City of Adelaide or SA Power Networks lighting assets and/or their associated electrical infrastructure, you must contact City of Adelaide to ensure all appropriate approvals have been granted. All works must comply with cityofadelaide.com.au/standards-guidelines and all associated costs are the responsibility of the applicant.

Removal of City of Adelaide assets must be carried out by an approved council contract panel electrical contractor or alternatively SA Power Networks where the assets are owned by them. City of Adelaide assets will be clearly labelled and returned to City of Adelaide for storage until such time when reinstatement is required. A minimum of two (2) months notice to City of Adelaide for removal and reinstatement is required to undertake the associated works.

Sports and Park Lands Lighting

The installation of new or alterations to existing sports lighting and related electrical infrastructure within the Park Lands requires City of Adelaide approval and may require Development Approval prior to the commencement of any works. A City Works permit is required for any public realm occupation required to facilitate the works.

Temporary Lighting

As each development is unique relative to the use of a site and the existing services located within its proximity, a tailored solution to suit the project will be required in coordination with the development, City of Adelaide and SA Power Networks assets.

Temporary lighting of public roads and footpaths adjoining the site of any work activity shall be provided for safety of pedestrians and vehicles at night and to ensure that any construction or demolition structures or equipment adjacent to the roads and footpaths are adequately illuminated and visible at night for public safety.

For temporary lighting standards for pedestrian raceways, hoarding and compounds, please see City Works Guide #1 – Works in the Public Realm.

Impacts to CCTV

If the location of a development and/or its associated structures – (including hoardings or compounds) impact on the existing coverage of City of Adelaide/SA Police CCTV camera street surveillance coverage, a review of the site works will be required. A City of Adelaide representative will visit the site and determine a suitable alternative for the CCTV coverage.

If the site works are unable to avoid affecting the existing CCTV coverage, relocation or the addition of cameras may be required and associated costs shall be paid in full by the applicant. The works will be carried out by an City of Adelaide approved CCTV contractor to meet

City of Adelaide requirements and standards.

Damage to Council lighting, electrical or communication assets including underground services

Any activity that results in damage to City of Adelaide's assets will be paid for in full by the applicant. Where ground boring is required for the erecting of cranes or lifting mechanisms, locations of bores shall be reviewed with City of Adelaide prior to commencement of works. It is the responsibility of the applicant to locate all underground services at their site and ensure that the locations of all cranes shall be reviewed to ensure inground services are not impacted/crushed.

Damage to existing services/pit lids are to be reinstated to City of Adelaide requirements and the relevant standards. City of Adelaide services/pits must not be buried or covered over by any works including planter boxes, earth works or structures. Access to all City of Adelaide assets shall be maintained throughout construction to allow access maintenance during the development construction phase.

If services/pits are too low they shall be raised to the finished surface level to meet City of Adelaide requirements and the relevant standards. All damage shall be reported directly to City of Adelaide via the Customer Service Centre.

Any developments, maintenance or other activities near existing overhead electricity powerlines

Where proposed developments or works are in proximity to existing SA Power Networks overhead reticulation (including LV and HV infrastructure), the applicant is required to contact SA Power Networks or the Technical Regulator to gain advice on safe work practices and guidelines.

Advice from the Technical Regulator shall be sort by the applicant to in relation to clearance requirements to SA Power Networks infrastructure – inground and overhead.

For further information visit: sa.gov.au/otr or call the Office of the Technical Regulator on 8226 5500. Regulations under the *Electricity Act 1996* are available from: legislation.sa.gov.au

Underground Private Electricity Consumer Mains

Undergrounding of public streets involves removal of overhead SA Power Networks power lines, stobie poles, telecommunication cables and associated infrastructure and replacing these with underground networks and may also include installation of new street lighting.

Property owners wishing to underground their electricity supply (Private Consumer Mains) from the SA Power Networks service point to their property must contact the City of Adelaide to gain approval by emailing city@cityofadelaide.com.au. A City Works permit is also required to approve the publicrealm occupation work to facilitate this activity.

The City of Adelaide has an underground funding scheme to incentivise the removal of overhead power lines, telecommunications cables and associated infrastructure to improve visual appeal, safety and usability of public places.

For more information please visit: cityofadelaide.com.au/undergrounding