PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

Approval no: DEV2021/1251

Date: 16 March 2022

Queensland Government

Maroochydore Private Hospital

Mundoo Boulevard, Maroochydore

Stormwater Management Plan

Sunshine Coast Regional Council

November 2021

Document Verification

Job Title	Maroochydore Private Hospital
Job Number	25222
Document Title	Stormwater Management Plan

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Document Control

Date	Document / Description	Revision No.	Author	Reviewer
09.09.21	Stormwater Management Plan	00	P. Pascon Da Paz	D. Macky
18.11.21	Amended Layouts	01	D.Macky	M.Van Itallie

Approval for Issue

Name	Signature	Date
Dane Macky		18.11.21
Michael Van Itallie		18.11.21

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EXECUTIVE SUMMARY

ADG Engineers (Aust.) Pty Ltd has been engaged by Essence Project Management Pty Ltd to prepare a Stormwater Management Plan (SMP) on behalf of Barwon Investment Partners and DPA Health for submission to the Economic Development Queensland in support of a Development Application for a mixed-use development. The site is located at Sun Central technology hub at Mundoo Boulevard, Maroochydore, which is within the Maroochydore Priority Development Area.

The proposed development described by Mode Design architectural plans is for the proposed new Maroochydore Private Hospital. The development comprises of eight (8) level structure with three (3) levels of above ground carparking and multilevel commercial spaces.

This report has been updated to harmonise with the Maroochydore City Centre Stage 1 Local Flooding Technical Memorandum regarding the minimum floor level to achieve flooding immunity and Sunshine Coast Council Flood Information Search. For more information refer to **Appendix D**.

The report comprises of stormwater quality assessments for the proposed development. No onsite stormwater detention is required as the site is located within close proximity to a downstream waterway and mouth of the Maroochydore River (refer to section 3.1 of this report for further intonation). The development will consist of various floor levels, ranging from 3.65 to 3.97m AHD for flood immunity (refer to section 3.2 of this report for further information). The quality assessment was undertaken to determine the required stormwater treatment measures to meet the State Planning Policy 2017. In order to comply with the relevant standards, the following Stormwater Quality Improvement Devices are proposed:

- Three (3) OceanGaurd filter baskets to be placed within pits on the ground / podium levels; and
- 11 x 690mm Ocean Protect StormFilters system within a precast manhole (or approved equivalent).

1 INTRODUCTION

1.1 General

ADG Engineers (Aust.) Pty Ltd was engaged by Essence Project Management Pty Ltd on behalf of Barwon Investment Partners and DPA Health, to carry out a Stormwater Management Plan (SMP) suitable for submission to Economic Development Queensland (EDQ) for a proposed Mixed-use Development (Maroochydore Private Hospital) at Sun Central Mundoo Boulevard, Maroochydore, QLD 4558.

The purpose of this report is to provide advice on the proposed development with regard to works required to service the proposed development with regard to stormwater treatment, as detailed in the architectural drawings in **Appendix A**. The works described herein are subject to further approvals and cover works required to service the proposed development with regard to stormwater treatment.

1.2 Background Information

This report was compiled using information from the following sources:

- Architectural plans supplied by Mode Design Corp. Pty Ltd (**Appendix A**);
- Detail Survey supplied by Bennett & Bennet Pty Ltd (**Appendix B**);
- Technical Memorandum: Maroochydore City Centre Flooding and Stormwater Management Consideration for Stage 1 prepared by Cardno (**Appendix D**); and
- Maroochydore City Centre Stage 1 Construction Plans prepared by Cardno (QLD) Pty Ltd (**Appendix E**).
- Detailed Maroochydore City Centre Stage 1 As constructed plans (not provided as part of this report).

1.3 Property Details

Proposed Lot J1 and J2 of Maroochydore City Centre is part of the master planned Maroochydore City Centre development area. The development area currently comprises of a vacant land with no dwellings or structures. The site is currently completely pervious and covered with poor to medium grass coverage.

The existing land titles that make up the site are given in **Table 1**. The current condition of the site is shown in **Figure 1**.

Table 1 - Property Details

Existing Title	Lot 201 on SP305312
Street Address	Mundoo Boulevard, Maroochydore Qld 45587
Existing Lot Area	451,000 m^2
Developable Site Area	2,969 m^2

Figure 1 - Site Locality Plan (As Accessed from Nearmaps, on 16.11.2021)

2 PROPOSED DEVELOPMENT

The proposed development as described in the architectural drawings in **Appendix A** is a mixed used development of approximately comprised of eight (8) level structure with three (3) levels of above ground carparking and multilevel commercial spaces.

A breakdown of the surface areas exposed to rainfall for the proposed development is presented in **Table 2**.

Table 2– Proposed Development Areas

Catchment ID	Land Type	% Impervious	Area (m^2)	Percentage of Total Site Area
C1	Roof	100	1,901	64%
	Podium/ Landscaping	75	969	33%
C2 bypass to road reserve draining infrastructure	Roof	100	87	2.5%
	Ground	0	12	0.5%
	Total	**91%**	**2,969**	**100%**

Refer to the Stormwater Quality Plan SK01 in **Appendix C** for further information regarding the areas calculated for each land type.

The site is bounded by South Sea Islander Way to the north-east, Future Way to the south-west, Mundoo Boulevards to the north-west and Market Lane to the south-east. The site has a boundary level generally between 3.8mAHD and 3.5mAHD and falls towards the centre of the site's Future Way frontage.

2.1 Proposed Stormwater Infrastructure

Stormwater Connection will be provided to the site as part of the suncentral subdivision process by others. The discharge arrangement consists of the following:

- A 600x600mm field inlet pit located on the site's Market Lane frontage approximately 15 meters south of the South Sea Island Way and Market Lane intersection, with a DN375 stormwater connection to the stormwater reticulation network within Market Lane. The proposed invert level of the pit is 1.828mAHD.
- A 900x600mm field inlet pit located on the site's Market Lane frontage in the south east corner of the site with a DN375 stormwater connection to the stormwater reticulation network within Market Lane. The proposed invert level of the pit is 1.7mAHD.
- A 900x600mm field inlet pit approximately centrally located on the site's Mundoo Boulevard frontage with a DN375 stormwater connection to the stormwater reticulation network within Mundoo Boulevard. The proposed invert level of the pit is 1.872mAHD.
- A 900x900mm field inlet pit located on the site's Mundoo Boulevard frontage, north of the site's southwestern corner with a DN375 stormwater connection to the stormwater reticulation network within Moondo Boulevard. The invert level of the pit is 1.50mAHD.

Refer to the detailed Maroochydore City Centre Stage 1 Construction Plans prepared by Cardno (QLD) Pty Ltd **Appendix E** for further details regarding the proposed stormwater infrastructure surrounding the subject site.

2.2 Proposed Services

The operational works design for the site included a multitude of services allowing for the accommodation of the proposed building development outlined in this report. The following services have been identified in the Maroochydore City Centre subdivision operational works drawings by Cardno:

- Four (4) optional drainage discharge points as listed above.
- Two (2) water supply points located on the site's Market Lane frontage inside the boundary.
- Two (2) sewerage reticulation discharge points located on the site's Market Lane frontage inside the boundary that drains to the existing DN400 Polyethylene (PE-100) sewer main in Market Lane via an existing 1200mm diameter sewer manhole.
- Electrical and Telecommunication services.

Refer to the detailed Maroochydore City Centre Stage 1 Construction Plans prepared by Cardno (QLD) Pty Ltd **Appendix E** for further details regarding the proposed services for the subject site.

2.3 Existing Services

The Sunshine Coast Council (SCC) mapping and a DBYD search for the site has identified the following infrastructure directly available to the site, further confirming the services described on Cardno's Construction Plans. The following services have been specifically identified:

- Four (2) optional drainage discharge points on the site's frontage as listed above.
- Two (2) water supply points inside the boundary located on the site's South Sea Islander Way frontage under the verge.
- Two (2) sewerage reticulation discharge points located on the site's Market Lane frontage. The site is currently serviced via two existing 150mm sewer property connection that drains to the DN400 Polyethylene (PE-100) sewer in Market Lane via a 1200mm diameter sewer manhole.
- Electrical and Telecommunication conduits conduits under the verge located on the site's South Sea Islander Way frontage

Refer to the detailed survey by Bennett & Bennett in **Appendix B** for further details regarding the existing services for the subject site.

2.4 External Catchments

Upon review of the detailed survey and grading plan for the Maroochydore City Centre Stage 1 works, it has been confirmed there are no external catchments which discharge flows into the proposed development site.

3 STORMWATER QUANTITY ASSESSMENT

3.1 Stormwater Detention

As the subject site forms part of the Maroochydore City Centre development masterplan, no on-site stormwater detention is required as the site is located within close proximity to a downstream waterway and mouth of the Maroochydore River. It is beneficial to release site stormwater without detention to allow site flows to be discharged prior to the larger upstream catchment flows being conveyed through the system. The design of the Maroochydore City Centre stage 1 works stormwater has allowed for a fully developed site (95% fraction impervious) which further supports the requirement for no detention as the downstream infrastructure has capacity to cater for a fully developed site.

3.2 Flooding Considerations

As part of the masterplan subdivision to create that Maroochydore City Centre, significant upgrades were made to the drainage within the area to reduce the flooding impacts on the area. The Technical Memorandum: Maroochydore City Centre Flooding and Stormwater Considerations for Stage 1 prepared by Cardno, summarises the flooding and stormwater management strategies for the Maroochydore City Centre. As part of the stage 1 works upgrades to the Maud Canal have been completed to increase the flood conveyance capacity. These works have reduced the chance of flood inundation to the site.

Council's Flood Information Search refers to the Technical Memorandum (Maroochydore City Centre Flooding and Stormwater Considerations for Stage 1) prepared by Cardno, dated 29 October 2015, for the minimum floor levels to provide immunity to the 1% AEP climate change flood level in Maud Canal. Please refer to **Figure 2** below for a preliminary sketch of the proposed finish surface levels, consistence with the Technical Memorandum.

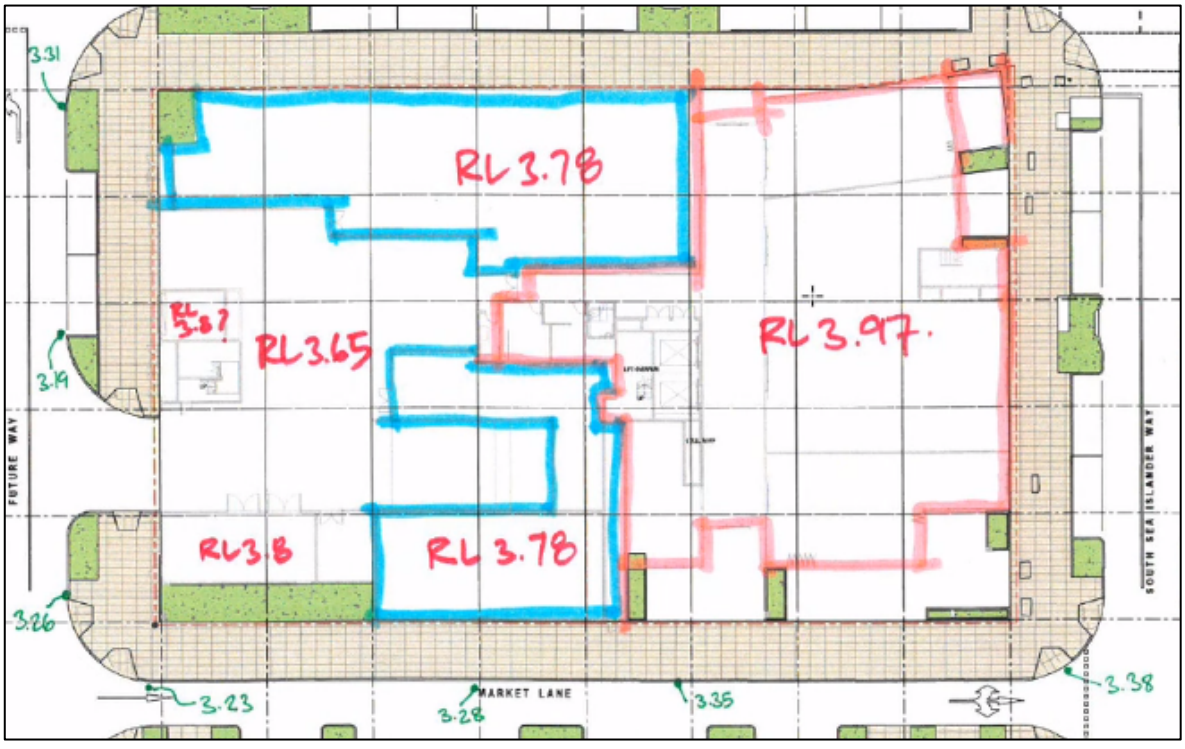


Figure 2 – Proposed Floor levels(mAHD).

For further information regarding flooding considerations refer to the Technical Memorandum: Maroochydore City Centre Flooding and Stormwater Considerations for Stage 1 prepared by Cardno dated 29 October 2015 in **Appendix D**.

4 STORMWATER QUALITY ASSESSMENT

4.1 Stormwater Quality Objectives

This assessment identifies issues relating to stormwater quality runoff and assesses possible methods of treatment if required. The aim of this section is to determine practical approaches to achieving improvements in the quality of the stormwater run-off from the site that can be readily implemented.

The proposal includes a development works for urban purposes that involve disturbing more than 2,500m^2 of land. Hence, the development is classed as 'high risk' for water quality and State Planning Policy (SPP) July 2017 applies. As such, the SPP 2017 assessment benchmarks requirements will apply for the development.

SPP 2017 suggests the development aims to:

- Avoid or otherwise minimises adverse impacts on the environmental values of receiving waters, arising from:
  - Altered stormwater quality and hydrology;
  - Wastewater (other than contaminated stormwater and sewage);
  - The creation or expansion of non-tidal artificial waterways;
  - The release and mobilisation of nutrients and sediments;
  - Development achieves the applicable stormwater management design objectives outlined in Tables A and B (SPP Appendix 2); and
  - Development in a water supply buffer area avoids adverse impacts on drinking water supply environmental values.

Appendix 2 (Table B) of SPP 2017 and Sunshine Shire Council water quality and drainage code suggests 'Post Construction Phase – Stormwater Management Design Objectives' as:

Table 3 - South East Queensland (SEQ) Targets

Total Suspended Solids (TSS)	Total Phosphorus (TP)	Total Nitrogen (TN)	Gross Pollutants >5mm
80% Removal	60% Removal	45% Removal	90% Removal

The objective is to provide the following:

- Nitrogen and Phosphorous removal;
- Gross Pollutant and Suspended Solids removal;
- All of the site's impervious areas discharge to suitable treatment device/s;
- Treatment device selection criteria are to be in accordance with Industry Best Practice and, WSUD Engineering Guidelines; and
- Provide engineering diagrams of the stormwater quality treatment of the proposed development.

4.2 Stormwater Quality Improvement Devices (SQID's)

A stormwater treatment train has been established to treat the runoff from the proposed development that includes the developable works area only and green space areas. The proposed treatment train will enable a higher level of pollutant removal efficiency by using stormwater quality improvement devices (SQIDs). Maintenance of the SQIDs will be the responsibility of the owners of the development. The maintenance should be carried out in accordance with the Council conditions of approval and supplier's specifications.

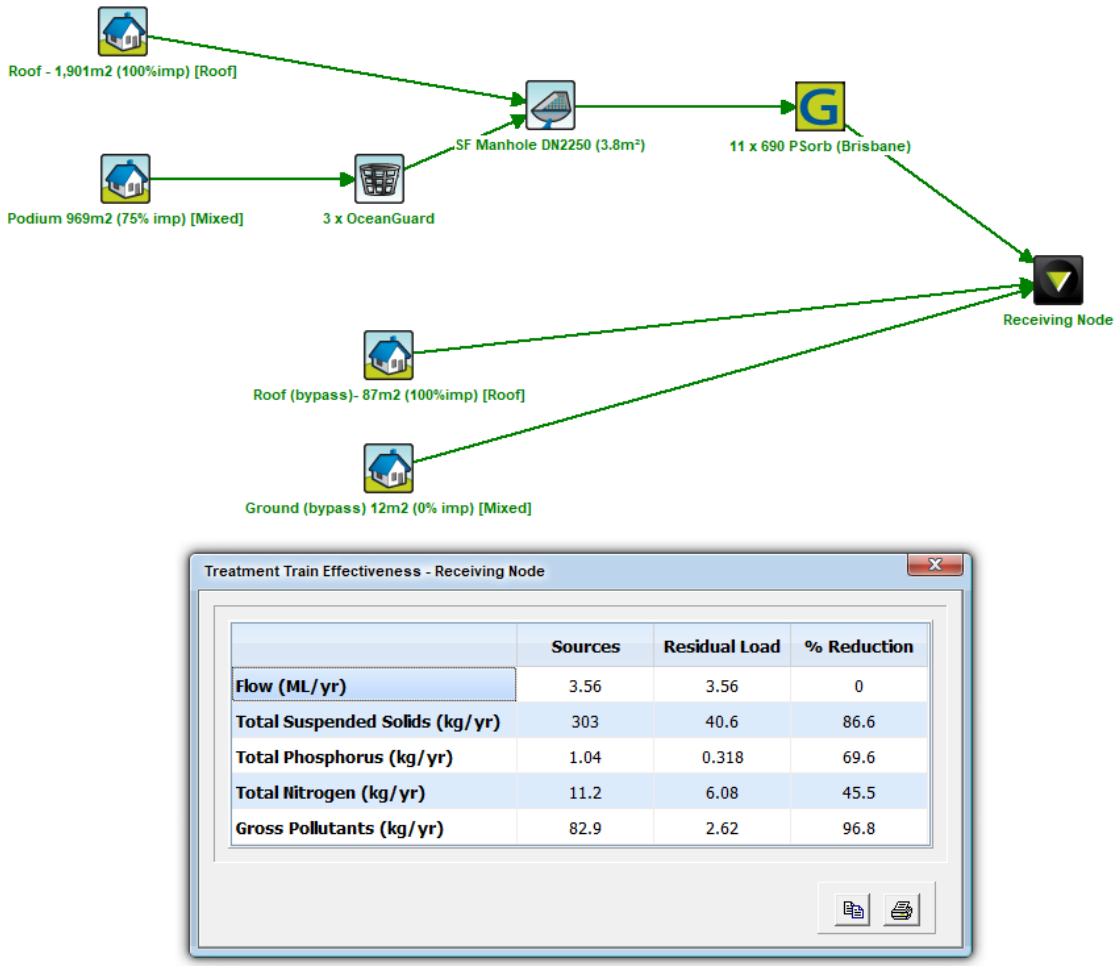
The proposed stormwater quality treatment measures for the development will consist of:

- Three (3) OceanGaurd filter baskets to be placed within pits on the ground / podium levels; and
- 11 x 690mm Ocean Protect Storm Filters system within a precast manhole as per the supplier's specifications (or approved equivalent).

4.3 MUSIC Model

The sites stormwater run-off for the development was modelled using MUSIC (version 6.3.0) and the water quality objectives for South East Queensland specified in the SPP 2017 of 80% TSS reduction, 60% TP reduction, 45% TN reduction, and 90% Gross Pollutants reduction. The modelled treatment trains is show in **Figure 3**.

Details of the MUSIC model are attached within **Appendix F** for further information.



	Sources	Residual Load	% Reduction
Flow (ML/yr)	3.56	3.56	0
Total Suspended Solids (kg/yr)	303	40.6	86.6
Total Phosphorus (kg/yr)	1.04	0.318	69.6
Total Nitrogen (kg/yr)	11.2	6.08	45.5
Gross Pollutants (kg/yr)	82.9	2.62	96.8

Figure 3 - Alternative 1 MUSIC Model Treatment Train and Results.

The above results meet the percent reduction water quality objectives identified by the SPP 2017.

4.4 Water Quality Monitoring

No water quality monitoring is proposed for this development at this stage due to the nature of the development and the fact that no monitoring currently takes place.

4.5 Lifecycle Costs

A lifecycle cost analysis is not a part of the scope of this report. All the recommended water quality treatment infrastructure lies within the development site and it shall be maintained and serviced by the owners of the development at **no cost to Council**.

4.6 Construction phase

During the construction phase of this development, there is a higher risk of sedimentation transport during construction due to the large areas of disturbed land. A sediment and erosion control plan is required for the lodgement of operational works and the following construction phase of the development.

A sediment and erosion control plan is required for the lodgement of operational works and shall be implemented during the construction phase of the development as follows:

Stage 1: Pre construction

- All erosion and sediment control (ESC) devices are to be installed prior to any earth disturbing activities

Stage 2: Construction

- All ESC devices are to be maintained to operational levels, as specified in the management plans and drawings.
- The maintenance plan needs to be in accordance with the Water by Design Construction and Establishment Guidelines.
- The filter media installed is to be in accordance with the FAWB 2008 specifications and certified by the contractor prior to installation.
- During any excavations, the contractor shall provide a temporary sediment basin (sump pit) and pump out stormwater only once the water has settled and has achieved an acceptable quality to the satisfaction of Council (i.e. no turbidity and acceptable pH levels).

Stage 3: Pre-Operational Stage (all disturbed areas stabilized, 90% of all structures completed)

- Impervious layer removed and the nutrient removing plants, as specified in the landscaping plan, are installed.
- Property owner to implement a maintenance plan to ensure correct establishment of plants.
- All ESC devices can be removed only if approved by the superintendent and engineers.

4.7 Operational phase

Once directed to be commissioned by the Superintendent and engineers, the Stormwater Quality Improvement Devices (SQIDs) will provide the required level of stormwater quality treatment to runoff from the site prior to discharging into Council's stormwater drainage infrastructure. It is expected that sediment laden runoff and the erosion potential at the subject site during the operational phase will be minimal. This is due to the high amount of permanent impervious area in the form of roofs, paths, courtyards, driveways and other impervious structures. The proposed landscaped areas will be maintained in a manner that will minimise erosion.

4.8 Maintenance

The maintenance regime for the proposed litter baskets and filter cartridges System shall be as per the suppliers' specifications.

5 CONCLUSIONS

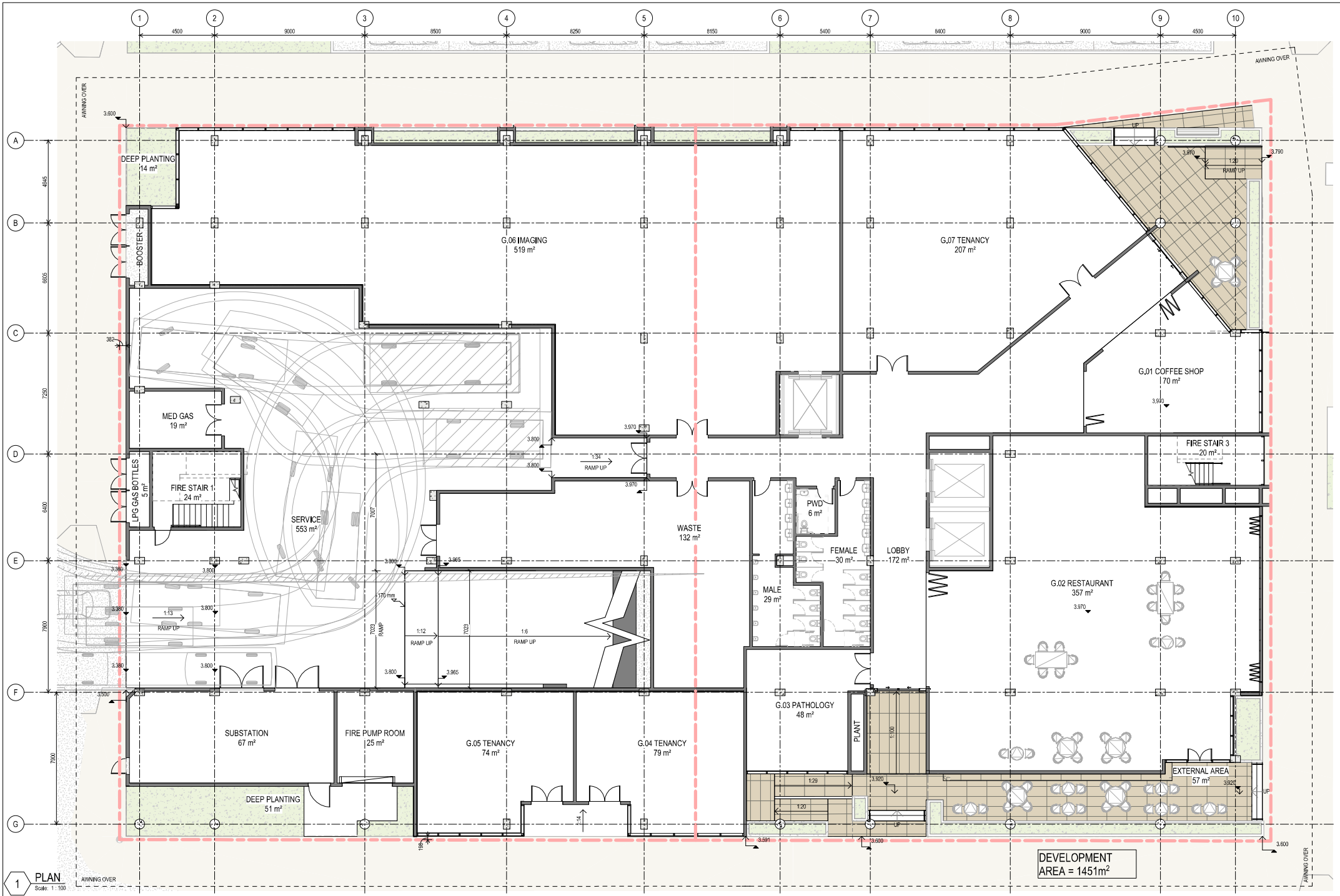
In preparing this stormwater overview, we have achieved all requirements for Stormwater Management Plans as described in QUDM 2013 standards, as well as a pollutant load reduction as required by the SPP 2017 and Sunshine Coast Regional Council standards. No onsite stormwater detention is required, and the development shall have varying minimum floor levels in accordance with the Technical Memorandum: Maroochydore City Centre Flooding and Stormwater Considerations for Stage 1 prepared by Cardno dated, 29 October 2015 in **Appendix D** for flood immunity.

To achieve stormwater quality best management guidelines for this development, ADG recommends the use of the following treatment devices:

- Three (3) OceanGaurd filter baskets to be placed within pits on the ground / podium levels; and
- 11 x 690mm Ocean Protect Storm Filters system within a precast manhole (or approved equivalent).

Detailed engineering diagrams and management requirements for the proposed development are to be submitted to the assessing body for approval prior to any works commencing on site with design certification prepared by a qualified stormwater engineer or scientist.

Appendix A
Architectural Drawings



1 PLAN
Scale: 1 : 100

REV	DESCRIPTION	AUTH	CHK	DATE
A	DESIGN DEVELOPMENT	DSJ	MP	27.08.21
B	CLIENT REVIEW	DSJ	MP	10.09.21
C	FOR COORDINATION	DSJ	MP	16.09.21
D	SUN CENTRAL SUBMISSION	DH	PB	08.11.21

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- Verify all dimensions on site prior to commencement of work.
- DO NOT scale off these drawings.
- Report any discrepancies to the architect before carrying out any work.

STATUS: PRELIMINARY

NORTH

CLIENT: BARWON INVESTMENT PARTNERS
BARWON

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HSPC HEALTH ARCHITECTS

PROJECT: PARKVIEW PLACE
Maroochydore Health Centre

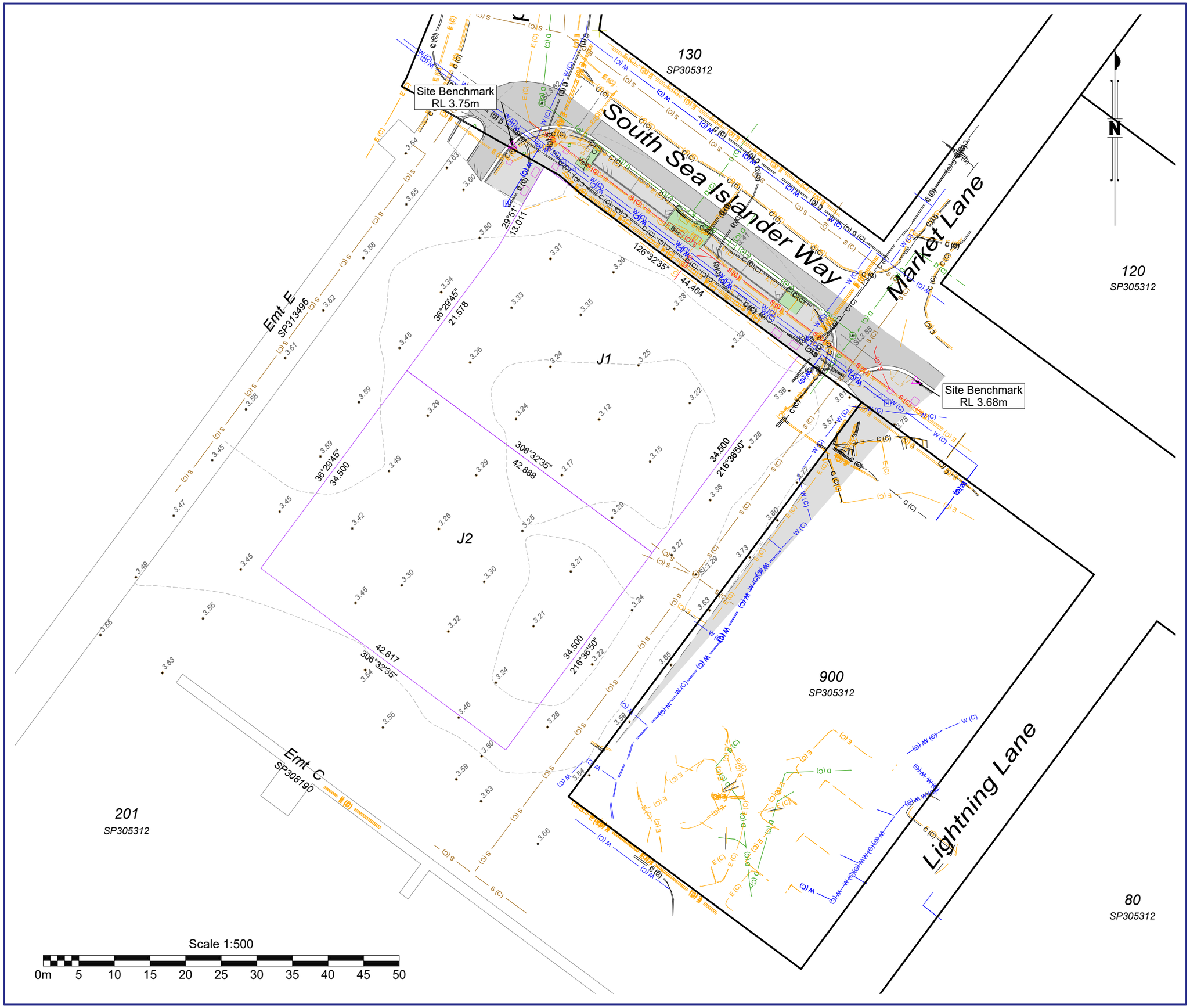
DRAWING TITLE: FLOOR PLAN - GROUND LEVEL

DRAWN	CHECKED
DSJ	MP
ISSUE: 08/11/2021 12:03:06 PM	SCALE @ A1: 1 : 100

PROJECT No	STAGE	DRAWING No	REVISION
20673	DD	MMX-AR-1000	D

08/11/2021 12:03:06 PM

Appendix B
Detailed Survey Plan



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LEGEND:

- Road: Kerb Back; Kerb Invert; Edge of Bitumen; Edge of Gravel; Road Crown; Traffic Park Meter; Traffic Light; Traffic Pit; Traffic Sign; Traffic Post Box
- Structures: Building Line; Roof Ridgeline; Fence Line; Gate; Hand Rail; Cattle Grid; Bollard
- Sewer: Sewer Line; Valve; Inspection Opening; Manhole
- Electrical: Electricity Line; Overhead Line; Pits/Manholes; Pole; Street Light; Light In-Ground
- Water: Water Line; Meter; Valve; Fire Hydrant; Tap; Sprinkler
- Fuel: Fuel Line; Fitting
- Terrain: Driveway; Footpath; Slab Edge; Retaining Wall Base; Retaining Wall Top; Change of Grade; Top of Bank; Toe of Bank; Waterline; Garden Edge; Creek Toe of Bank; Creek Top of Bank; Creek Invert; Creek Waterline; Tree; Tree Canopy; Control Point/PSM
- Drainage: Drainage line; Open Drain; Manhole; Field Inlet; Downpipe
- Communications: Communication Line; Overhead Line; Pits/Manholes; Pillar
- Gas: Gas Line; Valve; Marker
- Subsurface Utility -QL: * Quality A (H±50mm,V±50mm); * Quality B (H±300mm,V±500mm); * Quality C (H±300mm,2D); * Quality D (Exist Record)

NOTES:

1. Drawn to scale on an A3 sheet.
2. Contour Interval... 0.25m
3. All levels are in metres on the Australian Height Datum referred to PM134531 - RL2.715m AHD situated in Mungar Street.
4. Boundaries are proposed as per approval no. DEV2016/747 plan 14422.PP.12 and subject to change.
5. The Location of Underground services are in accordance with AS5488:2019, the Australian Standard for classification of Subsurface Utility Information (SUI). The exact nature and location of these services should be confirmed prior to construction.
6. In ground services from As Constructed services survey conducted by Shadforths Civil Contractors as part of Sun Central CBD development works.
7. Area Vide Proposal Plan 2969m2
8. Field Survey Completed on 23/06/2021

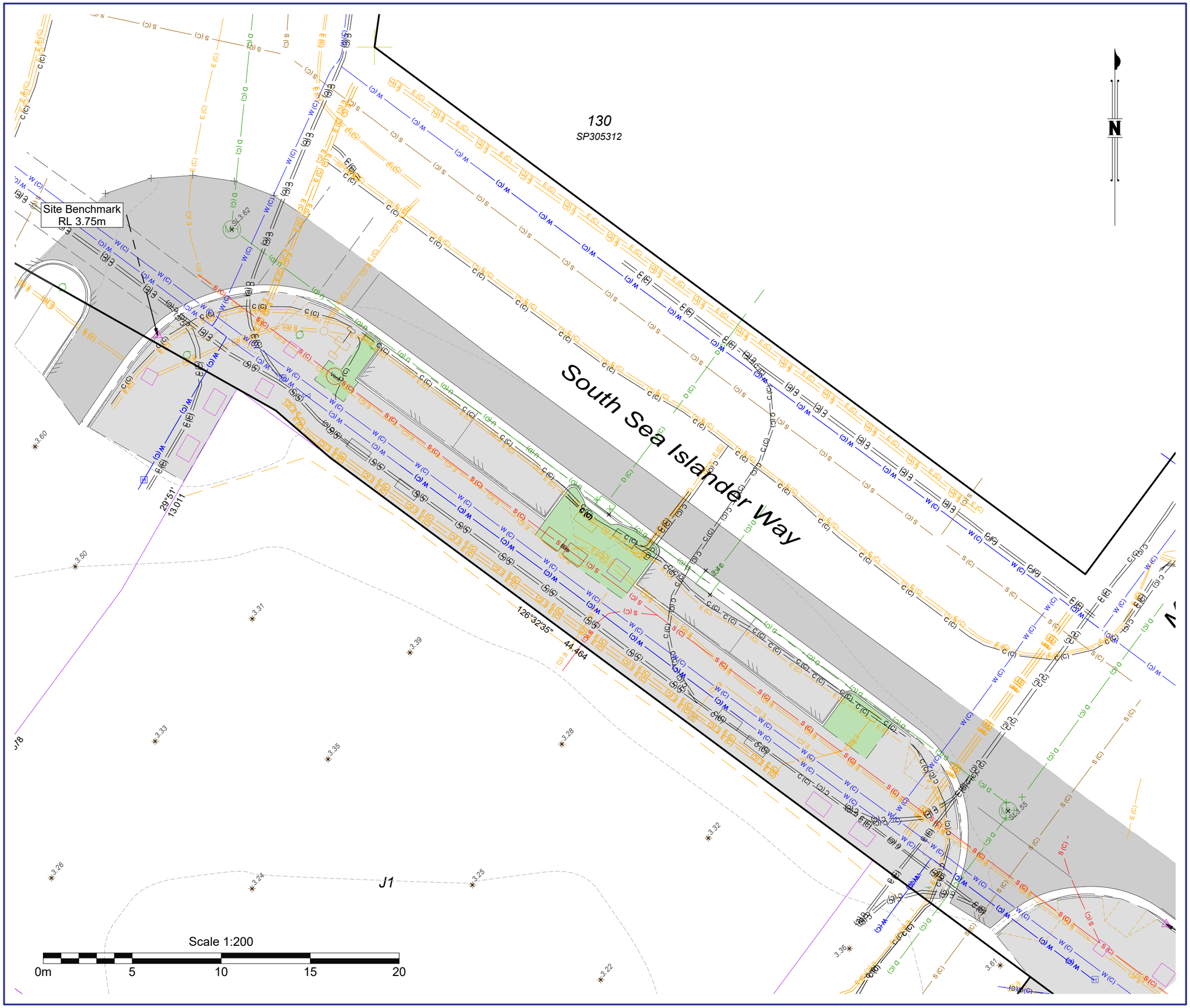
Level datum: (PSM)
Horiz datum: (06/2021)
Coord Origin: DCDB (NE Cor Site)
GDA System: GDA2020 Coordinate System: Plane 1:1
Meridian: DCDB Only

Title:

VERIFICATION PLOT

Proposed Lots J1 & J2
Suncentral Maroochydore

Client:	**Essence Project Management Pty Ltd**		
Locality:	Maroochydore		
Local Gov:	Sunshine Coast Regional Council		
Surveyed By:	AS	Approved:	BMH
Date Created:	25/06/21	Scale:	1:500
File Ref:			210787
Plan No:	**210787_001_VER**	Rev:	**A**



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LEGEND:

- Road: Kerb Back; Kerb Invert; Edge of Bitumen; Edge of Gravel; Road Crown; Traffic Park Meter; Traffic Light; Traffic Pit; Traffic Sign; Traffic Post Box
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Level datum: (PSM)
Horiz datum: (06/2021)
Coord Origin: DCDB (NE Cor Site)
GDA System: GDA2020 Coordinate System: Plane 1:1
Meridian: DCDB Only

Title:

VERIFICATION PLOT

Proposed Lots J1 & J2
Suncentral Maroochydore

Client:	**Essence Project Management Pty Ltd**		
Locality:	Maroochydore		
Local Gov:	Sunshine Coast Regional Council		
Surveyed By:	AS	Approved:	BMH
Date Created:	25/06/21	Scale:	1:200
File Ref:			210787
Plan No:	**210787_001_VER**	Rev:	**A**

A3

Appendix C
ADG Quality/Catchment Plans

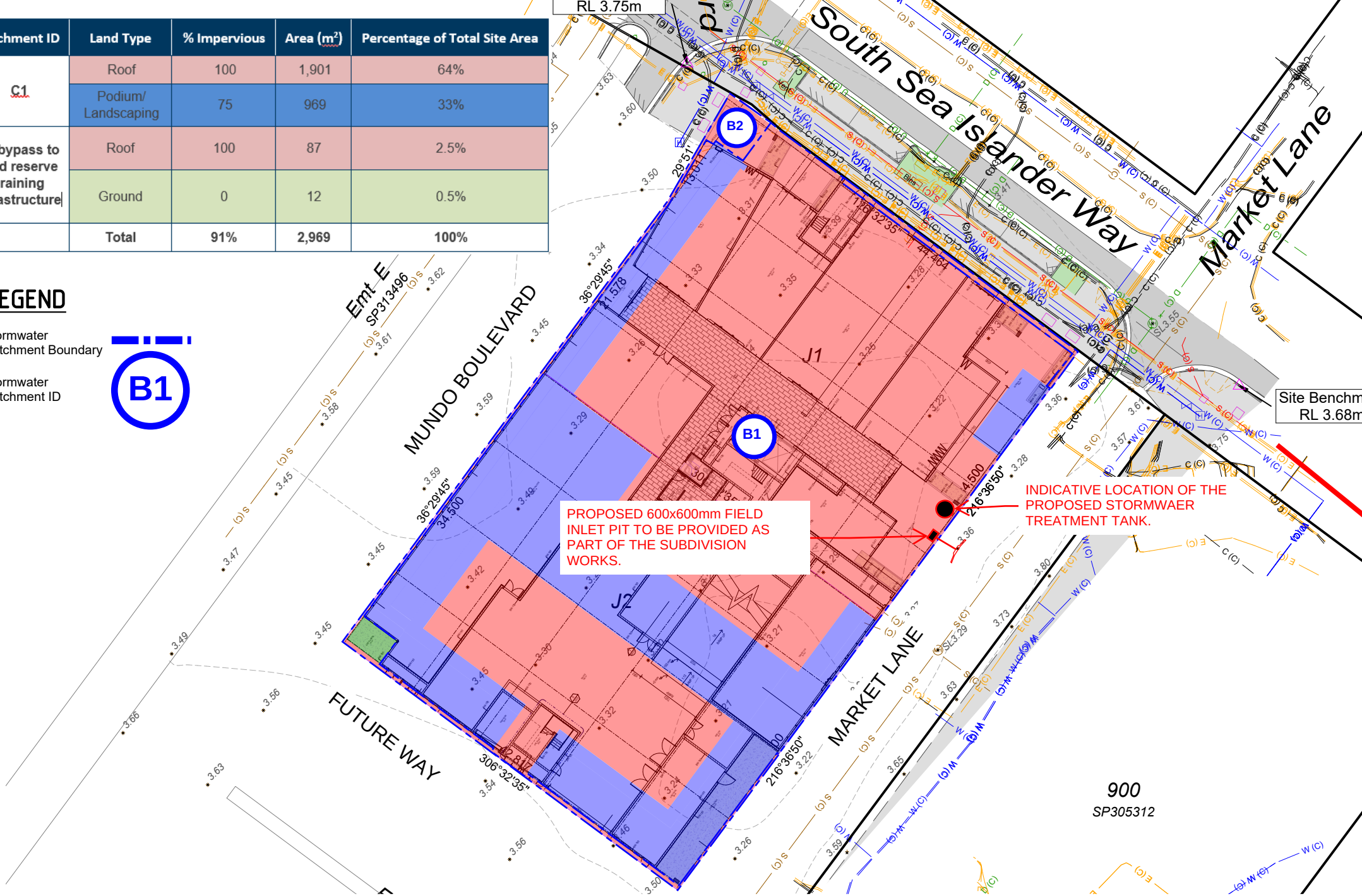
Catchment ID	Land Type	% Impervious	Area (m²)	Percentage of Total Site Area
C1	Roof	100	1,901	64%
	Podium/ Landscaping	75	969	33%
C2 bypass to road reserve draining infrastructure	Roof	100	87	2.5%
	Ground	0	12	0.5%
	Total	**91%**	**2,969**	**100%**

LEGEND

Stormwater Catchment Boundary

Stormwater Catchment ID

B1



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Rev	Date	Description
01	09.09.21	ISSUED FOR INFORMATION

Client: ESSENCE PROJECT MANAGEMENT PTY LTD

Project Name: MAROOCHYDORE PRIVATE HOSPITAL
LOT 201 ON SP305312
MUNDOO BOULEVARD,
MAROOCHYDORE QLD 45587

Discipline: CIVIL

Status: INFORMATION

Designed By: PP | Checked By: DM | Approved By: MVI

Project No.: 25222 | Drawn By: PP | Scale: NTS

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Title: STORMWATER QUALITY PLAN

Drawing No.: SK01

Revision: 01

Appendix D
Technical Memorandum: Maroochydore City Centre Flooding and Stormwater Considerations for Stage 1

Technical Memorandum

Title	**Maroochydore City Centre** **Flooding and Stormwater Management Considerations for Stage 1**		
Client	Suncentral Maroochydore	**Project No**	249402
Date	26 August 2015	**Status**	Preliminary
Author	Nadia Guterres	**Discipline**	Civil Engineering
Reviewer	Darryl Hone	**Office**	Sunshine Coast

FLOODING AND STORMWATER MANAGEMENT

1. Summary

Stage 1 of the Maroochydore City Centre (MCC) development is PDA Precinct 3, which is the Core Business District area located to the north of Maud Canal. As part of Stage 1 works Maud Drain will realigned and constructed as a canal with increased flood conveyance capacity. The channel will be relocated further north at the eastern end of the site and further south at the western end of the site, so that the canal has a straighter configuration. The canal will be deepened to RL -2.0m AHD and will have a minimum width of 20 metres. From RL -2.0 to -0.5m AHD, 1 in 3 side slopes will be adopted. Above this level the canal will have vertical walls, and/or terraced walls, dependent on the landscape design and access. The typical surface levels adjacent to the canal will be around RL 3.3m AHD. The normal water surface level in the canal will typically vary between RL -0.33m AHD (MLWS) and RL 0.47m AHD (MHWS). A typical cross-section of the proposed canal is attached.

The current drain has a minimum level of RL -0.5m AHD at the eastern end of the site to around RL -1.2 mAHD at the western end. It has a bed width of around 10 metres and side slopes ranging from 1 in 3 to 1 in 5.

The current site where Stage 1 works are to take place consists of former golf course, club house and associated car parking. The majority of the existing Stage 1 area currently drains towards the north, where a stormwater inlet in the car park drains to an 825mm RCP. This connects northward to the underground stormwater drainage, which discharges to Cornmeal Creek at the end of Cornmeal Parade. The limited capacity of this stormwater drainage network has created urban flooding issues in the past. The MCC design will reduce the area that drains towards the north so that there is no increase in flows as a result of development. The current area of the site that drains towards the north is around 7.9 hectares, of which about 1.1 hectares is impervious. The ultimate design of Stage 1 will have around 0.55 hectares continuing to drain towards the north. This decrease in flows directed towards the north will result in a reduction of local flooding to the north of the site.

The *Cornmeal Creek Flood Study* (Cardno, 2013) was undertaken for Sunshine Coast Regional Council (SCRC) to inform the master planning for the site. In this study it was assumed that the majority of the Stage 1 area drainage would be re-directed towards Maud Canal. The increased capacity of the canal proposed as part of the MCC development ensured that there were no adverse flood impacts on adjacent properties. The results of the flood study showed that the MCC development resulted in reduction in peak water levels at Maud Street by up to 169mm.

Additional flood modelling has been conducted for the Stage 1 earthworks, to ensure that temporary diversion works and redirection of flows do not have an unacceptable impact on adjacent properties. The results of this analysis are provided in this Technical Note.

2. Flood Behaviour of Existing Site

In the existing case, flows from the urban catchment to the east of the site are conveyed west through Maud Drain and discharge into Cornmeal Creek downstream of Plaza Parade. Flood flows from south of Dalton Drive are conveyed in two directions: north into the golf course lake, and west beneath Maroochy Boulevard into Sunshine Cove Lake. Flood flows that enter the golf course eventually discharge via a swale along the north western boundary of the golf course, into Maud Drain near Plaza Parade, or they flow south-west to go back under Dalton Drive (near the intersection with Maroochy Boulevard), which then flows to the Sunshine Cove Lake. The majority of flood flows from the south do not overtop into Maud Drain, except for a small section at the eastern end of the site. This is due to the high southern bank, which is at levels of around RL 2.3 to 3.0m AHD, which is shown in Image 1 below. Flood flows in Maud Drain do not overtop the northern bank and therefore do not flow into the area that will be developed as part of Stage 1 works.

Image 1 Location of Existing Southern Bank

3. Flood Impacts during Stage 1 Works

The construction of Maud Canal during Stage 1 works will be conducted in a way that will ensure that flows from the east and south are not obstructed during construction. The existing channel will be retained while a temporary diversion channel is excavated and stabilised. A 15 metre wide overland flow path at RL 1.60m AHD will also be provided on the southern side of the temporary diversion drain, to direct flows from the south to existing low points in the north-west. A plan showing the proposed temporary diversion channel is attached. Once the temporary diversion drain is stabilised, works within the existing Maud Drain will be able to proceed. Stockpiling of excavation material will occur in existing flood free areas identified on the site.

The existing case TUFLOW flood model of the site set up for the *Cornmeal Creek Flood Study* (Cardno, 2013) was modified to take into account the temporary works required for Stage 1. For the flood

modelling it has been assumed that the section of Maud Drain undergoing excavation would not contribute to flood storage. The results of the analysis are attached. The TUFLOW analysis was able to demonstrate that Stage 1 temporary works can proceed with minimal flood impacts. There is a minor increase of around 30mm in the 1% and 39% Annual Exceedance Probability (AEP) peak water levels within the creek through Sunshine Plaza. No residential areas are affected. Given the temporary nature of these works, these impacts are considered acceptable. As shown in Figures 1 to 6, the residential area upstream of Maud Street will experience a reduction in peak flood levels for all AEP events.

The 1% AEP flood impact plot is also shown in Image 2. This image highlights areas that were dry and now are wet, or vice versa, in the 1% AEP event, with the temporary Stage 1 works in place. As shown by this image, the temporary works improve flooding for properties to the west and also for properties around Maud Street. The increase in inundation area around Sunshine Plaza is minimal. The difference in peak water levels in the 1% AEP event are shown in Figure 6.

In the 39% AEP event the flood extent around Sunshine Plaza is contained within the channels, so a minor increase is peak water level does not increase the area being inundated.

In the 1% AEP flood event none of the surrounding road crossings are overtopped, therefore the flood immunity of the roads is not reduced as part of Stage 1 works.

Image 2 1% AEP Stage 1 Temporary Works Flood Impact

4. Local Stormwater Drainage

A 675mm RCP runs along the eastern boundary of the site and drains into Maud Canal. The stormwater line drains local stormwater from Maud Street. This drainage line will be retained and a swale will be

constructed to convey any overland flow from this area, around Stage 1 works and towards Maud Canal. Similarly the existing stormwater drainage lines along the northern boundary of the site, that connect stormwater flows from Golf Street and Maud Street to the Cornmeal Parade drainage line will be retained.

For Stage 1, the internal stormwater network has been designed to have 5% AEP capacity. This is greater than the capacity required by the *Queensland Urban Drainage Manual* (QUDM), which specifies 10% AEP for commercial areas. Allowance for climate change has been made in the internal drainage design. The assumed tailwater level is the 5% AEP climate change storm tide level of RL 2.2m AHD. A 20 percent increase in rainfall intensity has also been allowed for in the design. In localised areas where overland flow paths are not able to be provided, the underground drainage network will be designed to have 1% AEP capacity. A duplicate 1% AEP capacity network will also be provided in these localised areas to account for the potential impact of blockage. This satisfies the requirements of QUDM, which stipulates that 100 percent blockage should be considered in severe events.

5. Flood Levels

The flood levels that have been used to define the minimum floor levels for the Stage 1 area are taken from the *Cornmeal Creek Flood Study* (Cardno, 2013), and are summarised below. They are based on *Planning Scheme Policy No.15: Maroochydore Principal Activity Centre Structure Plan*:

- 1% AEP Storm Surge level of RL 2.5m AHD + 819mm allowance for Mean Sea Level rise, i.e. RL 3.32m AHD. This is inclusive of 400mm of freeboard.
- 1% AEP Flood Level, including allowances for Climate Change (in 2100) + 400mm freeboard for residential, commercial and industrial buildings = RL 3.07m AHD. This is based on the 1% AEP climate change flood level in Maud Canal of RL 2.67m AHD.

The minimum floor level for the development within Stage 1 is therefore RL 3.32m AHD. However, to be consistent with future stages of the MCC development, **a minimum floor level of RL 3.5m AHD has been adopted.**

STORMWATER QUALITY

1. Summary

As part of Stage 1 works it is necessary to demonstrate that the stormwater quality objectives for the site, for this stage of works, can be achieved.

The overall stormwater quality strategy for the site is to use a combination of stormwater harvesting for irrigation, centralised treatment of upstream catchments entering the site and localised treatment of internal catchments. At Dalton Drive, approximately 291 hectares of urbanised area drains to the existing waterbody on the southern side of Dalton Drive and into Dalton Lake located within the site. By treating and reusing this water, significant reductions in pollutant loads can be achieved. As a weir at RL 1.4m AHD will ultimately be installed downstream of Dalton Drive this section of the lake will always contain freshwater. It is therefore suitable for use as irrigation water. The benefits of treating this external inflow and using it for stormwater harvesting include:

- Pollutant loads entering the Dalton Lake will be reduced, which will decrease the risk of algal blooms within the lake.
- Stormwater will be reused for irrigation, reducing the potable water demand of the site. It is proposed to use stormwater to irrigate open space areas proposed within Stage 3 works. The estimated irrigation demand for this area is 23 ML/year.
- By targeting external stormwater pollutant loads, less reduction of internal pollutant loads is required in order to meet the stormwater pollutant load reduction targets. This will allow for more flexibility within the urban design.

The stormwater treatment measures being considered within the public realm areas of the site include:

- Litter baskets in stormwater field inlets.

- End of line gross pollutant traps (GPTs) for areas where the installation of litter baskets is problematic.
- Porous pavement where suitable.
- Bio-retention street trees.
- Passively irrigated landscape areas.
- Bio-retention gardens or swales where suitable, such as in the median strip.
- Floating wetlands within the lake.

Litter baskets target the removal of gross pollutants, sediment, oil and grease. They also remove the nutrient load that is associated with these pollutants. Litter baskets are considered to be the most suitable method of removing gross pollutants within Stage 1. As the internal stormwater drainage network will be permanently backwatered from tidal inflows from Maud Canal, the design of an in-ground GPT would need to take these conditions into consideration for operation and maintenance. Due to the future infrastructure requirements for light rail, the area that is available for the installation of an in-ground GPT is limited at the downstream end of some of the stormwater drainage lines.

Litter baskets are able to be cleaned in-situ by vacuum hose attached to vacuum street sweeper trucks. They do not require confined space entry. As the litter baskets store the captured pollutants above standing water level, they reduce the potential breakdown of captured organic material. This reduces the potential for odour issues and the leaching of pollutants.

The design of the internal stormwater drainage will ensure that sufficient overflow capacity is provided if the litter basket is full.

2. Stage 1 Works

Stormwater harvesting is not proposed to commence during Stage 1 works. In order to meet the stormwater pollutant removal targets for this stage it is proposed to:

- Improve the treatment provided by the existing waterbody around Dalton Drive by installing floating wetlands. Installation of floating wetlands in this area would not require any modification during future stages. As a weir at RL 1.4m AHD will ultimately be installed downstream of Dalton Drive, this waterbody will always contain freshwater. Floating wetlands are currently being tested on local urban developments by the University of the Sunshine Coast.
- Provide litter baskets on all field inlets within the public realm.

Although not included in the MUSIC modelling (so as to allow flexibility within the landscape design), the following stormwater treatment measures will also be considered within Stage 1:

- Porous pavement where suitable.
- Passively irrigated trees and landscape areas.

Internal lots within Stage 1 will be responsible for providing their own stormwater treatment. It is expected that this will be provided via a combination of rainwater or stormwater harvesting (for example passive irrigation of vertical gardens) and proprietary treatment devices.

3. Stage 1 MUSIC Modelling

The Stage 1 works were modelled using MUSIC Version 6.10. The Stage 1 MUSIC source nodes included:

- Stage 1 Roads – 6.8 hectares, 80% impervious Commercial Road
- Stage 1 Open Space - 1.75 hectares, 60% impervious Commercial Road
- External Urban Catchment - 291 hectares, 50% impervious Urban

No stormwater harvesting was assumed for this stage of the works. The internal lots within Stage 1 were also not included in the modelling.

Typical stormwater treatment MUSIC nodes were used for the analysis. The treatment assumed for the litter baskets was 40 percent removal of Total Suspended Solids (TSS), 20 percent removal of Total Nitrogen (TN) and Total Phosphorus (TP) and 100 percent removal of Gross Pollutants (GP). Based on reported removal efficiencies from manufacturers, these removal rates are considered conservative. A high flow bypass of 11L/s for each litter basket was assumed, with one litter basket provided for every 0.25 hectares of catchment area. This was a conservative assumption as the preliminary number of litter baskets required is around 120.

As the existing waterbody provides treatment similar to a pond, this treatment node was included in the base case. The pond was modelled as having a 2.5ha surface area, storage volume of 50ML and extended detention depth of 0.3 metres. Only treatment in addition to that already provided by the pond would therefore be included in the developed case. The floating wetland was modelled as a wetland with a 50ML inlet pond. The storage surface area was conservatively modelled as the actual proposed area of floating macrophytes. The treatment efficiency of floating wetlands should be significantly greater due to the increased biological surface area in contact with water.

The treatment efficiency of floating wetlands is currently being tested. Once this testing is completed, specific MUSIC nodes will be made available from which the required treatment area can be verified. Using standard wetland treatment nodes it was found that floating wetland of 100m^2, coupled with the litter baskets could provide enough treatment to meet all of the stormwater quality pollutant reduction targets. However, preliminary site investigations have determined that a wetland area of around 300m^2 would be required to target all inflow points in the waterbody. It is therefore recommended that this larger area be installed during Stage 1 works. The installation of a solar powered recirculation pump is also recommended for the downstream section of the waterbody. The establishment time for floating wetlands is 6 to 12 months. The preliminary locations for the floating wetlands are attached.

If the litter baskets are not installed, then sufficient treatment is provided by the floating wetland for all pollutants with the exception of gross pollutants. Therefore the assumed treatment efficiency of litter baskets for the removal of TSS, TP and TN does not need to be relied upon in order to meet the pollutant reduction targets for Stage 1.

The MUSIC results are summarised in Table 1 below. The third column shows the pollutant loads relating to Stage 1 public realm areas. The fifth column shows the pollutant load removal targets for Stage 1 public realm areas. As shown by the last columns, as external loads are also being treated, more than 100 percent of Stage 1 pollutant loads are being removed for TSS and TP.

Table 1 Stage 1 MUSIC Model Results

Pollutant	Pollutant Load (kg/yr)		Total Pollutant Load After Treatment (kg/yr)	Pollutant Removal Required for Stage 1 (kg/yr)	Total Pollutant Removal Achieved Without Litter Baskets (kg/yr)	Total Pollutant Removal Achieved With Litter Baskets (kg/yr)
	External Catchment (After Pond Treatment)	Stage 1 Public Realm Areas (No Treatment)				
Total Suspended Solids	328000	**42300**	222500	**33840 (80%)**	133000 (>100%)	147800 (>100%)
Total Phosphorous	774	**72.3**	655	**43 (60%)**	179 (>100%)	191 (>100%)
Total Nitrogen	5130	**338**	5188	**152 (45%)**	220 (65%)	280 (83%)
Gross Pollutants	23.8	**2410**	114	**2169 (90%)**	0 (0%)	2319 (96%)

4. Future Stages

The treatment efficiency of the floating wetlands is currently being tested by the University of the Sunshine Coast. Preliminary results show that observed removal rates are significantly higher than those provided by standard wetland MUSIC nodes, which were adopted for this analysis. Using the specific MUSIC nodes that will be created as part of this work, the treatment provided for Stage 1 will be able to be verified.

If floating wetlands are found to be efficient, then they should be adopted for future stages. Additional floating wetlands could be installed in the existing waterbody as well as within areas of the proposed Dalton Lake. These floating wetlands would need to be planted with different vegetation that was able to tolerate brackish conditions. They would be positioned near stormwater culvert inlets into the lake. The depths of the lake in these areas would be limited to 1.6 metres, so that the treatment provided by the floating wetlands was maximised. An added benefit of having floating wetlands installed on the culvert inlets is that some treatment will also be provided for the lake re-circulation water that will be pumped into the lake. The floating wetlands will also provide for some fish habitat areas.

The expanded use of floating wetlands would remove the requirement to construct a wetland and bio-retention treatment system in the parkland area within Stage 3 works. If the floating wetlands are found not to be sufficiently effective, then a wetland and bio-retention treatment system within the Stage 3 parkland area will be required. This will need to be sized to also compensate for Stage 1 works.

The waterbody will also be used for stormwater harvesting, with the intake located upstream of the weir proposed to the north of Dalton Drive. The water used for irrigation will therefore be freshwater.

The waterbody has an area of 2.5 hectares, and a minimum level of RL -10m AHD. Preliminary water balance modelling in MUSIC was conducted using 50 years of daily rainfall data. This demonstrated that if a maximum drawdown of 300mm was allowed, then the waterbody could provide around 98 percent of the irrigation demand of 23 ML/year, which is the approximate irrigation demand for Stage 3. Therefore there is potential to use this waterbody to provide for additional non-potable demands. A reliability of around 87 percent can be achieved for a demand of 100 ML/year.

Additional preliminary MUSIC modelling has been conducted to take into account all future development of public realm areas, including Stage 1 works. The additional MUSIC nodes included:

- Stage 2 Entertainment Facility – 3.4 hectares, 100% impervious Commercial Roof
- Stage 3 Open Space – 5.3 hectares, 20% impervious, Commercial Ground
- Stage 3 Roads – 1.8 hectares, 80% impervious, Commercial Road
- Future Open Space – 1.3 hectares, 20% impervious Urban Ground
- Future Roads – 7.5 hectares, 80% impervious, Urban Road

Runoff from all areas, with the exception of open space, was assumed to be treated via litter baskets on all field inlets. For the purposes of MUSIC modelling, each litter basket was assumed to treat 0.25 hectares. The open space areas were assumed to be treated by grassed swales. The storage surface area of the wetland was increased and a re-use of 23ML/year was assumed.

The results of MUSIC modelling found that pollutant removal targets could be achieved if:

- The floating wetland area for external catchment treatment is maintained as per Stage 1 requirements.
- Floating wetland area of at least 200m^2 is provided within Dalton Lake near culvert inlets into the lake.
- Stormwater harvesting is used to irrigate Stage 3 open space, i.e. 23 ML/year.
- Litter baskets are installed on all field inlets.

It should be noted that although not included in the MUSIC modelling, additional stormwater treatment will be provided within public realm areas, as outlined in Section 1.

The results of the MUSIC modelling are summarised in Table 2. The removal targets are achieved for all pollutants with the proposed stormwater treatment strategy in place.

Table 2 Future Stages Preliminary MUSIC Model Results

Pollutant	Pollutant Load IN (kg/yr)		Total Pollutant Load After Treatment (kg/yr)	Pollutant Removal Required for All Public Realm Areas (kg/yr)	Pollutant Removal Achieved (kg/yr)
	External Catchment (After Pond Treatment)	All Public Realm Areas (No Treatment)			
Total Suspended Solids	326000	**100000**	255500	**80000 (80%)**	170500 (>100%)
Total Phosphorous	777	**184**	738	**110 (60%)**	228 (>100%)
Total Nitrogen	5130	**933**	5595	**420 (45%)**	468 (50%)
Gross Pollutants	23.8	**6960**	113.8	**6264 (90%)**	6870 (99%)

It should be noted that additional MUSIC modelling will be completed for future stages to verify the required floating wetland areas, once a specific MUSIC node becomes available.

There is potential to further increase the removal of stormwater pollutants from the public realm. This could be achieved through:

- Increased stormwater harvesting for non-potable uses throughout the site.
- Increased floating wetlands installed in the upstream waterbody.
- Rainwater harvesting for toilet flushing for the Entertainment and Convention Centre.
- Inclusion in MUSIC of the treatment that will be provided by landscape stormwater treatment measures.

5. Treatment of Internal Lots

It has been assumed that internal lots for Stage 1 and all future stages will be responsible for providing their own stormwater treatment. It is expected that this will be provided via a combination of rainwater or stormwater harvesting and proprietary treatment devices.

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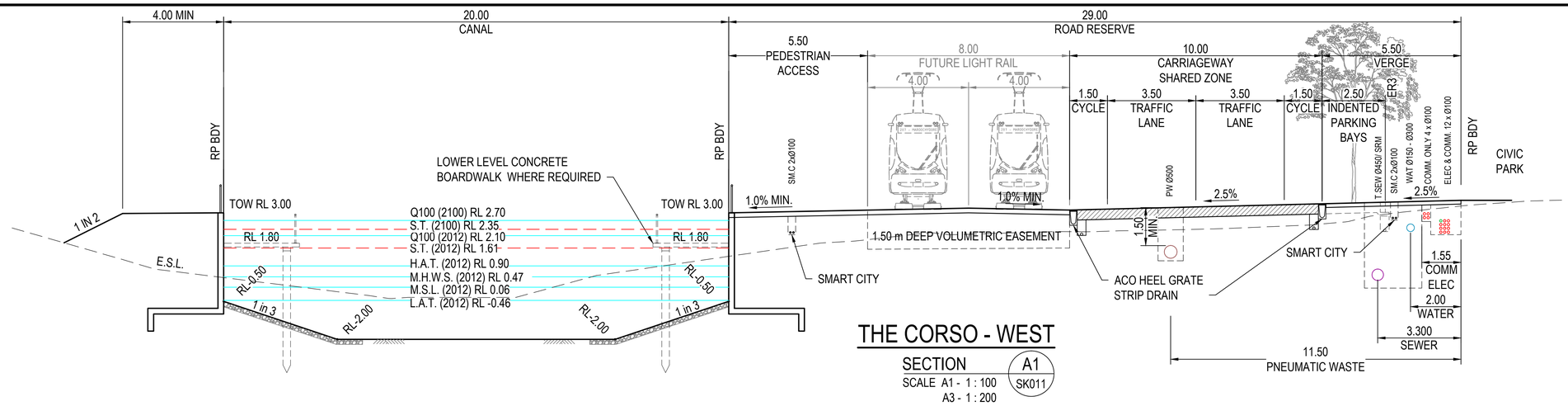

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SECTION A1 SK011

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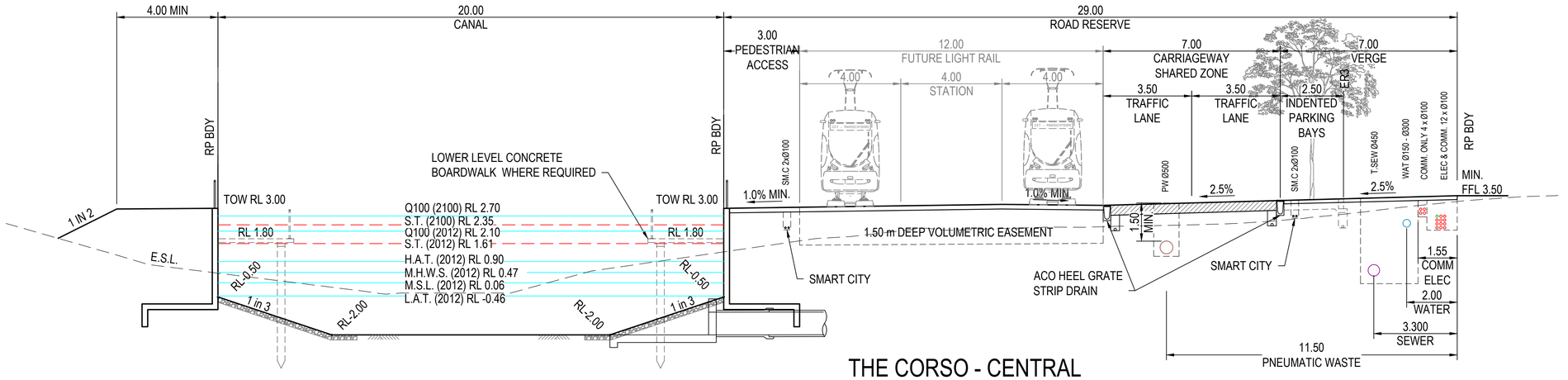

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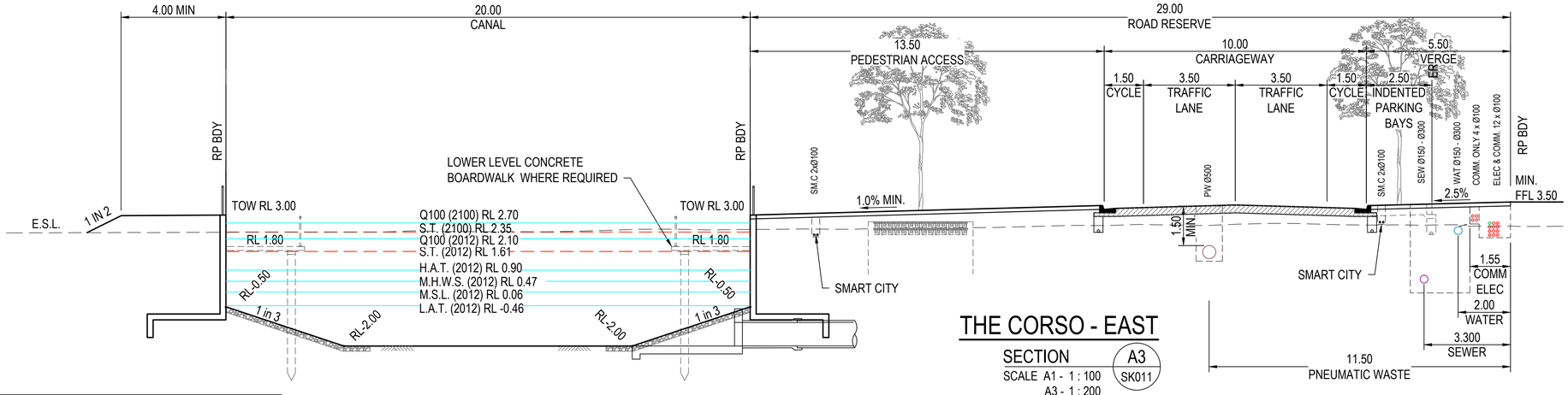

THE CORSO - EAST

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WORK IN PROGRESS
FOR DESIGN DEVELOPMENT PURPOSES ONLY

LEGEND	
TIDE	DESCRIPTION
S.T.	STORM TIDE
H.A.T.	HIGHEST ASTRONOMICAL TIDE
M.H.W.S.	MEAN HIGH WATER SPRINGS
M.S.L.	MEAN SEA LEVEL
S.W.L.	STANDING WATER LEVEL
L.A.T.	LOWEST ASTRONOMICAL TIDE

TYPICAL CROSS SECTIONS

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A3 - 1 : 200

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ROADWORKS TYPICAL SECTIONS - SHEET 1

DATUM	Date	Scale	Size
AHD	22/07/2015	AS SHOWN	A1

Drawing Number: 249402-SK012
Revision: -

XREFs:
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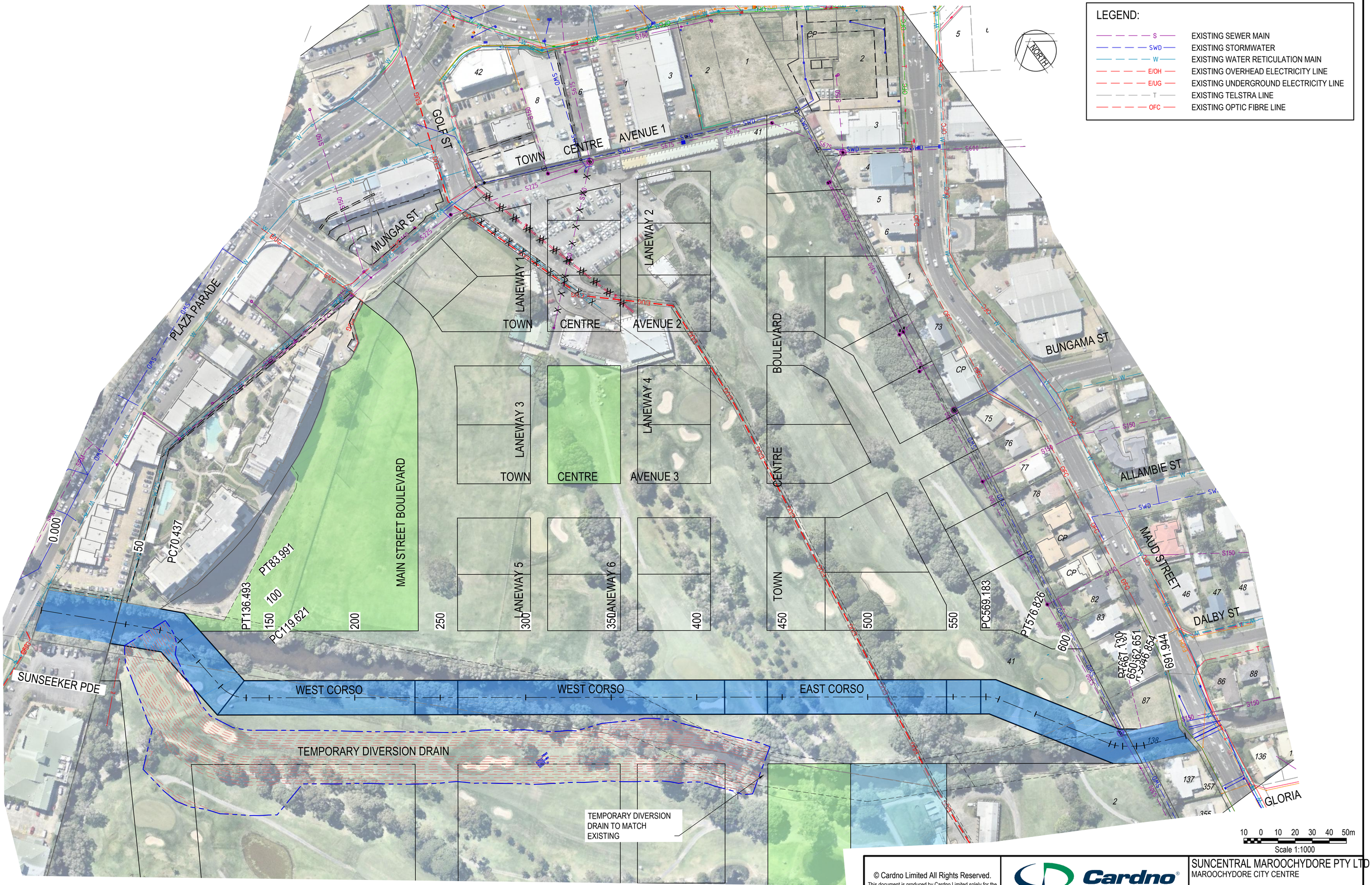

PLAN

SCALE A1 - 1 : 1000
A3 - 1 : 2000

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TEMPORARY DIVERSION DRAIN PLAN

DATUM	Date	Scale	Size
AHD	28/05/2015	AS SHOWN	A1

Drawing Number	Revision
249402-SKSK037	-

XREFs: X-249402-EXISTING; X-249402 DESIGN STAGE 1; X-249402 RP BASE; X-249402 EXTERNAL ROADWORKS PROJEX; X-249402 RP BASE EXTERNAL CADASTRE 160302
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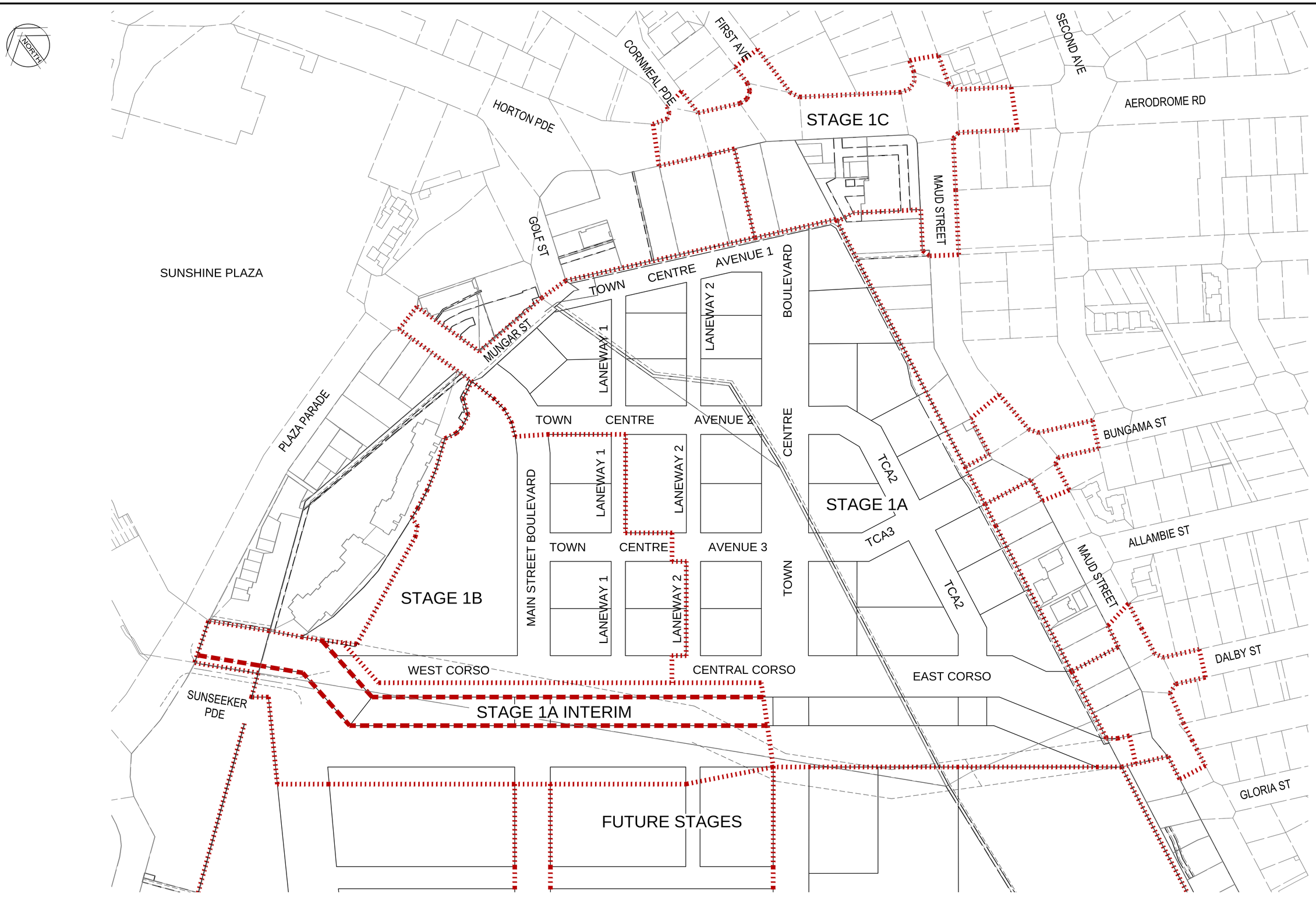

LEGEND:

STAGE BOUNDARY

PLAN

SCALE A1 - 1 : 1250
A3 - 1 : 2500

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Scale 1:1250

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STAGING PLAN

DATUM	Date	Scale	Size
AHD	29/07/2015	AS SHOWN	A1

Drawing Number	Revision
249402-SK150	1

XREFs: X-249402 DESIGN STAGE 1; X-249402 RP BASE; X-249402 DESIGN MASTER PLANNING UPDATE-BACKGROUND INFO ONLY; X-249402 RP BASE EXTERNAL CADASTRE 150302
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Figure 1 **Stage 1 Temporary Works 39% AEP Flood Impact**

Figure 2 **Stage 1 Temporary Works 18% AEP Flood Impact**

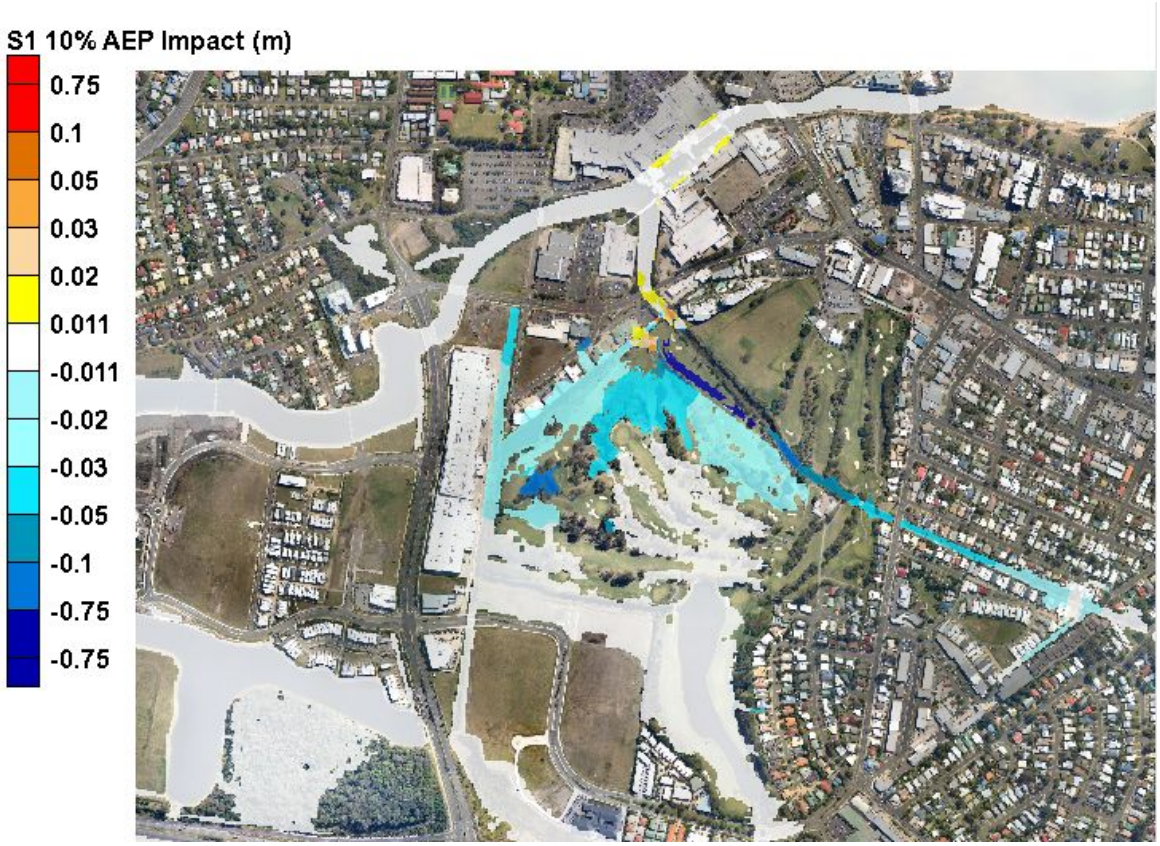


Figure 3 **Stage 1 Temporary Works 10% AEP Flood Impact**

Figure 4 **Stage 1 Temporary Works 5% AEP Flood Impact**

Figure 5 **Stage 1 Temporary Works 2% AEP Flood Impact**

Figure 6 **Stage 1 Temporary Works 1% AEP Flood Impact**

Notes:

1. FTW mattresses are securely anchored to bank.
2. Staggered FTW segments eliminate treatment short circuiting.
3. FTW cables installed with slack to cater for Q100 flows.

SPEL Floating Wetland (FTW) Outlet location

SPEL Floating Wetland (FTW) Inlet locations

Technical Memorandum

Title	**Maroochydore City Centre Stage 1 Local Flooding**		
Client	Suncentral Maroochydore	**Project No**	249402
Date	29 October 2015	**Status**	Preliminary
Author	Nadia Guterres	**Discipline**	Civil Engineering
Reviewer	Darryl Hone	**Office**	Sunshine Coast

1. Summary

Given the flat nature of the Stage 1 works and the locations of raised intersections which would block overland flow paths, detailed two-dimensional flood analysis was conducted to ensure that the proposed road and internal drainage design would be sufficient to convey stormwater flows during major flood events. The purpose of this analysis was to:

> Determine the 100 year ARI local flood levels throughout Stage 1 and the corresponding floor levels for each lot.

> Determine the impact of complete blockage of stormwater gully and field inlets to ensure that the freeboard provided to minimum floor levels was sufficient.

> Determine whether the peak depths within the road reserve during major flood events complied with the requirements of QUDM.

> Determine if any areas required additional drainage infrastructure.

The proposed stormwater drainage has been designed to have 5% Annual Exceedance Probability (AEP) capacity using 12d. This drainage design was then transferred into TUFLOW for analysis of the major 1% AEP storm event.

2. Methodology

The TUFLOW model was set up using the following methodology:

> The 1% AEP rainfall was increased by 20% to account for the potential impact of climate change.

> The Duration Independent Storm (DIS) was used, with a time step of 5 minutes. The DIS method converts peak rainfall intensities from various storm duration into the one temporal pattern.

> A 0.5m grid size was adopted so that the road reserve was captured in sufficient detail.

> The road reserve areas were modelled using rainfall on grid. No rainfall losses were assumed

> The runoff from the surrounding lots was directed towards the underground drainage network. As the roof drainage is likely to have 5% AEP capacity, flows in excess of this capacity were directed as inflows onto the road surface. No rainfall losses were assumed.

> The tailwater level in the canal was assumed to be 2.35m AHD. This is the 1% AEP storm tide level with potential climate change included. Storm tide levels are to be used in preference to

storm surge levels as wave runup is not included as it is not a factor in protected waterways such as Maud Canal.

> The tailwater level for the existing northern drainage system was assumed to be equal to the obvert of the existing pipe.

> The road reserve was modelled with a Manning's roughness of 0.02.

> For the design scenario the blockage factors for field and gully inlets as specified by QUDM were assumed.

> For the blockage scenario all inlets were blocked by 100%. Roof water drainage (to 5% AEP capacity) was still assumed to be able to enter the drainage network.

> The manhole losses were automatically calculated by TUFLOW using the Engelhund Method.

3. Results

The preliminary results of the analysis identified areas where additional inlets would be required. Once these modifications were made to the design the results showed that:

> The depth of flooding in the 1% AEP climate change design event was less than 250mm in all areas of the proposed development.

> Once complete blockage of inlets was included the increase in peak water levels was less than 300mm in all areas of the site. As freeboard of 300mm above the 1% AEP local flood level is required for minimum floor levels based on the requirements of QUDM, this confirmed that all lots would have sufficient flood immunity for the major local flood event. For the majority of the site the increase was less than 100mm, with 95% of impacts being less than 200mm.

> The peak depth-velocity (dV) product for the 1% AEP design flood event was extremely low in all areas, with a maximum of around 0.05m^2/s. This indicates that flood hazards to motorists and pedestrians will be minimal.

The preliminary proposal for drainage design within Stage 1 nominated that areas where overland flow paths were blocked would have a duplicate drainage network with 1% AEP capacity. The results of this analysis have shown that even if all inlets are completely blocked that the peak water levels will not be increased by more than the specified minimum freeboard of 300mm. This is because there are some alternate flow paths available for areas around the raised intersections. It has therefore been deemed not necessary to provide a dual drainage network for these areas.

The results of the TUFLOW modelling are shown in the attached figures.

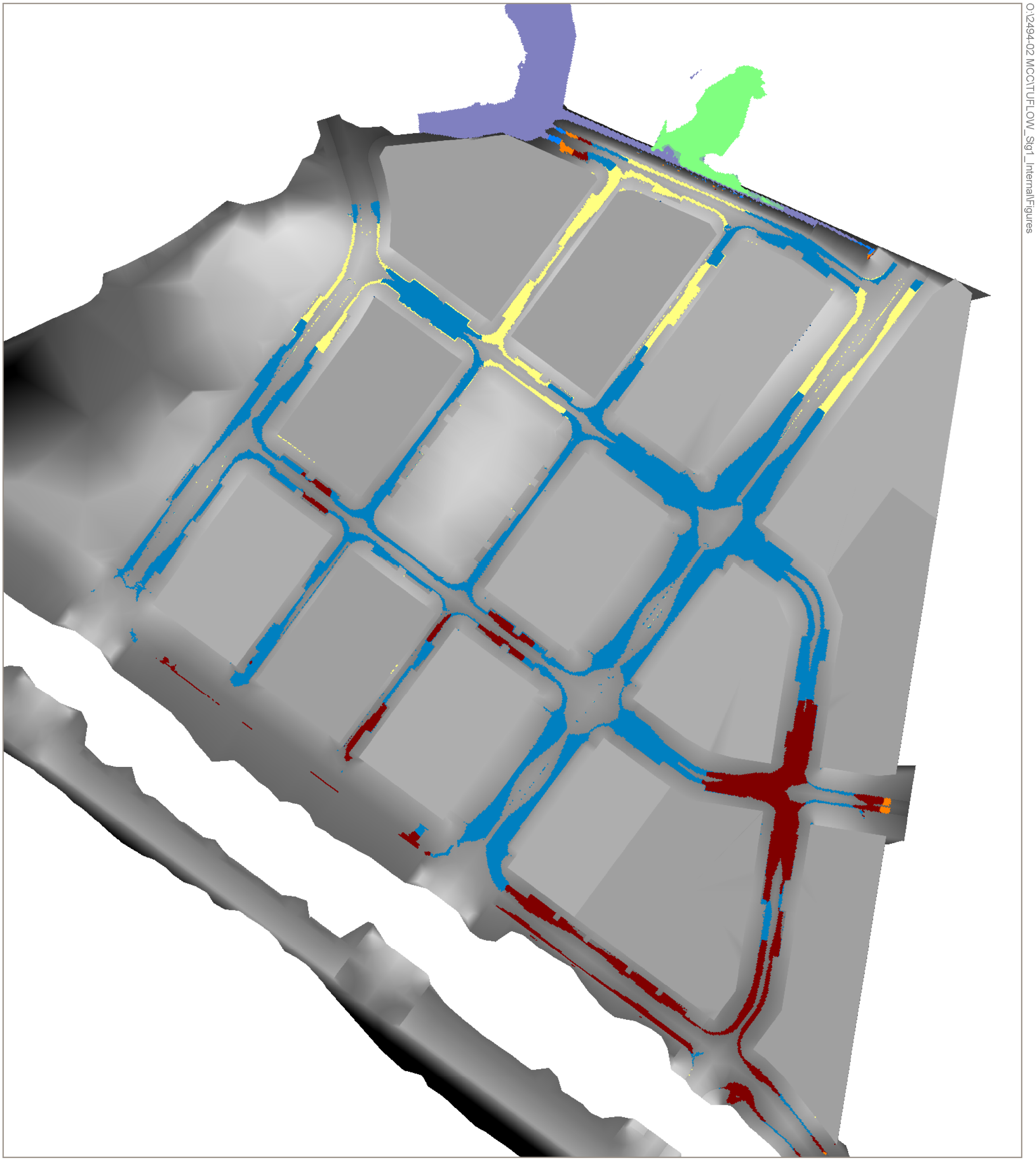
The minimum floor level for each lot, as specified by the manhole number relating to the roof drainage inlet point, is summarised in Table 1. A freeboard of 300mm above the 1% AEP flood level with climate change has been specified to comply with QUDM. The minimum floor levels required are all higher than those obtained using the 1% AEP climate change storm surge level, i.e. 3.32m AHD. The minimum floor levels in Table 1 were obtained by adding 300mm to the maximum design flood level along the street frontage of each lot.

Table 1 Minimum Floor Levels for each Lot

Lot Identifier	Minimum Floor Level (mAHD)	Freeboard with Complete Blockage (mm)	Lot Identifier	Minimum Floor Level (mAHD)	Freeboard with Complete Blockage (mm)
1-11	3.60	187	1-51	3.97	300
1-12	3.56	159	1-52	3.74	300
1-15	3.60	179	1-53	3.90	300
1-16	3.59	175	1-54	3.74	245
1-17	3.66	238	1-55	3.86	292
1-18	3.68	213	1-56	3.82	297
1-20	3.66	248	1-57	3.87	300
1-21	3.67	258	1-58	3.87	300
1-23	3.69	206	1-59	3.92	300
1-24	3.70	244	1-6	3.58	237
1-25	3.70	222	1-60	3.89	299
1-26	3.74	248	1-61	3.87	284
1-27	3.69	203	1-64	3.89	299
1-3	3.71	300	1-65	3.32*	590
1-30	3.85	297	1-66	3.79	294
1-31	3.66	215	1-7	3.52	263
1-32	3.60	182	1-75	3.80	215
1-33	3.60	184	1-78	3.77	247
1-34	3.74	254	1-79	3.67	147
1-35	3.63	162	1-8	3.67	257
1-37	3.70	199	1-80	3.70	175
1-38	3.69	210	1-81	3.77	245
1-39	3.70	227	1-83	3.63	180
1-41	3.70	226	1-84	3.63	180
1-42	3.72	217	1-85	3.63	118
1-45	3.86	290	1-86	3.72	209
1-48	3.89	285	1-90	3.78	267
1-49	3.88	296	1-91	3.97	300
1-50	3.88	294	1-92	3.70	186

** Based on 1% AEP storm surge level*

O:\2494-02 MCC\TUFLOW_Stg1_Internal\Figures



Scale: 1:1,500

15 0 15 30 45

Metres

N W E S

SHEET	A3
Project No:	2492-02
Date:	30 October 2015
Revision Number:	
Designed by:	
Client Name:	SunCentral Maroochydore

Peak Water Level (mAHD)

- 2.00 to 2.25
- 2.25 to 2.50
- 2.50 to 2.75
- 2.75 to 3.00
- 3.00 to 3.25
- 3.25 to 3.50
- 3.50 to 3.75

Figure 1

1% AEP Design Peak Flood Level with Climate Change

Stage 1 Internal Drainage

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Level 11, North Tower, 515 St Pauls Terrace
Locked Bag 4006, Fortitude Valley QLD 4006
Tel: 07 3369 9822 Fax: 07 3369 9722

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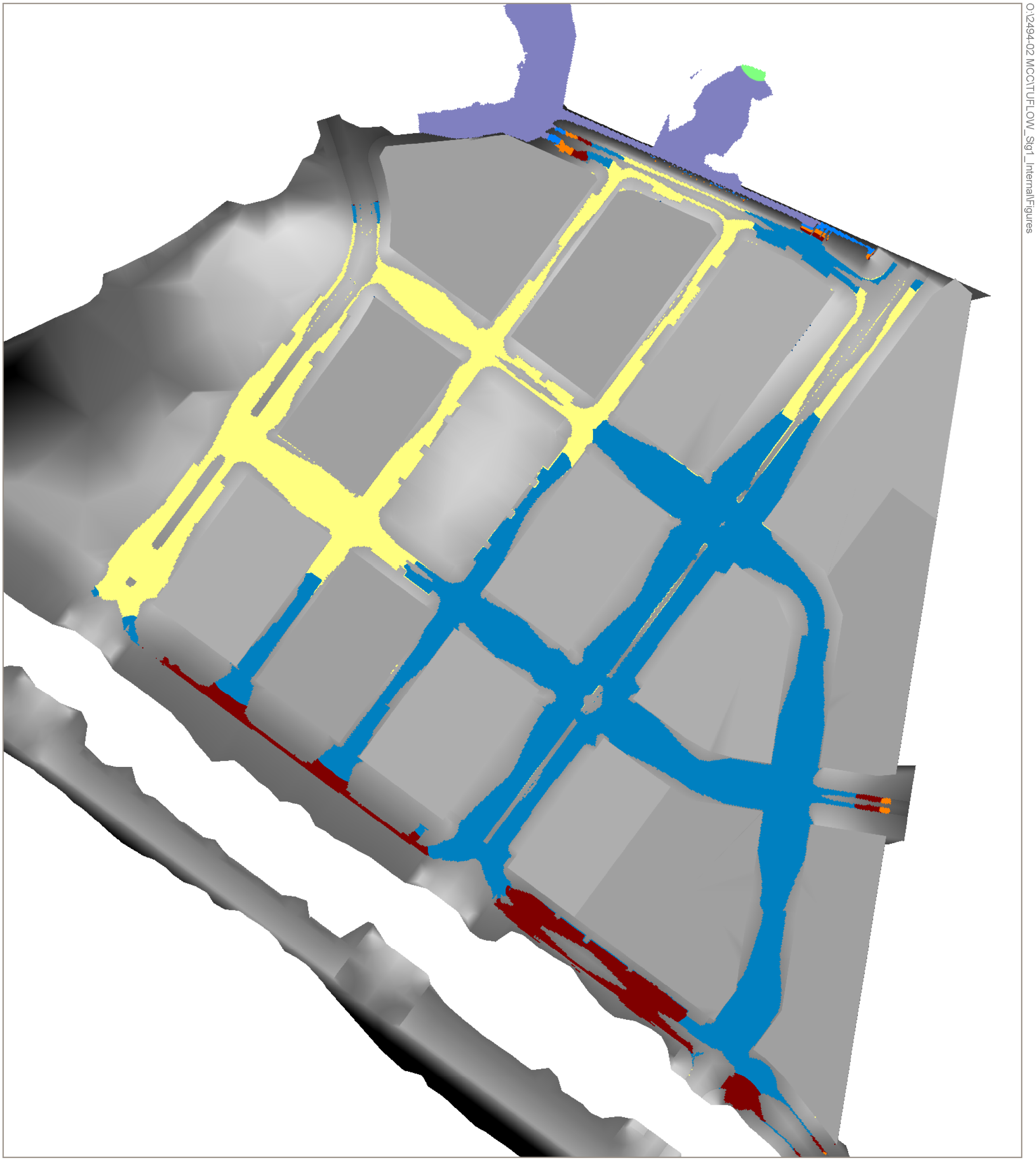

Scale: 1:1,500

15 0 15 30 45

Metres

N
W E
S

SHEET	A3
Project No:	2492-02
Date:	30 October 2015
Revision Number:	
Designed by:	
Client Name:	SunCentral Maroochydore

Peak Water Level (mAHD)

- 2.00 to 2.25
- 2.25 to 2.50
- 2.50 to 2.75
- 2.75 to 3.00
- 3.00 to 3.25
- 3.25 to 3.50
- 3.50 to 3.75

Figure 2

1% AEP Peak Flood Level with Climate Change and Complete Inlet Blockage

Stage 1 Internal Drainage

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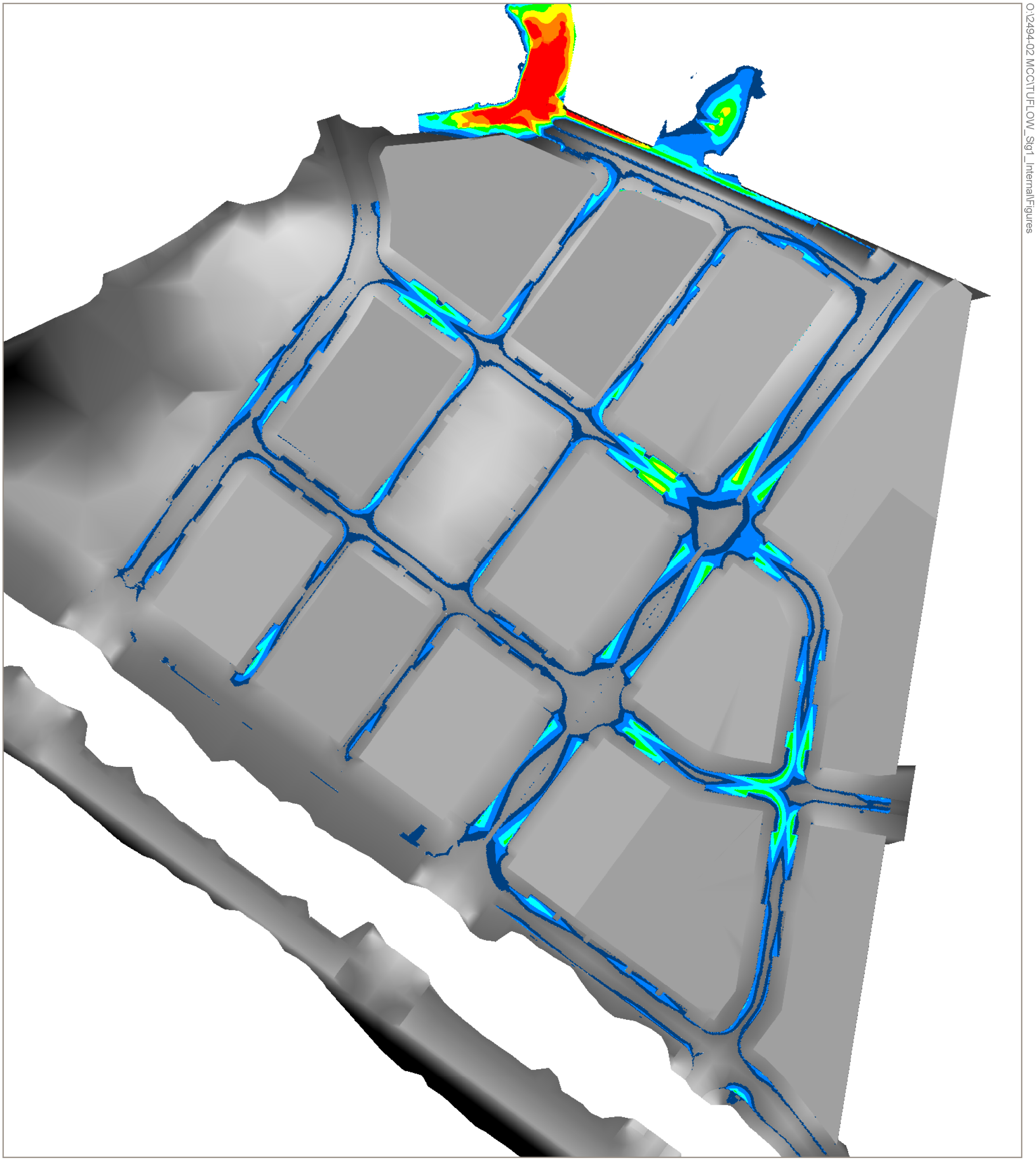

Scale: 1:1,500

15 0 15 30 45

Metres

N W E S

SHEET	A3
Project No:	2492-02
Date:	30 October 2015
Revision Number:	
Designed by:	
Client Name:	SunCentral Maroochydore

Depth (m)

- 0.00 to 0.01
- 0.01 to 0.05
- 0.05 to 0.10
- 0.10 to 0.15
- 0.15 to 0.20
- 0.20 to 0.25
- 0.25 to 0.30
- 0.30 to 0.50

Figure 3

1% AEP Design Peak Depth with Climate Change

Stage 1 Internal Drainage

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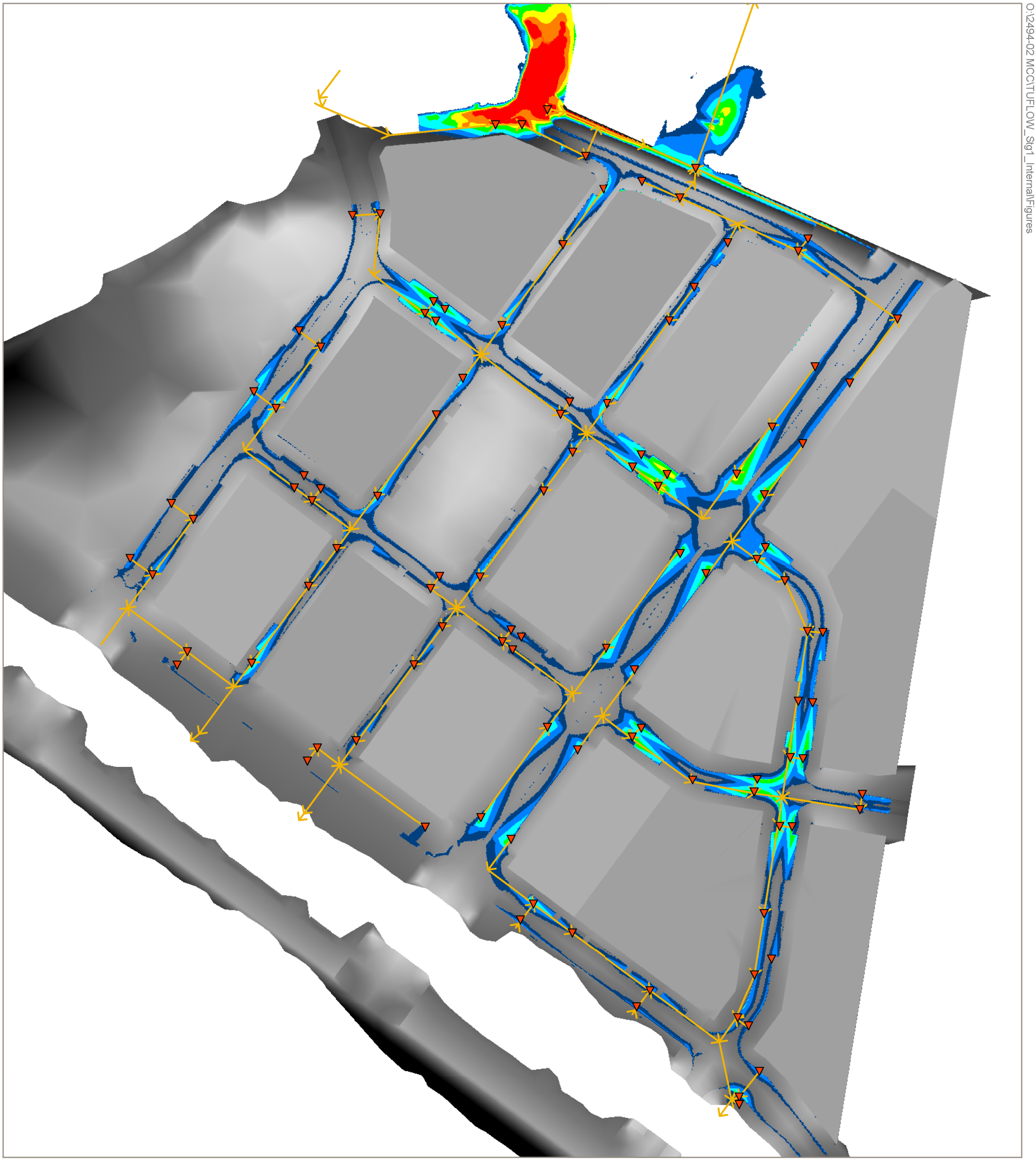
O:\2494-02 MCC\TUFLOW_Stg1_InternalFigures



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Metres

N W E S

SHEET	A3
Project No:	2492-02
Date:	30 October 2015
Revision Number:	
Designed by:	
Client Name:	SunCentral Maroochydore

Depth (m)

- 0.00 to 0.01
- 0.01 to 0.05
- 0.05 to 0.10
- 0.10 to 0.15
- 0.15 to 0.20
- 0.20 to 0.25
- 0.25 to 0.30
- 0.30 to 0.50

Inlet Pits

Stormwater Drainage

Figure 4

1% AEP Design Peak Depth with Climate Change

Stage 1 Internal Drainage

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Appendix E
Maroochy Maroochydore City Centre Stage 1 Construction Plans prepared by Cardno (QLD) Pty Ltd

DOCUMENT TRANSMITTAL

Cardno
Shaping the Future

To: **SUNCENTRAL**	Project Name	**MAROOCHYDORE CITY CENTRE - STAGE 1B & 1C**	
	Project/Transmittal Number:	**249402**	**9**
Attn: SIMON KAY	Date:	17/09/2019	

Cardno (Qld) Pty Ltd
ABN 57 051 074 992

Level 1, 9 Maud Street
Maroochydore,
QLD 4558

PO Box 152
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Tel: 07 5443 2555
Fax: 07 5443 5642

www.cardno.com.au

Message: TRG Comments

Issued By: *Chase Kempe*

Authorised by: *Tony Howard*

We Enclose:	No	Media	Sent Via	Reason for Issue		Print Size	No
☑ Drawings	41	☐ Disc	☐ Mail	☐ Information	☐ Preliminary	☐ A0	41
☐ Reports		☐ Paper	☑ Email	☐ For Comment	☑ Tender	☑ A1	
☐ Computations		☑ PDF	☐ Courier	☐ Quotation	☐ Construction	☐ A3	
☐ Specification		☐ Electronic	☐ By Hand	☐ For Approval	☐ As Constructed	☐ B1	
☐ Other		☐ Other	☐ Other	☐ Coordination		☐ Other	

CC'd: Company	Contact	Message

Cardno Documents

Report No	Revision	Report Title

Document No	Revision	Document Title
249402-CI-2000	4	COVER SHEET AND LOCALITY PLAN
249402-CI-2001	5	SCHEDULE OF DRAWINGS AND GENERAL NOTES
249402-CI-2005	7	KEY AND OVERALL STAGING PLAN
249402-CI-2100	4	CONCEPT EROSION AND SEDIMENT CONTROL NOTES
249402-CI-2102	7	CONCEPT EROSION AND SEDIMENT CONTROL PLAN
249402-CI-2103	4	INTERIM PARK EROSION AND SEDIMENT CONTROL PLAN
249402-CI-2180	7	SERVICES PLAN
249402-CI-2199	8	PAVEMENT PLAN
249402-CI-2200	5	GRADING PLAN
249402-CI-2201	8	ROADWORKS PLAN
249402-CI-2211	5	ROADWORKS TYPICAL SECTIONS - SHEET 1
249402-CI-2212	6	ROADWORKS TYPICAL SECTIONS - SHEET 2
249402-CI-2216	5	ROADWORKS TYPICAL DETAILS & PAVEMENT SPECIFICATIONS
249402-CI-2217	5	CONCRETE JOINTING DETAILS - SHEET 1
249402-CI-2218	5	CONCRETE JOINTING DETAILS - SHEET 2
249402-CI-2219	5	CONCRETE JOINTING PLAN - SHEET 1
249402-CI-2220	5	CONCRETE JOINTING PLAN - SHEET 2
249402-CI-2231	4	ROADWORKS LONGITUDINAL SECTIONS - SHEET 1
249402-CI-2232	4	ROADWORKS LONGITUDINAL SECTIONS - SHEET 2
249402-CI-2233	2	ROADWORKS LONGITUDINAL SECTIONS - SHEET 3
249402-CI-2261	8	INTERSECTION DETAILS - SHEET 1
249402-CI-2262	7	INTERSECTION DETAILS - SHEET 2
249402-CI-2263	5	INTERSECTION DETAILS - SHEET 3
249402-CI-2264	3	INTERSECTION DETAILS - SHEET 4
249402-CI-2271	6	LINEMARKING AND SIGNAGE PLAN - SHEET 1
249402-CI-2272	6	LINEMARKING AND SIGNAGE PLAN - SHEET 2
249402-CI-2273	5	LINEMARKING AND SIGNAGE PLAN - SHEET 3
249402-CI-2300	5	STORMWATER NOTES AND DETAILS
249402-CI-2301	7	STORMWATER DRAINAGE PLAN
249402-CI-2311	5	STORMWATER LONGITUDINAL SECTIONS - SHEET 1
249402-CI-2312	5	STORMWATER LONGITUDINAL SECTIONS - SHEET 2
249402-CI-2313	5	STORMWATER LONGITUDINAL SECTIONS - SHEET 3
249402-CI-2315	2	STORMWATER DRAINAGE OUTLET DETAILS
249402-CI-2400	5	SEWERAGE TYPICAL NOTES AND DETAILS

Cardno Documents		
249402-CI-2402	7	SEWERAGE RETICULATION PLAN
249402-CI-2411	5	SEWERAGE LONG SECTIONS - SHEET 1
249402-CI-2412	5	SEWERAGE LONG SECTIONS - SHEET 2
249402-CI-2500	6	WATER TYPICAL NOTES & DETAILS
249402-CI-2501	1	WATER TYPICAL DETAILS - DICL EXTENT AT ENERGEX PITS
249402-CI-2502	7	WATER RETICULATION PLAN
249402-CI-2550	3	SAFETY IN DESIGN PLAN

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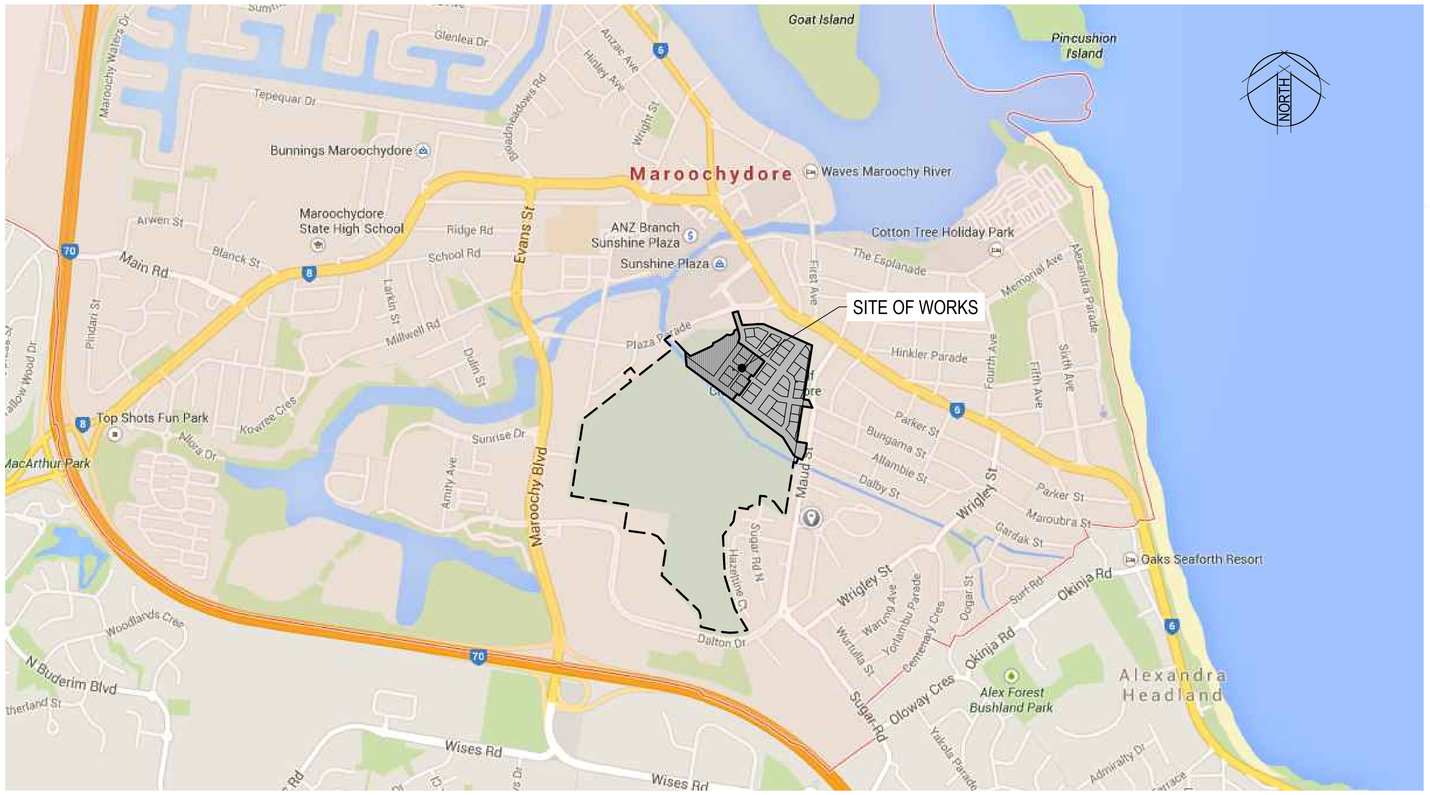
MAROOCHYDORE CITY CENTRE
CIVIL WORKS - STAGE 1B 1C & 1C(1)



LOCALITY PLAN
SCALE A1 - N.T.S.
A3 - N.T.S.

CONCEPT MASTER PLAN
SCALE A1 - N.T.S.
A3 - N.T.S.

249402-CI-2000
Drawing Number

4
Revision

DATE PLOTTED: 15 August 2019 4:26 PM BY: ANTHONY SKORIC
CAD File: P:\249402 MCC Design Package 1_DESIGN\ACAD_CIVIL STAGE 1B & 1C\249402-CI-2000 COVER SHEET AND LOCALITY PLAN.dwg

DATE PLOTTED: 15 August 2019 4:20 PM BY: ANTHONY SKORIC

SCHEDULE OF DRAWINGS

DRAWING No.	DESCRIPTION
249402-CI-2000	COVER SHEET AND LOCALITY PLAN
249402-CI-2001	SCHEDULE OF DRAWINGS AND GENERAL NOTES
249402-CI-2005	KEY AND OVERALL STAGING PLAN
249402-CI-2100	CONCEPT EROSION AND SEDIMENT CONTROL NOTES
249402-CI-2102	CONCEPT EROSION AND SEDIMENT CONTROL PLAN
249402-CI-2103	INTERIM PARK EROSION AND SEDIMENT CONTROL PLAN
249402-CI-2180	SERVICES PLAN
249402-CI-2199	PAVEMENT PLAN
249402-CI-2200	GRADING PLAN
249402-CI-2201	ROADWORKS PLAN
249402-CI-2211	ROADWORKS TYPICAL SECTIONS - SHEET 1
249402-CI-2212	ROADWORKS TYPICAL SECTIONS - SHEET 2
249402-CI-2216	ROADWORKS TYPICAL DETAILS & PAVEMENT SPECIFICATIONS
249402-CI-2217	CONCRETE JOINTING DETAILS - SHEET 1
249402-CI-2218	CONCRETE JOINTING DETAILS - SHEET 2
249402-CI-2219	CONCRETE JOINTING PLAN - SHEET 1
249402-CI-2220	CONCRETE JOINTING PLAN - SHEET 2
249402-CI-2231	ROADWORKS LONGITUDINAL SECTIONS - SHEET 1
249402-CI-2232	ROADWORKS LONGITUDINAL SECTIONS - SHEET 2
249402-CI-2233	ROADWORKS LONGITUDINAL SECTIONS - SHEET 3
249402-CI-2261	INTERSECTION DETAILS - SHEET 1
249402-CI-2262	INTERSECTION DETAILS - SHEET 2
249402-CI-2263	INTERSECTION DETAILS - SHEET 3
249402-CI-2264	INTERSECTION DETAILS - SHEET 4
249402-CI-2271	LINEMARKING AND SIGNAGE PLAN - SHEET 1
249402-CI-2272	LINEMARKING AND SIGNAGE PLAN - SHEET 2
249402-CI-2273	LINEMARKING AND SIGNAGE PLAN - SHEET 3
249402-CI-2300	STORMWATER NOTES AND DETAILS
249402-CI-2301	STORMWATER DRAINAGE PLAN
249402-CI-2311	STORMWATER LONGITUDINAL SECTIONS - SHEET 1
249402-CI-2312	STORMWATER LONGITUDINAL SECTIONS - SHEET 2
249402-CI-2313	STORMWATER LONGITUDINAL SECTIONS - SHEET 3
249402-CI-2315	STORMWATER DRAINAGE OUTLET DETAILS
249402-CI-2400	SEWERAGE TYPICAL NOTES AND DETAILS
249402-CI-2402	SEWERAGE RETICULATION PLAN
249402-CI-2411	SEWERAGE LONG SECTIONS - SHEET 1
249402-CI-2412	SEWERAGE LONG SECTIONS - SHEET 2
249402-CI-2500	WATER TYP NOTES & DETAILS
249402-CI-2501	WATER TYP DETAILS - DICL EXTENT AT ENERGEX PITS
249402-CI-2502	WATER RETICULATION PLAN
249402-CI-2550	SAFETY IN DESIGN PLAN
249402-ST-2001	STRUCTURAL REINFORCEMENT DETAILS - SHEET 1
249402-ST-2002	STRUCTURAL REINFORCEMENT DETAILS - SHEET 2

5

ABBREVIATIONS TABLE

ABBREVIATION	DESCRIPTION
BOL	BOLLARD
BOW	BOTTOM OF WALL
COMMS	COMMUNICATION
CP	COMMON PROPERTY
DW	DRIVEWAY
DWG.	DRAWING
EFF	EFFLUENT
ELEC	ELECTRICITY
ESL	EXISTING SURFACE LEVEL
EX	EXISTING
FL	EARTHWORKS FINISHED LEVEL
FSL	FINISHED SURFACE LEVEL
H.A.T.	HIGHEST ASTRONOMICAL TIDE
HV	HIGH VOLTAGE
I.P.W.E.A.	INSTITUTE OF PUBLIC WORKS ENGINEERING AUSTRALIA
IP	INTERSECTION POINT
L.A.T.	LOWEST ASTRONOMICAL TIDE
LA	LANDSCAPE
LL	LIP LEVEL OF KERB
M.H.W.S.T.	MEAN HIGH WATER SPRING TIDE

ABBREVIATIONS TABLE

ABBREVIATION	DESCRIPTION
M.S.L.	MEAN SEA LEVEL
PL	FINISHED PAVEMENT LEVEL
PR	PROPOSED
RL	REDUCED LEVEL
RP BDY	REAL PROPERTY BOUNDARY
S.T.	STORM TIDE
S.W.L.	STANDING WATER LEVEL
SCC	SUNSHINE COAST COUNCIL
SEW	SEWER
SS	SUBSOIL DRAINAGE
STD.	STANDARD
SWD	STORMWATER
TEL	TELSTRA
TIDE	DESCRIPTION
TOW	TOP OF WALL
TP	TANGENT POINT
TR	TRANSITION
VEG	VEGETATION
WAT	WATER

DIAL BEFORE YOU DIG

SERVICE LOCATIONS

It is the responsibility of the Foreman to contact the relevant service authorities to ascertain the exact location of services prior to construction.

PLEASE CONTACT THE SCC'S ARBORIST PRIOR TO ANY CONSTRUCTION FOR ADVICE ON TREE ROOT PROTECTION IN THE VICINITY OF THE WORKS TO BE CARRIED OUT.

ENERGY SERVICE PROVIDERS

AGL, origin, ERGON. ENERGY, energex

NOTE: SERVICE LOCATIONS ARE APPROXIMATE ONLY FROM PROVIDERS PLANS. LOCATIONS ARE TO BE CONFIRMED PRIOR TO START OF CONSTRUCTION. PHONE DBYD SERVICE LOCATIONS ON **1100** FOR DETAILS.

TELECOMMUNICATIONS SERVICE PROVIDERS

'yes' OPTUS, Telstra, visionstream

NOTE: SERVICE LOCATIONS ARE APPROXIMATE ONLY FROM PROVIDERS PLANS. LOCATIONS ARE TO BE CONFIRMED PRIOR TO START OF CONSTRUCTION. PHONE DBYD SERVICE LOCATIONS ON **1100** FOR DETAILS.

SUBSOIL DRAINAGE NOTES:

S.1. SUBSOIL DRAINAGE SHALL BE IN ACCORDANCE WITH AUSTROADS AGPT10 AND IPWEA STD. DWG. RS-140.

S.2. SUBSOIL DRAINAGE IS TO BE INSTALLED UNDER ALL KERBS, INTERFACES OF PAVEMENT WIDENING AND TO LANDSCAPED MEDIANS, UNLESS NOTED OTHERWISE. MITRE DRAINS ARE TO BE PROVIDED ON GRADES IN ACCORDANCE WITH IPWEA STD DWG RS-140 AND AS NECESSARY TO INTERCEPT ANY VISIBLE GROUNDWATER PERCOLATION IN THE SUBGRADE.

S.3. SUBSOIL DRAINAGE SHALL BE CONTINUOUS WITH ADJOINING KERB AND CHANNEL WHERE CONCRETE INVERT IS CONSTRUCTED. REFER IPWEA STANDARD DRAWINGS RS-140 TO RS-142.

S.4. TYPE A/B DRAINS SHALL BE USED FOR SUBSOIL DRAINS PLACED IN SAND OR COARSER GRANULAR SOILS. THE DRAIN SHALL COMPRISE OF 5mm SCREENINGS SURROUNDING AN UN-SOCKED 100mm SLOTTED PIPE.

S.5. TYPE B/C DRAINS SHALL BE USED WHEN DRAINS ARE PLACED IN CLAY, SILT OR FINE SAND GROUND CONDITIONS. THE DRAIN SHALL COMPRISE OF A GEOTEXTILE FILTER (FILTRATION CLASS V, STRENGTH CLASS C) WRAPPED AROUND 10mm SCREENINGS CONTAINING A 100mm DIA (UN-SOCKED) SLOTTED PIPE.

S.6. TYPE B/D DRAINS SHALL BE USED FOR SUBSOIL DRAINS PLACED IN SAND OR COARSER GRANULAR SOILS. THE DRAIN SHALL COMPRISE OF 5mm SCREENINGS COMBINED WITH A PROPRIETARY WRAPPED STRIP FILTER DRAIN.

GENERAL NOTES:

G.1. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL OTHER CONSULTANT'S DRAWINGS AND SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT. ANY DISCREPANCIES OR OMISSIONS SHALL BE IMMEDIATELY REFERRED TO THE SUPERINTENDENT FOR RESOLUTION.

G.2. CONSTRUCTION FROM THESE DRAWINGS AND ASSOCIATED CONSULTANTS' DRAWINGS SHALL NOT COMMENCE UNTIL APPROVED BY THE LOCAL AUTHORITY.

G.3. ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE RELEVANT AND CURRENT AUSTRALIAN STANDARDS, IPWEA, SEQ WS&S, WSAA, NATSPEC/AUS-SPEC, THE BUILDING CODE OF AUSTRALIA AND WITH THE POLICIES, BY-LAWS, CODES AND SPECIFICATIONS OF THE RELEVANT LOCAL AUTHORITIES.

G.4. WHERE PROVIDED, THE ACCOMPANYING BILLS OF QUANTITIES SHALL ONLY SERVE AS A SUPPLEMENT FOR PRICING PURPOSES. THE CONTRACTOR SHALL ALLOW FOR ALL WORKS REQUIRED TO COMPLY WITH THE DRAWINGS. THIS INCLUDES ANY TEMPORARY, INTERMEDIATE OR PROTECTIVE WORKS REQUIRED TO FACILITATE FINAL CONSTRUCTION.

G.5. SERVICES SHOWN ON THESE PLANS ARE ONLY THOSE EVIDENT AT THE TIME OF SURVEY, FROM AS CONSTRUCTED SURVEY AND FROM 'DIAL BEFORE YOU DIG' SEARCHES. THERE MAY BE ADDITIONAL SERVICES WHICH ARE NOT SHOWN ON THESE DRAWINGS.

G.6. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE RELEVANT SERVICE UTILITY PROVIDERS TO CONFIRM THE LOCATION OF ALL EXISTING SERVICES PRIOR TO COMMENCEMENT OF WORKS.

G.7. ANY DAMAGE TO SERVICES SHALL BE REPAIRED BY THE CONTRACTOR OR THE RELEVANT AUTHORITY AT THE CONTRACTOR'S EXPENSE.

G.8. THIS PROJECT HAS BEEN DESIGNED ON MGA ZONE 56, GDA94 DATUM COORDINATE BASE. THE SCALE FACTOR USED IS (1).

G.9. ALL SETOUT DATA TO BE SUPPLIED ELECTRONICALLY.

EARTHWORKS NOTES:

EW.1. EARTHWORKS SHALL BE IN ACCORDANCE WITH JOB SPECIFICATIONS AND AS 3798-2007 ('GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS').

EW.2. FILL SHALL BE PLACED AND COMPACTED TO THE FOLLOWING STANDARDS:
(I) COHESIVE MATERIALS:- ALLOTMENT FILL SHALL ACHIEVE A MINIMUM DRY DENSITY RATIO (M.D.D.R.) OF 95% STANDARD. COMMERCIAL ALLOTMENT FILL SHALL ACHIEVE A 98% STANDARD. DENSITY RATIO (M.D.D.R.)
ROAD EMBANKMENTS SHALL ACHIEVE THE FOLLOWING MINIMUM STANDARDS.
(A) GREATER THAN OR EQUAL TO 0.3m BELOW PAVEMENT SUBGRADE: 95% STD. M.D.D.R.
(B) LESS THAN 0.3m BELOW PAVEMENT SUBGRADE: 100% STD. M.D.D.R.
(II) NON COHESIVE MATERIALS:- FILL SHALL ACHIEVE A MINIMUM DENSITY INDEX RATIO OF 75%.

EW.3. GEOTECHNICAL CERTIFICATION SHALL BE 'LEVEL 1' AS PER AS.3798.

EW.4. ALL ALLOTMENTS TO FALL TO ROADWAY WITH A MINIMUM GRADE OF 1%.

EW.5. ALLOTMENT FINISHED LEVELS ADJACENT TO ROAD BOUNDARIES SHALL BE 5.0m FROM THE FRONT BOUNDARY, 1.0m FROM THE SIDE BOUNDARY AND 2.0m FROM THE FRONT BOUNDARY OF MULTI-UNIT SITES.

EW.6. EXCESS SPOIL TO BE TRANSPORTED TO A LOCATION CONFIRMED BY SUPERINTENDENT.

EW.7. PRELIMINARY INVESTIGATION INTO ROAD CORRIDORS. TEST PIT EXCAVATION WITHIN NEW ROAD CARRIAGEWAYS SHALL BE UNDERTAKEN TO INVESTIGATE SUBGRADE MATERIALS, PRIOR TO IMPORT OF ANY FILL TO IDENTIFY. OPPORTUNITY TO EXCAVATE AND REPLACE POOR SUBGRADE WITH IMPORTED MATERIAL AND USE EXCAVATED MATERIAL AS FILL ON ALLOTMENTS.

ROADWORKS AND INTERSECTION NOTES:

R.1. FOR DETAILS OF KERBS AND CHANNELS REFER TO IPWEA STANDARD DRAWING RS-080.

R.2. ALL KERBS AND CHANNELS TO BE PLAIN CONCRETE USING SLIP FORM CONSTRUCTION.

R.3. ALL CO-ORDINATE SETOUT POINTS OF KERB AND CHANNEL ARE TO THE LIP LINE AND NOMINATED LEVELS ARE LIP LEVELS.

R.4. ROOFWATER PIPES UP TO 300 DIA. ARE UPVC,
STORMWATER PIPES BETWEEN 300 AND 600 DIA. ARE R.C.P. CLASS 3, R.R.J.
STORMWATER PIPES 675 DIA. AND OVER ARE R.C.P. CLASS 2, R.R.J.
STORMWATER RCBC's TO BE EXPOSURE CLASSIFICATION B2.
ALL STORMWATER PIPES BELOW H.A.T. TO BE SALT WATER COVER PIPE CLASSIFICATION.

R.5. ROOFWATER CONNECTION POINTS SHALL BE IDENTIFIED BY A 100 x 100 WHITE HW POST MARKED AS "ROOFWATER DRAINAGE".

R.6. ALL ALLOTMENTS NOT PROVIDED WITH ROOFWATER DRAINAGE PIPED CONNECTION SHALL HAVE TWO POWDER COATED ALUMINIUM KERB ADAPTORS, ONE ON EACH COMMON BOUNDARY OFFSET 0.5m AND IN ACCORDANCE WITH IPWEA STANDARD DRAWING. RS-081.

R.7. FIELD INLET PITS IN ALLOTMENTS SHALL BE FITTED WITH BOLT DOWN LIGHT DUTY M.S. GRATED LID. PITS SHALL BE FITTED WITH 150 DIA. UPVC (S.W.) STUB SUPPLIED WITH BLANKING PIECE. STUB SHALL EXTEND 1.0m (MIN.) BEYOND SEWER LINE WHERE APPLICABLE.

R.8. FOR RESIDENTIAL AND COMMERCIAL DRIVEWAY CROSSOVERS, REFER TO IPWEA STANDARD DRAWINGS RS-050 AND RS-051.

R.9. PROVIDE KERB RAMPS WHERE SHOWN. REFER TO IPWEA STANDARD DRAWINGS RS-090 TO RS-094.

R.10. FOR DETAILS OF CONCRETE FOOTPATHS, REFER TO IPWEA STANDARD DRAWING RS-065.

R.11. SUBSOIL DRAINAGE SHALL BE CONTINUOUS WITH ADJOINING KERB AND CHANNEL WHERE CONCRETE INVERT IS CONSTRUCTED. REFER IPWEA STD. DWG'S RS-140 TO RS-142.

R.12. REFER TO ELECTRICAL CONTRACTOR'S DRAWINGS FOR ELECTRICAL CONDUIT LOCATIONS.

R.13. STREET SIGN LOCATIONS TO BE IN ACCORDANCE WITH IPWEA STANDARD DRAWING RS-130.

R.14. BIN PADS AS PER DRIVEWAY SPECIFICATIONS AND SURFACE FINISH AS PER LANDSCAPE SPECIFICATIONS.

Rev.	Date	Description	Des.	Verif.	Appd.
5	16/08/2019	TRG REVIEW; DWG 2501 ADDED	CK	AFH	GGT
4	20/05/2019	TRG REVIEW; DWGS 2103, 2315 & 2550 ADDED	CK	AFH	GGT
3	5/04/2019	ISSUED FOR TENDER - STAGE 1C(1) MUNDOO BOULEVARD	AS	DH	GT
2	6/02/2019	ISSUE FOR APPROVAL	CK	DH	GT
1	20/12/2018	FOR INFORMATION ONLY	CK	DH	GT

SunCentral Maroochydore

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Drawn	AE	Date 21/11/2018
Checked	DH	Date 21/11/2018
Designed	CK	Date 21/11/2018
Verified	GT	Date 6/02/2019
Approved	~~RPEQ No. 1723~~ G.Tamblyn	DATE 6/02/2019

Client: SUNCENTRAL MAROOCHYDORE PTY LTD
Project: MAROOCHYDORE CITY CENTRE
CIVIL WORKS - STAGE 1B 1C & 1C(1)
Title: SCHEDULE OF DRAWINGS AND GENERAL NOTES

Status: FOR TENDER ONLY
NOT TO BE USED FOR CONSTRUCTION PURPOSES

DATUM	Orig. Date	Scale	Size
AHD	21/11/2018	AS SHOWN	A1

Drawing Number: 249402-CI-2001
Revision: 5

XREFs: X:\TITLE BORDER
CAD File: P:\249402 MCC Design Package 1_DESIGN\ACAD_CIVIL\STAGE 1B & 1C\249402-CI-2001 SCHEDULE OF DRAWINGS AND GENERAL NOTES.dwg

DATE PLOTTED: 17 September 2019 8:41 AM BY: - AARON ELLARD

ROAD NAMES

CURRENT APPROVED NAMES	STAGE 1A DOCUMENTED NAMES
MUNDOO BOULEVARD	MC01 MAIN STREET BOULEVARD
MARKET LANE	MC02 LANEWAY 1
LIGHTNING LANE	MC03 LANEWAY 2
FIRST AVENUE	MC04 TOWN CENTRE BOULEVARD
FAIRWAY DRIVE	MC05 TOWN CENTRE AVENUE 1
SOUTH SEA ISLANDER WAY (SSI WAY)	MC06 TOWN CENTRE AVENUE 2
FUTURE WAY	MC07 TOWN CENTRE AVENUE 3
SUNSHINE COAST PDE	MC08 CORSO

PLAN
SCALE A1 - 1 : 1250
A3 - 1 : 2500

12.5 0 12.5 25 37.5 50 62.5m
Scale 1:1250

Rev.	Date	Description	Des.	Verif.	Appd.
7	17/09/2019	TRG COMMENTS; STAGE 1C(1) WORKS BOUNDARY AMENDED	CK	AFH	GGT
6	20/08/2019	TRG REVIEW; MUNGAR ST VERGE WORKS REMOVED	CK	AFH	GGT
5	16/08/2019	TRG REVIEW; STAGE 1C(1) WORKS BOUNDARY AMENDED	CK	AFH	GGT
4	20/05/2019	TRG REVIEW; MUNGAR ST WORKS ADDED	CK	AFH	GGT
3	5/04/2019	ISSUED FOR TENDER - STAGE 1C(1) MUNDOO BOULEVARD	AS	DH	GT
2	6/02/2019	ISSUE FOR APPROVAL	CK	DH	GT
1	20/12/2018	FOR INFORMATION ONLY	CK	DH	GT

SunCentral Maroochydore

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Drawn	AE	Date 21/11/2018
Checked	DH	Date 21/11/2018
Designed	CK	Date 21/11/2018
Verified	GT	Date 6/02/2019
Approved	G.Tamblyn	RPEQ No. 1723 — DATE 6/02/2019

Client: SUNCENTRAL MAROOCHYDORE PTY LTD
Project: MAROOCHYDORE CITY CENTRE
CIVIL WORKS - STAGE 1B 1C & 1C(1)
Title: KEY AND OVERALL STAGING PLAN

Status: FOR TENDER ONLY
NOT TO BE USED FOR CONSTRUCTION PURPOSES

DATUM	Orig. Date	Scale	Size
AHD	21/11/2018	AS SHOWN	A1

Drawing Number: 249402-CI-2005
Revision: 7

XREFs: X-TITLE BORDER, X-249402 RP BASE, X-249402 DESIGN STAGE 1, X-249402-EXISTING, X-249402 RP BASE EXTERNAL, CADASTRE 150302
CAD File: P:\249402 MCC Design Package 1_DESIGN\ACAD_CIVIL\STAGE 1B & 1C\249402-CI-2005 KEY PLAN.dwg

DATE PLOTTED: 15 August 2019 4:00 PM BY: ANTHONY SKORIC

EROSION AND SEDIMENT CONTROL NOTES:

THIS SITE HAS VERY LOW EROSION RISK POTENTIAL AS SPECIFIED BY THE 'RUSLE METHOD'.

ES.1. ALL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH I.E. AUST. SOIL EROSION AND SEDIMENT CONTROL MANUAL, SCC MANUAL FOR EROSION AND SEDIMENT CONTROL, IECA BEST PRACTICE EROSION AND SEDIMENT CONTROL AS DETAILED ON THIS PLAN, OR AS REQUIRED FOR COMPLIANCE WITH THE REQUIREMENTS OF THE ENVIRONMENTAL MANAGEMENT PLAN.

ES.2. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING EROSION AND SEDIMENT CONTROL DEVICES ARE INSPECTED AND MAINTAINED AS FOLLOWS:

- A. DAILY CONSTRUCTION
  - (I) DAILY DURING DRY WEATHER
  - (II) PRIOR TO PREDICTED STORM EVENTS
  - (III) TWICE DAILY DURING PROLONGED RAIN
  - (IV) DURING AND AFTER MAJOR STORM EVENTS
- B. DURING DEFECTS LIABILITY PERIOD
  - (I) WEEKLY DURING DRY WEATHER
  - (II) PRIOR TO PREDICTED STORM EVENTS
  - (III) TWICE WEEKLY DURING PROLONGED RAIN
  - (IV) DURING AND AFTER MAJOR STORM EVENTS

ES.3. EROSION AND SEDIMENT CONTROL DEVICES (OTHER THAN THOSE DETAILED) SHALL BE INSTALLED WHERE NECESSARY AND AS DIRECTED ON SITE BY THE CONTRACTOR'S ENVIRONMENTAL MANAGER OR THE SUPERINTENDENT.

ES.4. EROSION AND SEDIMENT CONTROL DEVICES ON THESE PLANS ARE INDICATIVE ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT THE INTENTS OF THESE PLANS AND THE ENVIRONMENTAL MANAGEMENT PLAN ARE COMPLIED WITH.

ES.5. EROSION AND SEDIMENT CONTROL DEVICES/STRATEGIES SHALL BE IMPLEMENTED PRIOR TO DISTURBANCE OF THE SITE, AND SHALL REMAIN IN PLACE UNTIL PERMANENT WORKS ARE COMPLETED AND CATCHMENT IS ESTABLISHED (80% COVER, MINIMUM).

ES.6. ALL EXPOSED SURFACES, ONCE COMPLETED, SHALL BE IMMEDIATELY STABILISED TO PREVENT EROSION.

ES.7. AREAS OF WORKS THAT REQUIRE DISTURBANCE OF SOIL SHALL BE KEPT TO A MINIMUM TO LIMIT THE EXPOSURE OF SOIL TO RAIN-DROP IMPACT AND OTHER FORMS OF WIND/STORMWATER EROSION.

ES.8. ALL STOCKPILES SHALL BE TEMPORARILY GRASSED AND GRADED TO ENSURE CONTROL OF RUNOFF. ALTERNATIVELY, SEDIMENT FENCES TO THE DOWNSTREAM FACE OF STOCKPILES SHALL BE INSTALLED, WITH CUT-OFF DRAINS UPSTREAM. STOCKPILES NOT BEING ACTIVELY WORKED SHALL BE SUITABLY STABILISED.

ES.9. ON SEEDED OR EXPOSED EARTH SURFACES, EROSION PROTECTION IN THE FORM OF SURFACE ROUGHENING TO INCREASE INFILTRATION AND DELAY THE FORMATION OF RUTTING SHALL BE USED.

ES.10. ALL TEMPORARY SWALES AND CUT-OFF DRAINS TO BE LINED WITH SOIL BINDER OR OTHER APPROVED MATERIAL.

ES.11. STABILISATION AND REHABILITATION OF DISTURBED AREAS IS TO OCCUR PROGRESSIVELY. COMPLETED AREAS ARE TO BE SEEDED HYDRO MULCHED, TURFED OR MULCHED AS APPROPRIATE.

ES.12. GRASS FILTER STRIPS SHALL BE PLACED ALONG THE BACK OF KERB AND CHANNEL, PATHWAYS AND OTHER IMPERVIOUS AREAS. LOCATIONS SHALL BE CONFIRMED BY SUPERINTENDENT.

ES.13. SUFFICIENT STOCKPILES OF MULCH/ECMI SOIL BINDER MUST BE RETAINED ON SITE AT ALL TIMES TO ENABLE ONGOING EROSION AND SEDIMENT CONTROL.

ES.14. ALL EROSION AND SEDIMENT CONTROL DEVICES ARE TO BE MAINTAINED IN GOOD WORKING ORDER AT ALL TIMES. MAINTENANCE OF DEVICES IS TO CONTINUE UNTIL SITE IS STABILISED.

ES.15. REFER IPWEA STANDARD DRAWINGS DS-040 AND DS-041 FOR DETAILS OF SEDIMENT TRAPS.

ES.16. DUST CONTROL SCREENS SHALL BE CONSTRUCTED AROUND PERIMETER OF WORKS AS DIRECTED.

ES.17. HYDROMULCH - REFER APPENDIX 9 SCC MANUAL. HYDROMULCH APPLICATION ACHIEVE TO 100% SOIL COVERAGE, ON APPLICATION 80% GRASS STRIKE IN 28 DAYS.

ES.18. ENSURE REHABILITATION/STABILISATION WITHIN THE SITE IS UNDERTAKEN PROGRESSIVELY AND ASAP AFTER THE COMPLETION OF CONSTRUCTION WORKS IN EACH PARTICULAR AREA.

ES.19. SEDIMENT IS TO BE TRAPPED WITHIN THE CONSTRUCTION ZONE AS CLOSE AS PRACTICABLE TO ITS SOURCE.

ES.20. SEDIMENT IS TO BE REMOVED FROM SEDIMENT CONTROLS ONCE THE SEDIMENT LEVELS REACH THE DESIGNED VOLUME.

ES.21. IF WORKS ARE TO BE SUSPENDED IN AREAS THAT ARE NON-COMPLETE THEN THE EXPOSED AREAS ARE TO HAVE TEMPORARY COVERAGE TO REDUCE RISK OF EROSION DUE TO RAINFALL AND WIND.

DUST SUPPRESSION NOTES:

THE CONTRACTOR IS RESPONSIBLE FOR THE CONTROL OF ALL DUST EMISSIONS DURING ALL EARTHWORKS OPERATIONS. CONTROL MEASURES MAY INCLUDE, BUT NOT BE LIMITED TO:

DS.1. WINDBREAK SCREENS INCLUDING THE ORIENTATION OF TEMPORARY STOCKPILES TO MINIMISE THE EFFECT OF PREVAILING WINDS.

DS.2. WATER TRUCKS OPERATING AS WARRANTED.

DS.3. MINIMISATION OF VEHICULAR MOVEMENT EXCEPT FOR DESIGNATED TRAFFIC ROUTES.

DS.4. IF VISIBLE DUST EMISSIONS ARE OCCURRING WORKS ARE TO CEASE IMMEDIATELY, UNTIL DUST CONTROL MEASURES CAN BE PUT IN PLACE. DUST MONITORING DEVICES ARE TO BE INSTALLED.

EROSION AND SEDIMENT CONTROL CONSTRUCTION SEQUENCE:

PHASE 3 - CIVIL CONSTRUCTION:

1. ALL MEASURES FROM BULK EARTHWORKS PHASE TO REMAIN IN PLACE.
2. MAINTAIN SANDBAG WEIRS AS REQUIRED TO LIMIT FLOWS ON ROADWAY AREAS NOT UNDER CONSTRUCTION. SAND BAG WEIRS TO BE REINSTATED PRIOR TO RAINFALL EVENT AS REQUIRED.
3. INSTALL FIELD INLET PROTECTION (SANDBAGS OR GRAVEL FILLED FILTER FABRIC) AND MONITOR.
4. TURF STRIPS TO BACK OF KERB AND TO SWALES AS REQUIRED.
5. RESEED AND WATER ANY DISTURBED AREAS.
6. INLET GRATES TO HAVE FILTER FABRIC PLACED OVER AND SECURED. KERB INLET BARRIERS TO BE INSTALLED.
7. EARTHWORKS AREAS TO REMAIN IN ROUGHENED STATE, REINSTATE IF REQUIRED.

PHASE 4 - CONSTRUCTION COMPLETION:

1. ALL MEASURES FROM PHASE 3 TO REMAIN IN PLACE.
2. MONITOR AND MAINTAIN ALL DEVICES.
3. INSPECT ALL DEVICES BEFORE AND AFTER RAINFALL EVENTS.
4. RESEED AND WATER ANY DISTURBED AREAS.
5. SEDIMENT TRENCHES/BASINS TO BE DECOMMISSIONED AND SITE TO BE ESTABLISHED AS REQUIRED.
6. TEMPORARY STOCKPILES AND SITE COMPOUND/OFFICE TO BE DECOMMISSIONED.
7. PLANTING, TURFING, MULCHING ETC. TO NOMINATED AREAS AS DETAILED ON LANDSCAPE ARCHITECTS DRAWINGS.

SITE MAINTENANCE AND REHABILITATION:

1. ALL DRAINAGE, EROSION AND SEDIMENT CONTROL MEASURES MUST BE INSPECTED AS SET OUT IN THE PROJECT ESCP.
2. COMPLETED EARTHWORKS ARE TO BE STABILISED ASAP, FOLLOWING COMPLETION OF SOIL DISTURBANCE ACTIVITIES. EROSION AND SEDIMENT CONTROL MEASURES TO REMAIN IN PLACE UNTIL DISTURBED AREA HAS BEEN COVERED/STABILISED.
3. WHERE EVIDENCE OF SCOUR EROSION IS PRESENT, WHERE WATER QUALITY ISSUES HAVE BEEN IDENTIFIED AND/OR WHERE OTHER CHANGES TO CONSTRUCTION ACTIVITIES HAVE BEEN IDENTIFIED, ADDITIONAL ESC MEASURES ARE TO BE IMPLEMENTED.

SITE SET UP, SITE ACCESS AND SITE MANAGEMENT:

1. ACCESS (ENTRY AND EXITS), DRAINAGE AND EROSION AND SEDIMENT CONTROLS TO BE INSTALLED PRIOR TO THE CLEARING AND GRUBBING AND CONSTRUCTION OF HAUL ROADS. INSTALLATION OF CLEAN WATER DIVERSION DRAINS, DIRTY WATER CATCH DRAINS, CHECK DAM SEDIMENT TRAPS, SEDIMENT FENCES, SEDIMENT TRENCHES AND SEDIMENT BASINS AROUND SITE TO BE UNDERTAKEN AS REQUIRED.
2. EROSION, SEDIMENT AND DRAINAGE CONTROLS TO BE INSTALLED PRIOR TO THE CONSTRUCTION OF PERMANENT DRAINAGE AND CULVERT EXTENSIONS, AND THE PLANNED BULK EARTHWORKS.
3. SITE EXIT LOCATIONS ARE TO CONTAIN STABILISED ACCESSES TO APPROPRIATELY MANAGE THE RISK OF DIRT/MUD BEING TRACKED ONTO PUBLIC ROADS. IN THE EVENT OF DIRT/MUD BEING TRACKED ONTO PUBLIC ROADS, IT IS TO BE CLEANED IMMEDIATELY.
4. ALL STORMWATER RUN OFF FROM ENTRY/EXIT LOCATIONS IS TO BE TREATED AS DIRTY WATER AND DIRECTED TO AN APPROPRIATE SEDIMENT CONTROL DEVICE.
5. WHERE PRACTICAL, HIGH EROSION AND SEDIMENTATION RISK CONSTRUCTION WORKS, SUCH AS WORKS ADJACENT TO AND WITHIN OVERLAND FLOW PATHS, ARE TO BE SCHEDULED DURING LOW RISK PERIODS WITH MINIMAL PREDICTED RAINFALL.
6. SEDIMENT DEPOSITS THAT OCCUR OFF-SITE (ON ROADS, WITHIN DRAINS OUTSIDE WORK AREA, WITHIN WATERCOURSE) AS A RESULT OF THESE CONSTRUCTION WORKS ARE TO BE CLEANED UP AND REHABILITATED TO PRIOR CONDITION AS SOON AS POSSIBLE FOLLOWING IDENTIFICATION OF PROBLEM.
7. ADEQUATE WASTE STORAGE IS REQUIRED ACROSS THE CONSTRUCTION AREA TO PREVENT BUILD UP OF WASTE/RUBBISH AND RISK OF DEPOSITION TO THE ENVIRONMENT.
8. THESE EROSION AND SEDIMENT CONTROL DRAWINGS SHOULD BE REVIEWED REGULARLY AND UPDATED AS REQUIRED IN RESPONSE TO CHANGES IN SITE CONDITIONS, CONSTRUCTION ACTIVITIES OR CONSTRUCTION STAGING.

STOCKPILE MANAGEMENT:

1. STOCKPILES TO BE POSITIONED AWAY FROM OVERLAND FLOW PATHS, POOR DRAINAGE AREAS OR OTHER LIKELY CONFLUENCES WHERE CONCENTRATED FLOW MAY CAUSE SEDIMENT TRANSPORTATION.
2. STOCKPILES ARE TO BE LOCATED UP GRADIENT OF AN APPROPRIATE SEDIMENT CONTROL DEVICE, WITH A CATCH DRAIN OR DIVERSION BUND INSTALLED UP GRADIENT TO REDUCE OVERLAND FLOW INTO THE STOCKPILE AREA.
3. STOCKPILED (FILL OR EXCAVATED) MATERIAL THAT WILL REMAIN ONSITE FOR LONGER THAN 28 DAYS IS TO BE COVERED AND BUNDED TO PREVENT SEDIMENT LADEN WATER RUN-OFF INTO THE ENVIRONMENT.

DRAINAGE CONTROL AND SURFACE WATER MONITORING:

1. WHERE PRACTICAL "CLEAN" WATER IS TO BE DIVERTED AWAY FROM THE CONSTRUCTION ZONE TO AVOID MIXING WITH "DIRTY" WATER FROM WITHIN THE CONSTRUCTION ZONE.
2. ROCK CHECK DAMS PREVENT SCOURING DUE TO HIGH FLOW VELOCITIES, IN A MANNER THAT PREVENTS SOIL EROSION ALONG DRAINAGE PATHS AND AT THE ENTRANCE/EXIT OF ALL DRAINS AND DRAINAGE PIPES DURING ALL STORMS.
3. DRAINAGE CONTROLS, INCLUDING ROCK CHECK DAMS AND TEMPORARY CULVERTS ARE TO BE MONITORED DURING RAIN EVENTS TO ENSURE THEY ARE OPERATING AS DESIGNED.
4. ALL SURFACE WATER MONITORING, RECORDING AND REPORTING IS TO BE DONE IN ACCORDANCE WITH THE PROJECT CEMP.

EROSION MANAGEMENT NOTES:

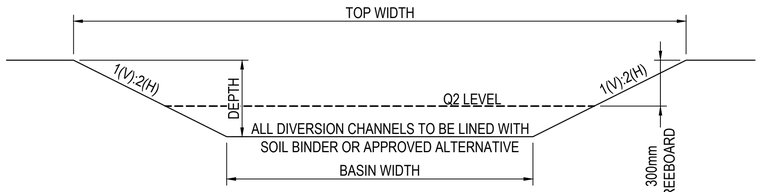
1. ALL PERIMETER BANKS/SWALES SHALL HAVE UNINTERRUPTED POSITIVE GRADE TO AN OUTLET.
2. AT ALL TIMES, THE CONTRACTOR SHALL MONITOR THE PREVAILING WEATHER CONDITIONS AND PROTECT ANY DOWNSTREAM CONSTRUCTION AND GULLY INLETS.
3. DURING CONSTRUCTION, ALL INLETS TO HAVE SILT PROTECTION IN ACCORDANCE WITH KERB INLET PROTECTION DETAIL AT LOCATIONS SHOWN, OR AS DIRECTED BY CONTRACTOR'S ENVIRONMENTAL MANAGER OR THE SUPERINTENDENT.
4. THE EXTENT OF GRASSING SHALL BE DETERMINED BY THE CONTRACTOR'S ENVIRONMENT MANAGER OR SUPERINTENDENT.
5. DUMPED ROCK SHALL NOT BE LESS THAN THE NOMINATED d50. IF THE NOMINATED SIZE IS NOT AVAILABLE, USE NEXT AVAILABLE LARGER SIZE

SUB-STAGING OF CIVIL WORKS:

1. SCOUR PROTECTION IS REQUIRED AT THE END OF ALL KERBS DISCHARGING ONTO FUTURE ROADWAYS.
2. REFER TO TYPICAL DETAIL ON ROADWORKS CROSS SECTIONS FOR EARTHWORKS PROFILE OF FUTURE ROADS.

EROSION RISK IDENTIFICATION CHART

LOCATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
MAROOCHYDORE	V	V	H	M	M	M	M	L	L	M	M	H



TYPICAL TEMPORARY DIVERSION CHANNEL

SCALE A1 - 1 : 200
A3 - 1 : 400

TEMPORARY DIVERSION CHANNEL LININGS

CHANNEL LONGITUDINAL SLOPE	RECOMMENDED TREATMENT
<10%	JUTE MAT/LIGHT TRM (ECM)
10<16%	MEDIUM TRM
>16%	HEAVY TRM/ROCK LINING

NOTE:
REFER IECA BOOK 6 STANDARD DRAINAGE FOR CHANNEL LINING SYSTEMS AND INSTALLATION INFORMATION. ALL TEMPORARY DIVERSION CHANNELS ARE SIZED FOR A Q2 RAINFALL EVENT AND HAVE NOMINAL FREEBOARD OF 300mm.

GEOTEXTILE SPECIFICATION TABLE :

PROPERTY	TEST	GEOTEXTILE CLASS
		C
MINIMUM GRAB TENSILE STRENGTH (N)	AS2001.2.3	1800
MINIMUM G RATING	AUSTROADS	4200
MINIMUM TRAPEZOIDAL TEAR STRENGTH (N)	AS3706.3	600
MAXIMUM PORE SIZE (EOS UM)	AS3706.7	200
MINIMUM PERMATIVITY (S^{-1})	AS3706.9	0.5

SILT MANAGEMENT PROGRAM:

- SILT FENCE, SAND BAGS AND STABILISED EARTH BUNDS TO BE ERECTED AS INDICATED OR REQUIRED.
- BARRIER FENCING TO BE ERECTED AROUND ALL NON-DISTURBED AREAS TO PREVENT ACCESS BY CONSTRUCTION MACHINERY.

EARTHWORKS

- SILT FENCES AND STABILISED EARTH BUNDS WITHIN ROADS TO BE ERECTED AS INDICATED OR REQUIRED.
- HYDRO MULCHING OF DISTURBED AREAS, UNLESS NOTED OTHERWISE, TO OCCUR ASAP.
- AN ADEQUATE SUPPLY OF ECM SHOULD BE KEPT ON SITE TO ENSURE THAT RELEVANT DISTURBED AREAS CAN BE PHYSICALLY COVERED IN THE EVENT OF A HIGH INTENSITY RAINFALL EVENT PRIOR TO THE HYDRO MULCHING OCCURRING. A SPRAYED SOIL BINDER IS PREFERRED TEMPORARY EROSION CONTROL SOLUTION.
- ALL ROAD VERGES TO BE TOP SOILED AND LANDSCAPED ASAP.

STORMWATER/SERVICES

- EXCAVATED MATERIAL TO BE PLACED ON HIGH SIDE OF TRENCH AND TO PROTECT PIPE WORK AND DIRECT SURFACE RUNOFF AWAY FROM EXCAVATIONS.
- TOPSOIL AND GRASS SEED AREAS IN ROAD BATTERS ASAP AFTER COMPLETING THE TRENCHING WORKS.
- DEPRESS GROUND AROUND TEMPORARY FIELD INLETS TO CREATE SILT POND.

MAINTENANCE

- THE SILT FENCES ARE TO BE INSPECTED REGULARLY. ANY REPAIRS REQUIRED ARE TO BE EFFECTED ASAP.
- SILT AFTER RAIN IS TO BE CLEARED FROM ROADWAY IMMEDIATELY AND CORRECTIVE ACTION TAKEN TO AVOID A REOCCURRENCE OF THE FAILURE.

EROSION AND SEDIMENT MANAGEMENT STRATEGY

OBJECTIVE/TARGET	COMPLY WITH THE EROSION AND SEDIMENT CONTROL PLAN AS SHOWN, TO CONTROL EROSION AND SEDIMENT FLOWS. ENSURE THAT ALL EROSION AND SEDIMENT CONTROL DEVICES ARE OPERATIONAL AT ALL TIMES
MANAGEMENT STRATEGY	SITE FOREMAN TO IDENTIFY AND CHECK DIRECTION OF STORMWATER OVER LAND FLOWS AS SHOWN ON PLAN. PROVIDE BARRIERS AND OTHER MEASURES SHOWN ON THE PLAN TO PREVENT STORMWATER FLOWS OVER EMBANKMENTS, AND SEDIMENTS INTO GULLY PITS.
TASKS/ACTIONS	ERECT SEDIMENTATION BARRIERS AT PERIMETER OF CONSTRUCTION AREAS AS REQUIRED.
FREQUENCY/DEADLINE	SITE FOREMAN TO MONITOR PERFORMANCE AFTER EVERY HEAVY RAINFALL.
RESPONSIBLE PERSON/ ORGANISATION	SITE FOREMAN TO BE RESPONSIBLE FOR INSPECTIONS.
REPORTING/REVIEW	SITE WORKMEN TO ADVISE FOREMAN IF THEY NOTICE ANY CONTROLS NEEDING REPAIR.
CORRECTIVE ACTIONS	SITE FOREMAN TO CONFIRM TO SUPERINTENDENT, EXTRA BARRIERS AS REQUIRED.

Rev.	Date	Description	Des.	Verif.	Appd.
4	16/08/2019	TRG REVIEW;	CK	AFH	GGT
3	5/04/2019	ISSUED FOR TENDER - STAGE 1C(1) MUNDOO BOULEVARD	AS	DH	GT
2	6/02/2019	ISSUE FOR APPROVAL	CK	DH	GT
1	20/12/2018	FOR INFORMATION ONLY	CK	DH	GT

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Drawn	AE	Date 21/11/2018
Checked	DH	Date 21/11/2018
Designed	CK	Date 21/11/2018
Verified	GT	Date 6/02/2019
Approved	G.Tamblyn	RPEQ No. 1723 DATE 6/02/2019

Client: SUNCENTRAL MAROOCHYDORE PTY LTD
Project: MAROOCHYDORE CITY CENTRE
CIVIL WORKS - STAGE 1B 1C & 1C(1)
Title: CONCEPT EROSION AND SEDIMENT CONTROL NOTES
Status: FOR TENDER ONLY
NOT TO BE USED FOR CONSTRUCTION PURPOSES

DATUM	Orig. Date	Scale	Size
AHD	21/11/2018	AS SHOWN	A1

Drawing Number: 249402-CI-2100
Revision: 4

XREF's: X-TITLE BORDER
CAD File: P:\249402 MCC Design Package 1_DESIGN\ACAD_CIVIL STAGE 1B & 1C\249402-CI-2100 ERO & SED TYP NOTES.dwg

DATE PLOTTED: 17 September 2019 9:43 AM BY - AARON ELLARD

XREFs: X-TITLE BORDER; X-249402-EXISTING; X-249402 RP BASE EXTERNAL; CADASTRE 150302; X-249402 RP BASE; X-249402 TEMP SOUTH ACCES RD; X-249402 DESIGN STAGE 1B & 1C; X-249402 DESIGN STAGE 1A EXISTING; X-249402 AWCS STAGE 02; X-249402 AWCS STAGE 01
CAD File: P:\249402 MCC Design Package 1_DESIGN\ACAD_CIVIL STAGE 1B & 1C\249402-CI-2102 EROSION AND SEDIMENT CONTROL PLAN.dwg

PLAN

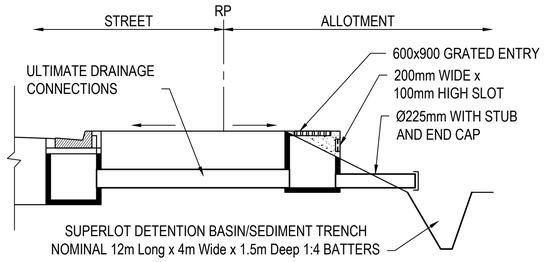
SCALE A1 - 1 : 500
A3 - 1 : 1000

LEGEND:

- CONSTRUCTION ENTRY/EXIT
- SEDIMENT BARRIER OR GEOSOCK
- DIRECTION OF FLOW MINOR/MAJOR
- TOPSOIL BUND / STOCKPILE
- STORMWATER PIPE AND MANHOLE/PIT
- DRAINAGE SWALE
- STAGE BOUNDARY
- NOMINAL KERB LINE
- CUT OFF DRAIN
- SEDIMENT FENCE
- DUST CONTROL FENCE & GATE
- DUST CONTROL FENCE WITH BANNER
- 1.80m SAFETY/VEG PROTECTION FENCE
- FINISHED CONTOURS
- LOT AREA TO BE GRADED/SHAPED TO ENSURE FREE DRAINING AND HYDROMULCHED DRAINAGE CONTROL STRUCTURE. REFER TO TYPICAL DETAIL.
- FINISH TO ARCHITECT'S DETAILS
- AC PAVEMENT
- CONCRETE PAVEMENT
- HYDROMULCH
- EXISTING EROSION & SEDIMENT CONTROL MEASURES TO REMAIN IN PLACES AND BE MAINTAINED

NOTE:

1. REFER TO DRAWINGS CI-2001 & CI-2100 FOR TYPICAL NOTES AND DETAILS.



SUPERLOT DETENTION BASIN/SEDIMENT TRENCH
NOMINAL 12m Long x 4m Wide x 1.5m Deep 1:4 BATTERS

* TYPICAL ALLOTMENT DRAINAGE CONTROL STRUCTURE

SCALE A1 - 1 : 50
A3 - 1 : 100

NOTE :
ALLOTMENTS TO BE FREE DRAINING. ALL FLOWS TO BE DIRECTED GENERALLY IN ACCORDANCE WITH THIS PLAN.

5 0 5 10 15 20 25m
Scale 1:500

Rev.	Date	Description	Des.	Verif.	Appd.
7	17/09/2019	TRG COMMENTS; STAGE 1C(1) WORKS BOUNDARY AMENDED	CK	AFH	GGT
6	20/08/2019	TRG REVIEW; MUNGAR ST VERGE WORKS REMOVED	CK	AFH	GGT
5	16/08/2019	TRG REVIEW; VERGE WORKS ADDED, BASIN REMOVED	CK	AFH	GGT
4	20/05/2019	TRG REVIEW; NOTES & FLOW ARROWS ADDED	CK	AFH	GGT
3	5/04/2019	ISSUED FOR TENDER - STAGE 1C(1) MUNDOO BOULEVARD	AS	DH	GT
2	6/02/2019	ISSUE FOR APPROVAL	CK	DH	GT
1	20/12/2018	FOR INFORMATION ONLY	CK	DH	GT

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Drawn	AE	Date 21/11/2018
Checked	DH	Date 21/11/2018
Designed	CK	Date 21/11/2018
Verified	GT	Date 6/02/2019
Approved	G.Tamblyn	RPEQ No. 1723 DATE 6/02/2019

Client: SUNCENTRAL MAROOCHYDORE PTY LTD
Project: MAROOCHYDORE CITY CENTRE
CIVIL WORKS - STAGE 1B 1C & 1C(1)

CONCEPT ONLY

Title: CONCEPT EROSION AND SEDIMENT CONTROL PLAN

DATUM	Orig. Date	Scale	Size
AHD	21/11/2018	AS SHOWN	A1

Drawing Number: 249402-CI-2102
Revision: 7

DATE PLOTTED: 17 September 2019 9:49 AM BY: - AARON ELLARD

NOTE :
PARK AREA TO GENERALLY GRADE IN ACCORDANCE WITH THIS DRAWING AND EXISTING BULK EARTHWORKS LEVELS DURING ALL INTERIM WORKS PRIOR TO FINAL STAGE 1C PARK WORKS.

NORTH

ENSURE NO RUNOFF TO NEIGHBOURING PROPERTY

ENSURE SWALE AND WESTERN BOUNDARY BUND REMAIN OPERATIONAL AND ALL SURFACE FLOW IS DIRECTED SOUTH TO CANAL UNTIL COMPLETION OF STAGE 1C PARK WORKS.

CHECK DAM

EXISTING EROSION AND SEDIMENT CONTROL MEASURES TO EXISTING HORTON APARTMENT BASIN TO BE REINSTATED

DUST SUPPRESSION CONTROL MEASURES TO BE APPROVED BY SUPERINTENDENT

REFER CONCEPT EROSION AND SEDIMENT CONTROL PLAN FOR CONCEPTUALISATION ON ALL OTHER MEASURES DURING WORKS

HORTON APARTMENTS

STAGE 1C

STAGE 1C(1)
(MUNDOO BLVD)

STAGE 1A

STAGE 1B

SSI WAY

MARKET LN →

← LIGHTNING LN

FUTURE WAY

MUNDOO BLVD

SUNSHINE COAST PDE

SWD

LEGEND:

- CONSTRUCTION ENTRY/EXIT
- SEDIMENT BARRIER OR GEOSOCK
- DIRECTION OF FLOW MINOR/MAJOR
- TOPSOIL BUND / STOCKPILE
- STORMWATER PIPE AND MANHOLE/PIT
- DRAINAGE SWALE
- STAGE BOUNDARY
- NOMINAL KERB LINE
- CUT OFF DRAIN
- SEDIMENT FENCE
- DUST CONTROL FENCE & GATE
- DUST CONTROL FENCE WITH BANNER
- 1.80m SAFETY/VEG PROTECTION FENCE
- FINISHED CONTOURS
- EXISTING ERO & SED CONTROL MEASURES TO REMAIN IN PLACES AND BE MAINTAINED
- TURF LINED SWALE
- HYDROMULCH

NOTE:
1. REFER TO DRAWINGS CI-2001 & CI-2100 FOR TYPICAL NOTES AND DETAILS.

PLAN
SCALE A1 - 1 : 500
A3 - 1 : 1000

5 0 5 10 15 20 25m
Scale 1:500

Rev.	Date	Description	Des.	Verif.	Appd.
4	17/09/2019	TRG COMMENTS; STAGE 1C(1) WORKS BOUNDARY AMENDED	CK	AFH	GGT
3	20/08/2019	TRG REVIEW; MUNGAR ST VERGE WORKS REMOVED	CK	AFH	GGT
2	16/08/2019	TRG REVIEW; BASIN REMOVED, NOTES REVISED	CK	AFH	GGT
1	20/05/2019	TRG REVIEW: DWG ADDED	CK	DH	GT

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Drawn	CK	Date 20/05/2019
Checked	TH	Date 20/05/2019
Designed	CK	Date 20/05/2019
Verified	GT	Date 20/05/2019
Approved	G.Tamblyn	RPEQ No. 1723 DATE 20/05/2019

Client: SUNCENTRAL MAROOCHYDORE PTY LTD
Project: MAROOCHYDORE CITY CENTRE
CIVIL WORKS - STAGE 1B 1C & 1C(1)
Title: INTERIM PARK EROSION AND SEDIMENT CONTROL PLAN

CONCEPT ONLY

DATUM	Orig. Date	Scale	Size
AHD	21/11/2018	AS SHOWN	A1

Drawing Number: 249402-CI-2103
Revision: 4

XREFs: X-TITLE BORDER; X-249402-EXISTING; X-249402 RP BASE EXTERNAL CADASTRE 150302; X-249402 RP BASE; X-249402 TEMP SOUTH ACCESS RD; X-249402 DESIGN STAGE 1B & 1C; X-249402 DESIGN STAGE 1A EXISTING; X-249402 AWCS STAGE 02; X-249402 DESIGN STAGE 02; X-249402 MCC Design Package 11_DESIGN\ACAD_CIVIL STAGE 1B & 1C\249402-CI-2103 ERO AND SED INTERIM.dwg
CAD File: P:\249402 MCC Design Package 11_DESIGN\ACAD_CIVIL STAGE 1B & 1C\249402-CI-2103 ERO AND SED INTERIM.dwg

XREFs: X:249402-EXISTING, X:249402 RP BASE, X:249402 RP BASE EXTERNAL, CADASTRE 150302, X:249402 LANDSCAPE - STAGE 01, X:TITLE BORDER, X:249402-ELEC COMM & LIGHT STG1B & 01C, X:249402 DESIGN STAGE 1A EXISTING, X:249402 DESIGN STAGE 1B & 1C, X:249402 AWCS STAGE 01, X:249402 AWCS STAGE 02, X:249402 LANDSCAPE - STAGE 01B, X:249402 LANDSCAPE - CIVIC PARK, X:249402 LANDSCAPE - CIVIC PARK - CONCESSIONS, X:249402 LANDSCAPE - CIVIC PARK - CONCESSIONS
CAD File: P:\249402 MCC Design Package 1_DESIGN\ACAD_CIVIL STAGE 1B & 1C\249402-CI-2180 SERVICES PLAN.dwg
DATE PLOTTED: 17 September 2019 9:51 AM BY - AARON ELLARD

LEGEND:

- FUTURE LIGHT RAIL CORRIDOR
- WATERMAIN AND DIAMETER
- SEWER MAIN AND DIAMETER
- SEWER RISING MAIN
- PNEUMATIC WASTE - BY OTHERS
- ELECTRICAL, COMMS AND LIGHTING
- ELECTRICAL TRANSFORMER SITES
- EXISTING UG HV ELECTRICAL
- STORMWATER PIPES
- DRAINAGE SWALE
- SMART CITY CONDUITS
- TELSTRA & NBN
- STAGE BOUNDARY
- EXISTING WATERMAIN AND DIAMETER
- EXISTING RECYCLED MAIN AND DIAMETER
- EXISTING SEWER MAIN AND DIAMETER
- EXISTING SEWER RISING MAIN
- EXISTING PNEUMATIC WASTE - BY OTHERS
- EXISTING ELECTRICAL, COMMS AND LIGHTING
- EXISTING ELECTRICAL TRANSFORMER SITES
- EXISTING UG HV ELECTRICAL
- EXISTING STORMWATER PIPES & PITS
- EXISTING DRAINAGE SWALE
- EXISTING SMART CITY CONDUITS
- EXISTING TELSTRA & NBN

STORMWATER DRAINAGE WITHIN STAGE 1B BOUNDARY INCLUDING LINES 75, 75A, 75B, 76, 77, 83, 84, 85, 86, 87, 88 & 92 TO BE CONSTRUCTED WITH STAGE 1C(1) CIVIL WORKS TO A SUITABLE LEVEL WITH TEMPORARY LID/INLET AND SAFETY MEASURES AS REQUIRED.

EXISTING TEMPORARY SALINITY PUMP ELECTRICAL ALIGNMENT TO BE COORDINATED AND DECOMMISSIONED WITH PROPOSED ELECTRICAL INFRASTRUCTURE

PARK IRRIGATION AND LANDSCAPE DRAINAGE BY OTHERS

FINAL AWCS LAYOUT TO BE PROVIDED AND COORDINATED

WATER FEATURE DRAINAGE , TREATMENT, BALANCE TANK, PUMP HOUSE AND OVER FLOW POINT TO STORMWATER , BY OTHERS. FINAL LAYOUT TO BE PROVIDED AND COORDINATED.

X: 508829.584
Y: 7051441.330

X: 508976.353
Y: 7051517.126

X: 508991.284
Y: 7051505.643

HORTON APARTMENTS

STAGE 1C
CIVIC PARK

STAGE 1C(1)

SOUTH SEA ISLANDER WAY

MUNDOO BLVD

MARKET LN →

FUTURE WAY

URBAN PARK

← LIGHTNING LN

FIRST AVE

STAGE 1A

STAGE 1B

SUNSHINE COAST PDE

FUTURE LIGHT RAIL PLATFORM

PLAN

SCALE A1 - 1 : 500
A3 - 1 : 1000

5 0 5 10 15 20 25m
Scale 1:500

Rev.	Date	Description	Des.	Verif.	Appd.
7	17/09/2019	TRG COMMENTS; STAGE 1C(1) WORKS BOUNDARY AMENDED	CK	AFH	GGT
6	20/08/2019	TRG REVIEW; MUNGAR ST VERGE WORKS REMOVED	CK	AFH	GGT
5	16/08/2019	TRG REVIEW; STG 1C(1) WORKS BDY REV.,SECTION ADDED	CK	AFH	GGT
4	20/05/2019	TRG REVIEW; HORTON DRAINAGE REMOVED	CK	AFH	GGT
3	5/04/2019	ISSUED FOR TENDER - STAGE 1C(1) MUNDOO BOULEVARD	AS	DH	GT
2	6/02/2019	ISSUE FOR APPROVAL	CK	DH	GT
1	20/12/2018	FOR INFORMATION ONLY	CK	DH	GT

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Checked DH	Date 21/11/2018
Designed CK	Date 21/11/2018
Verified GT	Date 6/02/2019
Approved G.Tamblyn	RPEQ No. 1723 DATE 6/02/2019

Client: SUNCENTRAL MAROOCHYDORE PTY LTD
Project: MAROOCHYDORE CITY CENTRE
CIVIL WORKS - STAGE 1B 1C & 1C(1)
Title: SERVICES PLAN

Status: FOR TENDER ONLY
NOT TO BE USED FOR CONSTRUCTION PURPOSES

DATUM	Orig. Date	Scale	Size
AHD	21/11/2018	AS SHOWN	A1

Drawing Number: 249402-CI-2180
Revision: 7

DATE PLOTTED: 17 September 2019 9:53 AM BY: - AARON ELLARD
XREFs: X-249402-EXISTING; X-249402 RP BASE; X-249402 RP BASE EXTERNAL CADASTRE 190302; X-TITLE BORDER; X-249402 DESIGN STAGE 1B & 1C; X-249402 DESIGN STAGE 1A EXISTING; X-249402 AWCS STAGE 02; X-249402 AWCS STAGE 01; X-249402 LANDSCAPE - CIVIC PARK
CAD File: P:\249402 MCC Design Package 1_DESIGN\ACAD_CIVIL STAGE 1B & 1C\249402-CI-2199 PAVEMENT PLAN.dwg

NORTH

I2

I3

STAGE 1A

H1

SOUTH SEA ISLANDER WAY

STAGE 1C

CIVIC PARK

N

MUNDOO BLVD

J1

J2

MKARKET LN→

FUTURE WAY

M

URBAN PARK

← LIGHTNING LANE

F1

STAGE 1A

HORTON APARTMENTS

REFER TO LANDSCAPE DRAWINGS FOR PARK PEDESTRIAN PAVEMENT DETAILS AND SPECIFICATION

WATER FEATURE WET AREA PAVEMENT BY OTHERS

PARK TRAFFICABLE PAVEMENTS SUBJECT TO FINAL LANDSCAPE JOINTING COORDINATION AND DESIGN DETAIL

STAGE 1C(1)

(MUNDOO BLVD)

K2

K1

STAGE 1B

L2

E2

E1

FIRST AVE

PAVER DESIGN AND CONSTRUCTION SPECIFICATION UNDER REVIEW BY COUNCIL

MAUD CANAL

SUNSHINE COAST PDE

FUTURE CORSO

FUTURE CORSO

TEMPORARY PAVEMENT TO MATCH NEATLY WITH INTERIM BRIDGE PROFILE

LEGEND:

D1 D2 D3 D4	PAVEMENT TYPE D1, D2, D3 & D4
	CONCRETE PAVEMENT C1
	CONCRETE PAVEMENT C2 (PAVERS)
	CONCRETE PAVEMENT C3
	CONCRETE PAVEMENT C4 (PAVERS)
	CONCRETE PAVEMENT C5
	CONCRETE PAVEMENT C6
	CONCRETE PAVEMENT C7
	CONCRETE PAVEMENT C8 (PAVERS)
	CONCRETE PAVEMENT C9 (PAVERS)
	CONCRETE PAVEMENT C10
	TEMPORARY PAVEMENT T4
	LANDSCAPE AREA BY OTHERS
	STAGE BOUNDARY
	CONCRETE DRIVEWAY (PLAIN GREY) - REFER TYPICAL DETAIL ON DWG CI-2216

NOTE:

1. PAVEMENTS IN VERGE AREAS SURROUNDING CIVIC AND URBAN PARKS TO BE CO-ORDINATED WITH PARK LANDSCAPE FINISH TREATMENTS

PLAN

SCALE A1 - 1 : 500

A3 - 1 : 1000

5 0 5 10 15 20 25m

Scale 1:500

Rev.	Date	Description	Des.	Verif.	Appd.
8	17/09/2019	TRG COMMENTS; STAGE 1C(1) WORKS BOUNDARY AMENDED	CK	AFH	GGT
7	22/08/2019	TRG REVIEW; VERGE PAVEMENTS ALIGNED WITH LANDSCAPE	CK	AFH	GGT
6	20/08/2019	TRG REVIEW; MUNGAR ST VERGE WORKS REMOVED	CK	AFH	GGT
5	16/08/2019	TRG REVIEW; STG1A VERGE WORKS ADDED, INT PAVEMENTS REV.	CK	AFH	GGT
4	20/05/2019	TRG REVIEW; MUNGAR ST WORKS ADDED	CK	AFH	GGT
3	5/04/2019	ISSUED FOR TENDER - STAGE 1C(1) MUNDOO BOULEVARD	AS	DH	GT
2	6/02/2019	ISSUE FOR APPROVAL	CK	DH	GT
1	20/12/2018	FOR INFORMATION ONLY	CK	DH	GT

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Drawn AE	Date 21/11/2018
Checked DH	Date 21/11/2018
Designed CK	Date 21/11/2018
Verified GT	Date 6/02/2019
Approved G.Tamblyn	RPEQ No. 1723 DATE 6/02/2019

Client: SUNCENTRAL MAROOCHYDORE PTY LTD

Project: MAROOCHYDORE CITY CENTRE
CIVIL WORKS - STAGE 1B 1C & 1C(1)

Title: PAVEMENT PLAN

Status: FOR TENDER ONLY
NOT TO BE USED FOR CONSTRUCTION PURPOSES

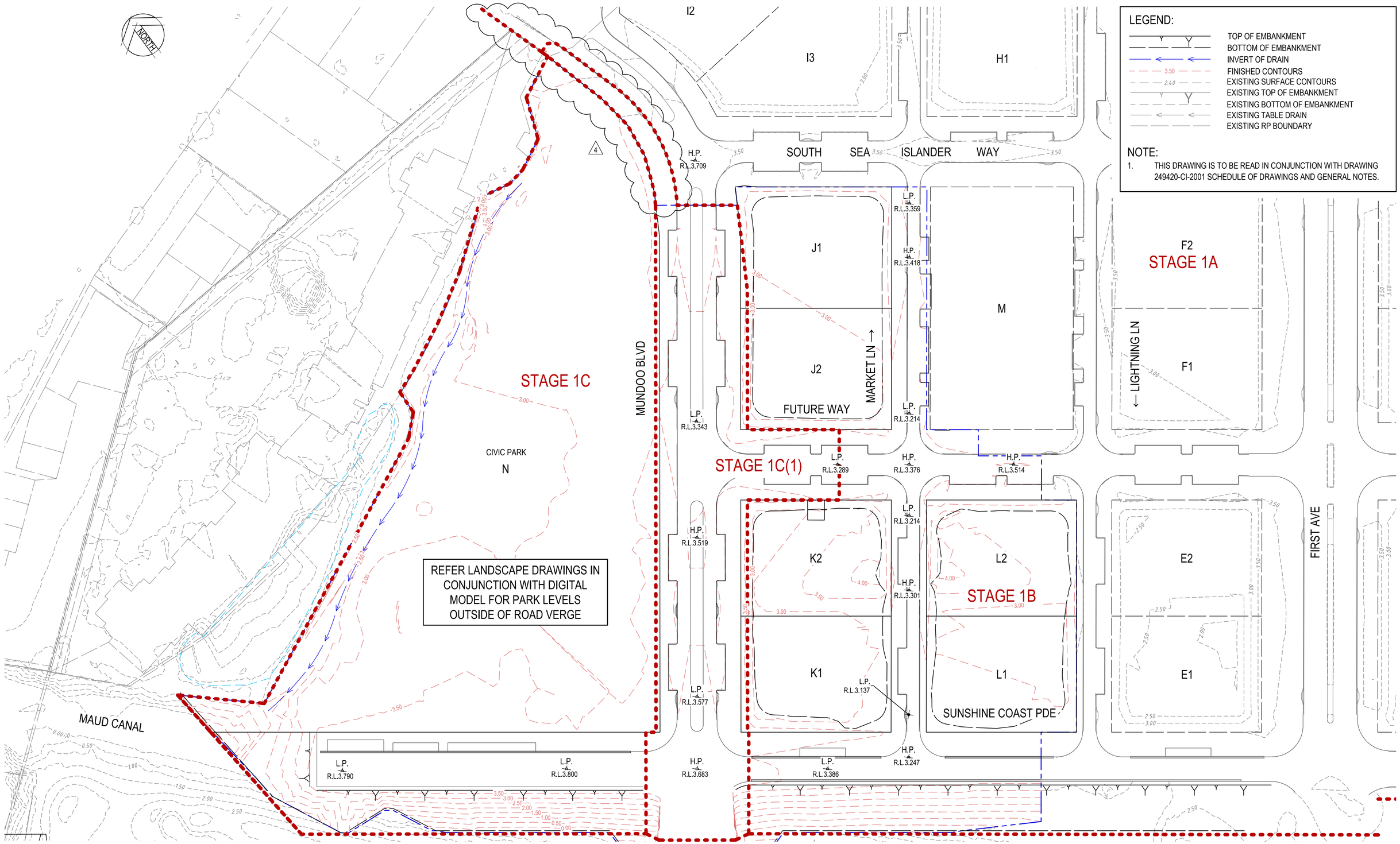
DATUM	Orig. Date	Scale	Size
AHD	21/11/2018	AS SHOWN	A1

Drawing Number: 249402-CI-2199

Revision: 8

DATE PLOTTED: 20 August 2019 10:58 AM BY : ADAM HAZELGROVE

XREFs: X-TITLE BORDER; X-249402-EXISTING; X-249402 EXTERNAL ROADWORKS PROJECT; X-249402 RP BASE EXTERNAL CADASTRE 150302; X-249402 RP BASE; X-249402 DESIGN STAGE 1B & 1C; X-249402 DESIGN STAGE 1A EXISTING; X-249402 AWCS STAGE 02; X-249402 AWCS STAGE 01
CAD File: P:\249402 MCC Design Package 1_DESIGN\ACAD_CIVIL STAGE 1B & 1C\249402-CI-2200 GRADING PLAN.dwg



PLAN
SCALE A1 - 1 : 500
A3 - 1 : 1000

5 0 5 10 15 20 25m
Scale 1:500

LEGEND:

- TOP OF EMBANKMENT
- BOTTOM OF EMBANKMENT
- INVERT OF DRAIN
- FINISHED CONTOURS
- EXISTING SURFACE CONTOURS
- EXISTING TOP OF EMBANKMENT
- EXISTING BOTTOM OF EMBANKMENT
- EXISTING TABLE DRAIN
- EXISTING RP BOUNDARY

NOTE:

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH DRAWING 249420-CI-2001 SCHEDULE OF DRAWINGS AND GENERAL NOTES.

Rev.	Date	Description	Des.	Verif.	Appd.
5	20/08/2019	TRG REVIEW; MUNGAR ST VERGE WORKS REMOVED	CK	AFH	GGT
4	16/08/2019	TRG REVIEW; STAGE 1C(1) WORKS BOUNDARY AMENDED	CK	AFH	GGT
3	5/04/2019	ISSUED FOR TENDER - STAGE 1C(1) MUNDOO BOULEVARD	AS	DH	GT
2	6/02/2019	ISSUE FOR APPROVAL	CK	DH	GT
1	20/12/2018	FOR INFORMATION ONLY	CK	DH	GT

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Drawn AE	Date 21/11/2018	
Checked DH	Date 21/11/2018	
Designed CK	Date 21/11/2018	
Verified GT	Date 6/02/2019	
Approved G.Tamblyn	RPEQ No. 1723 DATE 6/02/2019	

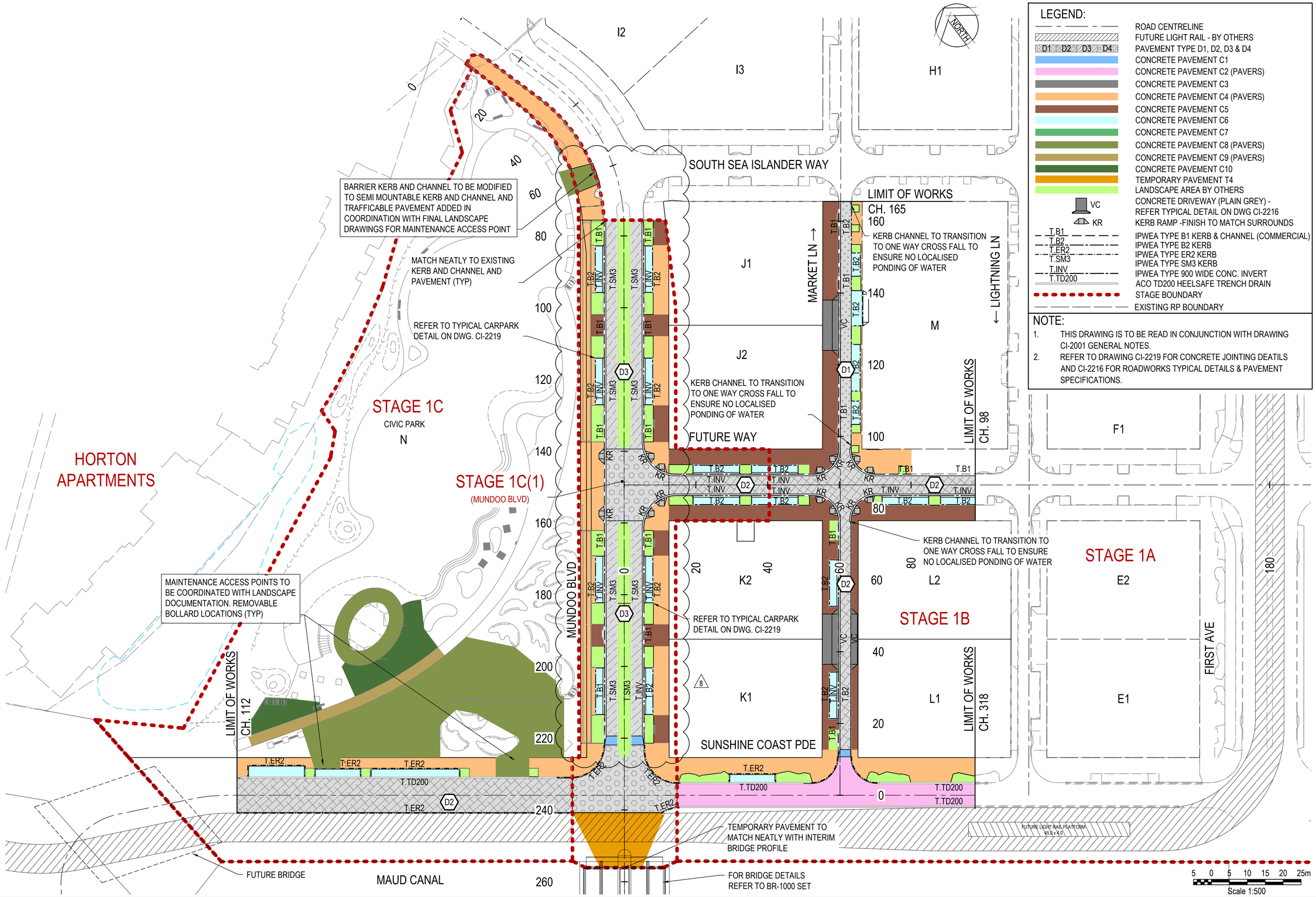
Client: SUNCENTRAL MAROOCHYDORE PTY LTD
Project: MAROOCHYDORE CITY CENTRE
CIVIL WORKS - STAGE 1B 1C & 1C(1)
Title: GRADING PLAN
Status: FOR TENDER ONLY
NOT TO BE USED FOR CONSTRUCTION PURPOSES

DATUM	Orig. Date	Scale	Size
AHD	21/11/2018	AS SHOWN	A1

Drawing Number: 249402-CI-2200
Revision: 5

DATE PLOTTED: 17 September 2019 10:08 AM BY - AARON ELLARD

X:\E*.X-TITLE BORDER; X:\249402\EXISTING; X:\249402\RP BASE; X:\249402 BRIDGE MAIN STREET; X:\249402 RP BASE EXTERNAL CADASTRE 150326; X:\249402 AWCS STAGE 01; X:\249402 AWCS STAGE 02; X:\249402 DESIGN STAGE 1B & 1C; X:\249402 DESIGN STAGE 1A & EXISTING; X:\249402 LANDSCAPE - CIVIC PARK
CAD File: P:\249402 MCC Design Package 1_DESIGN\ACAD_CIVIL STAGE 1B & 1C\249402-CI-2201 ROADWORKS PLAN.dwg



LEGEND:

- ROAD CENTRELINE
- FUTURE LIGHT RAIL - BY OTHERS
- D1 D2 D3 D4 — PAVEMENT TYPE D1, D2, D3 & D4
- CONCRETE PAVEMENT C1
- CONCRETE PAVEMENT C2 (PAVERS)
- CONCRETE PAVEMENT C3
- CONCRETE PAVEMENT C4 (PAVERS)
- CONCRETE PAVEMENT C5
- CONCRETE PAVEMENT C6
- CONCRETE PAVEMENT C7
- CONCRETE PAVEMENT C8 (PAVERS)
- CONCRETE PAVEMENT C9 (PAVERS)
- CONCRETE PAVEMENT C10
- TEMPORARY PAVEMENT T4
- LANDSCAPE AREA BY OTHERS
- VC — CONCRETE DRIVEWAY (PLAIN GREY) - REFER TYPICAL DETAIL ON DWG CI-2216
- KR — KERB RAMP -FINISH TO MATCH SURROUNDS
- T.B1 — IPWEA TYPE B1 KERB & CHANNEL (COMMERCIAL)
- T.B2 — IPWEA TYPE B2 KERB
- T.ER2 — IPWEA TYPE ER2 KERB
- T.SM3 — IPWEA TYPE SM3 KERB
- T.INV — IPWEA TYPE 900 WIDE CONC. INVERT
- T.TD200 — ACO TD200 HEELSAFE TRENCH DRAIN
- STAGE BOUNDARY
- EXISTING RP BOUNDARY

NOTE:

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH DRAWING CI-2001 GENERAL NOTES.
2. REFER TO DRAWING CI-2219 FOR CONCRETE JOINTING DEATILS AND CI-2216 FOR ROADWORKS TYPICAL DETAILS & PAVEMENT SPECIFICATIONS.

Rev.	Date	Description	Des.	Verif.	Appd.
8	17/09/2019	TRG COMMENTS; STAGE 1C(1) WORKS BOUNDARY AMENDED	CK	AFH	GGT
7	22/08/2019	TRG REVIEW: VERGE PAVEMENTS ALIGNED WITH LANDSCAPE	CK	AFH	GGT
6	20/08/2019	TRG REVIEW; MUNGAR ST VERGE WORKS REMOVED	CK	AFH	GGT
5	16/08/2019	TRG REVIEW; MUNDOO BLVD VERGE WORKS ADDED	CK	AFH	GGT
4	20/05/2019	TRG REV; MUNGAR ST WORKS ADDED, PARK TRAFFIC AREAS AMENDED	CK	AFH	GGT
3	5/04/2019	ISSUED FOR TENDER - STAGE 1C(1) MUNDOO BOULEVARD	AS	DH	GT
2	6/02/2019	ISSUE FOR APPROVAL	CK	DH	GT
1	20/12/2018	FOR INFORMATION ONLY	CK	DH	GT

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Approved	G.Tamblyn	RPEQ No. 1723 DATE 6/02/2019

Client: SUNCENTRAL MAROOCHYDORE PTY LTD

Project: MAROOCHYDORE CITY CENTRE
CIVIL WORKS - STAGE 1B 1C & 1C(1)

Title: ROADWORKS PLAN

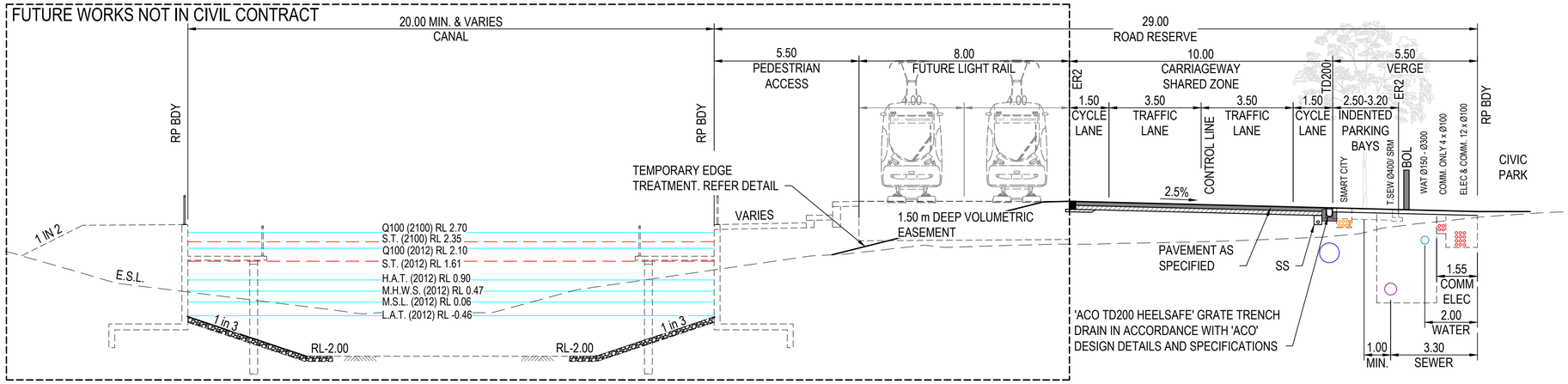
Status: FOR TENDER ONLY
NOT TO BE USED FOR CONSTRUCTION PURPOSES

DATUM	Orig. Date	Scale	Size
AHD	21/11/2018	AS SHOWN	A1

Drawing Number: 249402-CI-2201

Revision: 8

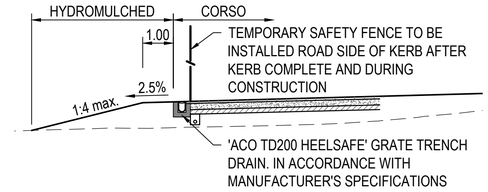
DATE PLOTTED: 14 August 2019 2:14 PM BY: CHASE KEMPE



SUNSHINE COAST PDE - WEST

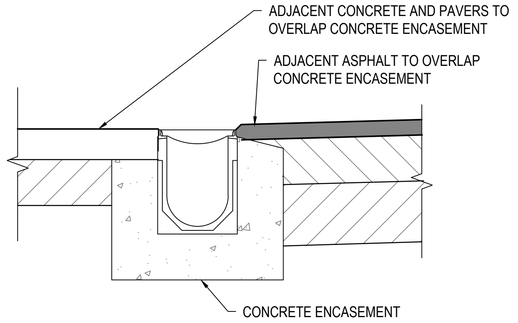
SECTION A1a CI-2180

SCALE A1 - 1 : 100
A3 - 1 : 200



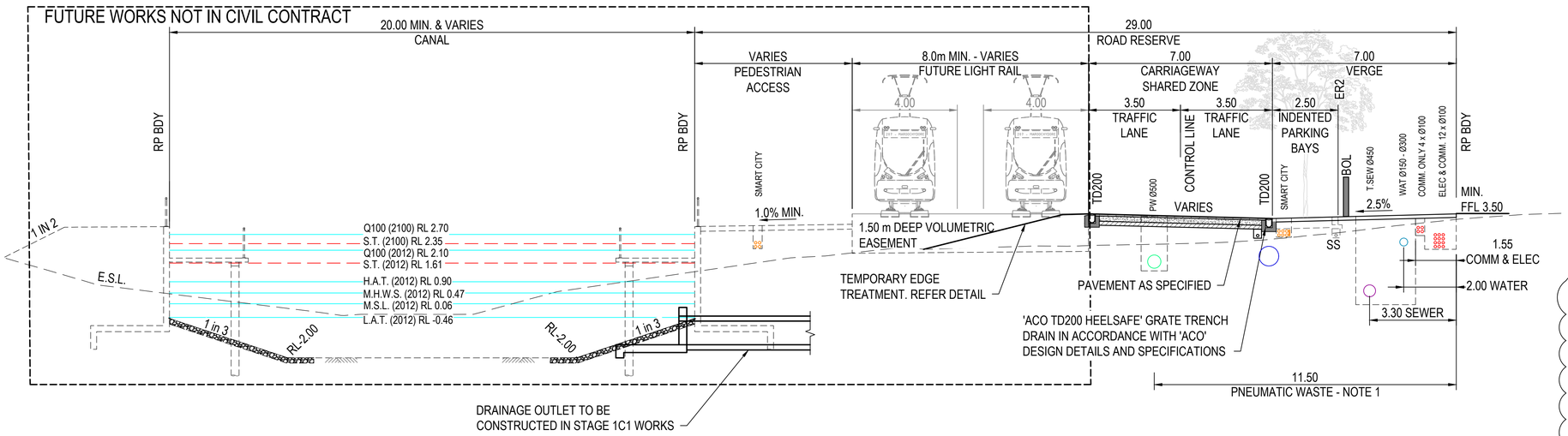
TEMPORARY CORSO EDGE TREATMENT

SCALE A1 - 1 : 100
A3 - 1 : 200



IN ACCORDANCE WITH 'ACO' DESIGN DRAWINGS AND SPECIFICATIONS
TRENCH DRAIN TYPICAL DETAILS

SCALE A1 - 1 : 10
A3 - 1 : 20



SUNSHINE COAST PDE - CENTRAL

SECTION A2a CI-2180

SCALE A1 - 1 : 100
A3 - 1 : 200

4

NOTES:

1. PNEUMATIC WASTE BY NOMINATED SUB-CONTRACTOR
2. ALL KERBS AND CHANNELS TO BE PLAIN CONCRETE USING SLIP FORM CONSTRUCTION.
3. REFER TO IPWEA STANDARD DRAWING RS-080 FOR DETAILS.
   B1 (COMMERCIAL) - BARRIER KERB AND CHANNEL
   B2 - BARRIER KERB
   ER2 - EDGE RESTRAINT
   SM3 - SEMI-MOUNTABLE KERB
   TD200 - 'ACO' TRENCH DRAIN
   INV - CONCRETE INVERT, 900mm WIDE (REINFORCED), DEPTH TO MATCH B1 COMMERCIAL.
4. SUBSOIL DRAINS TYPE B TO BE USED U.N.O. REFER TO IPWEA STANDARD DRAWING RS-140 FOR DETAILS.
5. REFER TO LANDSCAPE DRAWINGS FOR BOLLARD LOCATIONS AND DETAILS.

1 0 1 2 3 4 5m
Scale 1:100

Rev.	Date	Description	Des.	Verif.	Appd.
5	16/07/2019	TRG REVIEW;	CK	AFH	GGT
4	20/05/2019	TRG REVIEW; SLIP FORM NOTE ADDED	CK	AFH	GGT
3	5/04/2019	ISSUED FOR TENDER - STAGE 1C(1) MUNDOO BOULEVARD	AS	DH	GT
2	6/02/2019	ISSUE FOR APPROVAL	CK	DH	GT
1	20/12/2018	FOR INFORMATION ONLY	CK	DH	GT

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Checked	DH	Date 21/11/2018
Designed	CK	Date 21/11/2018
Verified	GT	Date 6/02/2019
Approved	G.Tamblyn	RPEQ No. 1723 DATE 6/02/2019

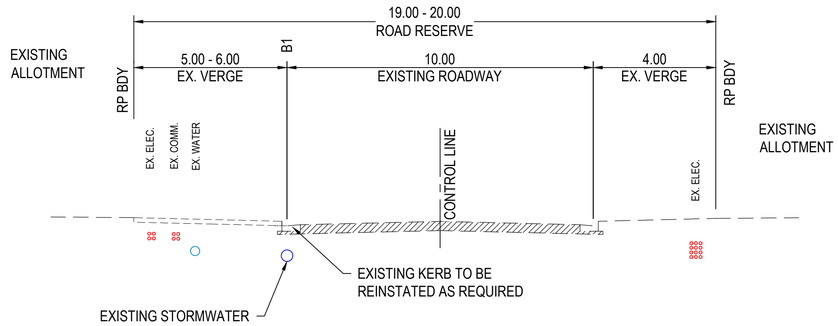
Client: SUNCENTRAL MAROOCHYDORE PTY LTD
Project: MAROOCHYDORE CITY CENTRE
CIVIL WORKS - STAGE 1B 1C & 1C(1)
Title: ROADWORKS TYPICAL SECTIONS - SHEET 1
Status: FOR TENDER ONLY
NOT TO BE USED FOR CONSTRUCTION PURPOSES

DATUM	Orig. Date	Scale	Size
AHD	21/11/2018	AS SHOWN	A1

Drawing Number: 249402-CI-2211
Revision: 5

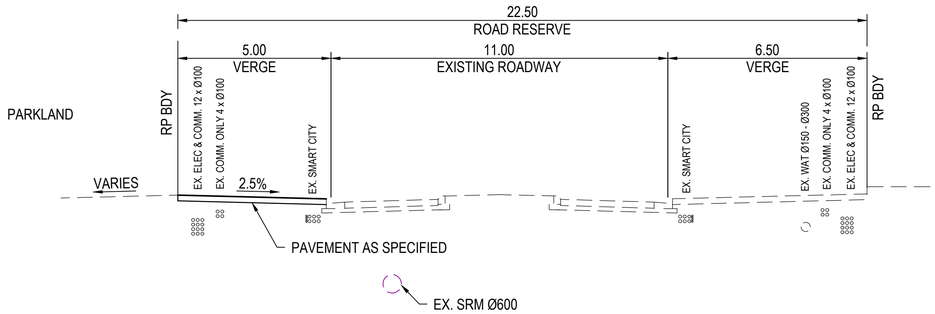
XREFs: X:\TITLE BORDER
CAD File: P:\249402 MCC Design Package 1\1_DESIGN\ACAD_CIVIL STAGE 1B & 1C\249402-CI-2211 ROADWORKS TYPICAL SECTIONS.dwg

DATE PLOTTED: 17 September 2019 5:13 PM BY : CHASE KEMPE



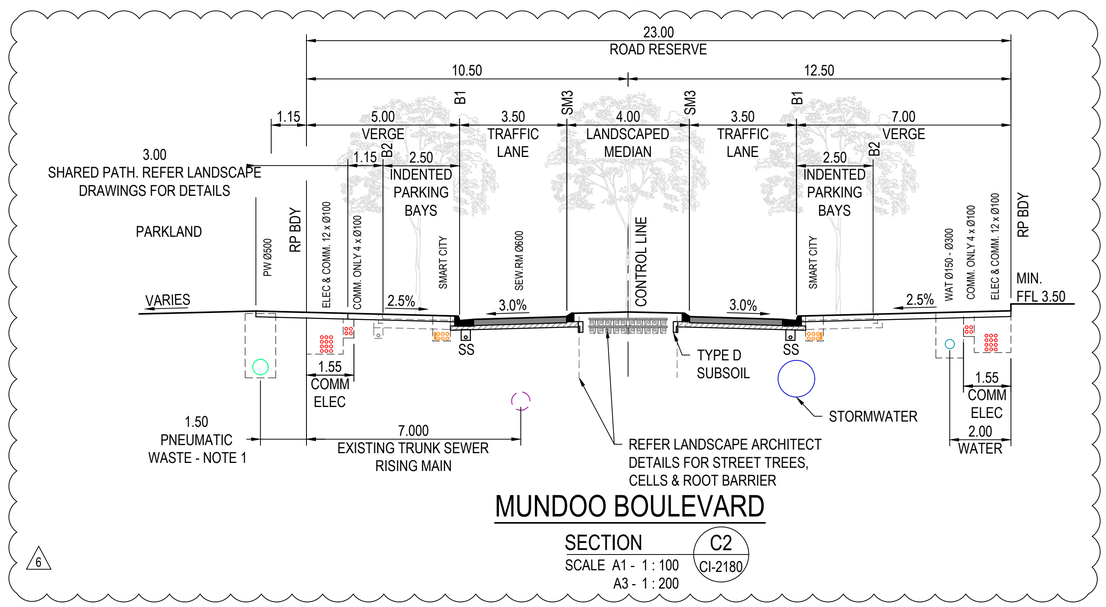
MUNGAR STREET TYPICAL SECTION

SCALE A1 - 1 : 100
A3 - 1 : 200



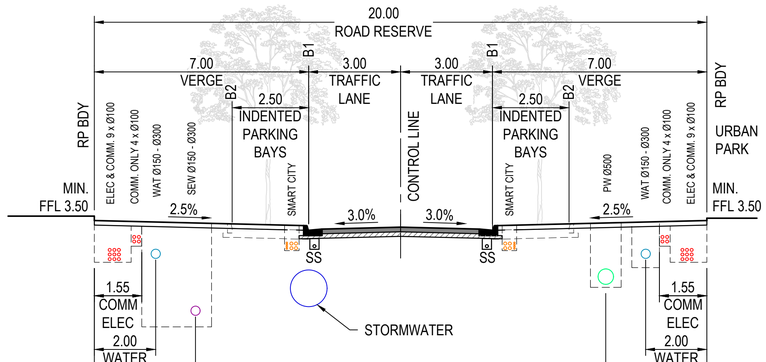
MUNDOO BOULEVARD SECTION C1

SCALE A1 - 1 : 100
A3 - 1 : 200



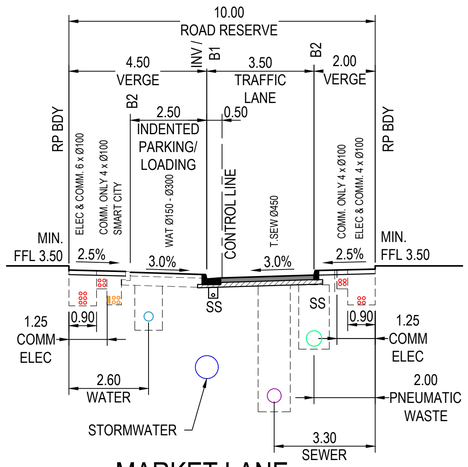
MUNDOO BOULEVARD SECTION C2

SCALE A1 - 1 : 100
A3 - 1 : 200



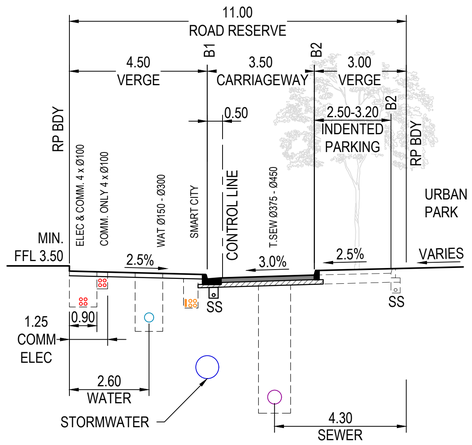
FUTURE WAY SECTION F1

SCALE A1 - 1 : 100
A3 - 1 : 200
CI-2180



MARKET LANE SECTION G1

SCALE A1 - 1 : 100
A3 - 1 : 200
CI-2180



MARKET LANE SECTION G2

SCALE A1 - 1 : 100
A3 - 1 : 200
CI-2180

NOTES:

1. PNEUMATIC WASTE BY NOMINATED SUB-CONTRACTOR
2. ALL KERBS AND CHANNELS TO BE PLAIN CONCRETE USING SLIP FORM CONSTRUCTION.
3. REFER TO IPWEA STANDARD DRAWING RS-080 FOR DETAILS.
   B1 (COMMERCIAL) - BARRIER KERB AND CHANNEL
   B2 - BARRIER KERB
   ER2 - EDGE RESTRAINT
   SM3 - SEMI-MOUNTABLE KERB
   TD200 - 'ACO' TRENCH DRAIN
   INV - CONCRETE INVERT, 900mm WIDE (REINFORCED), DEPTH TO MATCH B1 COMMERCIAL.
4. SUBSOIL DRAINS TYPE B TO BE USED U.N.O. REFER TO IPWEA STANDARD DRAWING RS-140 FOR DETAILS.
5. REFER TO LANDSCAPE DRAWINGS FOR BOLLARD LOCATIONS AND DETAILS.

TYPICAL CROSS SECTIONS

SCALE A1 - 1 : 100
A3 - 1 : 200

1 0 1 2 3 4 5m
Scale 1:100

Rev.	Date	Description	Des.	Verif.	Appd.
6	20/08/2019	TRG REVIEW; MUNGAR ST VERGE WORKS REMOVED	CK	AFH	GGT
5	16/08/2019	MUNDOO BLVD SECTION C1 ADDED. SECTION C REVISED TO C2	CK	AFH	GGT
4	20/05/2019	TRG REVIEW; SHARED PATH & SLIP FORM NOTE ADDED	CK	AFH	GGT
3	5/04/2019	ISSUED FOR TENDER - STAGE 1C(1) MUNDOO BOULEVARD	AS	DH	GT
2	6/02/2019	ISSUE FOR APPROVAL	CK	DH	GT
1	20/12/2018	FOR INFORMATION ONLY	CK	DH	GT

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Designed	CK	Date 21/11/2018
Verified	GT	Date 6/02/2019
Approved	G.Tamblyn	RPEQ No. 1723 DATE 6/02/2019

Client: SUNCENTRAL MAROOCHYDORE PTY LTD
Project: MAROOCHYDORE CITY CENTRE
CIVIL WORKS - STAGE 1B 1C & 1C(1)
Title: ROADWORKS TYPICAL SECTIONS - SHEET 2

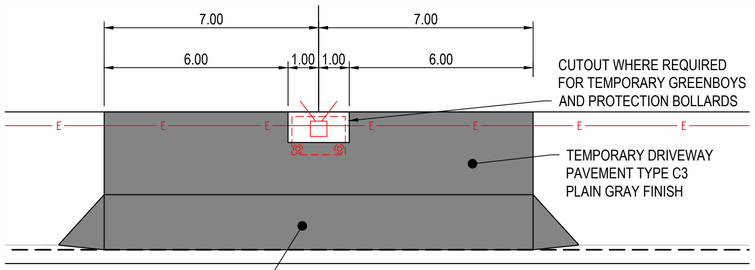
Status: FOR TENDER ONLY
NOT TO BE USED FOR CONSTRUCTION PURPOSES

DATUM	Orig. Date	Scale	Size
AHD	21/11/2018	AS SHOWN	A1

Drawing Number: 249402-CI-2212
Revision: 6

X:\REF's_X-TITLE BORDER\
CAD File: P:\249402 MCC Design Package 1_DESIGN\ACAD_CIVIL STAGE 1B & 1C\249402-CI-2211 ROADWORKS TYPICAL SECTIONS.dwg

DATE PLOTTED: 15 August 2019 4:05 PM BY: ANTHONY SKORIC

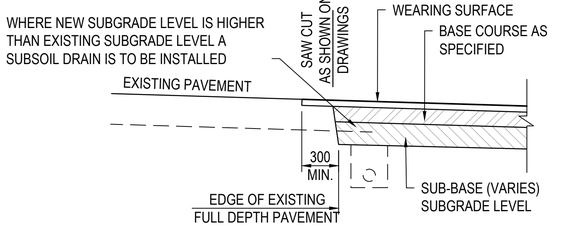


TYPICAL DRIVEWAY DETAIL

SCALE A1 - 1 : 100
A3 - 1 : 200

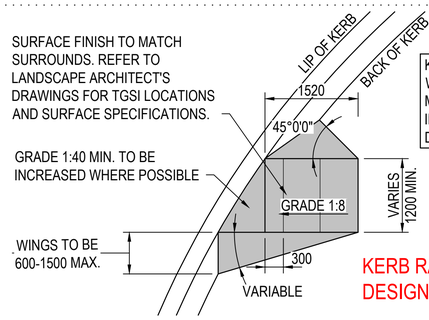
TYPICAL DRIVEWAY NOTE:
DRIVEWAYS ARE CONSIDERED SACRIFICIAL WITH BUILDERS REQUIRED TO REPLACE AFTER BUILDING CONSTRUCTION. FINAL DRIVEWAY PAVEMENT FINISHES TO MATCH ADJACENT VERGE SURFACE FINISHES, REFER LANDSCAPE SPECIFICATIONS FOR DETAILS.

FUTURE DRIVEWAY PAVEMENT - (BY OTHERS)
FINAL PAVEMENT TYPE 1
40mm THICK PAVERS (REFER LANDSCAPE SPECS)
10mm GROUT
175mm CONCRETE SLAB (N32/20, SL92 MESH), 50mm TOP COVER
100mm GRANULAR SUB-BASE (CBR45)
FINAL PAVEMENT TYPE 2
175mm CONCRETE SLAB (N32/20, SL92 MESH), 50mm TOP COVER
100mm GRANULAR SUB-BASE (CBR45)
REFER LANDSCAPE DETAILS FOR FINISHED SURFACE TREATMENT.



TYPICAL SAW CUT / PAVEMENT WIDENING

SCALE A1 - 1 : 25
A3 - 1 : 50

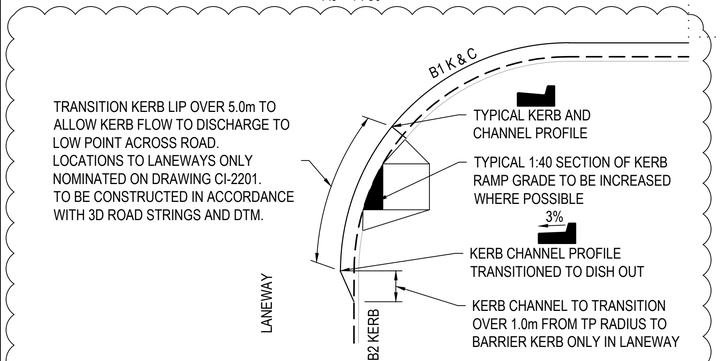


KERB RAMPS MUST ALWAYS ALIGN WITH OPPOSITE KERB RAMP & MEDIAN/ ISLAND CUT THROUGH. IN ACCORDANCE WITH IPWEA STD. DWG'S RS-090 TO RS-094

KERB RAMP STANDARD UNDER DESIGN REVIEW WITH COUNCIL

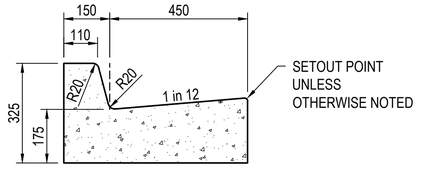
TYPICAL KERB RAMP LAYOUT

SCALE A1 - 1 : 50
A3 - 1 : 100



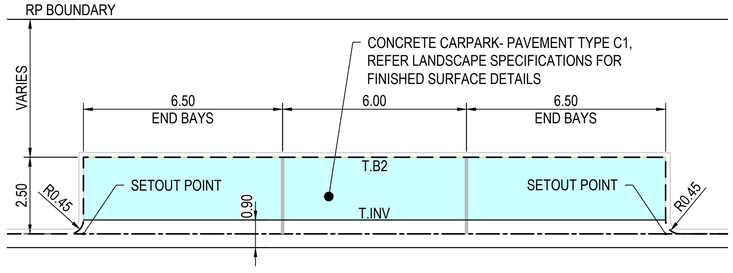
TYPICAL LANEWAY KERB TRANSITION DETAIL (HIGH SIDE)

SCALE A1 - 1 : 100
A3 - 1 : 200



IPWEA TYPE B1 - COMMERCIAL

SCALE A1 - 1 : 10
A3 - 1 : 20



TYPICAL CARPARK DETAIL

SCALE A1 - 1 : 100
A3 - 1 : 200

PAVEMENT NOTES:

P.1. ALL PAVEMENT DEPTHS SHALL BE CONFIRMED BY SUBGRADE TESTING PRIOR TO CONSTRUCTION IN ACCORDANCE WITH AUSTROADS-PAVEMENT DESIGN MANUAL.
P.2. IN CUT, MINIMUM TREATMENTS FOR CBRS LOWER THAN 3% ARE AS FOLLOWS; (EITHER DIG AND REPLACE OR ADD BELOW LOWER SUB-BASE)
P.2.1. CBR 2 = +200mm ROCKFILL OR CBR10 FILL
P.2.2. CBR 1 = +400mm ROCKFILL OR CBR10 FILL
P.3. WHERE STENCIL PRINT/STAMPED AC FINISH IS TO BE CONSTRUCTED, USE AN ADDITIONAL 10mm DENSE GRADED AC ON TOP OF THE SPECIFIED AC SURFACING DEPTH AND SUB-BASE ADJUSTED TO MAINTAIN OVERALL PAVEMENT THICKNESS.
P.4. FINAL SURFACING DESIGN TO BE PROVIDED FOR APPROVAL BY THE SUPERINTENDENT. DESIGNS NOMINATED ON THE PROJECT DRAWINGS TO BE ADJUSTED TO SUIT SITE CONDITIONS.
P.5. ARCHITECTURAL FINISHES TO VEHICULAR PAVEMENTS SHALL NOT COMPROMISE THE NOMINATED AGGREGATE SIZE (20mm), LIMIT THE EFFECTIVENESS OF LINEMARKING OR COMPROMISE SKID RESISTANCE. FULL DEPTH COLOUR TREATMENTS AND BROOM FINISHES ARE GENERALLY ACCEPTABLE. ANY OTHER TREATMENTS MUST BE APPROVED BY THE SUPERINTENDENT PRIOR TO USE.
P.6. CLEAN OUT PITS SHALL BE PROVIDED TO BLIND ENDS OF 100mm DIA. SUBSURFACE DRAINAGE PIPES IN ACCORDANCE WITH IPWEA STANDARD DRAWING NO RS-140.
P.7. GRANULAR SUB-BASE TO BE CRUSHED ROCK, ROAD BASE OR APPROVED ALTERNATIVE (CBR15 MIN.) FOR LIGHTLY TRAFFICKED RIGID PAVEMENTS.
P.8. SUB-BASE MAY USE PREPARED IN-SITU SAND. SAND SUB-BASE IS TO BE DAMPENED AND COMPACTED TO A UNIFORM LEVEL SURFACE AND VERIFIED AT THIS POINT. 200 micron PE BUILDERS PLASTIC IS TO BE USED PRIOR TO PLACEMENT OF REINFORCING, TO MAINTAIN MOISTURE CONTENT, PROVIDE ADDITIONAL CHAIR SUPPORT AND PREVENT INGRESS OF SAND INTO THE INDUCED (CRACK) JOINTS.
P.9. REFER DRAWINGS CI-2217-2218 FOR CONCRETE NOTES AND DETAILS.

ROAD PAVEMENT SPECIFICATIONS AND DETAILS:

TYPE	PAVEMENT DETAILS	TOTAL DEPTH	ASSUMED MIN. CBR	DESIGN ESA	STREET CLASSIFICATION /LOCATION	DESIGN SPEED	SIGNED SPEED
D1	100mm AC14M (2x50mm LAYERS) EMULSION PRIMERSEAL 10mm (SURFIX S60 OR SIMILAR) IMPROVED LAYER 150mm TYPE 2.3 CMB	250 mm	15	1.0 x 10^5	DISTRICT MAIN STREET/MIXED USE ACCESS INTERSECTION	≤ 40 km/hr	
D2	150mm AC14M (3x50mm LAYERS) EMULSION PRIMERSEAL 10mm (SURFIX S60 OR SIMILAR) IMPROVED LAYER 150mm TYPE 2.3 CMB	300 mm	15	6.0 x 10^5	DISTRICT MAIN STREET/MIXED USE ACCESS INTERSECTION	≤ 40 km/hr	
D3	100mm AC14M (2x50mm LAYERS) 90mm AC20M EMULSION PRIMERSEAL 10mm (SURFIX S60 OR SIMILAR) IMPROVED LAYER 150mm TYPE 2.3 CMB	340 mm	15	3.0 x 10^6	DISTRICT MAIN STREET/MIXED USE ACCESS INTERSECTION	≤ 40 km/hr	
D4	100mm AC14H (2x50mm LAYERS) - A15E BINDER 90mm AC20H - A15E BINDER EMULSION PRIMERSEAL 10mm (SURFIX S60 OR SIMILAR) IMPROVED LAYER 150mm TYPE 2.3 CMB	340 mm	15	3.0 x 10^6	DISTRICT MAIN STREET/MIXED USE ACCESS INTERSECTION	≤ 40 km/hr	
C1	~~200mm CONCRETE SLAB N40/20, (SL92 MESH, 50mm TOP~~ COVER), REFER NOTE # 5 150mm TYPE 2.3 BOUND (MIN. 5%) REFER TO LANDSCAPE ARCHITECT'S DRAWING FOR SURFACE FINISHES.	340 mm	15	3.0 x 10^6	DISTRICT MAIN STREET / KEY INTERSECTIONS AND THRESHOLDS	≤ 40 km/hr	-
C2	70mm THICK PAVERS - (REFER LANDSCAPE SPECIFICATIONS FOR DETAILS) 10mm GROUT 200mm CONCRETE SLAB N40/20, (SL92 MESH, 50mm TOP COVER) 150mm TYPE 2.3 BOUND (MIN. 5%)	420 mm	15	3.0 x 10^6	DISTRICT MAIN STREET / CENTRAL CORSO	≤ 40 km/hr	-
C3	150mm CONCRETE SLAB (N32/20, SL82 MESH, 50mm TOP COVER) 50mm PREPARED IN-SITU SUB-BASE (REFER NOTE P.8.) PLAIN CONCRETE BROOM FINISH	275 mm	15	1.0 x 10^3	DRIVEWAYS, PLAIN CONCRETE CROSS OVER AND TO VERGE BDY (SACRIFICIAL- TO BE REPLACED AFTER BUILDING CONSTRUCTION	-	-
C4	40mm THICK PAVERS - (REFER LANDSCAPE SPECIFICATIONS FOR DETAILS) 10mm GROUT 100mm CONCRETE SLAB (N32/20, SL72 MESH, 50mm TOP COVER) 50mm PREPARED IN-SITU SUB-BASE (REFER NOTE P.8.)	250 mm	15	PEDESTRIANS ONLY	PEDESTRIAN AREAS IN VERGE, ON MAIN STREETS	-	-
C5	125mm CONCRETE SLAB (N32/20, SL82 MESH, 50mm TOP COVER), REFER NOTE # 5 50mm PREPARED IN-SITU SUB-BASE (REFER NOTE P.8.) REFER LANDSCAPE DETAILS FOR FINISHED SURFACE TREATMENT. (PEDESTRIAN AND CYCLE MUST BE CONTRASTING FINISHES)	225 mm	15	OCCASIONAL LIGHT VEHICLE FOR MAINTENANCE	PEDESTRIAN AREAS IN VERGE & OFF ROAD CYCLE PATHS	-	-
C6	150mm CONCRETE SLAB (N32/20, SL82 MESH), 50mm TOP COVER 100mm GRANULAR SUB-BASE (CBR45) REFER LANDSCAPE DETAILS FOR FINISHED SURFACE TREATMENT.	275 mm	15	1.0 x 10^3	INDENTED PARKING BAYS	-	-
C7	175mm CONCRETE SLAB (N32/20, SL82 MESH, 60mm TOP COVER) 24mm DOWELS 125mm GRANULAR SUB-BASE (CBR15) REFER LANDSCAPE DETAILS FOR FINISHED SURFACE TREATMENT.	300 mm	15	5.0 x 10^4	REAR ACCESS LANEWAYS LOTS A1-A6 & C1-C3	-	-
C8	60mm THICK PAVERS, REFER LANDSCAPE SPECIFICATIONS FOR DETAILS. 30mm MORTAR, 150mm CONCRETE SLAB (N32/20 SL82 MESH), 50mm TOP COVER 100mm GRANULAR SUB-BASE (CBR45), R16 DOWELS @ 450 CRS	340 mm	15	1.0 x 10^3	TRAFFICABLE HARDSTAND	-	-
C9	60mm THICK PAVERS, REFER LANDSCAPE SPECIFICATIONS FOR DETAILS. 30mm MORTAR, 150mm CONCRETE SLAB (N32/20 SL82 MESH), 50mm TOP COVER 100mm GRANULAR SUB-BASE (CBR45), R16 DOWELS @ 450 CRS	320 mm	15	1.0 x 10^3	TRAFFICABLE HARDSTAND	-	-
C10	150mm CONCRETE SLAB (N32/20, SL82 MESH), 50mm TOP COVER 100mm GRANULAR SUB-BASE (CBR45) REFER LANDSCAPE DETAILS FOR FINISHED SURFACE TREATMENT. R16 DOWELS AT 450 CRS	275 mm	15	1.0 x 10^3	TRAFFICABLE HARDSTAND	-	-
O1	SCARIFY EXISTING AC AND RESURFACE WITH 35mm AC OVERLAY (AC10M FOR ≤ 35mm & AC14M FOR > 35mm)			6.0 x 10^5	MIXED USE ACCESS STREET	50 km/hr	≤ 40 km/hr
T4	2 COAT SEAL 14/7 150mm COMPACTED BASE TYPE 2.1 (MIN. CBR80) 150mm COMPACTED SUB-BASE TYPE 2.3 (MIN. CBR45)	300 mm	6	3.0 x 10^6	TEMPORARY PAVEMENT (EQUIVALENT TO INDUSTRIAL ACCESS WITHOUT AC)	-	-

Rev.	Date	Description	Des.	Verif.	Appd.
5	16/08/2019	TRG REVIEW; KERB TRANSITION DETAIL & PAVEMENT D4 ADDED	CK	AFH	GGT
4	20/05/2019	TRG REVIEW	CK	AFH	GGT
3	5/04/2019	ISSUED FOR TENDER - STAGE 1C(1) MUNDOO BOULEVARD	AS	DH	GT
2	6/02/2019	ISSUE FOR APPROVAL	CK	DH	GT
1	20/12/2018	FOR INFORMATION ONLY	CK	DH	GT

SunCentral Maroochydore

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Drawn	AE	Date 21/11/2018
Checked	DH	Date 21/11/2018
Designed	CK	Date 21/11/2018
Verified	GT	Date 6/02/2019
Approved	G.Tamblyn	RPEQ No. 1723 DATE 6/02/2019

Client: SUNCENTRAL MAROOCHYDORE PTY LTD
Project: MAROOCHYDORE CITY CENTRE
CIVIL WORKS - STAGE 1B 1C & 1C(1)
Title: ROADWORKS TYPICAL DETAILS & PAVEMENT SPECIFICATIONS

Status: FOR TENDER ONLY
NOT TO BE USED FOR CONSTRUCTION PURPOSES

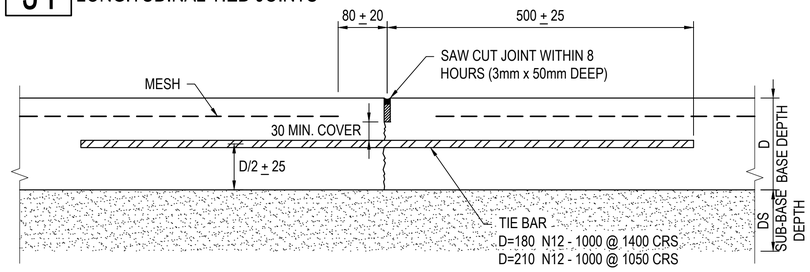
DATUM	Orig. Date	Scale	Size
AHD	21/11/2018	AS SHOWN	A1

Drawing Number: 249402-CI-2216
Revision: 5

XREFs: X-TITLE BORDER
CAD File: P:\249402 MCC Design Package 1_DESIGN\ACAD_CIVIL STAGE 1B & 1C\249402-CI-2216 ROADWORKS TYPICAL DETAILS.dwg

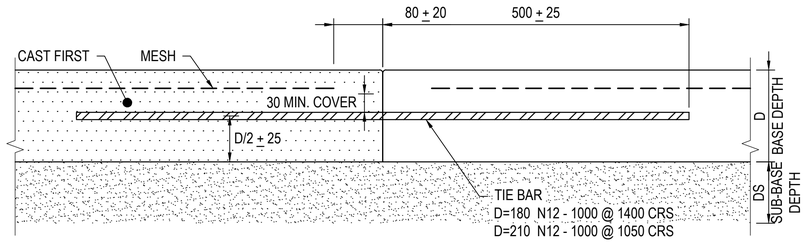
DATE PLOTTED: 17 September 2019 10:10 AM BY: - AARON ELLARD

J1 LONGITUDINAL TIED JOINTS



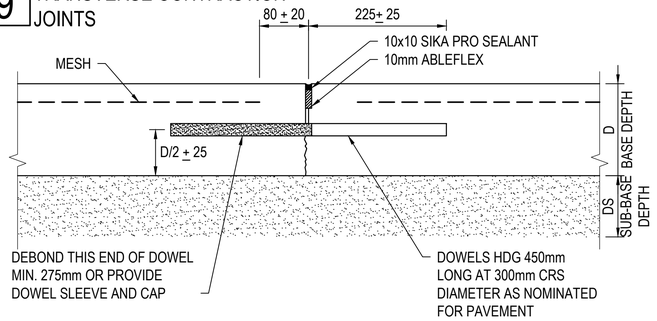
LONGITUDINAL JOINT / SAWN
J1 (SAWN)
SCALE A1 - 1 : 5
A3 - 1 : 10
(FOR SINGLE POUR CONSTRUCTION)

J2



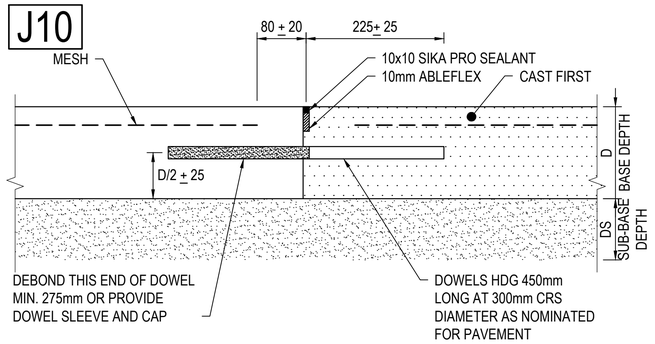
LONGITUDINAL JOINT / FORMED
J2 (FORMED)
SCALE A1 - 1 : 5
A3 - 1 : 10
(FOR 'CHECKERBOARD' OR ALTERNATE POUR CONSTRUCTION)

J9 TRANSVERSE CONTRACTION JOINTS



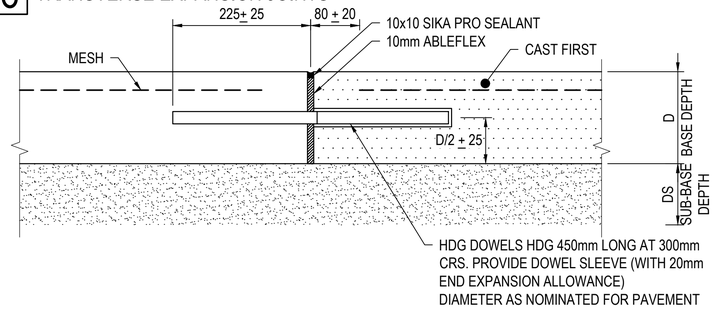
TRANSVERSE CONTRACTION / SAWN / DOWELLED
J9 (SAWN)
SCALE A1 - 1 : 5
A3 - 1 : 10
(FOR SINGLE POUR CONSTRUCTION)

J10

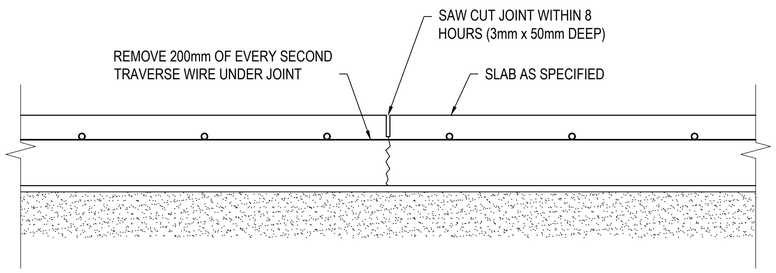


TRANSVERSE CONTRACTION / FORMED / DOWELLED
J10 (FORMED)
SCALE A1 - 1 : 5
A3 - 1 : 10
(FOR 'CHECKERBOARD' OR ALTERNATE POUR CONSTRUCTION)

J16 TRANSVERSE EXPANSION JOINTS



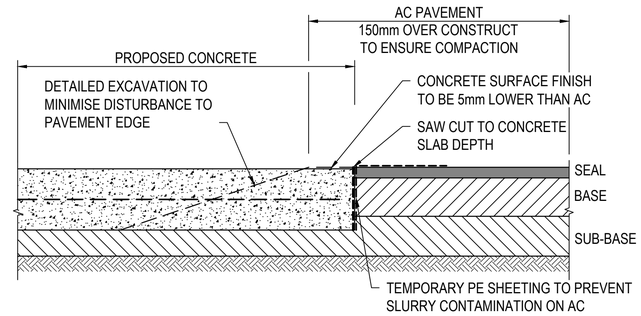
EXPANSION / DOWELLED
J16
SCALE A1 - 1 : 5
A3 - 1 : 10



TYPICAL SAW CUT JOINT (SCJ)
SCALE A1 - 1 : 5
A3 - 1 : 10
(PEDESTRIAN PAVEMENTS ONLY)

CONCRETE NOTES:

C.1. REFER TO DRAWING 249402-CI-2219 FOR JOINTING LAYOUT
C.2. NON-VEHICULAR PATHS ONLY MAY USE DANLEY 'EXPANDA' JOINT SYSTEMS
CONCRETE PAVEMENTS <1X10^6 ESA TO BE DETAILED IN ACCORDANCE WITH CPAA RESIDENTIAL STREETS / AUSTROADS LIGHT TRAFFIC DESIGN GUIDES.
C.3. CONCRETE PAVEMENTS ≥ 1X10^6 ESA TO BE DETAILED IN ACCORDANCE WITH NSW TRANSPORT ROADS AND MARITIME SERVICES (RTA) STANDARD DRAWINGS (JRCP AND SFCP SERIES) AND RESPECTIVE SPECIFICATIONS (AS REFERENCED IN AUSTROADS AGPT02 - STRUCTURAL DESIGN). ANY DISCREPANCY BETWEEN THE TRMS (RTA) STANDARDS & THE PROJECT SPECIFICATION IS TO BE BROUGHT TO THE ATTENTION OF THE DESIGN ENGINEER.
C.4. GRANULAR SUB-BASE UNDER CONCRETE TO BE CRUSHED ROCK, ROADBASE OR APPROVED ALTERNATIVE (CBR15 MIN.) FOR VEHICLE PAVEMENTS. 'CRUSHER DUST' TO BE USED UNDER PATHS AND NON TRAFFICABLE CONCRETE.
C.5. GRANULAR SUB-BASE SHALL BE COMPACTED AS SPECIFIED, TO A UNIFORMLY SMOOTH, FLAT SURFACE TO THE SATISFACTION OF THE SUPERINTENDENT PRIOR TO CONCRETE PLACEMENT.
C.6. ARCHITECTURAL FINISHES TO VEHICULAR PAVEMENT SHALL NOT COMPROMISE THE NOMINATED AGGREGATE SIZE (20mm), LIMIT THE EFFECTIVENESS OF LINEMARKING OR COMPROMISE SKID RESISTANCE. FULL DEPTH COLOUR TREATMENTS AND BROOM FINISHES ARE GENERALLY ACCEPTABLE. ANY OTHER TREATMENTS MUST BE APPROVED PRIOR TO USE.
C.7. ALL SERVICE COVERS WITHIN SHARED / BICYCLE PAVEMENTS TO BE INFILL TYPE, WHERE POSSIBLE, TO MINIMISE SLIP HAZARD
C.8. FIXED INTERNAL PENETRATIONS AND EDGES ABUTTING STRUCTURES TO BE ISOLATED WITH A 10mm FLEXIBLE (ABLEFLEX) JOINT. VALVE COVERS AND OTHER 'FLOATING' SERVICES MAY BE CAST DIRECTLY INTO THE SLAB.
C.9. ALL INTERNAL CORNERS AND PENETRATIONS REQUIRE 2X PARALLEL N12 TRIMMERS (900mm LONG) ACROSS EACH CORNER TO CONTROL CRACKING, UNLESS ALIGNED WITH AN APPROPRIATE FORMED OR INDUCED JOINT.
C.10. FOR SLABS ≤100mm THICK, SUFFICIENT COMPACTION IS ACHIEVED THOUGH SCREEDING PROCESS. FOR >100mm THICK AN IMMERSION VIBRATOR MUST BE USED TO ADEQUATELY DISPEL ENTRAINED AIR
C.11. SURFACE SHALL BE TREATED WITH A MOISTURE EVAPORATION RETARDANT (ALIPHATIC ALCOHOL) AFTER SCREEDING AND PRIOR TO FLOATING.
C.12. AN ADDITIONAL CURING COMPOUND MUST BE APPLIED OVER FINISHED WORKS. THE PRODUCT MUST BE APPROPRIATE FOR THE NOMINATED ARCHITECTURAL FINISH AND APPLIED IN ACCORDANCE WITH MANUFACTURES RECOMMENDATIONS
C.13. LMC SUB-BASE TO BE CURED BY THE APPLICATION OF A WAX EMULSION HYDROCARBON RESIN.
C.14. CONCRETE CUTTING SHALL BE UNDERTAKEN WITHIN 8 HOURS OF PLACEMENT. A SOFF-CUT SAW IS RECOMMENDED TO ENSURE CORRECT DEPTH OF CUTS, MINIMISE SPALLING AT ARISES AND PERMIT CUTTING WITHIN THE APPROPRIATE TIME.
C.15. FINISHED SURFACE SHALL NOT BE TRAFFICKED EARLIER THAN 10 DAYS AFTER PLACEMENT.



CONCRETE TO AC PAVEMENT DETAIL
SCALE A1 - 1 : 10
A3 - 1 : 20

CONCRETE JOINT TABLE

JOINTED REINFORCED CONCRETE PAVEMENT (JRCP)

TYPE	DESCRIPTION	REFER TO Std. Dwg.
J1/J2	LONGITUDINAL / SAWN / FORMED	RTA Std. Dwg. MD.R83.CJ SHEET 08
J9/J10	TRANSVERSE / SAWN / FORMED	RTA Std. Dwg. MD.R83.CJ SHEET 08
J16	EXPANSION / DOWELLED	RTA Std. Dwg. MD.R83.CJ SHEET 09

0 100 200 300 400 500mm
SCALE 1:5 @A1

0 200 400 600 800 1000mm
SCALE 1:10 @A1

Rev.	Date	Description	Des.	Verif.	Appd.
5	16/08/2019	TRG REVIEW;	CK	AFH	GGT
4	20/05/2019	TRG REVIEW; DETAILS REVISED	CK	AFH	GGT
3	5/04/2019	ISSUED FOR TENDER - STAGE 1C(1) MUNDOO BOULEVARD	AS	DH	GT
2	6/02/2019	ISSUE FOR APPROVAL	CK	DH	GT
1	20/12/2018	FOR INFORMATION ONLY	CK	DH	GT

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Drawn	AE	Date 21/11/2018
Checked	DH	Date 21/11/2018
Designed	CK	Date 21/11/2018
Verified	AR	Date 6/02/2019
Approved	A.Reckentin	RPEQ No. 4902 DATE 6/02/2019

Client: SUNCENTRAL MAROOCHYDORE PTY LTD
Project: MAROOCHYDORE CITY CENTRE
CIVIL WORKS - STAGE 1B 1C & 1C(1)
Title: CONCRETE JOINTING DETAILS - SHEET 1

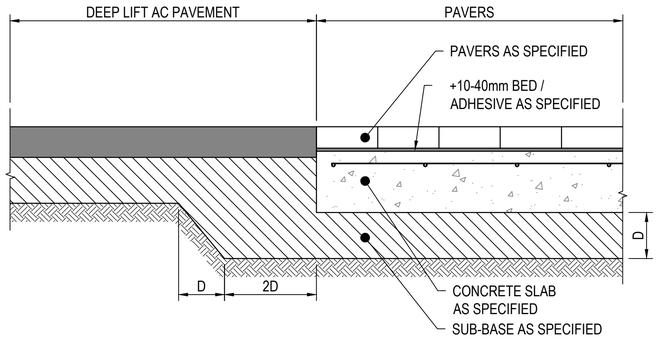
Status: FOR TENDER ONLY
NOT TO BE USED FOR CONSTRUCTION PURPOSES

DATUM	Orig. Date	Scale	Size
AHD	21/11/2018	AS SHOWN	A1

Drawing Number: 249402-CI-2217
Revision: 5

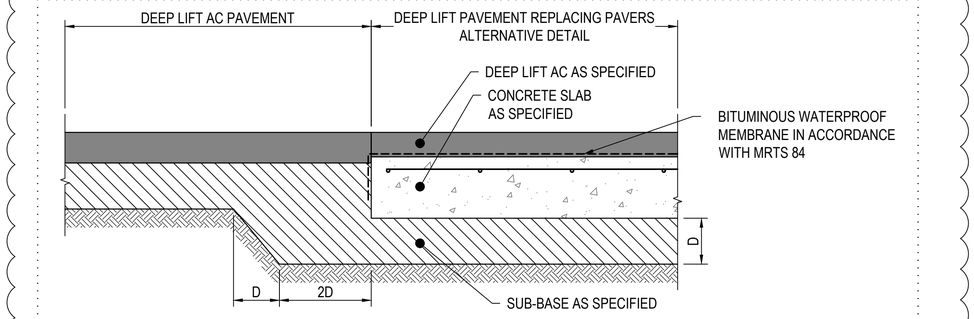
XREFs: X-TITLE BORDER, X-249402 RP BASE, X-249402 DESIGN STAGE 1B & 1C, X-249402 DESIGN STAGE 1A EXISTING, X-249402 AWCS STAGE 02, X-249402 AWCS STAGE 01, X-249402 LANDSCAPE - CIVIC PARK
CAD File: P:\249402 MCC Design Package 1_DESIGN\ACAD_CIVIL\STAGE 1B & 1C\249402-CI-2217-2219 CONCRETE JOINT PLAN & DETAILS.dwg

DATE PLOTTED: 17 September 2019 10:10 AM BY - AARON ELLARD



DEEP LIFT AC TO PAVER DETAIL

SCALE A1 - 1 : 10
A3 - 1 : 20



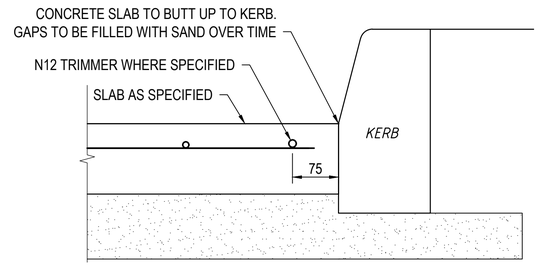
DEEP LIFT AC TO PAVER ALTERNATIVE DETAIL

SCALE A1 - 1 : 10
A3 - 1 : 20

ALTERNATIVE PAVER DETAIL UNDER REVIEW. TO BE APPROVED BY COUNCIL

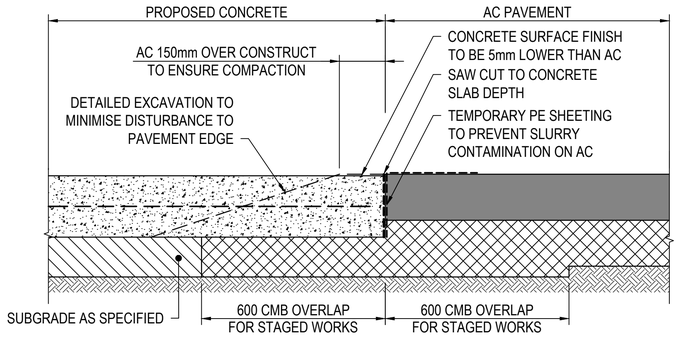
5

KIJ



KERB ISOLATION JOINT
KIJ

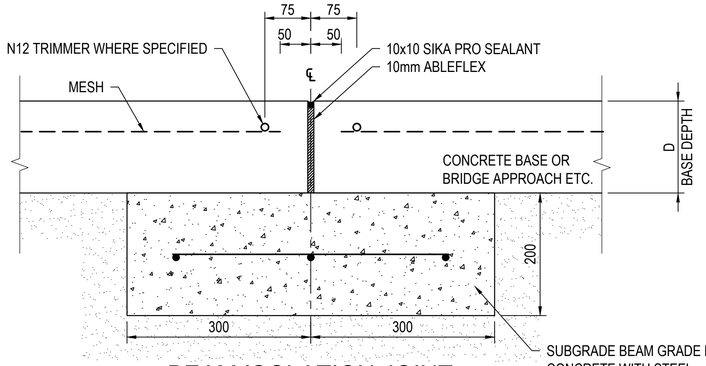
SCALE A1 - 1 : 5
A3 - 1 : 10



CONCRETE TO DEEP LIFT PAVEMENT DETAIL

SCALE A1 - 1 : 10
A3 - 1 : 20

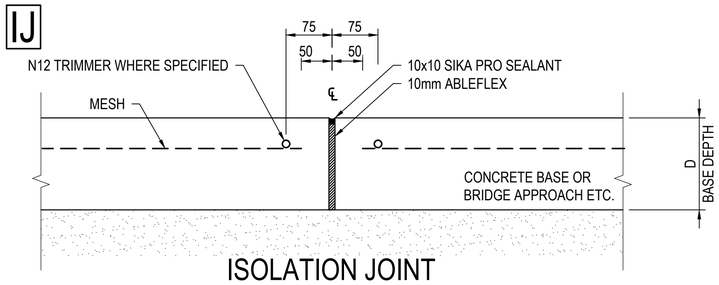
J14



BEAM ISOLATION JOINT
J14

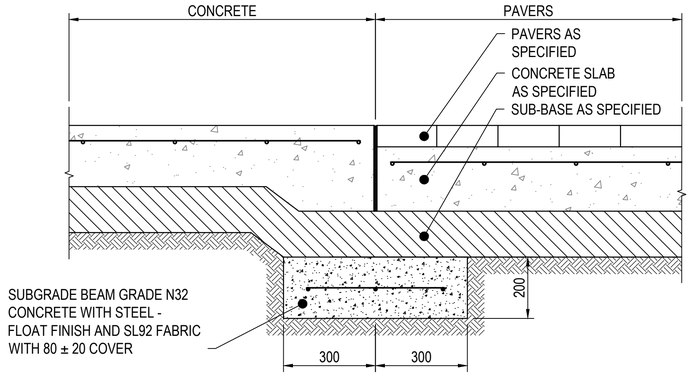
SCALE A1 - 1 : 5
A3 - 1 : 10

IJ



ISOLATION JOINT
IJ

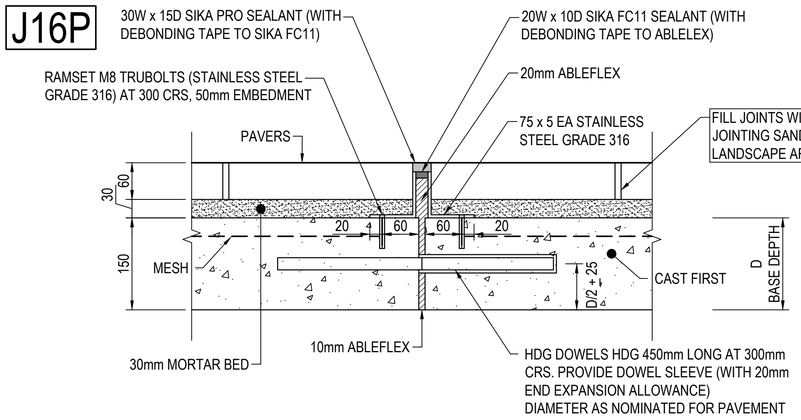
SCALE A1 - 1 : 5
A3 - 1 : 10



CONCRETE TO PAVER DETAIL

SCALE A1 - 1 : 10
A3 - 1 : 20

J16P



EXPANSION JOINT TO PAVER

SCALE A1 - 1 : 20
A3 - 1 : 40

0 100 200 300 400 500mm
SCALE 1:5 @A1

0 200 400 600 800 1000mm
SCALE 1:10 @A1

0 500 1000 1500 2000mm
SCALE 1:20 @A1

Rev.	Date	Description	Des.	Verif.	Appd.
5	16/08/2019	TRG REVIEW; PAVER ALTERNATIVE DETAIL ADDED	CK	AFH	GGT
4	20/05/2019	TRG REVIEW; DETAILS REVISED	CK	AFH	GGT
3	5/04/2019	ISSUED FOR TENDER - STAGE 1C(1) MUNDOO BOULEVARD	AS	DH	GT
2	6/02/2019	ISSUE FOR APPROVAL	CK	DH	GT
1	20/12/2018	FOR INFORMATION ONLY	CK	DH	GT

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Drawn	AE	Date 21/11/2018
Checked	DH	Date 21/11/2018
Designed	CK	Date 21/11/2018
Verified	AR	Date 6/02/2019
Approved	A.Reckentin	RPEQ No: 4902 DATE 6/02/2019

Client: SUNCENTRAL MAROOCHYDORE PTY LTD
Project: MAROOCHYDORE CITY CENTRE
CIVIL WORKS - STAGE 1B 1C & 1C(1)
Title: CONCRETE JOINTING DETAILS - SHEET 2

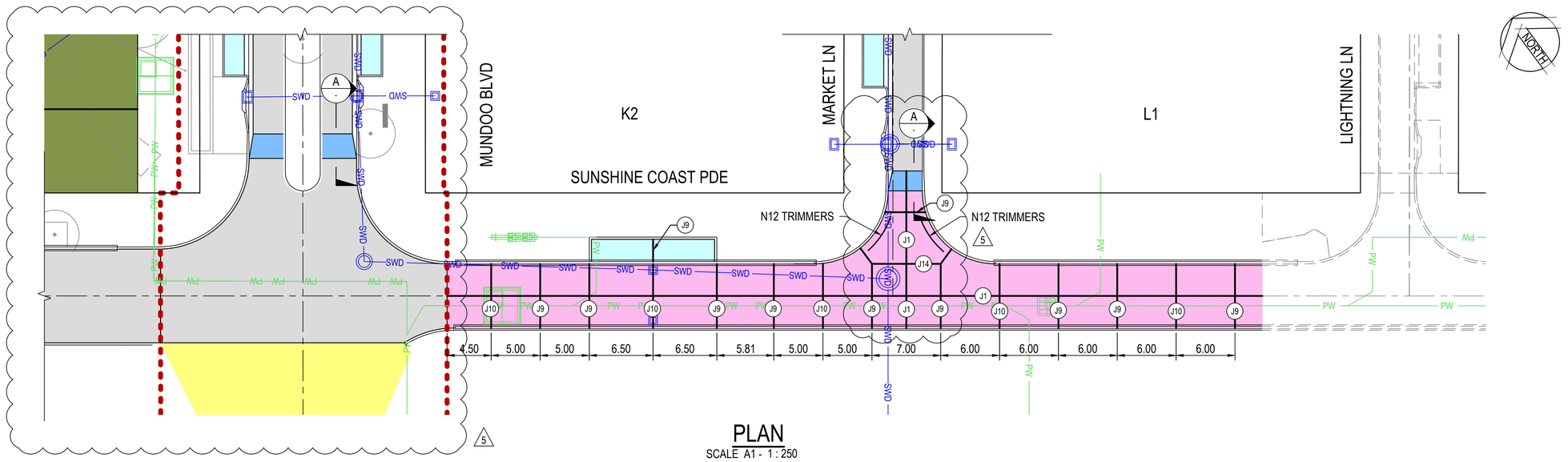
Status: FOR TENDER ONLY
NOT TO BE USED FOR CONSTRUCTION PURPOSES

DATUM	Orig. Date	Scale	Size
AHD	21/11/2018	AS SHOWN	A1

Drawing Number: 249402-CI-2218
Revision: 5

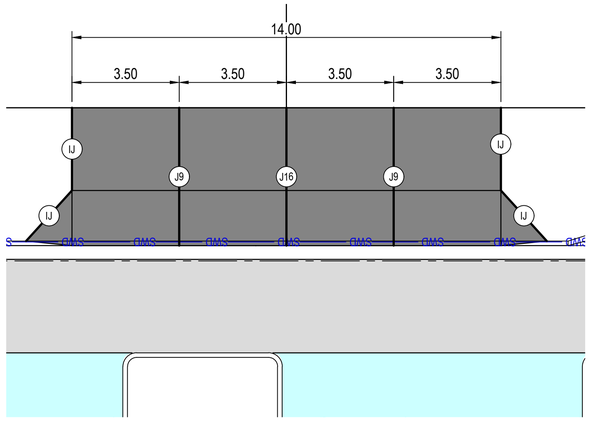
X:\Ref's: X-TITLE BORDER; X-249402 RP BASE; X-249402 DESIGN STAGE 1B & 1C; X-249402 DESIGN STAGE 1A EXISTING; X-249402 AWCS STAGE 02; X-249402 AWCS STAGE 01; X-249402 LANDSCAPE - CIVIC PARK
CAD File: P:\249402 MCC Design Package 1_DESIGN\ACAD_ CIVIL STAGE 1B & 1C\249402-CI-2217-2219 CONCRETE JOINT PLAN & DETAILS.dwg

DATE PLOTTED: 17 September 2019 10:10 AM BY: - AARON ELLARD



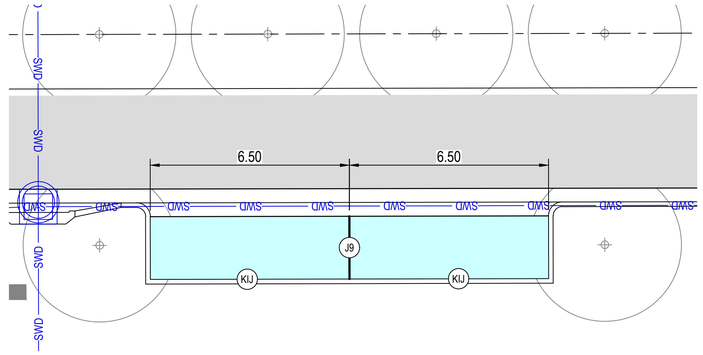
PLAN

SCALE A1 - 1 : 250
A3 - 1 : 500



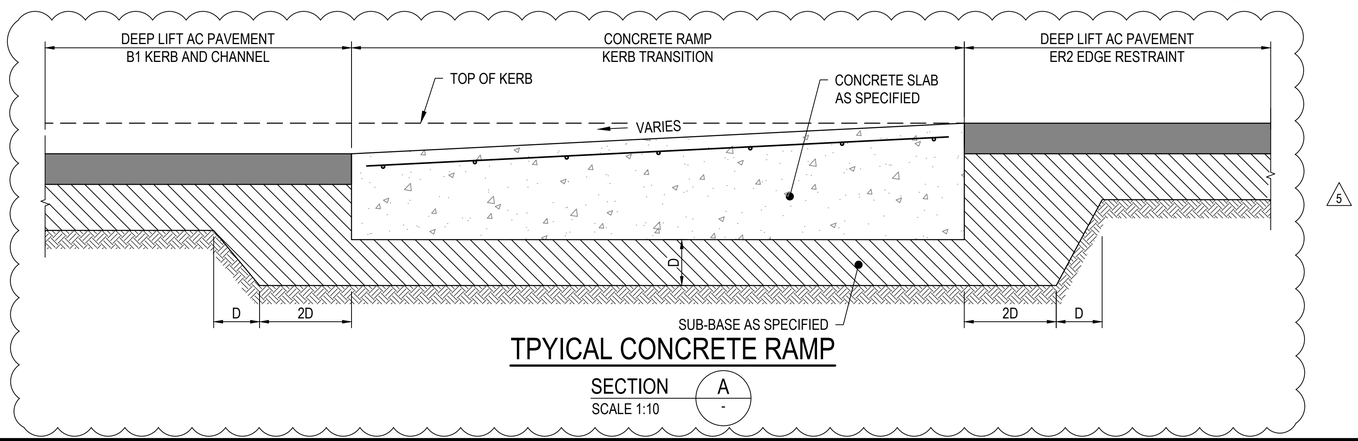
DRIVEWAY TYPICAL DETAIL

SCALE A1 - 1 : 100
A3 - 1 : 200



CARPARK TYPICAL DETAIL

SCALE A1 - 1 : 100
A3 - 1 : 200



TPYICAL CONCRETE RAMP

SECTION A -
SCALE 1:10

LEGEND:

- J9 — JRCP JOINT TYPE
- RAMP / GRADE LINE (NOT JOINT)
- AC PAVEMENT
- CONCRETE PAVEMENT C1
- CONCRETE PAVEMENT C2 (PAVERS)
- CONCRETE PAVEMENT C3
- CONCRETE PAVEMENT C6
- CONCRETE PAVEMENT C8
- CONCRETE PAVEMENT C9
- CONCRETE PAVEMENT C10
- TEMPORARY AC PAVEMENT T4

NOTE:

1. REFER LANDSCAPE DRAWINGS FOR JOINTING DETAILS IN VERGE.
2. TRIMMER BARS TO BE 75mm CLEAR FROM CONCRETE JOINTS. REFER TO DRAWING CI-2218 FOR DETAILS

1 0 1 2 3 4 5m
Scale 1:100

2.5 0 2.5 5.0 7.5 10 12.5m
Scale 1:250

Rev.	Date	Description	Des.	Verif.	Appd.
5	16/08/2019	TRG REVIEW; MUNDOO BLVD INTERSECTION PAVEMENT REVISED	CK	AFH	GGT
4	20/05/2019	TRG REVIEW; NOTES REVISED	CK	AFH	GGT
3	5/04/2019	ISSUED FOR TENDER - STAGE 1C(1) MUNDOO BOULEVARD	AS	DH	GT
2	6/02/2019	ISSUE FOR APPROVAL	CK	DH	GT
1	20/12/2018	FOR INFORMATION ONLY	CK	DH	GT

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Drawn	AE	Date 21/11/2018
Checked	DH	Date 21/11/2018
Designed	CK	Date 21/11/2018
Verified	AR	Date 6/02/2019
Approved	A.Reckentin	RPEQ No. 4902 DATE 6/02/2019

Client: SUNCENTRAL MAROOCHYDORE PTY LTD
Project: MAROOCHYDORE CITY CENTRE
CIVIL WORKS - STAGE 1B 1C & 1C(1)
Title: CONCRETE JOINTING PLAN - SHEET 1
Status: FOR TENDER ONLY
NOT TO BE USED FOR CONSTRUCTION PURPOSES

DATUM	Orig. Date	Scale	Size
AHD	21/11/2018	AS SHOWN	A1

Drawing Number: 249402-CI-2219
Revision: 5

XREF's: X-TITLE BORDER; X-249402 RP BASE; X-249402 DESIGN STAGE 1B & 1C; X-249402 DESIGN STAGE 1A EXISTING; X-249402 AWCS STAGE 02; X-249402 AWCS STAGE 01; X-249402 LANDSCAPE - CIVIC PARK
CAD File: P:\249402 MCC Design Package 1_DESIGN\ACAD_ CIVIL STAGE 1B & 1C\249402-CI-2217-2219 CONCRETE JOINT PLAN & DETAILS.dwg

DATE PLOTTED: 17 September 2019 10:10 AM BY - AARON ELLARD

LEGEND:

- J9 — JRCP JOINT TYPE
- RAMP / GRADE LINE (NOT JOINT)
- AC PAVEMENT
- CONCRETE PAVEMENT C1
- CONCRETE PAVEMENT C2 (PAVERS)
- CONCRETE PAVEMENT C3
- CONCRETE PAVEMENT C6
- CONCRETE PAVEMENT C8
- CONCRETE PAVEMENT C9
- CONCRETE PAVEMENT C10

NOTE:

1. REFER LANDSCAPE DRAWINGS FOR JOINTING DETAILS IN VERGE.
2. TRIMMER BARS TO BE 75mm CLEAR FROM CONCRETE JOINTS. REFER TO DRAWING CI-2218 FOR DETAILS

5

PLAN

SCALE A1 - 1 : 200
A3 - 1 : 400

2.0 0 2.0 4.0 6.0 8.0 10.0m
Scale 1:200

Rev.	Date	Description	Des.	Verif.	Appd.
5	16/08/2019	TRG REVIEW; MUNDOO BLVD INTERSECTION PAVEMENT REVISED	CK	AFH	GGT
4	20/05/2019	TRG REVIEW; NOTES REVISED	CK	AFH	GGT
3	5/04/2019	ISSUED FOR TENDER - STAGE 1C(1) MUNDOO BOULEVARD	AS	DH	GT
2	6/02/2019	ISSUE FOR APPROVAL	CK	DH	GT
1	20/12/2018	FOR INFORMATION ONLY	CK	DH	GT

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Drawn	AE	Date 21/11/2018
Checked	DH	Date 21/11/2018
Designed	CK	Date 21/11/2018
Verified	AR	Date 6/02/2019
Approved	A.Reckentin	RPEQ No. 4902 DATE 6/02/2019

Client: SUNCENTRAL MAROOCHYDORE PTY LTD
Project: MAROOCHYDORE CITY CENTRE
CIVIL WORKS - STAGE 1B 1C & 1C(1)
Title: CONCRETE JOINTING PLAN - SHEET 2

Status: FOR TENDER ONLY
NOT TO BE USED FOR CONSTRUCTION PURPOSES

DATUM	Orig. Date	Scale	Size
AHD	21/11/2018	AS SHOWN	A1

Drawing Number: 249402-CI-2220
Revision: 5

XREFs: X-TITLE BORDER, X-249402 RP BASE, X-249402 DESIGN STAGE 1B & 1C, X-249402 DESIGN STAGE 1A EXISTING, X-249402 AWCS STAGE 02, X-249402 AWCS STAGE 01, X-249402 LANDSCAPE - CIVIC PARK
CAD File: P:\249402 MCC Design Package 1_DESIGN\ACAD_CIVIL\STAGE 1B & 1C\249402-CI-2217-2219 CONCRETE JOINT PLAN & DETAILS.dwg

DATE PLOTTED: 15 August 2019 4:06 PM BY: ANTHONY SKORIC

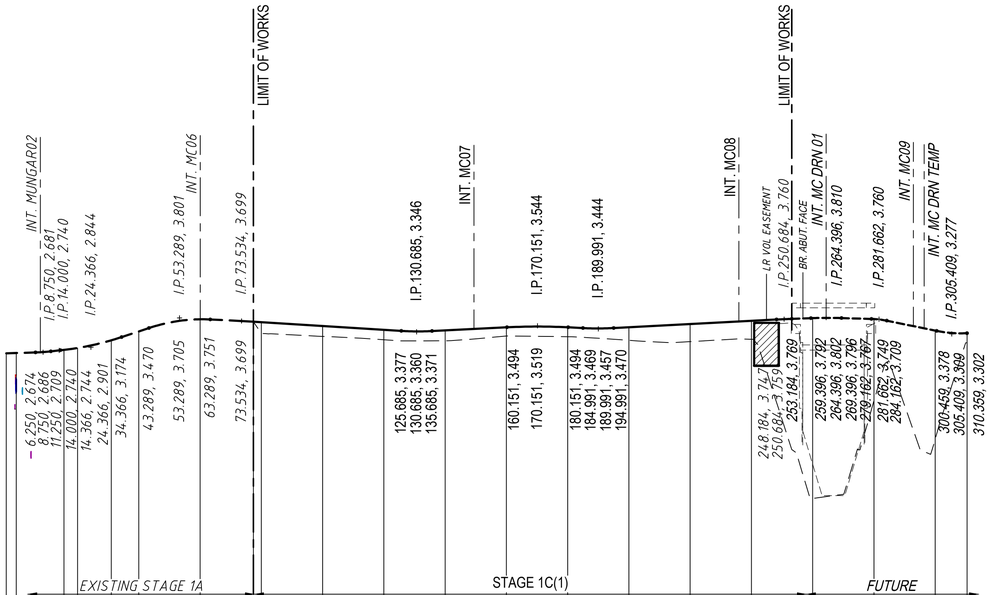
NOTE:
1. REFER TO STAGE 1A DRAWINGS 249402-CI-2001, CI-2264 FOR NOTES, SETOUT PLAN AND INTERSECTION DETAILS.
2. REFER BRIDGE DRAWINGS FOR DETAILS.

MUNDOO BLVD (MC01)

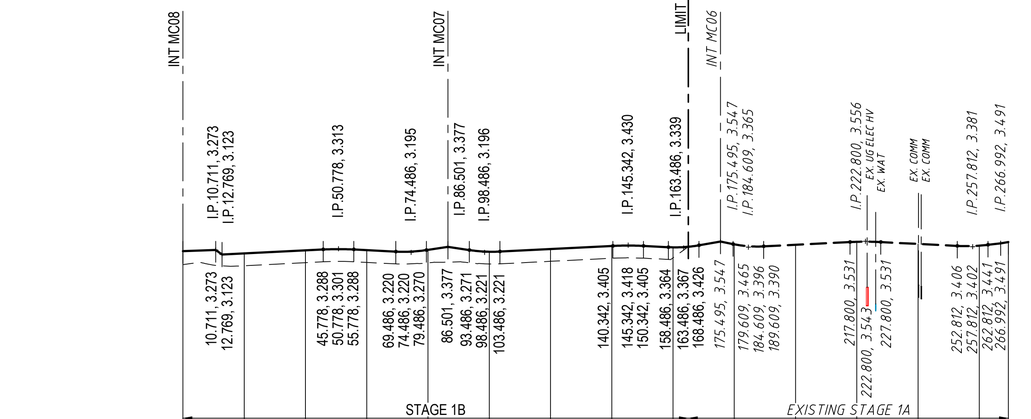
Pt	Chainage	Easting	Northing	Bearing	Rad/Spiral	A.Length	D.Angle
IP1	0	509001.617	7051566.357	162°24'32.47"			
IP2	15.556	509006.318	7051551.529				
IP3	31.028	509010.757	7051536.707				
IP4	54.227	509017.934	7051512.739		50	46.397	53°10'01.76"
IP5	77.425	509003.053	7051492.625				
IP6	310.383	508864.496	7051305.351	216°29'46.93"			

MARKET LANE (MC02)

Pt	Chainage	Easting	Northing	Bearing
IP1	0	508957.096	7051329.432	36°36'50.91"
IP2	269.489	509117.826	7051545.743	36°36'50.91"



MC01 - MUNDOO BLVD



MC02 - MARKET LN

LONGITUDINAL SECTIONS

SCALE A1 - 1:1000(H) 1:100(V)
A3 - 1:2000(H) 1:200(V)

HOR. 10 0 10 20 30 40 50m 1:1000
VERT. 1 0 1 2 3 4 5m 1:100

Rev.	Date	Description	Des.	Verif.	Appd.
4	16/08/2019	TRG REVIEW;	CK	AFH	GGT
3	5/04/2019	ISSUED FOR TENDER - STAGE 1C(1) MUNDOO BOULEVARD	AS	DH	GT
2	6/02/2019	ISSUE FOR APPROVAL	CK	DH	GT
1	20/12/2018	FOR INFORMATION ONLY	CK	DH	GT

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Drawn	AE	Date 21/11/2018
Checked	DH	Date 21/11/2018
Designed	CK	Date 21/11/2018
Verified	GT	Date 6/02/2019
Approved	~~RPEQ No. 1723~~ G.Tamblyn	DATE 6/02/2019

Client: SUNCENTRAL MAROOCHYDORE PTY LTD
Project: MAROOCHYDORE CITY CENTRE
CIVIL WORKS - STAGE 1B 1C & 1C(1)
Title: ROADWORKS LONGITUDINAL SECTIONS - SHEET 1
Status: FOR TENDER ONLY
NOT TO BE USED FOR CONSTRUCTION PURPOSES

DATUM	Orig. Date	Scale	Size
AHD	21/11/2018	AS SHOWN	A1

Drawing Number: 249402-CI-2231
Revision: 4

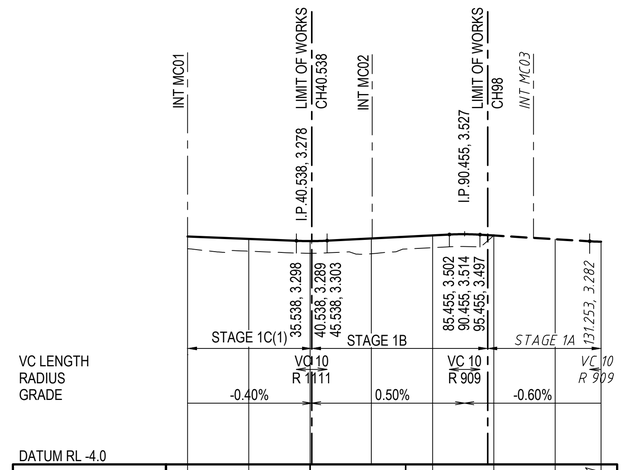
XREFs: X-TITLE BORDER
CAD File: P:\249402 MCC Design Package 1_DESIGN\ACAD_CIVIL STAGE 1B & 1C\249402-CI-2231-2233 ROADWORKS LONGITUDINAL SECTIONS.dwg

DATE PLOTTED: 15 August 2019 4:06 PM BY: ANTHONY SKORIC

NOTE:
1. REFER TO STAGE 1A DRAWINGS 249402-CI-2001, CI-2264 FOR NOTES, SETOUT PLAN AND INTERSECTION DETAILS.
2. REFER BRIDGE DRAWINGS FOR DETAILS.

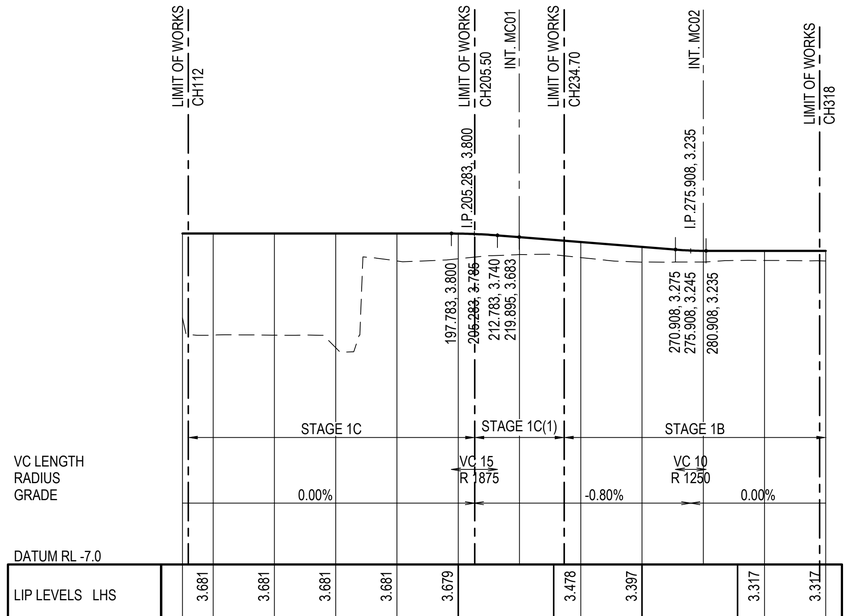
FUTURE WAY (MC07)							
Pt	Chainage	Easting	Northing	Bearing	Rad/Spiral	A.Length	D.Angle
IP1	0	508960.245	7051434.766	126°32'43.65"			
TC	228.541	509143.851	7051298.679	126°32'43.65"			
IP2	233.384	509147.82	7051295.737		-20	9.686	27°44'57.68"
CT	238.227	509152.702	7051294.982	98°47'45.97"			
TC	309.276	509222.915	7051284.117	98°47'45.97"			
IP3	336.462	509249.811	7051279.955		-475	54.372	6°33'30.81"
CT	363.648	509277.006	7051278.893	92°14'15.16"			
IP4	364.754	509278.111	7051278.849	92°14'15.16"			

SUNSHINE COAST PDE MC08 - SETOUT DATA							
PT	CHAINAGE	EASTING	NORTHING	BEARING	RAD/SPIRAL	ARC LEN	DEF ANG
IP 1	0.000	508741.079	7051395.481	31°32'39.19"			
TC	49.139	508766.786	7051437.359	31°32'39.19"			
IP 2	63.677	508776.092	7051452.519		R = 20.000	29.076	83°17'52.59"
CT	78.216	508792.233	7051445.046	114°50'31.78"			
TC	99.172	508811.251	7051436.241	114°50'31.78"			
IP 3	104.279	508815.902	7051434.088		R = 50.000	10.214	11°42'15.66"
CT	109.386	508820.019	7051431.037	126°32'47.44"			
TC	544.240	509169.369	7051172.092	126°32'47.44"			
IP 4	548.270	509172.626	7051169.677		R = 30.000	8.060	15°23'37.28"
CT	552.301	509175.126	7051166.485	141°56'24.72"			
IP 5	589.915	509198.314	7051136.869				
IP 6	589.915	509198.314	7051136.869				



LIP LEVELS LHS		3.283	3.212	NOTE 1	3.398	3.394		3.191	
LIP LEVELS RHS		3.283	3.212		3.399	3.393		3.191	
CUT/FILL (Depth of)	-0.400	-0.400	-0.400	-0.501	-0.400	-0.400	-0.416	-0.400	
DESIGN LEVELS	3.440	3.360	3.289	3.375	3.475	3.470	3.350	3.268	
EXISTING SURFACE LEVELS	3.040	2.960	2.889	2.874	3.075	3.070	2.934	2.868	
CHAINAGE	0.000	20.000	40.000	60.000	80.000	100.000	120.000	135.000	
HC DATA									

MC07 - FUTURE WAY



LIP LEVELS LHS		3.681	3.681	3.681	3.681	3.679	NOTE 1	3.478	3.397	NOTE 1	3.317	3.317				
LIP LEVELS RHS		3.776	3.919	3.919	3.919	3.918		3.541	3.324		3.153	3.153				
CUT/FILL (Depth of)	-2.753	-3.320	-3.319	-3.726	-0.894	-0.822	-0.568	-0.506	-0.496	-0.363	-0.315	-0.331				
DESIGN LEVELS	3.800	3.800	3.800	3.800	3.800	3.799	3.682	3.522	3.362	3.235	3.235	3.235				
EXISTING SURFACE LEVELS	1.047	0.480	0.481	0.074	2.906	2.977	3.114	3.017	2.866	2.872	2.920	2.904				
CHAINAGE	110.000	120.000	140.000	160.000	180.000	200.000	220.000	240.000	260.000	280.000	300.000	320.000				
HC DATA		112	122	132		200.39	200.55	204.6	225.69	227.33	234.06	234.93	246.63	251.25	272.62	272.76	275	279.65	280.43	282.43	290.38	290.54
SUPER ELEVATION		RHS 2.5%														
		LHS -2.5%							LHS -0.1%				LHS -0.1%		LHS 2.5%	
															RHS -2.5%	

MC08 - SUNSHINE COAST PDE

LONGITUDINAL SECTIONS

SCALE A1 - 1:1000(H) 1:100(V)
A3 - 1:2000(H) 1:200(V)

HOR. 10 0 10 20 30 40 50m 1:1000
VERT. 1 0 1 2 3 4 5m 1:100

Rev.	Date	Description	Des.	Verif.	Appd.
4	16/08/2019	TRG REVIEW;	CK	AFH	GGT
3	5/04/2019	ISSUED FOR TENDER - STAGE 1C(1) MUNDOO BOULEVARD	AS	DH	GT
2	6/02/2019	ISSUE FOR APPROVAL	CK	DH	GT
1	20/12/2018	FOR INFORMATION ONLY	CK	DH	GT

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Drawn	AE	Date 21/11/2018
Checked	DH	Date 21/11/2018
Designed	CK	Date 21/11/2018
Verified	GT	Date 6/02/2019
Approved	G.Tamblyn	RPEQ No. 17231 DATE 6/02/2019

Client: SUNCENTRAL MAROOCHYDORE PTY LTD
Project: MAROOCHYDORE CITY CENTRE
CIVIL WORKS - STAGE 1B 1C & 1C(1)
Title: ROADWORKS LONGITUDINAL SECTIONS - SHEET 2

Status: FOR TENDER ONLY
NOT TO BE USED FOR CONSTRUCTION PURPOSES

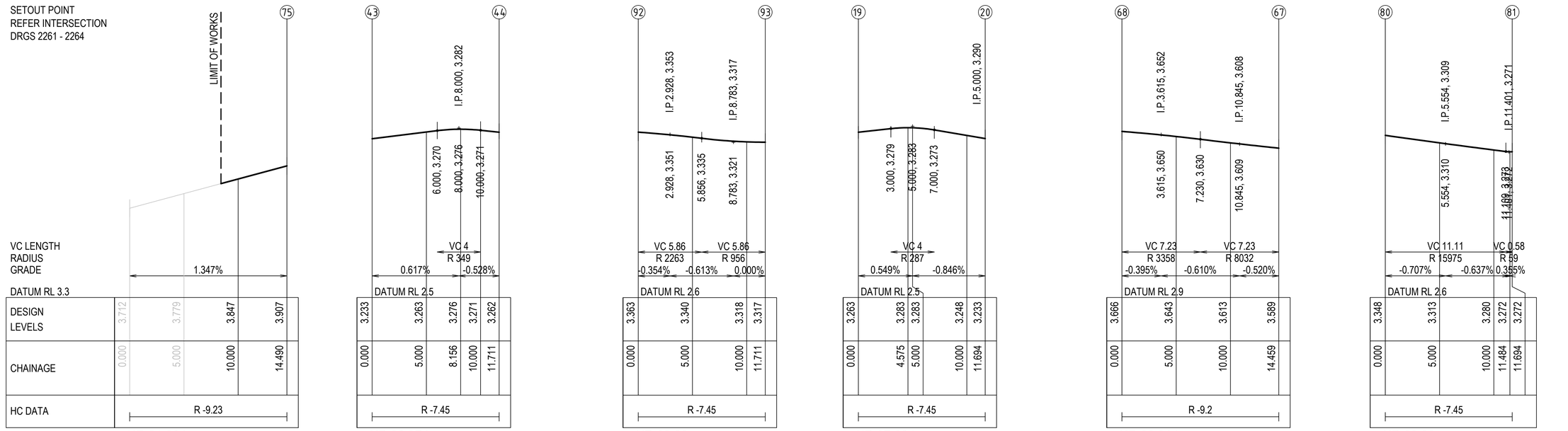
DATUM	Orig. Date	Scale	Size
AHD	21/11/2018	AS SHOWN	A1

Drawing Number: 249402-CI-2232
Revision: 4

X:\SE*.X-TITLE BORDER
CAD File: P:\249402 MCC Design Package 1\ DESIGN\ACAD\ CIVIL STAGE 1B & 1C\249402-CI-2231-2233 ROADWORKS LONGITUDINAL SECTIONS.dwg

DATE PLOTTED: 15 August 2019 4:06 PM BY: ANTHONY SKORIC

SETOUT POINT
REFER INTERSECTION
DRGS 2261 - 2264



KR 01 08 L
HOR. 1 : 200
VERT. 1 : 10

KR 02 07 L
HOR. 1 : 200
VERT. 1 : 10

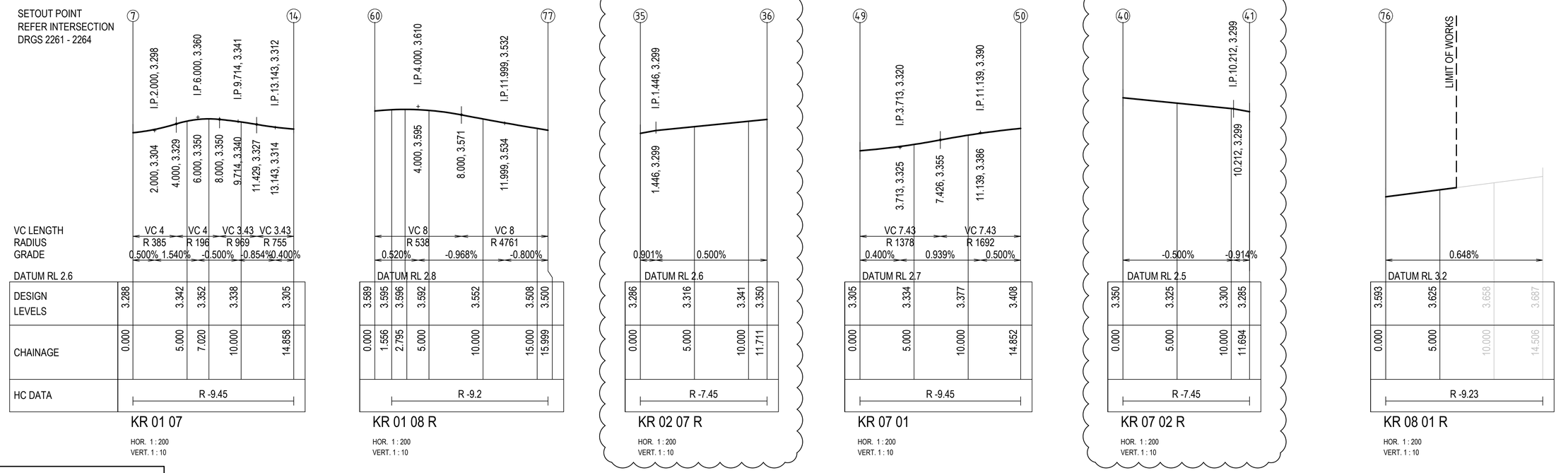
KR 02 08
HOR. 1 : 200
VERT. 1 : 10

KR 07 02 L
HOR. 1 : 200
VERT. 1 : 10

KR 08 01 L
HOR. 1 : 200
VERT. 1 : 10

KR 08 02
HOR. 1 : 200
VERT. 1 : 10

SETOUT POINT
REFER INTERSECTION
DRGS 2261 - 2264



KR 01 07
HOR. 1 : 200
VERT. 1 : 10

KR 01 08 R
HOR. 1 : 200
VERT. 1 : 10

KR 02 07 R
HOR. 1 : 200
VERT. 1 : 10

KR 07 01
HOR. 1 : 200
VERT. 1 : 10

KR 07 02 R
HOR. 1 : 200
VERT. 1 : 10

KR 08 01 R
HOR. 1 : 200
VERT. 1 : 10

NOTE:
1. REFER TO STAGE 1A DRAWINGS 249402-CI-2001, CI-2264 FOR NOTES, SETOUT PLAN AND INTERSECTION DETAILS.
2. REFER BRIDGE DRAWINGS FOR DETAILS.

KERB PROFILE
LONGITUDINAL SECTIONS
SCALE A1 - 1:200(H) 1:10(V)
A3 - 1:400(H) 1:20(V)

2.0 0 2.0 4.0 6.0 8.0 10.0m
Scale 1:200

0.1 0 0.1 0.2 0.3 0.4 0.5m
Scale 1:10

Rev.	Date	Description	Des.	Verif.	Appd.
2	16/08/2019	TRG REVIEW; GRADING AMENDED	CK	AFH	GGT
1	18/04/2019	ISSUED FOR TENDER - STAGE 1C(1) MUNDOO BOULEVARD	AS	DH	GT

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Drawn	AE	Date 18/04/2019
Checked	DH	Date 18/04/2019
Designed	CK	Date 18/04/2019
Verified	GT	Date 18/04/2019
Approved	G.Tamblyn	RPEQ No. 1723 DATE 18/04/2019

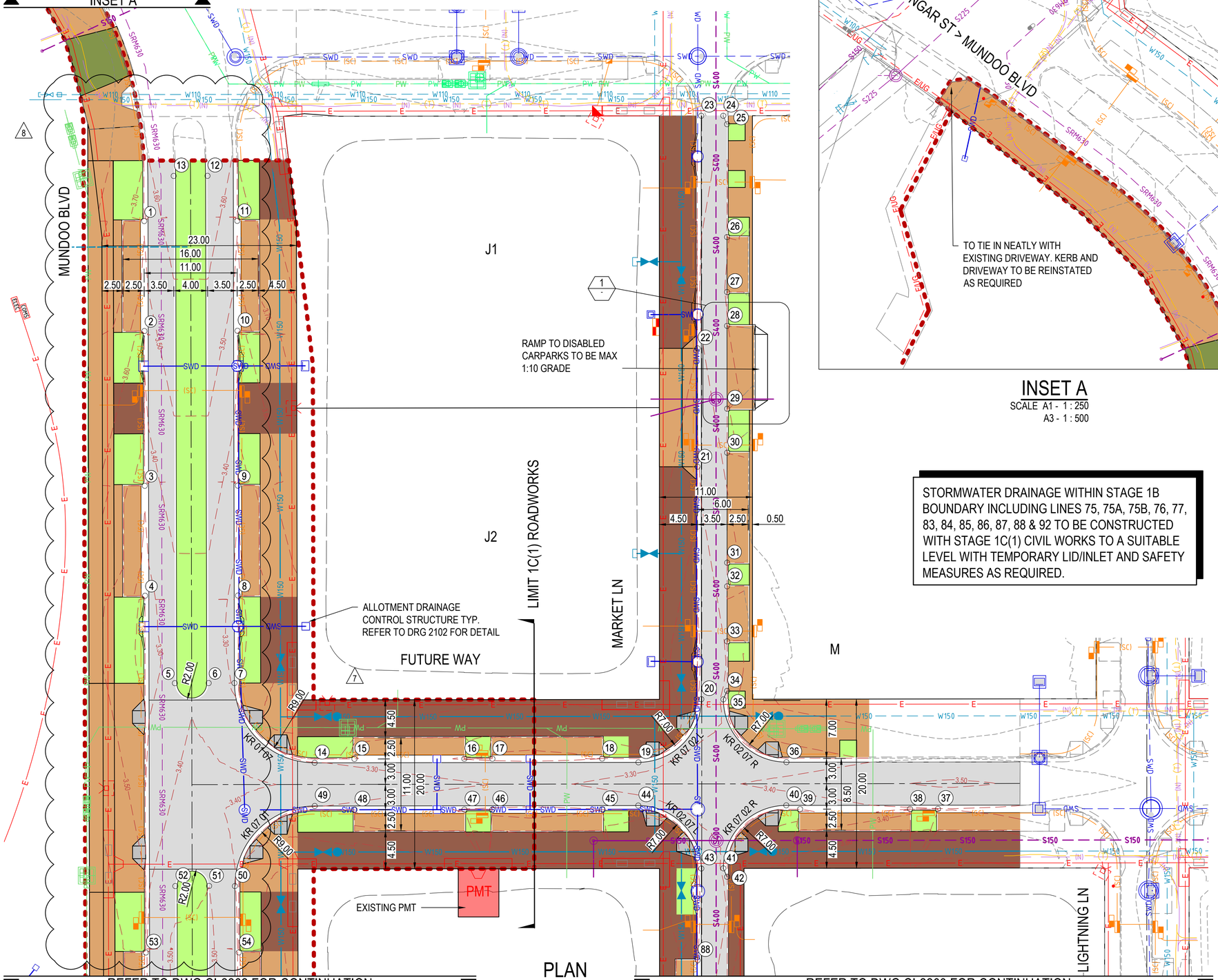
Client: SUNCENTRAL MAROOCHYDORE PTY LTD
Project: MAROOCHYDORE CITY CENTRE
CIVIL WORKS - STAGE 1B 1C & 1C(1)
Title: ROADWORKS LONGITUDINAL SECTIONS - SHEET 3
Status: FOR TENDER ONLY
NOT TO BE USED FOR CONSTRUCTION PURPOSES
DATUM: AHD | Orig. Date: 21/11/2018 | Scale: AS SHOWN | Size: A1
Drawing Number: 249402-CI-2233
Revision: 2

XREFs: X:\TITLE BORDER
CAD File: P:\249402 MCC Design Package 1\1_DESIGN\ACAD_CIVIL STAGE 1B & 1C\249402-CI-2231-2233 ROADWORKS LONGITUDINAL SECTIONS.dwg

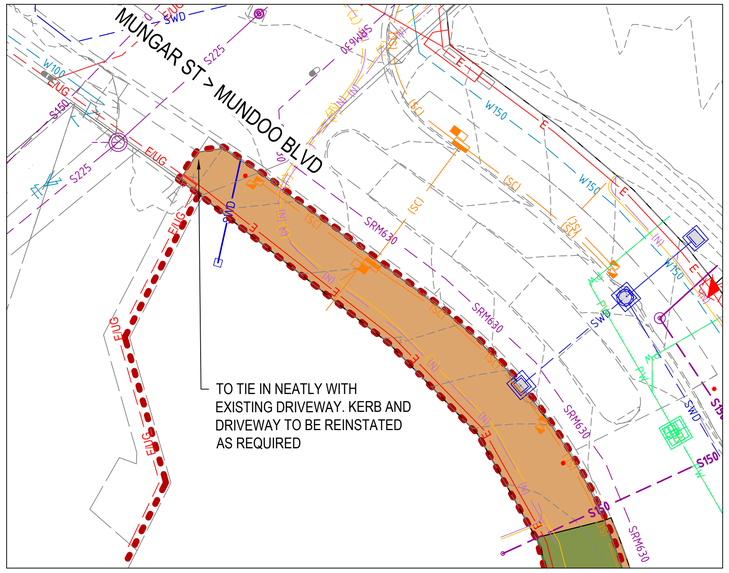
DATE PLOTTED: 17 September 2019 10:14 AM BY: - AARON ELLARD

XREF's: X-TITLE BORDER; X-249402-EXISTING; X-249402 RP BASE; X-249402 RP BASE EXTERNAL; CADASTRE 190302; X-249402 DESIGN STAGE 1B & 1C; X-249402 DESIGN STAGE 1A EXISTING; X-249402-ELEC COMM & LIGHT ST01B & 01C; X-249402 MCC Design Package 11_DESIGN\ACAD_CIVIL STAGE 1B & 1C\249402_CI-2261-2264 INTERSECTION DETAILS.dwg

CAD File: P:\249402 MCC Design Package 11_DESIGN\ACAD_CIVIL STAGE 1B & 1C\249402_CI-2261-2264 INTERSECTION DETAILS.dwg



PLAN
SCALE A1 - 1 : 250
A3 - 1 : 500



INSET A
SCALE A1 - 1 : 250
A3 - 1 : 500

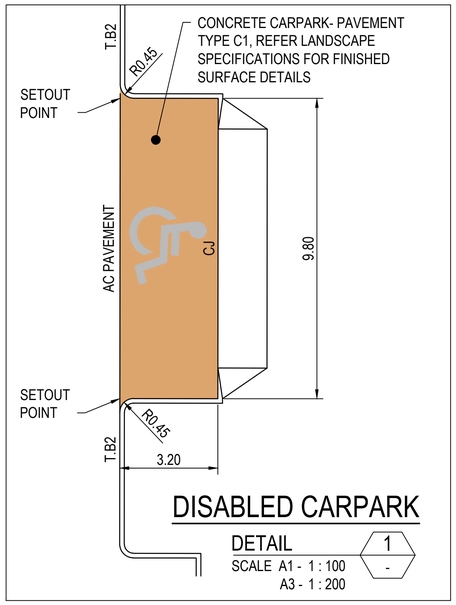
STORMWATER DRAINAGE WITHIN STAGE 1B BOUNDARY INCLUDING LINES 75, 75A, 75B, 76, 77, 83, 84, 85, 86, 87, 88 & 92 TO BE CONSTRUCTED WITH STAGE 1C(1) CIVIL WORKS TO A SUITABLE LEVEL WITH TEMPORARY LID/INLET AND SAFETY MEASURES AS REQUIRED.

LEGEND:

- ROAD CENTRELINE
- NOMINAL KERB LINE
- TOP OF EMBANKMENT
- BOTTOM OF EMBANKMENT
- FINISHED CONTOURS
- AC PAVEMENT
- CONCRETE PAVEMENT / PAVERS
- LANDSCAPED AREA - BY OTHERS
- FUTURE LIGHT RAIL CORRIDOR
- WATERMAIN
- SPS WATER MINING MAIN AND PIPE DIAMETER
- SEWER MAIN
- SEWER RISING MAIN
- STORMWATER PIPES AND PITS
- DRAINAGE SWALE
- ELECTRICAL, TRANSFORMER, COMMS & LIGHTING
- TELSTRA MAIN AND PITS
- EXISTING UG HV ELECTRICAL
- NBN CONDUITS
- PNEUMATIC WASTE - BY OTHERS
- SMART CITY CONDUITS
- STAGE BOUNDARY
- EXISTING KERB
- EXISTING ROAD CENTERLINE
- EXISTING FENCE
- EXISTING BUILDING/STRUCTURE
- EXISTING BOTTOM OF EMBANKMENT
- EXISTING RP BOUNDARY
- EXISTING STORMWATER
- EXISTING GRAVITY MAIN
- EXISTING WATER, STOP VALVE/FIRE HYDRANT
- EXISTING OVERHEAD ELECTRICITY LINE
- EXISTING UNDERGROUND ELECTRICITY LINE
- EXISTING TELSTRA LINE

NORTH

NOTE:
1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH DRAWING CI-2001 - SCHEDULE OF DRAWINGS AND GENERAL NOTES.
2. REFER TO DWG CI-2264 FOR SET OUT TABLE.



DISABLED CARPARK DETAIL 1
SCALE A1 - 1 : 100
A3 - 1 : 200

2.5 0 2.5 5.0 7.5 10 12.5m
Scale 1:250

Rev.	Date	Description	Des.	Verif.	Appd.
8	17/09/2019	TRG COMMENTS; STAGE 1C(1) WORKS BOUNDARY AMENDED	CK	AFH	GGT
7	22/08/2019	TRG REVIEW: VERGE PAVEMENTS ALIGNED WITH LANDSCAPE	CK	AFH	GGT
6	20/08/2019	TRG REVIEW; MUNGAR ST VERGE WORKS REMOVED	CK	AFH	GGT
5	16/08/2019	TRG REVIEW; MUNDOO BLVD VERGE WORKS ADDED	CK	AFH	GGT
4	20/05/2019	TRG REVIEW; MUNGAR ST WORKS ADDED	CK	AFH	GGT
3	5/04/2019	ISSUED FOR TENDER - STAGE 1C(1) MUNDOO BOULEVARD	AS	DH	GT
2	6/02/2019	ISSUE FOR APPROVAL	CK	DH	GT
1	20/12/2018	FOR INFORMATION ONLY	CK	DH	GT

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Drawn	AE	Date 21/11/2018
Checked	DH	Date 21/11/2018
Designed	CK	Date 21/11/2018
Verified	GT	Date 6/02/2019
Approved	G.Tamblyn	RPEQ No. 1723 DATE 6/02/2019

Client: SUNCENTRAL MAROOCHYDORE PTY LTD
Project: MAROOCHYDORE CITY CENTRE CIVIL WORKS - STAGE 1B 1C & 1C(1)
Title: INTERSECTION DETAILS - SHEET 1
Status: FOR TENDER ONLY NOT TO BE USED FOR CONSTRUCTION PURPOSES

DATUM	Orig. Date	Scale	Size
AHD	21/11/2018	AS SHOWN	A1

Drawing Number: 249402-CI-2261
Revision: 8

DATE PLOTTED: 17 September 2019 10:15 AM BY - AARON ELLARD

LEGEND:

- ROAD CENTRELINE
- NOMINAL KERB LINE
- TOP OF EMBANKMENT
- BOTTOM OF EMBANKMENT
- 3.50 FINISHED CONTOURS
- AC PAVEMENT
- CONCRETE PAVEMENT / PAVERS
- LANDSCAPED AREA - BY OTHERS
- FUTURE LIGHT RAIL CORRIDOR
- W100 WATERMAIN
- W110 SPS WATER MINING MAIN AND PIPE DIAMETER
- S150 SEWER MAIN
- SRM SEWER RISING MAIN
- SWD STORMWATER PIPES AND PITS
- DRAINAGE SWALE
- E ELECTRICAL, TRANSFORMER, COMMS & LIGHTING
- (T) TELSTRA MAIN AND PITS
- HV/UG EXISTING UG HV ELECTRICAL
- (N) NBN CONDUITS
- PW PNEUMATIC WASTE - BY OTHERS
- (SC) SMART CITY CONDUITS
- STAGE BOUNDARY
- EXISTING KERB
- EXISTING ROAD CENTERLINE
- EXISTING FENCE
- EXISTING BUILDING/STRUCTURE
- EXISTING BOTTOM OF EMBANKMENT
- EXISTING RP BOUNDARY
- SWD EXISTING STORMWATER
- S150 EXISTING GRAVITY MAIN
- W EXISTING WATER, STOP VALVE/FIRE HYDRANT
- E/OH EXISTING OVERHEAD ELECTRICITY LINE
- E/UG EXISTING UNDERGROUND ELECTRICITY LINE
- T EXISTING TELSTRA LINE

NOTE:

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH DRAWING CI-2001 - SCHEDULE OF DRAWINGS AND GENERAL NOTES.
2. REFER TO DWG CI-2264 FOR SET OUT TABLE.

NORTH

REFER TO DWG CI-2261 FOR CONTINUATION

MUNDOO BLVD

SUNSHINE COAST PDE

ALLOTMENT DRAINAGE CONTROL STRUCTURE TYP. REFER TO DRAWING CI-2102 FOR DETAIL

TEMPORARY VEHICLE TURNING TREATMENT TO BE IDENTIFIED WITH FUTURE PARK AND ROAD ACCESS WORKS STAGING AND DESIGN DEVELOPMENT OF FUTURE WESTERN BRIDGE AND SURROUNDING FEATURES

TEMPORARY PAVEMENT T4. REFER DRG 2216 FOR DETAILS

REFER TO DWG CI-2263 FOR CONTINUATION

PLAN

SCALE A1 - 1 : 250
A3 - 1 : 500

2.5 0 2.5 5.0 7.5 10 12.5m
Scale 1:250

Rev.	Date	Description	Des.	Verif.	Appd.
7	17/09/2019	TRG COMMENTS; STAGE 1C(1) WORKS BOUNDARY AMENDED	CK	AFH	GGT
6	22/08/2019	TRG REVIEW: VERGE PAVEMENTS ALIGNED WITH LANDSCAPE	CK	AFH	GGT
5	16/08/2019	TRG REVIEW; PAVEMENT TYPES AMENDED	CK	AFH	GGT
4	20/05/2019	TRG REVIEW; VEHICLE TURNING PATH ADDED	CK	AFH	GGT
3	5/04/2019	ISSUED FOR TENDER - STAGE 1C(1) MUNDOO BOULEVARD	AS	DH	GT
2	6/02/2019	ISSUE FOR APPROVAL	CK	DH	GT
1	20/12/2018	FOR INFORMATION ONLY	CK	DH	GT

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Drawn	AE	Date 21/11/2018
Checked	DH	Date 21/11/2018
Designed	CK	Date 21/11/2018
Verified	GT	Date 6/02/2019
Approved	G.Tamblyn	RPEQ No. 1723 DATE 6/02/2019

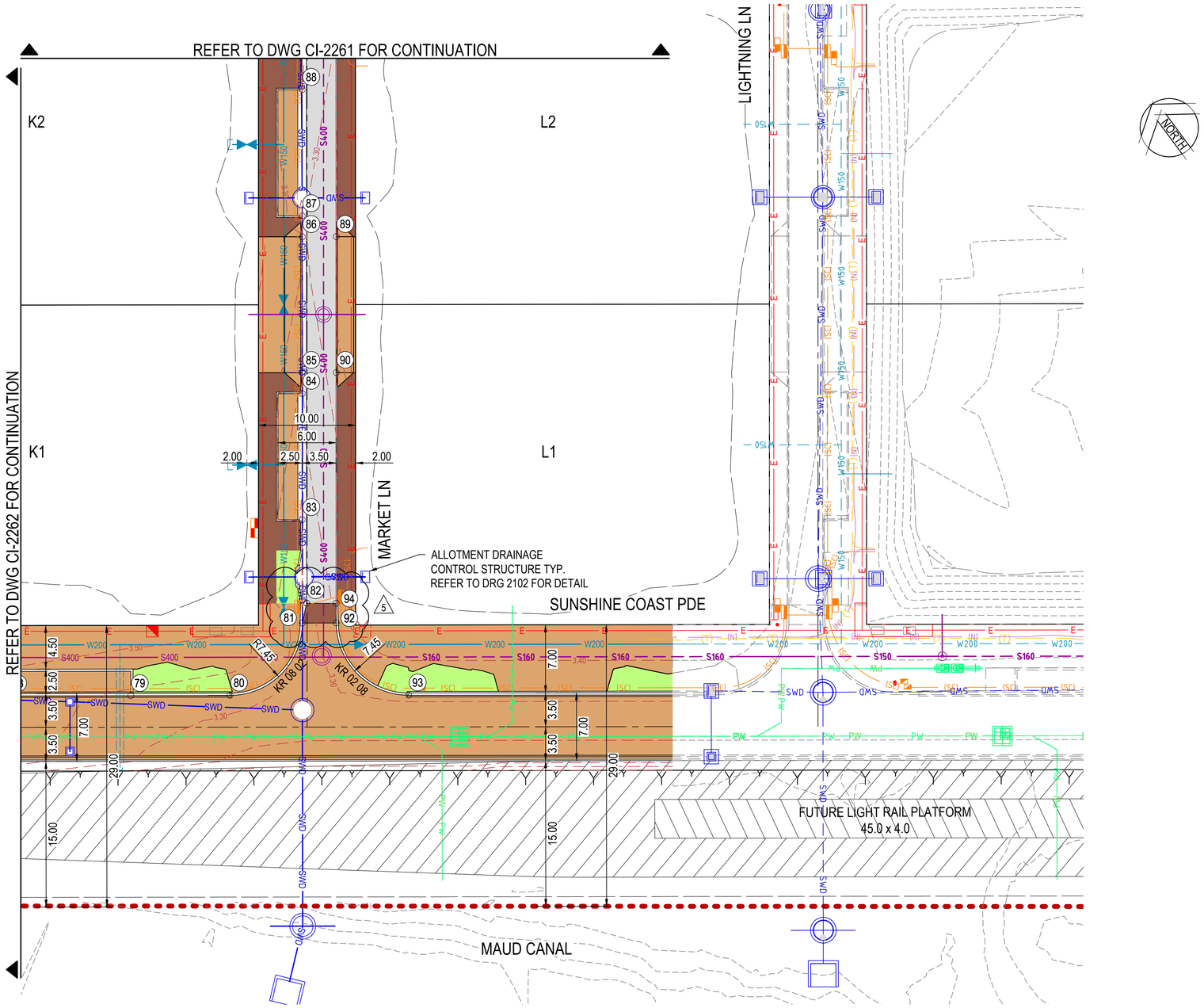
Client: SUNCENTRAL MAROOCHYDORE PTY LTD
Project: MAROOCHYDORE CITY CENTRE
CIVIL WORKS - STAGE 1B 1C & 1C(1)
Title: INTERSECTION DETAILS - SHEET 2

Status: FOR TENDER ONLY
NOT TO BE USED FOR CONSTRUCTION PURPOSES

DATUM	Orig. Date	Scale	Size
AHD	21/11/2018	AS SHOWN	A1

Drawing Number: 249402-CI-2262
Revision: 7

XREF's: X-TITLE BORDER; X-249402-EXISTING; X-249402 RP BASE; X-249402 RP BASE EXTERNAL; CADASTRE 150302; X-249402 DESIGN STAGE 1B & 1C; X-249402 DESIGN STAGE 1A EXISTING; X-249402-ELEC COMM & LIGHT STG1B & 01C; X-249402 AWCS STAGE 02; X-249402 AWCS STAGE 01; X-249402 LANDSCAPE - CIVIC PARK; X-249402-ST CORSO; WEIR
CAD File: P:\249402 MCC Design Package 1_DESIGN\ACAD_CIVIL STAGE 1B & 1C\249402-CI-2261-2264 INTERSECTION DETAILS.dwg



PLAN

SCALE A1 - 1 : 250
A3 - 1 : 500

2.5 0 2.5 5.0 7.5 10 12.5m
Scale 1:250

LEGEND:

- ROAD CENTRELINE
- NOMINAL KERB LINE
- TOP OF EMBANKMENT
- BOTTOM OF EMBANKMENT
- FINISHED CONTOURS
- AC PAVEMENT
- CONCRETE PAVEMENT / PAVERS
- LANDSCAPED AREA - BY OTHERS
- FUTURE LIGHT RAIL CORRIDOR
- WATERMAIN
- SPS WATER MINING MAIN AND PIPE DIAMETER
- SEWER MAIN
- SEWER RISING MAIN
- STORMWATER PIPES AND PITS
- DRAINAGE SWALE
- ELECTRICAL, TRANSFORMER, COMMS & LIGHTING
- TELSTRA MAIN AND PITS
- EXISTING UG HV ELECTRICAL
- NBN CONDUITS
- PNEUMATIC WASTE - BY OTHERS
- SMART CITY CONDUITS
- STAGE BOUNDARY
- EXISTING KERB
- EXISTING ROAD CENTERLINE
- EXISTING FENCE
- EXISTING BUILDING/STRUCTURE
- EXISTING BOTTOM OF EMBANKMENT
- EXISTING RP BOUNDARY
- EXISTING STORMWATER
- EXISTING GRAVITY MAIN
- EXISTING WATER, STOP VALVE/FIRE HYDRANT
- EXISTING OVERHEAD ELECTRICITY LINE
- EXISTING UNDERGROUND ELECTRICITY LINE
- EXISTING TELSTRA LINE

NOTE:

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH DRAWING CI-2001 - SCHEDULE OF DRAWINGS AND GENERAL NOTES.
2. REFER TO DWG CI-2264 FOR SET OUT TABLE.

Rev.	Date	Description	Des.	Verif.	Appd.
5	16/08/2019	TRG REVIEW; RAMP SETOUT ADDED	CK	AFH	GGT
4	20/05/2019	TRG REVIEW; VEHICLE TURNING PATH ADDED	CK	AFH	GGT
3	5/04/2019	ISSUED FOR TENDER - STAGE 1C(1) MUNDOO BOULEVARD	AS	DH	GT
2	6/02/2019	ISSUE FOR APPROVAL	CK	DH	GT
1	20/12/2018	FOR INFORMATION ONLY	CK	DH	GT

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Checked	DH	Date 21/11/2018
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Verified	GT	Date 6/02/2019
Approved	G.Tamblyn	RPEQ No. 1723 DATE 6/02/2019

Client: SUNCENTRAL MAROOCHYDORE PTY LTD
Project: MAROOCHYDORE CITY CENTRE
CIVIL WORKS - STAGE 1B 1C & 1C(1)
Title: INTERSECTION DETAILS - SHEET 3

Status: FOR TENDER ONLY
NOT TO BE USED FOR CONSTRUCTION PURPOSES

DATUM	Orig. Date	Scale	Size
AHD	21/11/2018	AS SHOWN	A1

Drawing Number: 249402-CI-2263
Revision: 5

DATE PLOTTED: 17 September 2019 10:15 AM BY - AARON ELLARD
X:\6E\Fx: X-TITLE BORDER; X:249402-EXISTING; X:249402-RP BASE; X:249402 RP BASE EXTERNAL CADASTRE 150302; X:249402 DESIGN STAGE 1B & 1C; X:249402 DESIGN STAGE 1A EXISTING; X:249402-ELEC COMM & LIGHT ST\GI1B & 01C; X:249402 AWCS STAGE 01; X:249402 AWCS STAGE 02; X:249402 AWCS STAGE 1B & 1C; X:249402 RP BASE; X:249402 RP BASE EXTERNAL CADASTRE 150302; X:249402 DESIGN STAGE 1A EXISTING; X:249402-ELEC COMM & LIGHT ST\GI1B & 01C; X:249402 AWCS STAGE 01; X:249402 LANDSCAPE - CIVIC PARK; X:249402-ST CORSO; WEIR
CAD File: P:\249402 MCC Design Package 1_DESIGN\CAD_CIVIL STAGE 1B & 1C\249402-CI-2261~2264 INTERSECTION DETAILS.dwg

DATE PLOTTED: 17 September 2019 10:15 AM BY: - AARON ELLARD

SETOUT TABLE

PT No.	EASTING	NORTHING	SETOUT POINT	LEVEL
1	508995.46	7051491.61	IP	3.51
2	508987.73	7051481.16	IP	3.43
3	508976.84	7051466.45	IP	3.32
4	508969.11	7051456.00	IP	3.24
5	508965.77	7051445.60	TP	3.34
6	508968.99	7051443.22	TP	3.38
7	508971.43	7051441.40	TP	3.29
8	508977.95	7051449.45	IP	3.24
9	508985.69	7051459.90	IP	3.32
10	508996.58	7051474.62	IP	3.43
11	509004.30	7051485.07	IP	3.51
12	509004.66	7051491.44	TP	3.68
13	509001.45	7051493.81	TP	3.68
14	508973.42	7051428.17	TP	3.31
15	508977.47	7051425.73	IP	3.25
16	508987.91	7051417.99	IP	3.19
17	508990.58	7051416.02	IP	3.18
18	509001.01	7051408.29	IP	3.20
19	509004.19	7051405.37	TP	3.26
20	509014.62	7051406.93	TP	3.23
21	509030.65	7051429.26	DW	3.28
22	509039.00	7051440.49	DW	3.35
23	509055.76	7051462.30	TP	3.38
24	509057.85	7051460.75	TR	3.46
25	509057.61	7051459.68	TR	3.46
26	509049.66	7051448.97	IP	3.49
27	509045.78	7051443.75	IP	3.51
28	509043.39	7051440.54	IP	3.50
29	509037.55	7051432.67	IP	3.45
30	509034.45	7051428.50	IP	3.42
31	509026.69	7051418.07	IP	3.36
32	509025.02	7051415.82	IP	3.34
33	509021.15	7051410.60	IP	3.31
34	509017.65	7051405.90	TR	3.32
35	509016.69	7051405.36	TP	3.31
36	509018.25	7051394.95	TP	3.35
37	509029.34	7051379.82	IP	3.40
38	509026.69	7051381.79	IP	3.38
39	509016.24	7051389.53	IP	3.32
40	509015.19	7051390.87	TP	3.35

SETOUT TABLE

PT No.	EASTING	NORTHING	SETOUT POINT	LEVEL
41	509004.78	7051389.32	TP	3.31
42	509004.54	7051388.25	TR	3.32
43	509002.68	7051390.86	TP	3.23
44	509001.13	7051401.29	TP	3.26
45	508997.44	7051403.47	IP	3.20
46	508986.99	7051411.21	IP	3.18
47	508984.34	7051413.17	IP	3.19
48	508973.90	7051420.91	IP	3.25
49	508970.38	7051424.08	TP	3.31
50	508957.16	7051422.11	TP	3.41
51	508954.72	7051423.93	TP	3.46
52	508951.50	7051426.31	TP	3.46
53	508944.01	7051422.07	IP	3.39
54	508952.86	7051415.53	IP	3.39
55	508945.12	7051405.08	IP	3.35
56	508934.33	7051390.49	IP	3.37
57	508926.60	7051380.04	IP	3.43
58	508922.68	7051375.50	TR	3.51
59	508921.53	7051373.24	LIP	3.59
60	508920.63	7051372.02	TP	3.59
61	508917.83	7051374.07	TP	3.61
62	508914.61	7051376.45	TP	3.61
63	508936.28	7051411.62	IP	3.35
64	508925.49	7051397.04	IP	3.37
65	508917.76	7051386.58	IP	3.43
66	508914.56	7051381.51	TR	3.51
67	508912.74	7051379.75	TP	3.59
68	508899.98	7051377.70	TP	3.67
69	508874.64	7051396.46	IP	3.68
70	508854.91	7051411.11	IP	3.68
71	508852.47	7051412.90	IP	3.68
72	508842.39	7051420.37	IP	3.68
73	508839.93	7051422.19	IP	3.68
74	508827.45	7051431.44	IP	3.68
75	508893.62	7051370.55	TP	3.91
76	508919.21	7051353.44	TP	3.59
77	508922.55	7051359.11	TP	3.50
78	508934.37	7051350.33	IP	3.44
79	508944.44	7051342.86	IP	3.39
80	508952.66	7051336.79	TP	3.35

SETOUT TABLE

PT No.	EASTING	NORTHING	SETOUT POINT	LEVEL
81	508963.08	7051338.33	TP	3.27
82	508964.67	7051339.71	TR	3.12
83	508969.43	7051346.86	IP	3.12
84	508977.18	7051357.30	IP	3.19
85	508978.46	7051359.02	DW	3.20
86	508986.81	7051370.26	DW	3.26
87	508988.09	7051371.99	IP	3.26
88	508995.85	7051382.42	IP	3.20
89	508989.63	7051368.18	DW	3.39
90	508981.28	7051356.95	DW	3.33
92	508965.91	7051336.26	TP	3.36
93	508967.45	7051325.83	TP	3.32
94	508967.11	7051337.88	TR	3.21
95	508915.53	7051377.69	TR	3.61
96	508917.01	7051379.70	TR	3.60
97	508918.74	7051375.31	TR	3.61
98	508920.23	7051377.32	TR	3.60

3

XREFs: X-TITLE BORDER; X-249402-EXISTING; X-249402 RP BASE; X-249402 RP BASE EXTERNAL CADASTRE 19330Z; X-249402 DESIGN STAGE 1B & 1C; X-249402 DESIGN STAGE 1A EXISTING; X-249402-ELEC COMM & LIGHT ST-01B & 01C; X-249402 MCC Design Package 1_DESIGN\ACAD_CIVIL STAGE 1B & 1C\249402-CI-2261-2264 INTERSECTION DETAILS.dwg
CAD File: P:\249402 MCC Design Package 1_DESIGN\ACAD_CIVIL STAGE 1B & 1C\249402-CI-2261-2264 INTERSECTION DETAILS.dwg

Rev.	Date	Description	Des.	Verif.	Appd.
3	16/08/2019	TRG REVIEW; RAMP SETOUT ADDED	CK	AFH	GGT
2	5/04/2019	ISSUED FOR TENDER - STAGE 1C(1) MUNDOO BOULEVARD	AS	DH	GT
1	6/02/2019	ISSUE FOR APPROVAL	CK	DH	GT

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Checked	DH	Date 21/11/2018
Designed	CK	Date 21/11/2018
Verified	GT	Date 6/02/2019
Approved	G.Tamblyn	RPEQ No. 1723 DATE 6/02/2019

Client: SUNCENTRAL MAROOCHYDORE PTY LTD

Project: MAROOCHYDORE CITY CENTRE
CIVIL WORKS - STAGE 1B 1C & 1C(1)

Title: INTERSECTION DETAILS - SHEET 4

Status: FOR TENDER ONLY
NOT TO BE USED FOR CONSTRUCTION PURPOSES

DATUM	Orig. Date	Scale	Size
AHD	21/11/2018	AS SHOWN	A1

Drawing Number: 249402-CI-2264

Revision: 3

DATE PLOTTED: 17 September 2019 10:22 AM BY - AARON ELLARD

XREFs: X-TITLE BORDER; X-249402-EXISTING; X-249402 RP BASE; X-249402 RP BASE EXTERNAL CADASTRE 150302; X-249402 DESIGN STAGE 1B & 1C; X-249402 DESIGN STAGE 1A EXISTING; X-249402 LANDSCAPE - STAGE 01; X-249402 AWCS STAGE 02; X-249402 AWCS STAGE 01; X-249402 AWCS STAGE 01; X-249402-SIGNALS ST01 BC INT; X-249402-ELEC COMM & LIGHT ST01B & 01C

CAD File: P:\249402 MCC Design Package 1_DESIGN\ACAD_CIVIL\STAGE 1B & 1C\249402-CI-2271-2274 LINEMARKING AND SIGNAGE PLAN.dwg

INTERIM HAZARD AND ROAD WARNING SIGNS APPROACHING INTERSECTION TO BE INSTALLED WITH APPROVED CONSTRUCTION ACCESS GATE AND SAFETY FENCE SYSTEM

PARK SIGNAGE AND WAY FINDING BY OTHERS

STAGE 1C

STAGE 1C(1)

STAGE 1B

STAGE 1A

J1

J2

URBAN PARK M

MUNDOO BLVD

MARKET LN

LIGHTNING LN

FUTURE WAY

STREET NAME G5-1

STREET NAME G5-1

FUTURE WAY

R2-4A

R2-6A (R)

AUTHORIZED VEHICLES EXCEPTED

R9-4A

KEEP LEFT

R2-3A

ONE WAY R2-2A (R)

GIVE WAY R1-2A

R2-6A (R)

R2-6A

P ONLY

N

REFER TO DWG CI-2272 FOR CONTINUATION

REFER TO DWG CI-2273 FOR CONTINUATION

LEGEND:

NORTH

LA	CONTINUITY LINE
LH	HOLD/GIVE WAY LINE
LU	PAINTED LINE UNBROKEN
L6	SEPARATION LINE 6X6
L3	SEPARATION LINE 9X3
LW	STOP LINE
LT	TURN LINE
PED	PEDESTRIAN CROSSING LINE
LY	YELLOW PAINTED LINE UNBROKEN
P1	PARKING T'S & L'S
	1.80m SAFETY/VEG PROTECTION FENCE
	STAGE BOUNDARY
	ON ROAD PAVEMENT MARKINGS
	CHEVRON PAVEMENT MARKING
	BICYCLE LANE - G13 EMERALD COLOUR. SURFACE TREATMENTS TO BE IN ACCORDANCE WITH TMR "COLOURED SURFACE TREATMENTS FOR BICYCLE LANES V1.34"
	(BAZ) BICYCLE AWARENESS ZONE
	PROPOSED SIGN / EXISTING SIGN
	SIGNPOST SLEEVE, FOOTING & SAFETY CAP ONLY - FUTURE PARKING SIGNS BY OTHERS
D3/D6	DIRECTIONAL TGSI 300/600 WIDE
W6	WARNING TGSI 600 WIDE
	LIGHTING / SMART CITY POLES

NOTE:

1. THIS DWG. IS TO BE READ IN CONJUNCTION WITH DWG. 249402-CI-2001 - SCHEDULE OF DRAWINGS AND GENERAL NOTES.
2. FOR TGSI, LINEMARKING & SIGNAGE NOTES REFER TO DWG. 249402-CI-2273 - LINEMARKING AND SIGNAGE PLAN - SHEET 3.

PLAN

SCALE A1 - 1 : 250
A3 - 1 : 500

2.5 0 2.5 5.0 7.5 10 12.5m
Scale 1:250

Rev.	Date	Description	Des.	Verif.	Appd.
6	17/09/2019	TRG COMMENTS; STAGE 1C(1) WORKS BOUNDARY AMENDED	CK	AFH	GGT
5	16/08/2019	TRG REVIEW; STAGE 1C(1) WORKS BOUNDARY AMENDED	CK	AFH	GGT
4	20/05/2019	TRG REVIEW; INTERIM SIGNAGE & DROP OFF NOTE ADDED	CK	AFH	GGT
3	5/04/2019	ISSUED FOR TENDER - STAGE 1C(1) MUNDOO BOULEVARD	AS	DH	GT
2	6/02/2019	ISSUE FOR APPROVAL	CK	DH	GT
1	20/12/2018	FOR INFORMATION ONLY	CK	DH	GT

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Checked	DH	Date 21/11/2018
Designed	CK	Date 21/11/2018
Verified	GT	Date 6/02/2019
Approved	RPEQ No. 1723 G.Tamblyn	DATE 6/02/2019

Client: SUNCENTRAL MAROOCHYDORE PTY LTD

Project: MAROOCHYDORE CITY CENTRE
CIVIL WORKS - STAGE 1B 1C & 1C(1)

Title: LINEMARKING AND SIGNAGE PLAN - SHEET 1

Status: FOR TENDER ONLY
NOT TO BE USED FOR CONSTRUCTION PURPOSES

DATUM	Orig. Date	Scale	Size
AHD	21/11/2018	AS SHOWN	A1

Drawing Number: 249402-CI-2271

Revision: 6

DATE PLOTTED: 17 September 2019 10:19 AM BY: - AARON ELLARD

XREFs: X-TITLE BORDER; X-249402-EXISTING; X-249402 RP BASE; X-249402 RP BASE EXTERNAL; CADASTRE 190302; X-249402 DESIGN STAGE 1B & 1C; X-249402 DESIGN STAGE 1A EXISTING; X-249402 LANDSCAPE - STAGE 01; X-249402 AWCS STAGE 02; X-249402 AWCS STAGE 01; X-249402 ELEC COMM & LIGHT ST0918 & 01C

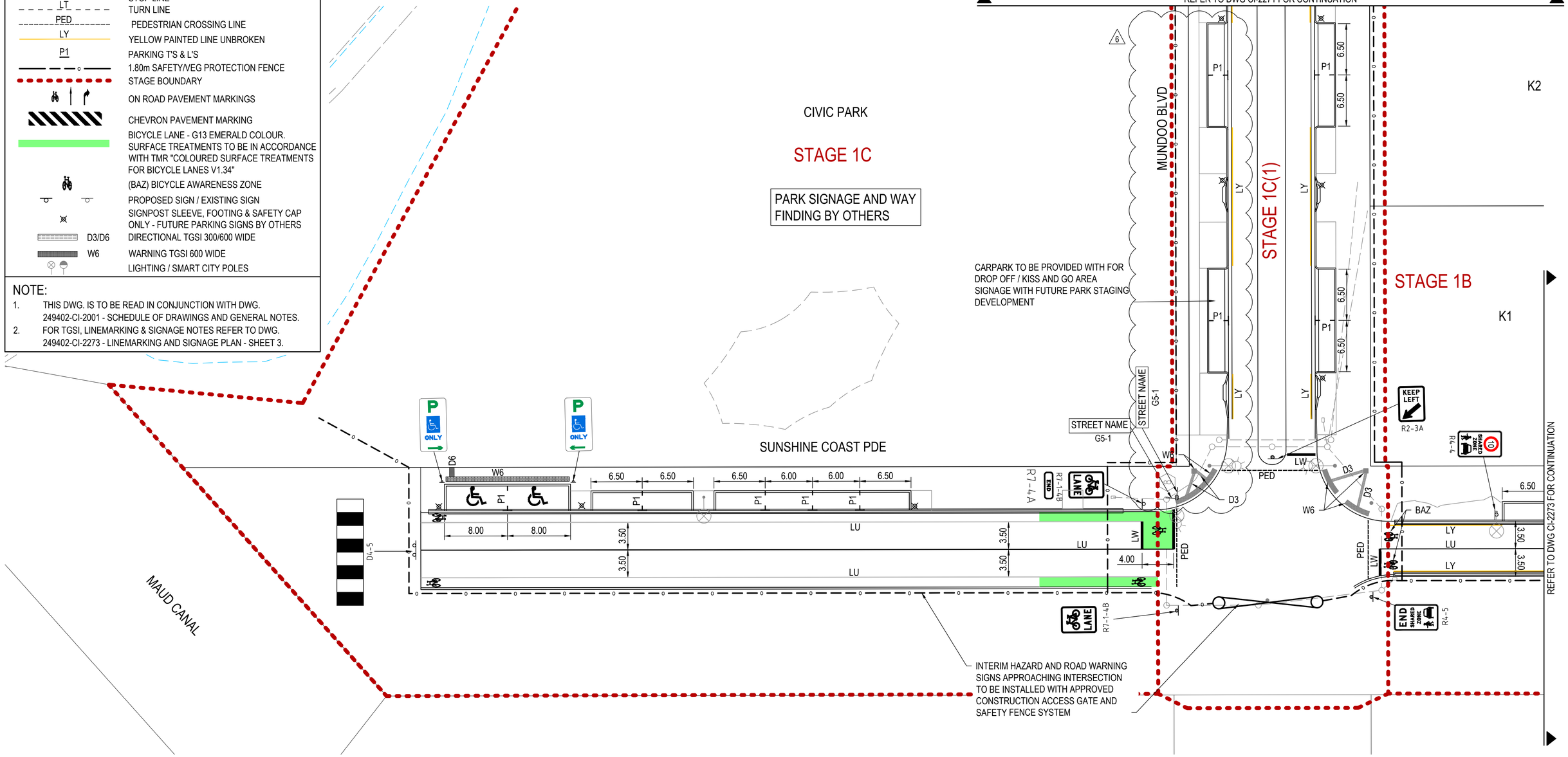
CAD File: P:\249402 MCC Design Package 1\1_DESIGN\ACAD_CIVIL STAGE 1B & 1C\249402-CI-2271-2274 LINEMARKING AND SIGNAGE PLAN.dwg

LEGEND:

LA / LH / LU / L6 / L3 / LW / LT	CONTINUITY LINE / HOLD/GIVE WAY LINE / PAINTED LINE UNBROKEN / SEPARATION LINE 6X6 / SEPARATION LINE 9X3 / STOP LINE / TURN LINE
PED	PEDESTRIAN CROSSING LINE
LY	YELLOW PAINTED LINE UNBROKEN
P1	PARKING T'S & L'S
	1.80m SAFETY/VEG PROTECTION FENCE
	STAGE BOUNDARY
	ON ROAD PAVEMENT MARKINGS
	CHEVRON PAVEMENT MARKING
	BICYCLE LANE - G13 EMERALD COLOUR. SURFACE TREATMENTS TO BE IN ACCORDANCE WITH TMR "COLOURED SURFACE TREATMENTS FOR BICYCLE LANES V1.34"
	(BAZ) BICYCLE AWARENESS ZONE
	PROPOSED SIGN / EXISTING SIGN
	SIGNPOST SLEEVE, FOOTING & SAFETY CAP ONLY - FUTURE PARKING SIGNS BY OTHERS
D3/D6	DIRECTIONAL TGSI 300/600 WIDE
W6	WARNING TGSI 600 WIDE
	LIGHTING / SMART CITY POLES

NOTE:

1. THIS DWG. IS TO BE READ IN CONJUNCTION WITH DWG. 249402-CI-2001 - SCHEDULE OF DRAWINGS AND GENERAL NOTES.
2. FOR TGSI, LINEMARKING & SIGNAGE NOTES REFER TO DWG. 249402-CI-2273 - LINEMARKING AND SIGNAGE PLAN - SHEET 3.



PLAN

SCALE A1 - 1 : 250
A3 - 1 : 500

2.5 0 2.5 5.0 7.5 10 12.5m
Scale 1:250

Rev.	Date	Description	Des.	Verif.	Appd.
6	17/09/2019	TRG COMMENTS; STAGE 1C(1) WORKS BOUNDARY AMENDED	CK	AFH	GGT
5	16/08/2019	TRG REVIEW;	CK	AFH	GGT
4	20/05/2019	TRG REVIEW; INTERIM SIGNAGE NOTE ADDED	CK	AFH	GGT
3	5/04/2019	ISSUED FOR TENDER - STAGE 1C(1) MUNDOO BOULEVARD	AS	DH	GT
2	6/02/2019	ISSUE FOR APPROVAL	CK	DH	GT
1	20/12/2018	FOR INFORMATION ONLY	CK	DH	GT

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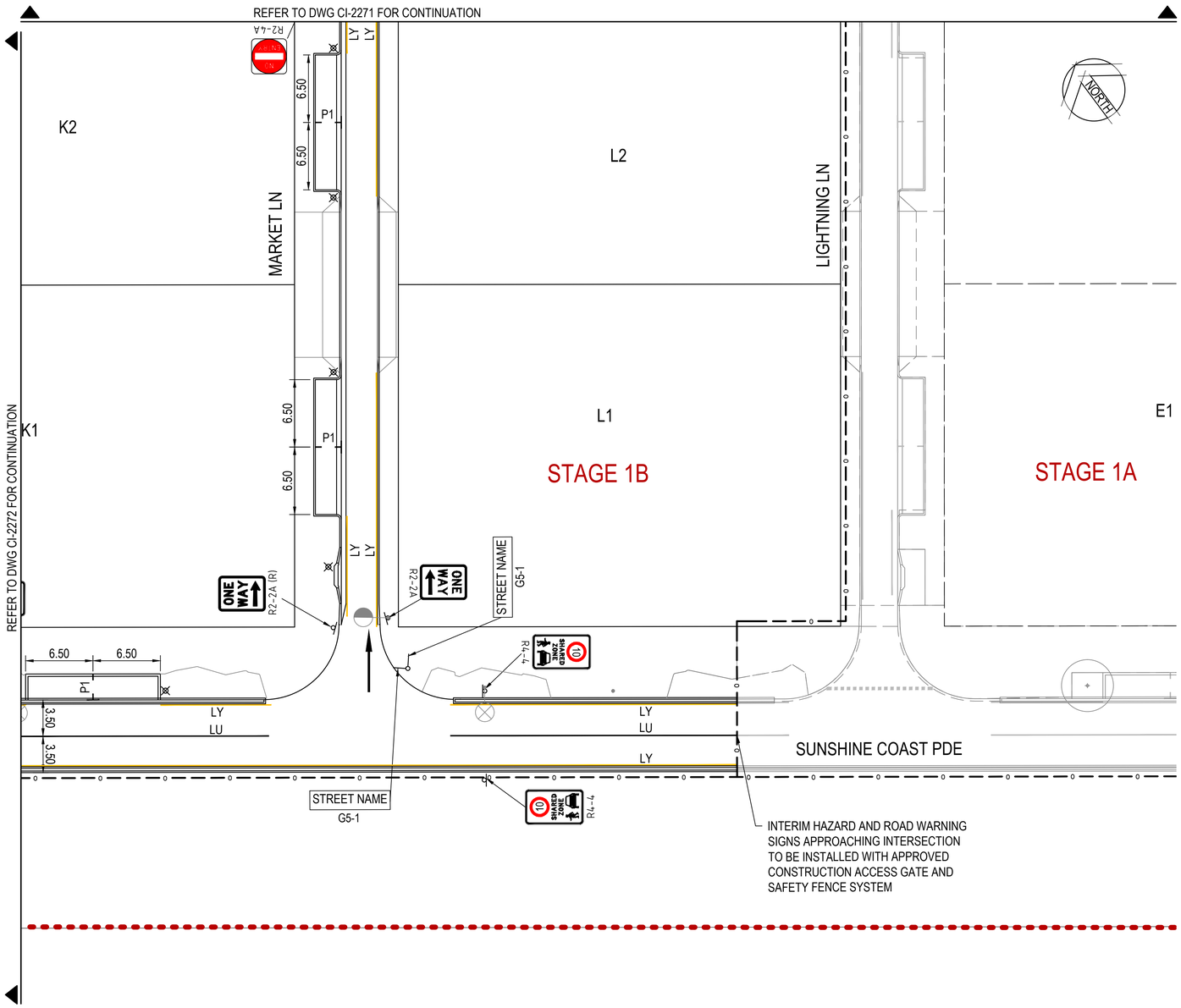
Drawn	AE	Date 21/11/2018
Checked	DH	Date 21/11/2018
Designed	CK	Date 21/11/2018
Verified	GT	Date 6/02/2019
Approved	G.Tamblyn RPEQ No. 1723	DATE 6/02/2019

Client: SUNCENTRAL MAROOCHYDORE PTY LTD
Project: MAROOCHYDORE CITY CENTRE CIVIL WORKS - STAGE 1B 1C & 1C(1)
Title: LINEMARKING AND SIGNAGE PLAN - SHEET 2
Status: FOR TENDER ONLY — NOT TO BE USED FOR CONSTRUCTION PURPOSES
DATUM: AHD | Orig. Date: 21/11/2018 | Scale: AS SHOWN | Size: A1
Drawing Number: 249402-CI-2272
Revision: 6

DATE PLOTTED: 17 September 2019 10:20 AM BY - AARON ELLARD



PLAN

SCALE A1 - 1 : 250
A3 - 1 : 500

LEGEND:

LA	CONTINUITY LINE
LH	HOLD/GIVE WAY LINE
LU	PAINTED LINE UNBROKEN
L6	SEPARATION LINE 6X6
L3	SEPARATION LINE 9X3
LW	STOP LINE
LT	TURN LINE
PED	PEDESTRIAN CROSSING LINE
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P1	PARKING T'S & L'S
	1.80m SAFETY/VEG PROTECTION FENCE
	STAGE BOUNDARY
	ON ROAD PAVEMENT MARKINGS
	CHEVRON PAVEMENT MARKING
	BICYCLE LANE - G13 EMERALD COLOUR. SURFACE TREATMENTS TO BE IN ACCORDANCE WITH TMR "COLOURED SURFACE TREATMENTS FOR BICYCLE LANES V1.34"
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	PROPOSED SIGN / EXISTING SIGN
	SIGNPOST SLEEVE, FOOTING & SAFETY CAP ONLY - FUTURE PARKING SIGNS BY OTHERS
D3/D6	DIRECTIONAL TGSI 300/600 WIDE
W6	WARNING TGSI 600 WIDE
	LIGHTING / SMART CITY POLES

NOTE:

1. THIS DWG. IS TO BE READ IN CONJUNCTION WITH DWG. 249402-CI-2001 - SCHEDULE OF DRAWINGS AND GENERAL NOTES.

LINEMARKING AND SIGNAGE NOTES:

- L.1. ALL SIGNS SHALL BE LOCATED IN ACCORDANCE WITH AUS. STD. 1742 'MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES' (M.U.T.C.D.).
- L.2. ALL SIGNS TO BE SIZE 'A' UNLESS NOTED OTHERWISE.
- L.3. SIGN SUPPORTS TO BE IN ACCORDANCE WITH DTMR STD. DWG. NO.S 1363 & 1368.
- L.4. SIGNS LOCATED IN MEDIANS TO BE INSTALLED USING LOC SOCKET OR APPROVED EQUIVALENT.
- L.5. WHERE POSSIBLE, SIGNS TO BE INSTALLED ON MULTI FUNCTION POLES IN COMPLIANCE WITH NOTE L1 ABOVE.
- L.6. ALL LINEMARKING AND CHEVRONS SHALL BE IN ACCORDANCE WITH AUS. STD. 1742 'MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES'.
- L.7. PAINTED LINES OR MARKINGS SHALL BE TYPE 1 ROAD MARKING PAINT APPLIED AT 0.375L/m² TO ACHIEVE A DRY THICKNESS OF 250-300 MICRONS OR TYPE 2 ON ROADS WITH OPERATING AADT OF ≤2000 VEHICLES/DAY.
- L.8. GENERALLY LINES SHALL BE MARKED IN THE FOLLOWING MATERIALS: DIAGONALS/CHEVRONS - PAINTED STOP BARS/GIVE WAY LINES - THERMOPLASTIC
- L.9. RAISED REFLECTORISED PAVEMENT MARKERS ARE TO BE PROVIDED TO ALL BARRIER AND MEDIAN LINEMARKING IN ACCORDANCE WITH AUS. STD. 1742 'MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES'.
- L.10. PAVEMENT ARROWS ARE TO BE AT 25m SPACING, UNLESS NOTED OTHERWISE.
- L.11. BICYCLE LANE SYMBOLS TO BE LOCATED AS INDICATED AND OTHERWISE AT 150m INTERVALS U.N.O.
- L.12. DELINEATORS SHALL BE FIXED AT 6.0m MAXIMUM CENTRES ATOP OF GUARDRAIL.
- L.13. ALL REDUNDANT LINEMARKING TO BE SCARIFIED / REMOVED.
- L.14. WHERE RED PAINT IS SHOWN, THE COLOUR EQUIVALENT IS TO BE R13 SIGNAL, R14 WARATAH OR R15 CRIMSON AS DETAILED IN AS2700.

TGSI NOTES:

- T.1. REFER LANDSCAPE DRAWINGS FOR TGSI LOCATIONS AND DETAILS
- T.2. PEDESTRIAN PATHWAYS, KERB RAMPS & CROSSINGS SHALL BE COMPLIANT WITH THE REQUIREMENTS OF AS1428 (ACCESS AND MOBILITY).
- T.3. REFER TO THE FOLLOWING DRAWINGS FOR ADDITIONAL INSTALLATION REQUIREMENTS - MAIN ROADS (SD1446, SD1447, KRG1, KRG2) COUNCIL & PRIVATE (IPWEA RS-090 TO RS-094) & NCC GUIDELINES WHERE ASSOCIATED WITH BUILDING WORKS.
- T.4. ANY DISCREPANCY BETWEEN THE DRAWINGS & NOMINATED GUIDELINES SHOULD BE BROUGHT TO THE ATTENTION OF THE SUPERINTENDED AND APPROVING AUTHORITY.
- T.5. NEW INSTALLATIONS SHALL USE EMBEDDED TACTILE CERAMIC TILES FOR CONCRETE PATHS. RETROFITTED INSTALLATIONS MAY USE ADHESIVE SHEETS SUPPLEMENTED WITH APPROPRIATE MECHANICAL FASTENERS IN EACH CORNER TO ENSURE LONGEVITY (SUBJECT TO AUTHORITY APPROVAL).
- T.6. SLIP RESISTANCE & LUMINOUS CONTRAST SHALL BE PROVIDED IN ACCORDANCE WITH AS 1428.4.
- T.7. GENERALLY, 'CHARCOAL' OR 'BLACK' TGSI'S SHALL BE USED FOR ALL LIGHT COLOURED PAVEMENTS & A 'SAFETY' YELLOW COLOUR SHALL BE USED FOR DARK FINISHES UNLESS NOMINATED BY LANDSCAPE OR ARCHITECTURAL FINISHES SPECIFICATION. IN ALL CASES, 30% LUMINOUS CONTRAST MUST BE ACHIEVED.

2.5 0 2.5 5.0 7.5 10 12.5m
Scale 1:250

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4	20/05/2019	TRG REVIEW; INTERIM SIGNAGE NOTE ADDED	CK	AFH	GGT
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Verified	GT	Date 6/02/2019
Approved	G.Tamblyn	RPEQ No. 1723 DATE 6/02/2019

Client: SUNCENTRAL MAROOCHYDORE PTY LTD
Project: MAROOCHYDORE CITY CENTRE
CIVIL WORKS - STAGE 1B 1C & 1C(1)
Title: LINEMARKING AND SIGNAGE PLAN - SHEET 3

Status: FOR TENDER ONLY
NOT TO BE USED FOR CONSTRUCTION PURPOSES

DATUM	Orig. Date	Scale	Size
AHD	21/11/2018	AS SHOWN	A1

Drawing Number: 249402-CI-2273
Revision: 5

XREFs: X-TITLE BORDER, X-249402-EXISTING, X-249402 RP BASE, X-249402 RP BASE EXTERNAL CADASTRE 150302, X-249402 DESIGN STAGE 1B & 1C, X-249402 DESIGN STAGE 1A EXISTING, X-249402 LANDSCAPE - STAGE 01, X-249402 AWCS STAGE 02, X-249402 AWCS STAGE 01, X-249402 SIGNALS ST001 BC INT, X-249402 ELEC COMM & LIGHT ST001B & 01C
CAD File: P:\249402 MCC Design Package 1_DESIGN\CAD_CIVIL\STAGE 1B & 1C\249402-CI-2271-2274 LINEMARKING AND SIGNAGE PLAN.dwg

DATE PLOTTED: 14 August 2019 5:49 PM BY: - CHASE KEMPE

STORMWATER LONGITUDINAL NOTES:

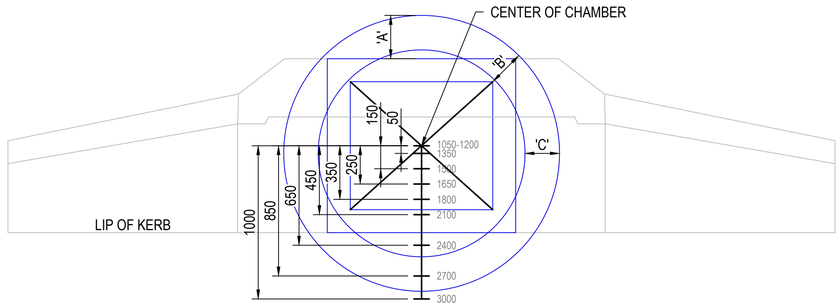
DL.1. TO BE READ IN CONJUNCTION WITH DRAWING CI-2301.
DL.2. FINISHED SURFACE LEVELS OF LIP IN LINE GULLIES REFER TO LIP LEVELS OF KERB AND CHANNEL.
DL.3. ALL MANHOLE LIDS AND FIELD INLETS LOCATED WITHIN PARKS AND ROAD RESERVES TO HAVE HEAVY DUTY BOLT DOWN COVERS IN ACCORDANCE WITH IPWEA STANDARD DRAWINGS DS-019 AND DS-050 RESPECTIVELY.
DL.4. ALL MANHOLE AND CLOSED GULLY PIT LIDS WITHIN CONCRETE AND PAVED PAVEMENTS TO HAVE INFILL LIDS TO MATCH SURROUNDS. REFER LANDSCAPE SPECIFICATIONS FOR DETAILS.
DL.5. FIELD INLET OPEN GRATES WITHIN PEDESTRIAN TRAFFICABLE AREAS NOMINATED ON DRAWINGS TO BE CLASS D, NON-SLIP AND HEEL SAFE IN ACCORDANCE WITH AUSTRALIAN STANDARDS AS 3996, AS 1428 AND AS 4586 IN PARTICULAR WITH SURFACE OPENING AND SKID RESISTANCE CRITERIA.
DL.6. OPEN FIELD INLET GRATES (900x900) WITHIN CONCRETE INVERTS TO BE CLASS D, DOUBLE HINGED IN ACCORDANCE WITH IPWEA STD. DWG. DS-050 & ASSOCIATED AUSTRALIAN STANDARDS.
DL.7. PIPES DENOTED (2) SHALL BE CLASS 2 R.C.P. R.R.J
PIPES DENOTED (3) SHALL BE CLASS 3 R.C.P. R.R.J.
PIPES DENOTED (U) SHALL BE UPVC, S.W.
DL.8. FOR DETAILS OF LIP IN LINE GULLIES, REFER TO IPWEA STANDARD DRAWINGS DS-061 TO DS-063.
DL.9. FOR DETAILS OF KERB IN LINE ANTI PONDING GULLY PITS, REFER TO IPWEA STANDARD DRAWINGS DS-068.
DL.10. FOR DETAILS OF MANHOLE ACCESS CHAMBERS 1050-2100 DIA. AND ≤ 3.0m DEEP REFER TO IPWEA STANDARD DRAWINGS DS-010 TO DS-021. FOR DETAILS OF MANHOLES 1050-2100 DIA. ≥ 3.0m AND ≤ 5.0m DEEP REFER TO DTMR STANDARD DRAWINGS 1307 & 1308.
DL.11. FOR DETAILS OF FIELD INLETS REFER TO IPWEA STANDARD DRAWING DS-050.
DL.12. FOR DETAILS OF ROOF WATER INSPECTION CHAMBERS REFER TO IPWEA STANDARD DRAWING DS-110.
DL.13. FOR DETAILS OF CULVERTS, HEADWALLS AND WINGWALLS GENERAL ARRANGEMENT AND CONSTRUCTION REFER DEPARTMENT OF TRANSPORT AND MAIN ROADS STANDARD DRAWINGS 1132, 1179, 1303, 1304, 1305, 1306, 1316, 1317, 1318, 1319, 1320 AND 1359.
DL.14. FOR DETAILS OF CULVERT BEDDING AND BACKFILLING REFER IPWEA STANDARD DRAWINGS DS-030 AND DS-031.
DL.15. FOR DETAILS OF CULVERT INLET SCREENS REFER IPWEA STANDARD DRAWING DS-082.
DL.16. LITTER BASKETS TO BE INSTALLED IN ALL ROAD GULLIES AND FIELD INLETS.

STORMWATER PIPE CONSTRUCTION LOADS

PCL.1. ALL STORMWATER DRAINAGE PIPES ARE TO BE LAID IN TYPE H2 SUPPORT.
PCL.2. THE MINIMUM COMPACTED LAYER THICKNESS FOR TRENCH BACKFILLING SHALL BE AS FOLLOWS:-
A. CLASS 2 STEEL REINFORCED CONCRETE PIPES:
(i) THE CONTRACTOR SHALL FIRST COVER THE PIPE WITH A LAYER OF FILL MATERIAL EQUIVALENT TO A 400mm COMPACTED LAYER OF FILL BEFORE APPLYING INITIAL COMPACTION WITH A VIBRATORY TRENCH ROLLER (UP TO 2 TONNES).
(ii) A VIBRATORY RAMMER (UP TO 75kg) MAY BE USED FOR FILL HEIGHTS BETWEEN 400mm AND 700mm.
(iii) A 15 TONNE EXCAVATOR AND COMPACTION WHEEL MAY BE USED FOR FILL HEIGHTS ABOVE 700mm.
B. CLASS 3 STEEL REINFORCED CONCRETE PIPES.
(i) THE CONTRACTOR SHALL FIRST COVER THE PIPE WITH A LAYER OF FILL MATERIAL EQUIVALENT TO A 250mm COMPACTED LAYER OF FILL BEFORE APPLYING INITIAL COMPACTION WITH A VIBRATORY TRENCH ROLLER (UP TO 2 TONNES).
(ii) A VIBRATORY RAMMER (UP TO 75kg) MAY BE USED FOR FILL HEIGHTS BETWEEN 350mm AND 500mm.
(iii) A 15 TONNE EXCAVATOR AND COMPACTION WHEEL MAY BE USED FOR FILL HEIGHTS ABOVE 500mm.
PCL.3. THE CONTRACTOR SHALL NOT VARY THE PIPE SUPPORT TYPE, LAYER THICKNESS AND COMPACTION EQUIPMENT, AS SET OUT ABOVE, WITHOUT THE PRIOR APPROVAL OF THE SUPERINTENDENT AND MUST COMPLY IN ALL RESPECTS WITH IPWEA STANDARD DRAWING DS-030.
PCL.4. NO CRACKS SHALL BE PERMISSIBLE IN THE COMPLETED STORMWATER PIPE SYSTEMS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT PIPES ARE NOT DAMAGED DURING DELIVERY, CONSTRUCTION AND POST CONSTRUCTION OF STORMWATER SYSTEMS.
PCL.5. PIPE COVER AND CLASS HAVE BEEN SELECTED FOR SUBGRADE COMPACTION BY A 10 TONNE SMOOTH DRUM VIBRATORY ROLLER FOR PAVEMENT DEPTHS UP TO 450mm. IF PAVEMENT DEPTHS ARE GREATER THAN 450mm, THE CONTRACTOR SHALL ADOPT CONSTRUCTION TECHNIQUES TO ENSURE THAT THE PIPES ARE NOT DAMAGED DURING CONSTRUCTION.

LEGEND:

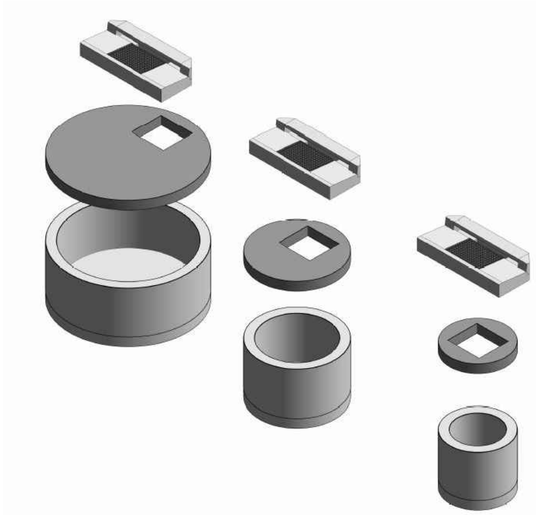
- Q20 HYDRAULIC GRADE LINE
- FINISHED SURFACE
- EXISTING SURFACE
- STANDING WATER LEVEL
- (2S) SALT WATER COVER PIPE CLASS
- (L.I.) LID INFILL TO MATCH SURROUNDING PAVEMENT. REFER NOTE DL.4.
- (H.S.) HEEL SAFE GRATE, NON SLIP. REFER NOTE DL.5.
- (D.H.) DOUBLE HINGED FIELD INLET GRATES WITHIN CONCRETE INVERTS. REFER NOTE DL.6.



LIP IN LINE GULLY CHAMBER SETOUT DETAILS - 1050Ø TO 3000Ø

SCALE N.T.S.

GULLY WITH CIRCULAR CHAMBER DETAILS				
MANHOLE DIA.	SETOUT LOCATION	DIM 'A'	DIM 'B'	DIM 'C'
SQUARE CHAMBER	CENTRE OF CHAMBER	-	-	150
1050	CENTRE OF CHAMBER	108	50	150
1200	CENTRE OF CHAMBER	258	200	225
1350	50mm OFFSET FROM CENTRE	283	241	225
1500	150mm OFFSET FROM CENTRE	258	241	225
1650	250mm OFFSET FROM CENTRE	233	237	225
1800	350mm OFFSET FROM CENTRE	233	253	250
2100	450mm OFFSET FROM CENTRE	308	341	275
2400	650mm OFFSET FROM CENTRE	258	311	275
2700	850mm OFFSET FROM CENTRE	233	300	300
3000	1000mm OFFSET FROM CENTRE	233	308	300



TYPICAL GULLY PIT CHAMBER EXPLODED PARTS VIEW

SCALE N.T.S.
FOR INFORMATION ONLY

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5	16/07/2019	TRG REVIEW;	CK	AFH	GGT
4	20/05/2019	TRG REVIEW; GRATE & LID NOTES ADDED	CK	AFH	GGT
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Verified	GT	Date 6/02/2019
Approved	G.Tamblyn	RPEQ No. 1723 DATE 6/02/2019

Client: SUNCENTRAL MAROOCHYDORE PTY LTD
Project: MAROOCHYDORE CITY CENTRE
CIVIL WORKS - STAGE 1B 1C & 1C(1)
Title: STORMWATER NOTES AND DETAILS
Status: FOR TENDER ONLY
NOT TO BE USED FOR CONSTRUCTION PURPOSES

DATUM	Orig. Date	Scale	Size
AHD	21/11/2018	AS SHOWN	A1

Drawing Number: 249402-CI-2300
Revision: 5

XREF= X-TITLE BORDER
CAD File: P:\249402 MCC Design Package 1_DESIGN\ACAD_CIVIL STAGE 1B & 1C\249402-CI-2300 STORMWATER NOTES AND DETAILS.dwg

DATE PLOTTED: 17 September 2019 10:26 AM BY: - AARON ELLARD

LEGEND:

- STORMWATER CATCHMENT BOUNDARY
- DRAINAGE SWALE
- STORMWATER PIPE AND MANHOLE/PIT
- 1-1 MANHOLE No. - LINE No.
- SUBSOIL DRAINAGE
- OVERLAND FLOW PATH EASEMENT
- STAGE BOUNDARY
- 3.50 FINISHED CONTOURS
- 1-1 FUTURE MANHOLE No. - LINE No.
- SWD FUTURE STORMWATER
- EXISTING DRAINAGE SWALE
- SWD EXISTING STORMWATER PIPE AND MANHOLE/PIT
- 1-1 EXISTING MANHOLE No. - LINE No.

NOTES:

1. REFER TO DRAWINGS 249402-CI-2311 TO 249402-CI-2314 FOR STORMWATER DRAINAGE LONGITUDINAL SECTIONS.
2. CATCHMENT NAME IS SAME AS PIT NUMBER UNLESS OTHERWISE NOTED.
3. CONTRACTOR TO SURVEY STORMWATER LINES AT CONNECTION POINTS DURING SITE ESTABLISHMENT AND FORWARD TO ENGINEERS FOR ASSESSMENT PRIOR TO CONSTRUCTION.
4. CONTRACTOR TO SURVEY STORMWATER LINES AT FUTURE CONNECTION POINTS, AS THEY ARE BUILT AND SENT TO ENGINEERS ASAP.

NOTE:
SPEL STORMSACK 200 MICRON LITTER BASKETS (OR APPROVED EQUIVALENT) ARE TO BE PROVIDED ON ALL FIELD & GULLY INLETS.

600X600 TYPE1 FIELD INLET WITH HEEL SAFE GRATE AND KERB ADAPTOR TO KERB AND CHANNEL. SURROUNDING AREA TO BE SHAPED BACK TO THIS PIT TO LIMIT PARK FLOW ONTO FOOTPATH.

STORMWATER DRAINAGE WITHIN STAGE 1B BOUNDARY INCLUDING LINES 75, 75A, 75B, 76, 77, 83, 84, 85, 86, 87, 88 & 92 TO BE CONSTRUCTED WITH STAGE 1C(1) CIVIL WORKS TO A SUITABLE LEVEL WITH TEMPORARY LID/INLET AND SAFETY MEASURES AS REQUIRED.

PROVIDE STUBS 1.0m FROM BOUNDARY FOR FUTURE PROVISION OF STORMWATER DRAINAGE

EXTERNAL CATCHMENT OVERFLOWS TO CANAL AT SOUTHERN BOUNDARY POINT

CORSO DRAINAGE AND CATCHMENTS ARE FUTURE WORKS, BY OTHERS

SOUTH SEA ISLANDER WAY

MUNDOO BLVD

MARKET LN →

FUTURE WAY

← LIGHTNING LN

FIRST AVE

SUNSHINE COAST PDE

STAGE 1A

STAGE 1B

STAGE 1C

STAGE 1C(1)

H1 J1 J2 K1 K2 L1 L2 M N F1 F2 E1 E2

PLAN

SCALE A1 - 1 : 500
A3 - 1 : 1000

Scale 1:500

Rev.	Date	Description	Des.	Verif.	Appd.
7	17/09/2019	TRG COMMENTS; STAGE 1C(1) WORKS BOUNDARY AMENDED	CK	AFH	GGT
6	20/08/2019	TRG REVIEW; MUNGAR ST VERGE WORKS REMOVED	CK	AFH	GGT
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4	20/05/2019	TRG REVIEW; HORTON APART. DRAINAGE REMOVED	CK	AFH	GGT
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Drawn AE	Date 21/11/2018	
Checked DH	Date 21/11/2018	
Designed CK	Date 21/11/2018	
Verified GT	Date 6/02/2019	
Approved G.Tamblyn	RPEQ No. 1723 DATE 6/02/2019	

Client: SUNCENTRAL MAROOCHYDORE PTY LTD
Project: MAROOCHYDORE CITY CENTRE
CIVIL WORKS - STAGE 1B 1C & 1C(1)
Title: STORMWATER DRAINAGE PLAN

Status: FOR TENDER ONLY
NOT TO BE USED FOR CONSTRUCTION PURPOSES

DATUM	Orig. Date	Scale	Size
AHD	21/11/2018	AS SHOWN	A1

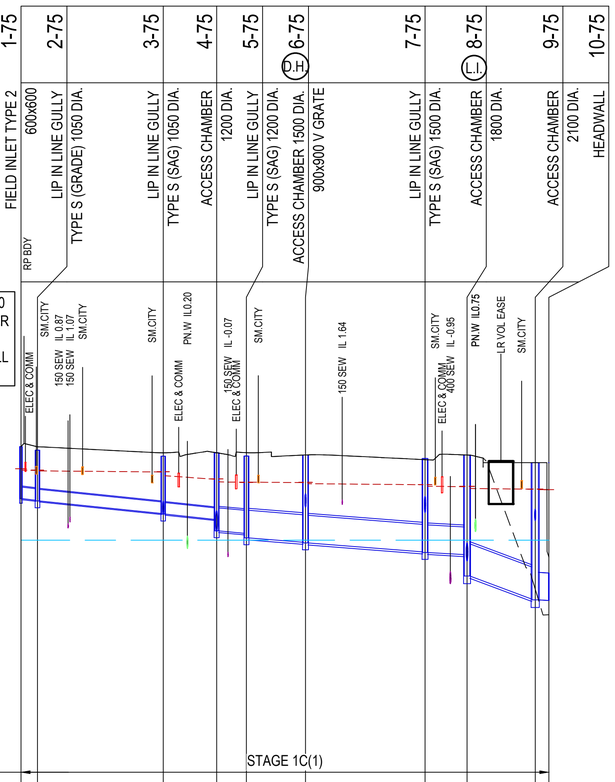
Drawing Number: 249402-CI-2301
Revision: 7

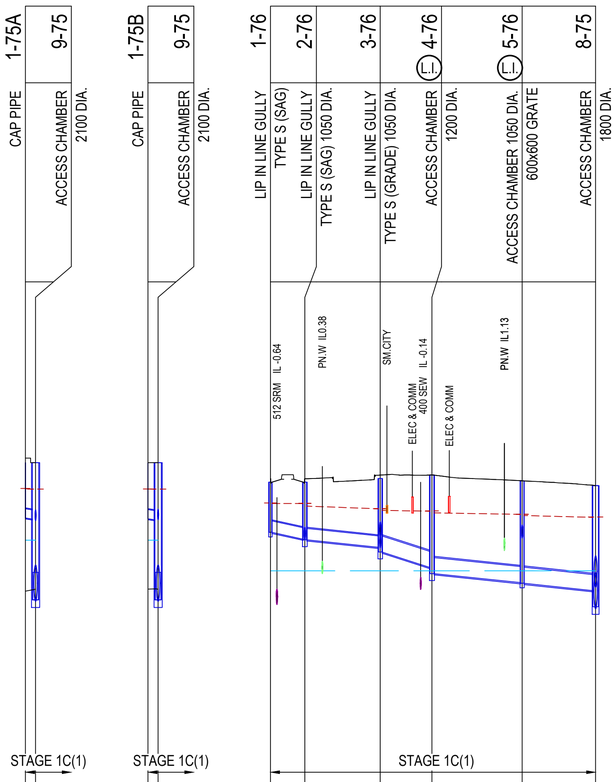
XREFs: X-TITLE BORDER; X-249402 RP BASE EXTERNAL CADASTRE 150302; X-249402 RP BASE; STG01 drainage pipes pits & catchments; X-249402-EXISTING; X-249402 DESIGN STAGE 1B & 1C; X-249402 DESIGN STAGE 1A EXISTING; X-249402 AWCS STAGE 02; X-249402 AWCS STAGE 01; X-249402 MCC Design Package 1_DESIGN\ACAD_CIVIL STAGE 1B & 1C\249402-CI-2301 STORMWATER DRAINAGE PLAN.dwg

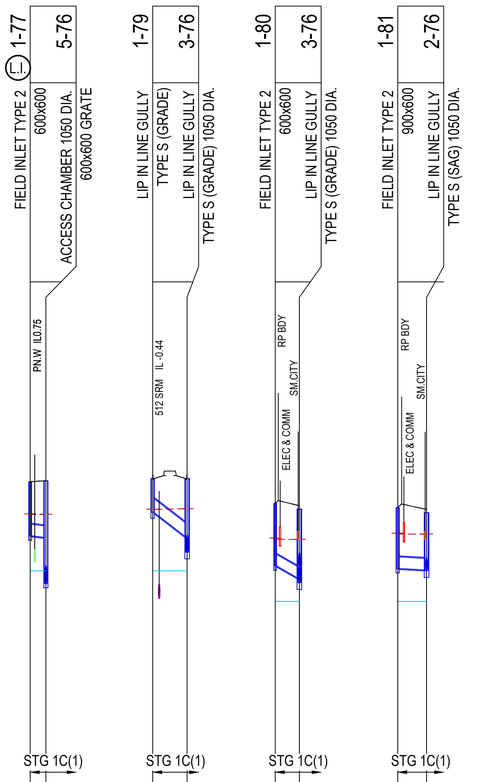
DATE PLOTTED: 15 August 2019 4:09 PM BY: ANTHONY SKORIC

	1-75	2-75		3-75	4-75	5-75	6-75		7-75	8-75	9-75	10-75	1-75A	9-75	1-75B	9-75	1-76	2-76		3-76	4-76	5-76		8-75	1-77	5-76	1-79	3-76	1-80	3-76	1-81	2-76	1-82	2-82		3-82	4-82	1-82A	3-82	1-83	7-75
STRUCTURE NAME	FIELD INLET TYPE 2	LIP IN LINE GULLY		LIP IN LINE GULLY	ACCESS CHAMBER	LIP IN LINE GULLY	ACCESS CHAMBER 1500 DIA.		LIP IN LINE GULLY	ACCESS CHAMBER	ACCESS CHAMBER	HEADWALL	CAP PIPE	ACCESS CHAMBER	CAP PIPE	ACCESS CHAMBER	LIP IN LINE GULLY	TYPE S (SAG)		LIP IN LINE GULLY	ACCESS CHAMBER	ACCESS CHAMBER 1050 DIA.		ACCESS CHAMBER	FIELD INLET TYPE 2	ACCESS CHAMBER 1050 DIA.	LIP IN LINE GULLY	TYPE S (GRADE)	FIELD INLET TYPE 2	LIP IN LINE GULLY	FIELD INLET TYPE 2	LIP IN LINE GULLY	FIELD INLET TYPE 2	FIELD INLET TYPE 2		ACCESS CHAMBER	HEADWALL	CAP PIPE	ACCESS CHAMBER	FIELD INLET TYPE 2	LIP IN LINE GULLY
STRUCTURE DESCRIPTION	600x600	TYPE S (GRADE) 1050 DIA.		TYPE S (SAG) 1050 DIA.	1200 DIA.	TYPE S (SAG) 1200 DIA.	900x900 V GRATE		TYPE S (SAG) 1500 DIA.	1800 DIA.	2100 DIA.		2100 DIA.		2100 DIA.		TYPE S (SAG)	TYPE S (SAG) 1050 DIA.		TYPE S (GRADE) 1050 DIA.	1200 DIA.	600x600 GRATE		1800 DIA.	600x600	600x600 GRATE	TYPE S (GRADE)	TYPE S (GRADE) 1050 DIA.	600x600	TYPE S (GRADE) 1050 DIA.	900x600	TYPE S (SAG) 1050 DIA.	900x900	900x900		1050 DIA.	HEADWALL		1050 DIA.	900x600	TYPE S (SAG) 1500 DIA.

NOTE: SPEL STORMSACK 200 MICRON LITTER BASKETS (OR APPROVED EQUIVALENT) ARE TO BE PROVIDED ON ALL FIELD & GULLY INLETS.







STAGE	STAGE 1C(1)												STAGE 1C(1)		STAGE 1C(1)		STAGE 1C(1)							STG 1C(1)		STG 1C(1)		STG 1C(1)		STG 1C(1)		STG 1C(1)	FUT.	STG 1C(1)	FUT.			FUT.		STG 1C(1)	
PIPE Ø mm	375	375		375	750	900	900		900	1050	1800x900		300		300		375	375		525	525	525			375		450		375		375		375	300	375	450			375		375	
(CLASS)	(3)	(3)		(3)	(2)	(2S)	(2S)		(2S)	(2S)	(BC 3)		(3)		(3)		(3)	(3)		(3)	(3S)	(3S)			(3)		(3)		(3)		(3)		(3)	(3)	(3)	(3S)			(3)		(3)	
PIPE GRADE %	1.00%	1.00%		1.00%	0.80%	0.75%	0.75%		0.50%	3.41%	0.50%		1.00%		1.00%		2.00%	1.00%		3.00%	1.00%	1.00%			1.00%		7.08%		5.12%		0.50%		1.00%	1.00%	2.62%	3.00%			1.00%		1.00%	
	1:100	1:100		1:100	1:125	1:133	1:133		1:200	1:29	1:200		1:100		1:100		1:50	1:100		1:33	1:100	1:100			1:100		1:14		1:20		1:200		1:100	1:100	1:38	1:33			1:100		1:100	
VELOCITY m/s	0.45	0.46		1.28	0.94	0.71	0.84		1.01	0.98	0.58		0.90		0.50		0.26	0.96		0.82	0.81	0.99			0.21		0.09		0.40		0.39		0.12	0.15	0.70				0.85		0.37	
PARTIAL VEL. m/s	1.37	1.38		1.77	2.15	2.13	2.23		2.01	4.32	1.91		1.46		1.26		1.50	1.66		2.82	1.89	1.99			1.10		1.86		2.36		1.02		0.84	1.41	2.50				1.62		1.30	
DATUM R.L.	-14.0												-14.0		-14.0		-13.0								-13.0		-13.0		-12.0		-12.0		-14.0						-13.0		-13.0	
H.G.L. LEVELS AND W.S.E. IN PIT	2.804	2.756 2.754		2.733	2.698 2.706	2.574	2.460 2.473	2.373	2.360	2.363 2.357	2.356		2.314	2.281 2.286	2.233	2.216 2.226	2.157	2.136 2.139	2.121	2.120	2.120	2.158	2.150 2.139	2.139	2.121	2.143	2.140 2.139	2.139	2.121	2.686	2.669 2.666 2.674		2.584	2.494 2.499	2.444	2.415 2.428	2.362	2.313 2.318	2.276	2.216 2.226	2.157	2.330	2.314 2.313 2.318	2.276	2.483	2.479 2.494 2.499	2.444	2.541	2.498 2.499	2.444	2.700	2.671 2.666 2.674	2.584	0.876	0.869 0.749 0.709	0.706 0.382 -0.913	-0.978	-1.355	-1.355	1.660	1.663 1.603 -0.913	-0.978	2.324	2.284	2.281 2.286	2.233
PIPE FLOW m³/s	0.050	0.051		0.142	0.416	0.449	0.532		0.639	0.847	0.937		0.063		0.036		0.029	0.106		0.177	0.176	0.215			0.023		0.014		0.044		0.043		0.008	0.017	0.111				0.094		0.041	
PIPE CAPACITY m³/s	0.175	0.175		0.175	0.996	1.568	1.568		1.281	5.041	3.949		0.097		0.097		0.248	0.175		0.745	0.430	0.430			0.175		0.759		0.397		0.124		0.097	0.284	0.494				0.175		0.175	
DEPTH TO INVERT	1.70	1.63	1.65		1.87	1.89	2.17	2.55	2.52	2.67	2.85	2.87		3.05	3.07	3.25	3.95	4.46	4.48	0.90	0.90	1.81	1.84	4.48		1.83	1.86	4.48	1.64	1.86	2.25	2.40	3.02	3.22		3.32	3.43	3.95	1.76	1.84	3.34	1.11	1.90	2.40	2.03	2.25	2.40	1.99	1.86	1.88	2.88	3.01	3.09	3.21	4.71	0.75	0.75	1.81	1.74	3.07
INVERT LEVELS	1.828	1.774	1.754		1.343	1.323	1.149	0.774	0.696	0.546	0.401	0.381		0.089	0.069	0.000	-0.700	-1.458	-1.478	-1.500	-1.500	1.194	1.161	-1.478		1.169	1.136	-1.478	1.727	1.502	1.482	1.236	1.086	0.579	0.379	0.085	0.065	-0.175	-0.700	1.616	1.565	0.065	2.381	1.586	1.086	1.639	1.236	1.086	1.549	1.502	1.482	0.800	0.689	0.614	0.290	-1.210	-1.500	-1.500	1.428	1.408	-1.210	1.455	1.400	0.069
FINISHED S.L. (EXISTING S.L.)	3.527	(3.527)	(3.519)		3.213	(3.323)	3.324	(3.324)	3.218	(3.328)	3.252	(3.252)		3.135	(3.098)	3.250	(3.250)	3.000	(-1.130)	-0.600	(-1.962)	3.000	(-1.194)	3.000	(-1.130)	3.000	(-1.124)	3.000	(-1.130)	3.367	(3.477)	(3.477)	3.486	(3.596)	3.601	(3.601)	3.410	(3.410)	3.250	(3.250)	3.378	(3.378)	3.410	(3.410)	3.486	(3.596)	3.486	(3.596)	3.667	(3.667)	3.486	(3.596)	3.534	(3.534)	3.367	(3.477)	3.675	(3.622)	3.704	(3.622)	3.500	(0.212)	-0.750	(-1.931)	3.338	(0.180)	3.500	(0.212)	3.268	(3.268)	3.135	(3.098)
STRUCTURE SETOUT COORDINATES	E 509036.968 N 7051446.984	E 509041.748 N 7051443.441		E 509017.262 N 7051410.487	E 509006.514 N 7051396.741	E 509001.065 N 7051388.689	E 508989.196 N 7051373.470		E 508966.279 N 7051341.874	E 508957.752 N 7051331.125	E 508944.502 N 7051313.250	E 508941.091 N 7051310.383	E 508941.831 N 7051315.230	E 508944.502 N 7051313.250	E 508947.174 N 7051311.270	E 508944.502 N 7051313.250	E 508931.498 N 7051404.401	E 508939.617 N 7051398.394		E 508924.980 N 7051378.611	E 508915.903 N 7051364.327	E 508939.046 N 7051346.110		E 508957.752 N 7051331.125	E 508935.985 N 7051341.981	E 508939.046 N 7051346.110	E 508916.797 N 7051384.532	E 508924.980 N 7051378.611	E 508931.772 N 7051373.584	E 508924.980 N 7051378.611	E 508949.450 N 7051397.336	E 508939.617 N 7051398.394	E 508904.480 N 7051350.074	E 508895.568 N 7051356.668	E 508884.571 N 7051362.316	E 508878.818 N 7051354.540	E 508882.964 N 7051363.507	E 508884.571 N 7051362.316	E 508961.496 N 7051345.408	E 508966.279 N 7051341.874
LENGTH	5.383	41.055		17.445	9.714	19.295	39.029		13.714	22.250	4.455		3.325		3.325		11.235	24.609		16.893	29.453	23.968			5.140		11.236		7.882		9.404		11.086	12.363	9.673				2.000		5.530	
DISTANCE ALONG DRAIN	-5.499	-0.117		40.938	58.383	68.097	87.392		126.421	140.135	162.385	166.841	0.000	3.325	0.000	3.325	0.000	11.235		35.844	52.737	82.190		106.158	0.000	5.140	0.000	11.236	0.000	7.882	0.000	9.404	-13.998	-2.912	9.450	19.123			0.000	2.000	0.000	5.530	
LINE	75												75A		75B		76								77		79		80		81		82					82A		83	

LONGITUDINAL SECTIONS

SCALE A1 - 1:1000(H) 1:100(V)
A3 - 1:2000(H) 1:200(V)

NOTE:
1. REFER TO DWG CI-2300 FOR STORMWATER NOTES & LEGEND

HOR. 10 0 10 20 30 40 50m 1:1000
VERT. 1 0 1 2 3 4 5m 1:100

Rev.	Date	Description	Des.	Verif.	Appd.
5	16/08/2019	TRG REVIEW;	CK	AFH	GGT
4	20/05/2019	TRG REVIEW; LID TYPES ADDED	CK	AFH	GGT
3	5/04/2019	ISSUED FOR TENDER - STAGE 1C(1) MUNDOO BOULEVARD	AS	DH	GT
2	6/02/2019	ISSUE FOR APPROVAL	CK	DH	GT
1	20/12/2018	FOR INFORMATION ONLY	CK	DH	GT

SunCentral Maroochydore

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Drawn	AJH	Date 20/12/2018
Checked	DH	Date 20/12/2018
Designed	CK	Date 20/12/2018
Verified	GT	Date 6/02/2019
Approved	G.Tamblyn	RPEQ No. 1723 DATE 6/02/2019

Client: SUNCENTRAL MAROOCHYDORE PTY LTD
Project: MAROOCHYDORE CITY CENTRE
CIVIL WORKS - STAGE 1B 1C & 1C(1)
Title: STORMWATER LONGITUDINAL SECTIONS - SHEET 1

Status: FOR TENDER ONLY
NOT TO BE USED FOR CONSTRUCTION PURPOSES

DATUM	Orig. Date	Scale	Size
AHD	20/12/2018	AS SHOWN	A1

Drawing Number: 249402-CI-2311
Revision: 5

XREFs: X-TITLE BORDER
CAD File: P:\249402 MCC Design Package 1_DESIGN\ACAD_CIVIL STAGE 1B & 1C\249402-CI-2311-2313 STORMWATER LONGITUDINAL SECTIONS.dwg

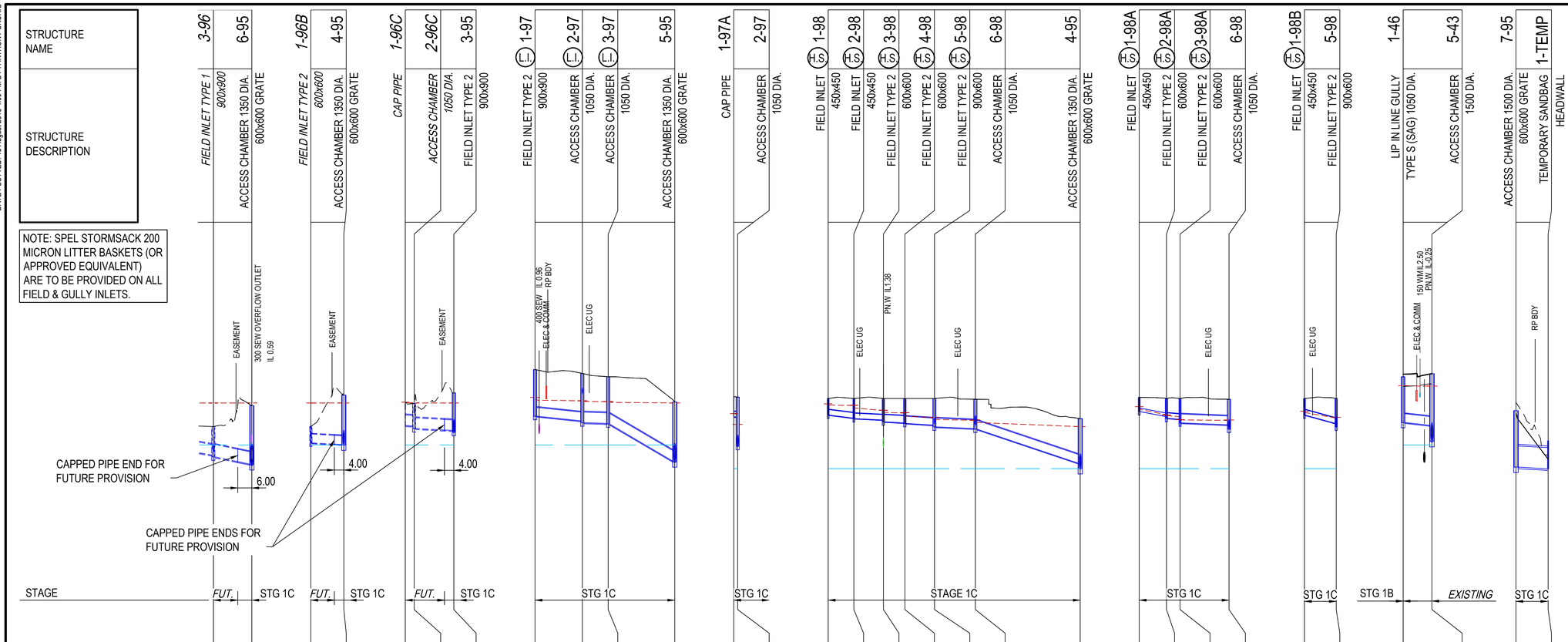
DATE PLOTTED: 15 August 2019 4:09 PM BY: ANTHONY SKORIC

| | | |

DATE PLOTTED: 15 August 2019 4:09 PM BY: ANTHONY SKORIC

STRUCTURE NAME	3-96	6-95	1-96B	4-95	1-96C	2-96C	3-95	1-97	2-97	3-97	5-95	1-97A	2-97	1-98	2-98	3-98	4-98	5-98	6-98	4-95	1-98A	2-98A	3-98A	6-98	1-98B	5-98	1-46	5-43	7-95	1-TEMP
STRUCTURE DESCRIPTION	FIELD INLET TYPE 1 900x900	ACCESS CHAMBER 1350 DIA. 600x600 GRATE	FIELD INLET TYPE 2 600x600	ACCESS CHAMBER 1350 DIA. 600x600 GRATE	CAP PIPE	ACCESS CHAMBER 1050 DIA.	FIELD INLET TYPE 2 900x900	FIELD INLET TYPE 2 900x900	ACCESS CHAMBER 1050 DIA.	ACCESS CHAMBER 1050 DIA.	ACCESS CHAMBER 1350 DIA. 600x600 GRATE	CAP PIPE	ACCESS CHAMBER 1050 DIA.	FIELD INLET 450x450	FIELD INLET 450x450	FIELD INLET TYPE 2 600x600	FIELD INLET TYPE 2 600x600	FIELD INLET TYPE 2 900x600	ACCESS CHAMBER 1050 DIA.	ACCESS CHAMBER 1350 DIA. 600x600 GRATE	FIELD INLET 450x450	FIELD INLET TYPE 2 600x600	FIELD INLET TYPE 2 600x600	ACCESS CHAMBER 1050 DIA.	FIELD INLET 450x450	FIELD INLET TYPE 2 900x600	LIP IN LINE GULLY TYPE S (SAG) 1050 DIA.	ACCESS CHAMBER 1500 DIA.	ACCESS CHAMBER 1500 DIA. 600x600 GRATE	TEMPORARY SANDBAG HEADWALL
								L.I.	L.I.	L.I.				H.S.	H.S.	H.S.	H.S.	H.S.	H.S.		H.S.	H.S.	H.S.	H.S.	H.S.					

NOTE: SPEL STORMSACK 200 MICRON LITTER BASKETS (OR APPROVED EQUIVALENT) ARE TO BE PROVIDED ON ALL FIELD & GULLY INLETS.



STAGE	FUT.	STG 1C	FUT.	STG 1C	FUT.	STG 1C		STG 1C				STG 1C		STAGE 1C							STG 1C				STG 1C		STG 1B	EXISTING	STG 1C	
PIPE Ø mm	525		375		450	450		375	450	450		225		225	225	300	300	375	375		150	225	375		225		375		900	
(CLASS)	(3S)		(3S)		(3)	(3)		(3)	(3)	(3S)		(3)		(3)	(3)	(3)	(3)	(3)	(3)		(U)	(3)	(3)		(3)		(3)		(3S)	
PIPE GRADE %	1.92%		0.50%		0.50%	0.50%		1.00%	0.30%	5.62%		0.77%		1.20%	0.50%	0.50%	0.60%	0.42%	3.27%		1.79%	0.77%	0.40%		2.62%		1.00%		0.50%	
	1:52		1:200		1:200	1:200		1:100	1:333	1:18		1:130		1:83	1:200	1:200	1:167	1:236	1:31		1:56	1:130	1:250		1:38		1:100		1:200	
VELOCITY m/s	1.90		0.46		1.23	1.23		0.60	0.54	0.54		0.60		0.46	1.02	0.82	1.03	0.86	1.09		0.61	0.46	0.23		0.39		0.31			
PARTIAL VEL. m/s	2.97		1.07		1.44	1.44		1.48	1.01	2.91		1.04		1.15	1.02	1.09	1.21	1.16	2.67		1.17	0.97	0.81		1.45		1.23			
DATUM R.L.	-13.0		-13.0		-13.0			-13.0				-12.0		-12.0							-12.0				-12.0		-13.0		-13.0	
H.G.L. LEVELS AND W.S.E. IN PIT	2.250	2.250	2.250	2.250	2.283	2.268	2.250	2.488	2.369	2.341	2.315	2.799	2.796	3.212	3.161	3.142	3.122	3.036	2.934	2.941	3.092	2.990	2.735	2.738	2.898	2.843	2.981	2.969	2.965	2.919
	2.250	2.250	2.250	2.250	-3.774	2.250	2.250	2.369	2.343	2.343	2.311	2.781	2.343	3.152	3.142	3.122	2.941	2.852	2.816	2.837	2.693	2.622	2.638	2.638	2.551	2.638	2.551			
	2.250	2.250	2.250	2.250		2.250	2.250	2.315	2.305	2.311	2.275	2.315	2.315	3.036	2.934	2.941	2.852	2.816	2.837	2.693	2.622	2.638	2.638	2.551	2.551	2.531	2.422	2.533	2.532	2.531	2.422
PIPE FLOW m³/s		0.411		0.051		0.195	0.195		0.066	0.086	0.086		0.024		0.018	0.041	0.058	0.073	0.095	0.120		0.011	0.018	0.025		0.016		0.035			
PIPE CAPACITY m³/s		0.596		0.124		0.202	0.202		0.175	0.156	0.676		0.039		0.049	0.032	0.068	0.075	0.114	0.317		0.020	0.039	0.111		0.073		0.175			
DEPTH TO INVERT	1.21	1.28	0.70	2.10	0.99	0.95	1.06	1.97	2.01	2.08	1.98	2.00	2.51	0.85	0.83	0.85	0.91	0.99	1.03	1.05	1.13	1.26	0.60	0.77	0.85	0.88	1.03	0.70	1.05	1.20	1.94	2.19	2.87	2.39	1.18
	2.48	2.50	0.557	0.487	2.12	0.467																													
INVERT LEVELS	0.041	-0.034	-0.346	-0.366	1.293	1.274	1.168	1.084	1.009	1.67				2.667	2.742	2.611	2.591	2.528	2.453	2.408	2.388	2.312	2.237	2.164	2.144	2.08	2.408	2.325	1.08	2.144	1.26	1.422	1.300	0.618	-0.470	-0.538
																																			-0.538
FINISHED S.L. (EXISTING S.L.)	1.251	(1.251)	1.255	(1.255)	2.283	(2.283)	2.223	3.664	(3.664)	3.500	(3.500)	3.517	(3.517)	3.443	(3.443)	3.441	(3.441)	3.441	(3.441)	3.441	(3.441)	3.441	(3.441)	3.452	(3.452)	3.440	(3.440)	3.407	3.442	(3.442)	3.441	(3.441)	3.358	(2.958)	3.489	(3.052)	1.924	(1.890)	0.644	(1.196)
	2.133	(2.133)	2.584	(2.584)		(2.676)					(2.291)																												
STRUCTURE SETOUT COORDINATES	E 508834.940	N 7051470.426	E 508879.880	N 7051490.063	E 508903.845	N 7051503.597	E 508900.474	E 508859.529	N 7051408.784	E 508863.308	N 7051428.448	E 508864.561	N 7051427.336	E 508884.567	N 7051403.745	E 508895.079	N 7051400.888	E 508907.587	N 7051400.798	E 508911.726	N 7051408.921	E 508905.239	N 7051419.638	E 508903.198	N 7051436.852		E 508832.519	N 7051428.412	E 508921.351	N 7051425.395	N 7051417.159	E 508893.377	N 7051413.253	E 508905.239	N 7051419.638	E 509052.197	N 7051458.509	E 509059.646	N 7051468.195	E 508820.790	N 7051451.094	E 508812.841	N 7051449.427
	E 508841.092	N 7051455.352	E 508868.205	N 7051476.511	E 508899.249	N 7051485.123																																		
LENGTH	16.282		13.954		3.774	16.821		20.023	10.958	28.201		1.675		10.893	12.508	9.116	12.527	17.335	44.413		11.567	5.725	20.753		13.471		12.215		13.606	
DISTANCE ALONG DRAIN	-31.712	47.993	-3.774	10.180	-3.774	0.000	16.821	-9.770	10.253	21.211	49.412	0.000	1.675	0.000	10.893	23.401	32.518	45.045	62.380	106.793	0.000	11.567	17.292	38.045	0.000	13.471	0.000	12.215	0.000	13.606
LINE	96		96B		96C			97				97A		98							98A				98B		46		TEMP	

LONGITUDINAL SECTIONS

SCALE A1 - 1:1000(H) 1:100(V)
A3 - 1:2000(H) 1:200(V)

NOTE:
1. REFER TO DWG CI-2300 FOR STORMWATER NOTES & LEGEND

HOR. 10 0 10 20 30 40 50m 1:1000
VERT. 1 0 1 2 3 4 5m 1:100

Rev.	Date	Description	Des.	Verif.	Appd.
5	16/08/2019	TRG REVIEW;	CK	AFH	GGT
4	20/05/2019	TRG REVIEW; HORTON APART. DRAINAGE REMOVED	CK	AFH	GGT
3	5/04/2019	ISSUED FOR TENDER - STAGE 1C(1) MUNDOO BOULEVARD	AS	DH	GT
2	6/02/2019	ISSUE FOR APPROVAL	CK	DH	GT
1	20/12/2018	FOR INFORMATION ONLY	CK	DH	GT

SunCentral Maroochydore

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Drawn	AJH	Date 20/12/2018
Checked	DH	Date 20/12/2018
Designed	CK	Date 20/12/2018
Verified	GT	Date 6/02/2019
Approved	G.Tamblyn	RPEQ No. 1723 DATE 6/02/2019

Client: SUNCENTRAL MAROOCHYDORE PTY LTD
Project: MAROOCHYDORE CITY CENTRE CIVIL WORKS - STAGE 1B 1C & 1C(1)
Title: STORMWATER LONGITUDINAL SECTIONS - SHEET 3

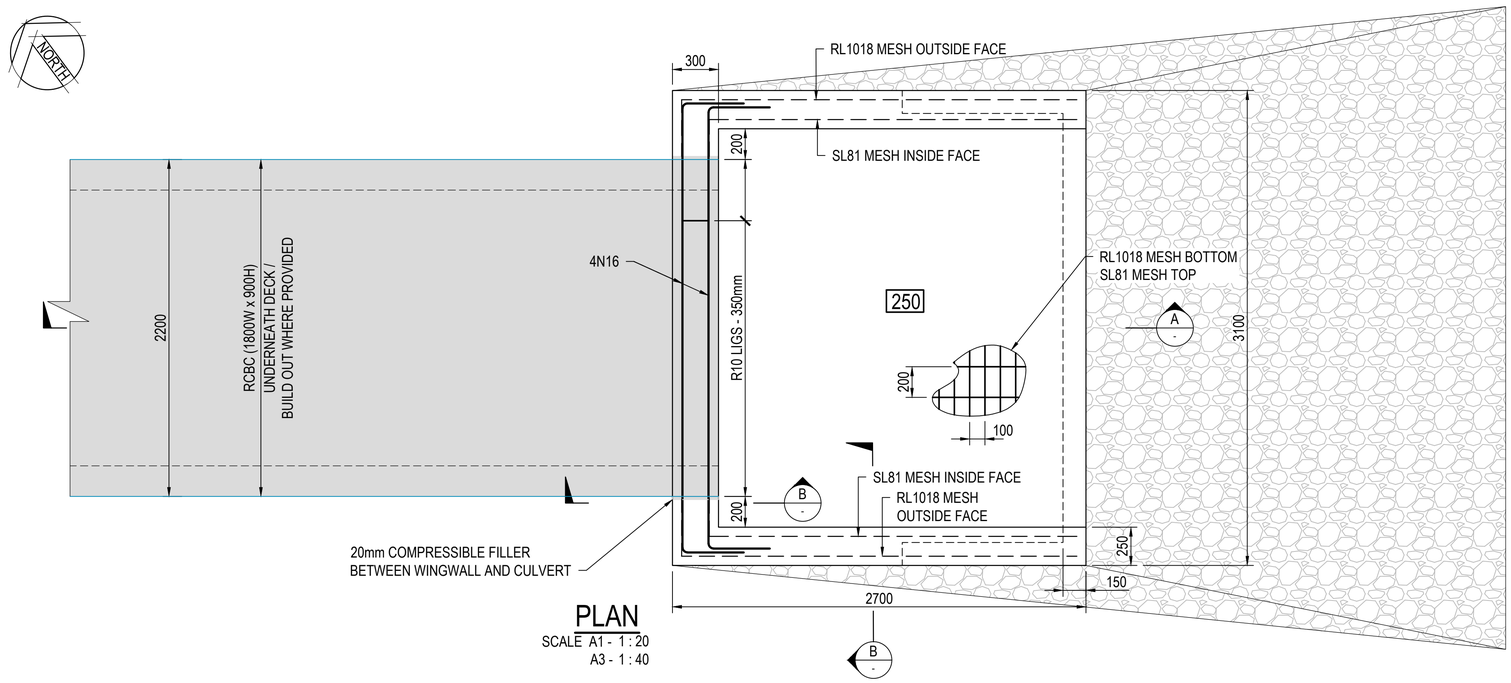
Status: FOR TENDER ONLY
NOT TO BE USED FOR CONSTRUCTION PURPOSES

DATUM	Orig. Date	Scale	Size
AHD	20/12/2018	AS SHOWN	A1

Drawing Number: 249402-CI-2313
Revision: 5

XREFs: X-TITLE BORDER
CAD File: P:\249402 MCC Design Package 1_DESIGN\ACAD_CIVIL STAGE 1B & 1C\249402-CI-2311-2313 STORMWATER LONGITUDINAL SECTIONS.dwg

DATE PLOTTED: 15 August 2019 4:10 PM BY: ANTHONY SKORIC



PLAN

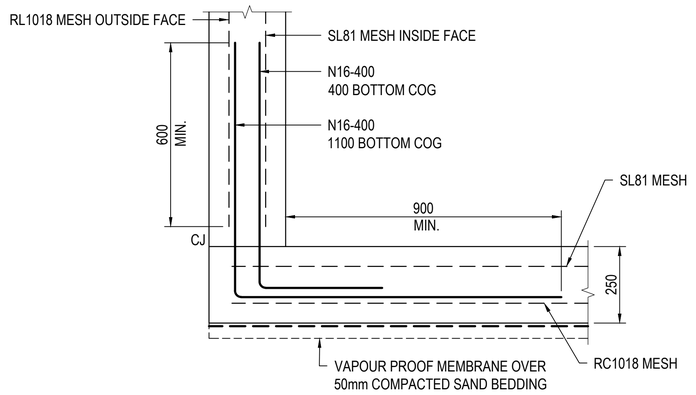
SCALE A1 - 1 : 20
A3 - 1 : 40

NOTES:

1. ALL CONCRETE QUALITY AND CONSTRUCTION PROCEDURES SHALL BE IN ACCORDANCE WITH A.S.3600
2. CONCRETE SHALL BE CLASS S50/20 (EXPOSURE CLASSIFICATION C - AGGRESSIVE ENVIRONMENT).

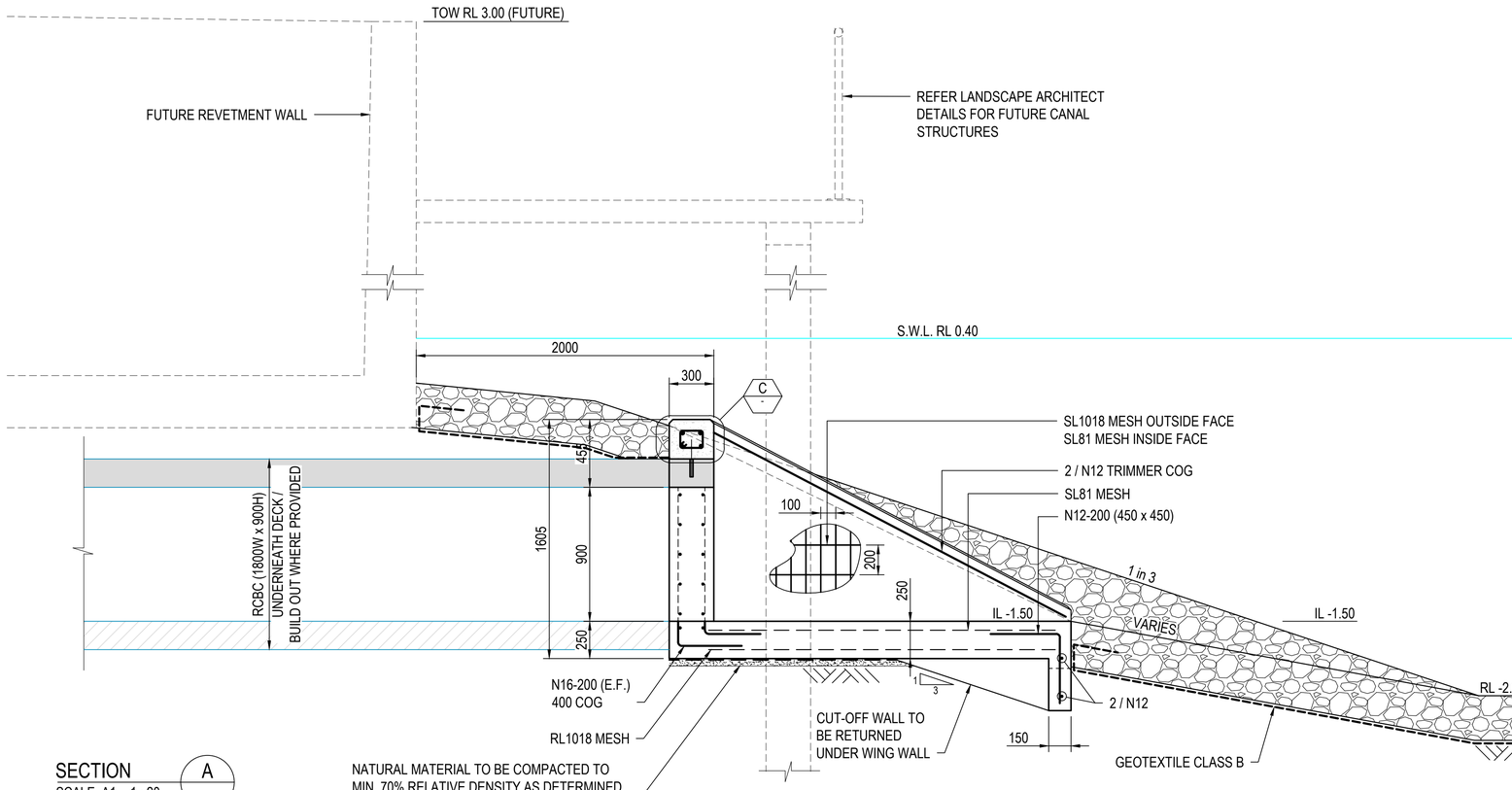
GRADE	MIN. CEMENT CONTENT (Kg/m³)	MAX. W/C RATIO	MAX. AGGREGATE SIZE (mm)
S50	550	0.40	20

3. CONCRETE TO BE SPRAYED WITH APPROVED CURING MEMBRANE AT THE APPLICATION RATE SPECIFIED BY THE MANUFACTURER. APPLY WITHIN 1 HOUR OF CONCRETE POUR OR AS DIRECTED BY THE SUPERINTENDENT.
4. ALL EXPOSED EDGES SHALL BE CHAMFERED 25mm.
5. ALL COVER TO ALL REINFORCEMENT SHALL BE 70mm.
6. (E.F.) DENOTES EACH FACE WITH SPECIFIED COVER.



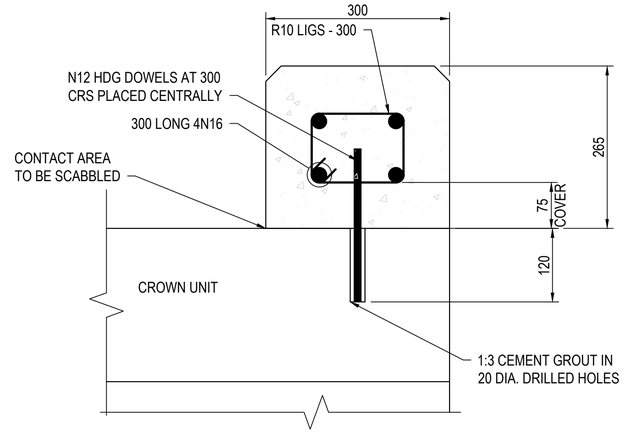
SECTION B

SCALE A1 - 1 : 10
A3 - 1 : 20



SECTION A

SCALE A1 - 1 : 20
A3 - 1 : 40



DETAIL C

SCALE A1 - 1 : 5
A3 - 1 : 10

0 200 400 600 800 1000mm
SCALE 1:10 @A1

0 100 200 300 400 500mm
SCALE 1:5 @A1

0 500 1000 1500 2000mm
SCALE 1:20 @A1

Rev.	Date	Description	Des.	Verif.	Appd.
2	16/08/2019	TRG REVIEW;	CK	AFH	GGT
1	20/05/2019	TRG REVIEW; ADDED TO DWG SET	CK	AR	GGT

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Drawn	CK	Date 20/05/2019
Checked	TH	Date 20/05/2019
Designed	AR	Date 20/05/2019
Verified	GT	Date 20/05/2019
Approved	G.Tamblyn	RPEQ No. 1723 DATE 6/02/2019

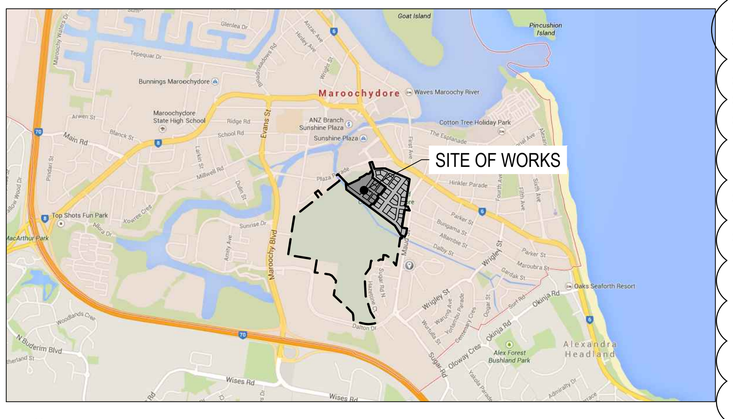
Client: SUNCENTRAL MAROOCHYDORE PTY LTD
Project: MAROOCHYDORE CITY CENTRE
CIVIL WORKS - STAGE 1B 1C & 1C(1)
Title: STORMWATER DRAINAGE OUTLET DETAILS
Status: FOR TENDER ONLY
NOT TO BE USED FOR CONSTRUCTION PURPOSES

DATUM	Orig. Date	Scale	Size
AHD	20/05/2019	AS SHOWN	A1

Drawing Number: 249402-CI-2315
Revision: 2

XREF's: X-TITLE BORDER; X-249402-ST RETAIN WALL - SECT
CAD File: P:\249402 MCC Design Package 1_DESIGN\ACAD_CIVIL STAGE 1B & 1C\249402-CI-2315 STORMWATER OUTLET DETAILS.dwg

DATE PLOTTED: 15 August 2019 4:33 PM BY: ANTHONY SKORIC



NORTH

LOCALITY PLAN

SCALE A1 - N.T.S.
A3 - N.T.S.

NAME OF ESTATE		MAROOCHYDORE CITY CENTRE
SUB-DIVIDER/DEVELOPER		SUNSHINE COAST COUNCIL
APPLICATION No.		
SP DELEGATE APPROVAL DATE		
DRAWING No.		
No. OF ALLOTMENTS		7
AREA (Ha)		3.5Ha
LENGTH OF SEWER (m)	150Ø	33m
	300Ø	30m
	400Ø	154.5m

SCHEDULE OF LIVE SEWER WORKS

No.	DESCRIPTION
1A	0.5m FROM STUB END CAP, CONTRACTOR TO LAY NEW LINE 8/1. AFTER CLEANSING, TESTING AND INSPECTING, NOTIFY UNITYWATER.
1B	UNITYWATER TO REMOVE TEMPORARY END CAPS ON STUB AND LINE 8/1 AND MAKE LIVE CONNECTIONS AFTER SUCCESSFUL 'ON MAINTENANCE' INSPECTION.
2A	0.5m FROM STUB END CAP, CONTRACTOR TO LAY NEW LINE 1/9. AFTER CLEANSING, TESTING AND INSPECTING, NOTIFY UNITYWATER.
2B	UNITYWATER TO REMOVE TEMPORARY END CAPS ON STUB AND LINE 1/9 AND MAKE LIVE CONNECTIONS AFTER SUCCESSFUL 'ON MAINTENANCE' INSPECTION.
3A	0.5m FROM STUB END CAP, CONTRACTOR TO LAY NEW LINE 8/1. AFTER CLEANSING, TESTING AND INSPECTING, NOTIFY UNITYWATER.
3B	UNITYWATER TO REMOVE TEMPORARY END CAPS ON STUB AND LINE 8/1 AND MAKE LIVE CONNECTIONS AFTER SUCCESSFUL 'ON MAINTENANCE' INSPECTION.

SEWERAGE RETICULATION NOTES (PE NUSEWERS)

SP.1. ALL SEWERS LESS THAN 4.0m DEEP SHALL BE DN160 PE100 SDR21 BUTT WELDED NUSEWER UNLESS NOTED OTHERWISE. ALL SEWER GREATER THAN OR EQUAL TO 4.0m DEEP SHALL BE SDR17 UNLESS NOTED OTHERWISE.

SP.2. ALL WELDED PE SEWER PIPE OD250mm OR GREATER TO HAVE INTERNAL BEADING REMOVED.

SP.3. FOR PROPERTY CONNECTION DETAILS REFER TO SEQ STANDARD DRAWINGS SEQ-SEW-1106-1 TO 1106-6.

SP.4. FOR MAINTENANCE HOLE DETAILS REFER TO SEQ STANDARD DRAWINGS SEQ-SEW-1301-1, SEQ-SEW-1301-2 to 1301-13. LADDERS, STEP IRONS AND LANDINGS ARE NOT PERMITTED WITHIN MAINTENANCE HOLES. FOR BENCHING DETAILS REFER TO SEQ STANDARD DRAWINGS SEQ-SEW-1304-1, 1305-1. FOR PIPE CONNECTION DETAILS REFER TO SEQ-SEW-1302-1, 1313-1 (PE & PVC). FOR OTHER PIPE MATERIALS REFER TO SEQ-SEW-1302-1. FOR DROP TYPES REFER TO SEQ-SEW-1303-1, 1306-1.

SP.5. FOR MAINTENANCE SHAFT AND TERMINAL ENTRY POINT DETAILS REFER TO SEQ STANDARD DRAWINGS SEQ-SEW-1315-1 AND SEQ-SEW-1316-1.

SP.6. TRENCH INSTALLATION SHALL COMPLY WITH SEQ-SEW-1200-2, 1201-1, 1202-1, 1203-1, 1204-1, 1205-1. TRENCH TYPES SHALL BE AS FOLLOWS, UNLESS NOTED OTHERWISE:

LOCATION	TRENCH TYPE
< 4.0m DEEP PRIVATE PROPERTY;	3
< 4.0m DEEP FOOTPATHS;	
< 4.0m DEEP NEW ROADS.	
> 4.0m PRIVATE PROPERTY;	4
> 4.0m FOOTPATHS;	
> 4.0m NEW ROADS.	
EXISTING SEALED ROADS	14 (CROSSING SEALED ROADS)
	15, 17 (ALONG SEALED ROADS)

DETECTABLE MARKING TAPE SHALL BE LAID ABOVE ALL BURIED NON-METALLIC PIPES ALONG THE TOP OF THE EMBEDMENT ZONE OR AT 1m BELOW THE SURFACE (WHICHEVER IS CLOSER TO GROUND SURFACE).
TRENCH BACK FILL FOR ALL SEWER GREATER THAN OR EQUAL TO 4.0m DEEP SHALL BE TO LEVEL 1 IN ACCORDANCE WITH AS 3798. GEOTECHNICAL ENGINEER TO BE NOMINATED TO SUPERINTENDENT AND UNITYWATER PRIOR TO COMMENCEMENT OF BACKFILLING. MONTHLY REPORTS TO BE PROVIDED TO THE SUPERINTENDENT AND UNITYWATER CERTIFYING THAT THE REQUIRED COMPACTION HAS BEEN ACHIEVED.

SP.7. FOR DEEP SEWERS IT IS RECOMMENDED THAT CONSTRUCTION TOLERANCES (INC. OVALITY) ARE ASSESSED AT 2m OF BACKFILL. CONTRACTOR TO ENSURE SUITABLE BACKFILLING AND COMPACTION PROCESSES DURING BACKFILLING OPERATION TO ENSURE CONSTRUCTION TOLERANCES ARE ACHIEVED.

SP.8. MAINTENANCE STRUCTURE COVERS SHALL BE AS3996 CLASS D FOR ROADWAYS, CLASS B FOR PRIVATE PROPERTY AND BOLT DOWN BELOW Q100 FLOOD LEVEL. CONCRETE INFILL COVERS NOT ACCEPTED. REFER TO SEQ STANDARD DRAWINGS SEQ-SEW-1308-1 AND SEQ-SEW-1308-5 TO 1308-11.

SP.9. MAINTENANCE STRUCTURE LIDS SHALL BE CONSTRUCTED FLUSH WITH PAVEMENTS, FOOTPATHS AND DRIVEWAYS AND TO FOLLOW SLOPE OF BATTERS 50mm PROUD IN NEW AREAS AND 25mm PROUD IN EXISTING AREAS.

SP.10. MAINTENANCE HOLE BASE LINERS SHALL BE COMPLAS OR SIMILAR F.R.P.

SP.11. SEWER EASEMENTS ARE 3.0m WIDE UNLESS NOTED OTHERWISE.

SP.12. IN A NUSEWER RETICULATION SYSTEM WHERE GROUND CONDITIONS DICTATE THE USE OF TRENCH SHIELDS ON THE SEWER MAIN, AND A HOUSE CONNECTION TYPE B (SLOPED) IS NOMINATED. THE CONTRACTOR MAY REPLACE WITH A TYPE C (VERTICAL) AT THE DISCRETION OF THE SUPERINTENDENT.

SP.13. LANDSCAPING AND PLANTING TO BE IN ACCORDANCE WITH UNITYWATER PLANTING GUIDE.

SEWERAGE RETICULATION NOTES (RIGSS)

SR.1. ALL SEWERS SHALL BE DN150 UPVC SN8 RRJ UNLESS NOTED OTHERWISE. WHERE SEWERS ARE GREATER THAN 3m DEEP USE UPVC PN12.

SR.2. ALL DICL PIPES TO BE PE SLEEVE WRAPPED (OR APPROVED EQUIVALENT) IN ACCORDANCE WITH AS3680, AS3681 AND PIPE MANUFACTURERS SPECIFICATIONS.

SR.3. FOR PROPERTY CONNECTION DETAILS REFER TO SEQ STANDARD DRAWINGS SEQ-SEW-1104-1 AND 1105-1.

SR.4. FOR MAINTENANCE HOLE DETAILS REFER TO SEQ STANDARD DRAWING SEQ-SEW-1300-1 (PRE-CAST) OR 1301-1, 1307-1 (CAST IN-SITU). LADDERS, STEP IRONS AND LANDINGS ARE NOT PERMITTED WITHIN MAINTENANCE HOLES. FOR BENCHING DETAILS REFER TO SEQ STANDARD DRAWINGS SEQ-SEW-1304-1, 1305-1. FOR PIPE CONNECTION DETAILS REFER TO SEQ-SEW-1302-1, 1313-1 (PE & PVC). FOR OTHER PIPE MATERIALS REFER TO SEQ-SEW-1302-1. FOR DROP TYPES REFER TO SEQ-SEW-1303-1, 1306-1.

SR.5. FOR MAINTENANCE SHAFT AND TERMINAL ENTRY POINT DETAILS REFER TO SEQ STANDARD DRAWINGS SEQ-SEW-1314-1 AND SEQ-SEW-1314-2.

SR.6. TRENCH INSTALLATION SHALL COMPLY WITH SEQ-SEW-1200-2, 1201-1, 1202-1, 1203-1, 1204-1, 1205-1. TRENCH TYPES SHALL BE AS FOLLOWS, UNLESS NOTED OTHERWISE:

LOCATION	TRENCH TYPE
PRIVATE PROPERTY	3
FOOTPATHS	3
NEW ROADS	3
EXISTING SEALED ROADS	14 (CROSSING SEALED ROADS)
	15, 17 (ALONG SEALED ROADS)

DETECTABLE MARKING TAPE SHALL BE LAID ABOVE ALL BURIED NON-METALLIC PIPES ALONG THE TOP OF THE EMBEDMENT ZONE OR AT 1m BELOW THE SURFACE (WHICHEVER IS CLOSER TO GROUND SURFACE).

SR.7. MAINTENANCE STRUCTURE COVERS SHALL BE AS3996 CLASS D FOR ROADWAYS, CLASS B FOR PRIVATE PROPERTY AND BOLT DOWN BELOW Q100 FLOOD LEVEL. CONCRETE INFILL COVERS NOT ACCEPTED. REFER TO SEQ STANDARD DRAWINGS SEQ-SEW-1308-1 AND SEQ-SEW-1308-5 TO 1308-11.

SR.8. MAINTENANCE STRUCTURE LIDS SHALL BE CONSTRUCTED FLUSH WITH PAVEMENTS, FOOTPATHS AND DRIVEWAYS AND TO FOLLOW SLOPE OF BATTERS 50mm PROUD IN NEW AREAS AND 25mm PROUD IN EXISTING AREAS.

SR.9. MAINTENANCE HOLE BASE LINERS SHALL BE COMPLAS OR SIMILAR F.R.P.

SR.10. SEWER EASEMENTS ARE 3.0m WIDE UNLESS NOTED OTHERWISE.

SR.11. IN A RIGGS RETICULATION SYSTEM WHERE GROUND CONDITIONS DICTATE THE USE OF TRENCH SHIELDS ON THE SEWER MAIN, AND A HOUSE CONNECTION TYPE B (SLOPED) IS NOMINATED, THE CONTRACTOR MAY REPLACE WITH A TYPE D (VERTICAL) AT THE DISCRETION OF THE SUPERINTENDENT

SEWERAGE RETICULATION GENERAL NOTES

SG.1. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT SEQ SEWERAGE DESIGN AND CONSTRUCTION (D&C) CODE SPECIFICATIONS AND STANDARD DRAWINGS.

SG.2. UNLESS SPECIFIED OTHERWISE ALL MATERIALS AND WORK SHALL COMPLY WITH THE RELEVANT AUSTRALIAN STANDARDS.

SG.3. ALL WORK ASSOCIATED WITH LIVE SEWERS OR MAINTENANCE HOLES SHALL BE CARRIED OUT BY UNITYWATER AT THE DEVELOPER'S COST. ALLOTMENTS REQUIRING A PROPERTY CONNECTION FROM EXISTING SEWERS SHALL BE PROVIDED BY UNITYWATER AT THE DEVELOPERS COST.

SG.4. ALL PRODUCTS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE SEQ "ACCEPTED PRODUCTS AND MATERIALS" LIST.

SG.5. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL EXISTING SERVICES WITH RELEVANT AUTHORITIES BEFORE COMMENCING WORKS

SG.6. ALIGNMENT:- UNLESS NOTED OTHERWISE, SEWERS AND MAINTENANCE STRUCTURES SHALL BE LOCATED AS FOLLOWS:
1.75m FROM FRONT ALLOTMENT BOUNDARIES WITHIN ROAD RESERVE,
1.00m FROM SIDE ALLOTMENT BOUNDARIES

SG.7. EACH ALLOTMENT SHALL BE SERVED BY A DN100 PVC (OR DN110 PE) PROPERTY CONNECTION. FOR ALLOTMENTS OTHER THAN SINGLE RESIDENTIAL, A DN150 PVC (OR DN160 PE) PROPERTY CONNECTION SHALL BE PROVIDED.

SG.8. PROPERTY CONNECTIONS SHALL BE LOCATED WITHIN THE PROPERTY AS SHOWN IN THE DRAWINGS. PROPERTY CONNECTION BRANCHES SHALL EXTEND INTO THE PROPERTY A MINIMUM OF 500mm, MAXIMUM OF 750mm.

SG.9. PIPE BEDDING, EMBEDMENT, AND BACKFILL SHALL BE COMPACTED IN ACCORDANCE WITH THE SEQ SEWERAGE CODE. WHERE PIPES ARE LAID IN FILL, THE FILLING SHALL BE CARRIED OUT IN LAYERS NOT EXCEEDING 300mm (LOOSE) IN DEPTH AND SHALL BE COMPACTED UNTIL THE COMPACTION IS NOT LESS THAN 95% OF THE MATERIALS MAXIMUM COMPACTION WHEN TESTED IN ACCORDANCE WITH A.S. 1289 (MODIFIED COMPACTION). TESTING SHALL BE CARRIED OUT AFTER EACH ALTERNATE LAYER. APPROVAL OF CONSTRUCTED SEWERS WILL NOT BE ISSUED BY UNITYWATER UNLESS CERTIFICATES ARE PRODUCED CERTIFYING THAT THE REQUIRED COMPACTION HAS BEEN ACHIEVED.

SG.10. WHERE SEWERS HAVE A GRADE OF 1 IN 20 (5.0%) OR STEEPER, BULKHEADS AND TRENCHSTOPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE SEQ SEWERAGE CODE.

SG.11. WHERE SHOWN ON THE DRAWINGS, EXISTING SEWERS SHALL BE DISUSED/ABANDONED IN ACCORDANCE WITH PROCEDURES SET OUT IN THE SEQ SEWERAGE CODE.

SG.12. BENCH MARK AND LEVELS TO AHD.

SG.13. EXISTING DWELLINGS SERVED BY A SEPTIC SYSTEM, SHALL BE CONNECTED TO THE NEW SEWER BY A LICENSED PLUMBER IN ACCORDANCE WITH THE RELEVANT STATUTORY AND REQUIREMENTS. THE SEPTIC SYSTEM, INCLUDING TRENCHES SHALL BE REMOVED AT THE DEVELOPERS COST. ALL FIXTURES SHALL BE UPGRADED IF REQUIRED BY PLUMBING CODE.

SG.14. PROPERTY CONNECTIONS HAVE BEEN DESIGNED TO CONTROL THE ENTIRE LOT AT A GRADE OF 1 IN 60 (MINIMUM), AND A MAXIMUM DEPTH OF PROPERTY CONNECTION OF 1.50 m, UNLESS OTHERWISE STATED.

SG.15. ALL SEWERS SHALL BE INSPECTED BY CCTV IN ACCORDANCE WITH THE SEQ SEWERAGE CODE.

SG.16. ALL SEWER MAINS AND MAINTENANCE STRUCTURES SHALL BE VACUUM TESTED IN ACCORDANCE WITH THE SEQ SEWERAGE CODE.

SG.17. MANHOLES WILL REQUIRE PROTECTION COATINGS IN THE FOLLOWING CIRCUMSTANCES:
ALL 1500mm DIA AND LARGER MANHOLES;
MANHOLES GREATER THAN 4m IN DEPTH;
MANHOLES ON SEWERS > 300mm NOMINAL BORE;
MANHOLES SERVICING INDUSTRIAL ESTATES; AND
SPS COLLECTION MANHOLES.

ENVIRONMENTAL CONDITIONS

ALL ENVIRONMENT PROTECTION MEASURES SHALL BE IMPLEMENTED PRIOR TO ANY CONSTRUCTION AND CLEARING COMMENCING.

VEGETATION PROTECTION

A. TREES LOCATED ALONG THE FOOTPATH SHALL BE, WHERE POSSIBLE TRANSPLANTED PRIOR TO CONSTRUCTION, OR REPLACED IF DESTROYED.

B. WHEN WORKING WITHIN 4m OF TREES, RUBBER OR HARDWOOD GIRDLES SHALL BE CONSTRUCTED WITH 1.8m BATTENS CLOSELY SPACED AND ARRANGED VERTICALLY FROM GROUND LEVEL. GIRDLES MUST BE STRAPPED TO TREES PRIOR TO CONSTRUCTION AND REMAIN UNTIL COMPLETION.

C. WHERE POSSIBLE, TREE ROOTS SHALL BE TUNNELLED UNDER, RATHER THAN SEVERED. IF ROOTS ARE SEVERED THE DAMAGED AREA SHALL BE TREATED WITH A SUITABLE FUNGICIDE. CONTACT COUNCIL ARBORIST FOR FURTHER ADVICE.

D. ANY TREE LOPPING REQUIRED SHALL BE UNDERTAKEN BY AN APPROVED ARBORIST.

SOIL

E. TOPSOIL AND SUBSOIL MATERIALS SHALL BE STOCKPILED SEPARATELY.

F. CARE SHOULD BE TAKEN TO PREVENT SEDIMENT FROM ENTERING THE STORMWATER SYSTEM. THIS MAY INVOLVE PLACING APPROPRIATE SEDIMENT CONTROLS AROUND STOCKPILES.

G. ACID SULPHATE SOILS EXIST IN THE WORKS AREA. THE OUTPUTS FROM THE RISK ASSESSMENT BASED ON THE QUEENSLAND ACID SULPHATE SOIL TECHNICAL MANUAL REQUIRES THAT ACID SULPHATE SOILS ARE MANAGED IN ACCORDANCE WITH STATE LEGISLATION, THE GEOTECHNICAL REPORT AND METHODOLOGIES DEFINED IN THE SITE BASED MANAGEMENT PLAN.

REHABILITATION

H. PRE-DISTURBANCE SOIL PROFILES AND COMPACTION LEVELS ARE TO BE REINSTATED.

I. PRE-DISTURBANCE VEGETATION PATTERNS SHALL BE RESTORED.

CREEK CROSSINGS

J. SILTATION CONTROL MEASURES SHALL BE PLACED DOWNSTREAM OF ANY EXCAVATION WORK.

K. APPROPRIATE SEDIMENT CONTROLS SHALL BE USED TO PREVENT SEDIMENT FROM ENTERING THE CREEK.

L. NO SOIL SHALL BE STOCKPILED WITHIN 5m OF A CREEK.

Rev.	Date	Description	Des.	Verif.	Appd.
5	16/08/2019	TRG REVIEW; NOTES AMENDED	CK	AFH	GGT
4	20/05/2019	TRG REVIEW	CK	AFH	GGT
3	5/04/2019	ISSUED FOR TENDER - STAGE 1C(1) MUNDOO BOULEVARD	AS	DH	GT
2	6/02/2019	ISSUE FOR APPROVAL	CK	DH	GT
1	20/12/2018	FOR INFORMATION ONLY	CK	DH	GT

SunCentral Maroochydore

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Drawn	AE	Date 20/12/2018
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Verified	GT	Date 6/02/2019
Approved	G.Tamblyn	RPEQ No. 1723 DATE 6/02/2019

Client: SUNCENTRAL MAROOCHYDORE PTY LTD
Project: MAROOCHYDORE CITY CENTRE
CIVIL WORKS - STAGE 1B 1C & 1C(1)
Status: FOR TENDER ONLY
NOT TO BE USED FOR CONSTRUCTION PURPOSES
Title: SEWERAGE TYPICAL NOTES AND DETAILS

DATUM	Orig. Date	Scale	Size
AHD	20/12/2018	AS SHOWN	A1

Drawing Number: 249402-CI-2400
Revision: 5

XREFs: x-TITLE BORDER
CAD File: P:\249402 MCC Design Package 1_DESIGN\ACAD_CIVIL STAGE 1B & 1C\249402-CI-2400 SEWERAGE TYP NOTES & DETAILS.dwg

DATE PLOTTED: 17 September 2019 10:30 AM BY: - AARON ELLARD

LEGEND:

- STRUCTURE / BEND NUMBER / LINE NUMBER
- S150 — SEWER MAIN AND STRUCTURE
- DIRECTION OF HOUSE CONNECTION TO MAIN
- H.D. — HOUSE DRAIN TO EXTEND 1.00m MIN. BEYOND R.P. BOUNDARY INTO ALLOTMENT SERVED
- SRM — RISING MAIN
- AV / SC / SRM — AIR VALVE / SCOUR VALVE
- SEWER EASEMENT
- 3.50 — FINISHED CONTOURS
- SWD — STORMWATER DRAINAGE
- W100 — WATER RETICULATION
- (SC) — SMART CITY CONDUITS
- E — ELECTRICAL, PILLAR, COMMS AND LIGHTING
- PW — PNEUMATIC WASTE - BY OTHERS
- STAGE BOUNDARY

- W — EXISTING WATER RETICULATION MAIN
- W100 — EXISTING STOP VALVE/FIRE HYDRANT
- S150 — EXISTING GRAVITY MAIN
- SRM — EXISTING RISING MAIN
- SWD — EXISTING STORMWATER
- E/OH — EXISTING OVERHEAD ELECTRICITY LINE
- E/UG — EXISTING UNDERGROUND ELECTRICITY LINE

NOTES:

1. THIS PLAN IS TO BE READ IN CONJUNCTION WITH DWG 249402-CI-2001 GENERAL NOTES & DWG CI-2400 SEWERAGE TYPICAL NOTES & DETAILS.
2. PROPERTY CONNECTIONS HAVE BEEN DESIGNED TO CONTROL THE ENTIRE LOT AT A GRADE OF 1 IN 60, A F.F.L. OF RL 3.50, AND A MAXIMUM DEPTH OF PROPERTY CONNECTION OF 1.50 m, UNLESS OTHERWISE STATED.

NORTH

MUNDOO BLVD

SOUTH SEA ISLANDER WAY

I2 I3 H1 G1

J1 J2 K2 K1 L2 L1 M N F2 F1 E2 E1

MARKET LN

LIGHTNING LN

FIRST AVE

PARK

STAGE 1A

STAGE 1B

STAGE 1C

STAGE 1C(1)
(MUNDOO BLVD)

SEWER RISING MAIN BY OTHERS, REFER DWG U14332 SERIES

FUTURE WAY

SUNSHINE COAST PDE

OVERFLOW CHAMBER IN ACCORDANCE WITH STD. DWG. SEQ-SEW-1413-1 REFER LONGSECTIONS

FUTURE ODOUR CONTROL UNIT (OCU) IN ACCORDANCE WITH ODOUR REPORTING

FUTURE SEWER RISING MAIN

MAUD CANAL

PLAN

SCALE A1 - 1 : 500
A3 - 1 : 1000

5 0 5 10 15 20 25m
Scale 1:500

Rev.	Date	Description	Des.	Verif.	Appd.
7	17/09/2019	TRG COMMENTS; STAGE 1C(1) WORKS BOUNDARY AMENDED	CK	AFH	GGT
6	20/08/2019	TRG REVIEW; MUNGAR ST VERGE WORKS REMOVED	CK	AFH	GGT
5	16/08/2019	TRG REVIEW; STAGE 1C(1) WORKS BOUNDARY AMENDED	CK	AFH	GGT
4	20/05/2019	TRG REVIEW; BACKGROUND LAYERS UPDATED	CK	AFH	GGT
3	5/04/2019	ISSUED FOR TENDER - STAGE 1C(1) MUNDOO BOULEVARD	AS	DH	GT
2	6/02/2019	ISSUE FOR APPROVAL	CK	DH	GT
1	20/12/2018	FOR INFORMATION ONLY	CK	DH	GT

SunCentral Maroochydore

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Drawn	AE	Date 21/11/2018
Checked	DH	Date 21/11/2018
Designed	CK	Date 21/11/2018
Verified	GT	Date 6/02/2019
Approved	G.Tamblyn	RPEQ No. 1723 DATE 6/02/2019

Client: SUNCENTRAL MAROOCHYDORE PTY LTD

Project: MAROOCHYDORE CITY CENTRE
CIVIL WORKS - STAGE 1B 1C & 1C(1)

Title: SEWERAGE RETICULATION PLAN

Status: FOR TENDER ONLY
NOT TO BE USED FOR CONSTRUCTION PURPOSES

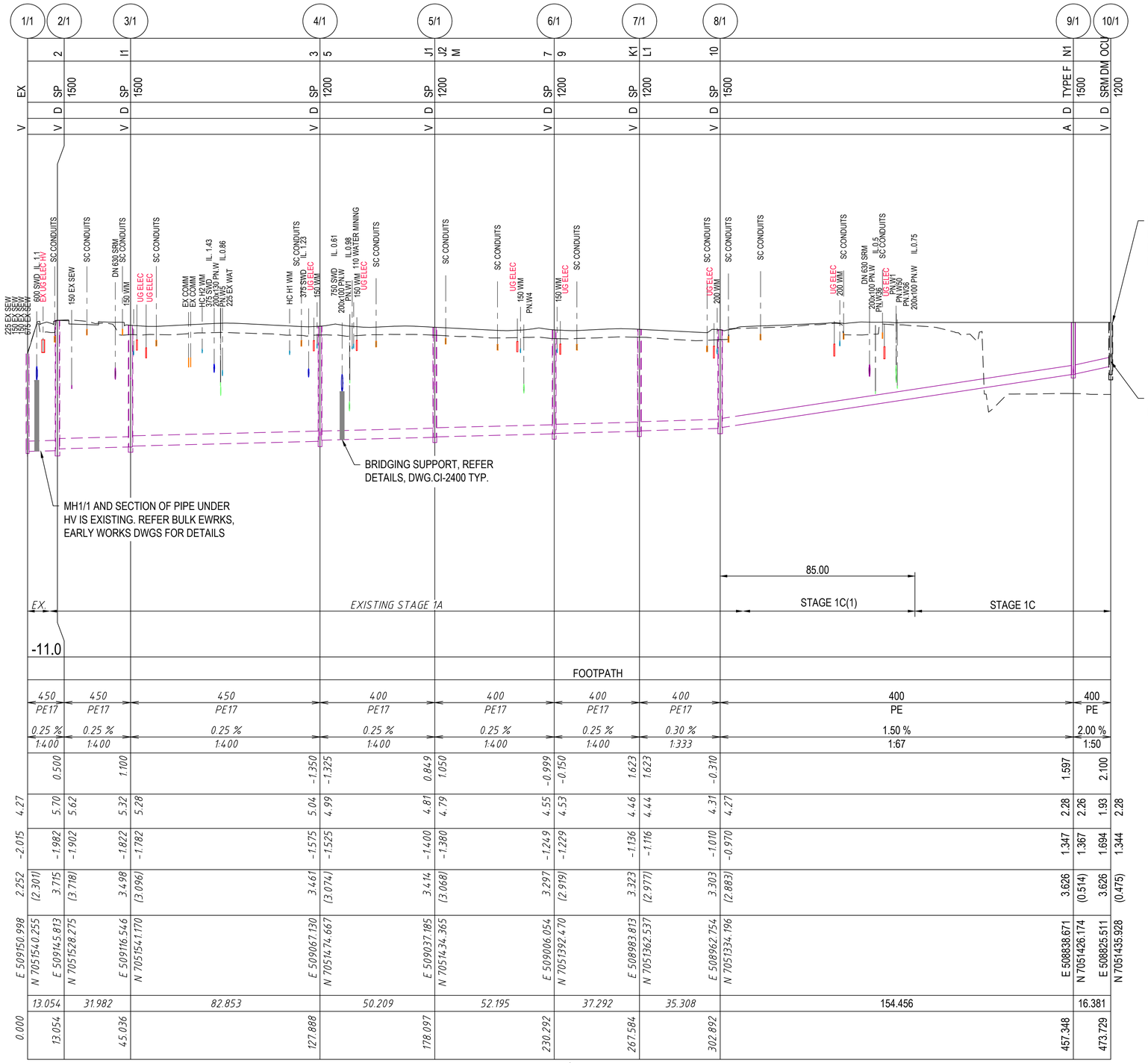
DATUM	Orig. Date	Scale	Size
AHD	21/11/2018	AS SHOWN	A1

Drawing Number: 249402-CI-2402

Revision: 7

XREFs: X-TITLE BORDER; X-249402-EXISTING; X-249402-RP BASE; X-249402 DESIGN STAGE 1B & 1C; X-249402 DESIGN STAGE 1A EXISTING; X-249402-ELEC COMM & LIGHT ST1C(1) & 01C; X-249402 AWCS STAGE 01; X-249402 AWCS STAGE 02
CAD File: P:\249402_MCC Design Package 1_DESIGN\ACAD_CIVIL STAGE 1B & 1C\249402-CI-2402 SEWERAGE RETICULATION PLAN.dwg

DATE PLOTTED: 15 August 2019 4:11 PM BY: ANTHONY SKORIC



LEGEND:

- NATURAL SURFACE
- PROPOSED SURFACE
- FUTURE SURFACE
- PROPOSED SEWER PIPE
- EXISTING SEWER PIPE
- DENOTES PIPE CLASS UPGRADE TO PN12. REFER NOTE SL.8.
- LIGHT RAIL 1.50m DEEP VOLUMETRIC EASEMENT
- (L.I.) LID INFILL TO MATCH SURROUNDING PAVEMENT.

SEWERAGE LONGITUDINAL NOTES:

SL.1. TO BE READ IN CONJUNCTION WITH SHEET CI-2400 & CI-2402

SL.2. STRUCTURES :

TEP	TERMINAL ENTRY POINT
MS	MAINTENANCE SHAFT (POO PIT)
P1-P3	PRECAST MAINTENANCE HOLE
C	CAST-IN-SITU MAINTENANCE HOLE
TYPE F	MAINTENANCE HOLE TO BE IN ACCORDANCE WITH STD. DWG. SEQ-SEW-1307-1.
SP	>4.00m DEEP MAINTENANCE HOLE - PE LINED REFER DWG. CI-2420-2421 & NOTE #12
SRB	SHORT RADIUS BEND
LRB	LONG RADIUS BEND
Y JCT	40° SUNCTION
E	CAPPED END
SRM DM	SEWER RISING MAIN DISCHARGE MH

SL.3. PIPES :

PN12	uPVC SERIES 12 R.R.J.
SN8	uPVC R.R.J.
PE	PE 100 BUTT WELDED, CLASS SDR 21 - TYPE 3 BEDDING
PE17	PE 100 BUTT WELDED, CLASS SDR 17 > 4.0m DEEP - TYPE 4 BEDDING

SL.4. HOUSE CONNECTIONS / DROP TYPE (RIGGS):

A	STANDARD CONNECTION
B	SLOPED CONNECTION
D	VERTICAL RISER
SZ	POO PIT VERTICAL RISER CONNECTION
SV	POO PIT AT BASE CONNECTION
V	DROP BENCHING - STRAIGHT THROUGH
X	DROP INTERNAL BACKDROP
W	DROP OBLIQUE
Y	MH EXTERNAL BACKDROP

SL.5. HOUSE CONNECTIONS / DROP TYPE (NUSEWER):

A1, A2	STANDARD/EXTENDED - LINE
A3, A4	STANDARD/EXTENDED - MH
B1, B2	SLOPED/EXTENDED - LINE
B3, B4	SLOPED/EXTENDED - MH
C1, C2	VERTICAL RISER/EXTENDED - LINE
C3, C4	VERTICAL RISER/EXTENDED - MH
A	DROP BECHING - STRAIGHT THROUGH
C	DROP OBLIQUE
D	MH EXTERNAL BACKDROP
ID	MH INTERNAL BACKDROP

SL.6. LOCATIONS:

PP	PRIVATE PROPERTY
FP	FOOTPATH \ VERGE
RD	ROAD

SL.7. THIS PLAN IS TO BE READ IN CONJUNCTION WITH DWG. 249402-CI-2400.

SL.8. ALL RIGGS ROAD AND STORMWATER CROSSINGS SHALL BE UPVC R.R.J. PN12 AS SHOWN (MINIMUM OF ONE LENGTH 6.00m).

SL.9. FOR COMPACTION REQUIREMENTS, CONSTRUCTION AND TESTING METHODOLOGY REFER TO WSAA 02 - PART 3 FOR DETAILS.

SL.10. FOR BULKHEAD AND TRENCH STOP DETAILS REFER TO SEQ WATER STANDARD DRAWING SEQ-SEW-1206-1

SL.11. LONG RADIUS BENDS ARE SETOUT TO IP's EXCEPT WHERE SHOWN.

SL.12. MANHOLES WILL REQUIRE PROTECTION COATINGS IN THE FOLLOWING CIRCUMSTANCES:

- ALL 1500mm DIA AND LARGER MANHOLES;
- MANHOLES GREATER THAN 4m IN DEPTH;
- MANHOLES ON SEWERS > 300mm NOMINAL BORE;
- MANHOLES SERVICING INDUSTRIAL ESTATES; AND
- SPS COLLECTION MANHOLES.

LONGITUDINAL SECTIONS

SCALE A1 - 1:1000(H) 1:100(V)
A3 - 1:2000(H) 1:200(V)

HOR. 10 0 10 20 30 40 50m 1:1000
VERT. 1 0 1 2 3 4 5m 1:100

Rev.	Date	Description	Des.	Verif.	Appd.
5	16/08/2019	TRG REVIEW;	CK	AFH	GGT
4	20/05/2019	TRG REVIEW; NOTES REVISED	CK	AFH	GGT
3	5/04/2019	ISSUED FOR TENDER - STAGE 1C(1) MUNDOO BOULEVARD	AS	DH	GT
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Drawn	AJH	Date 20/12/2018
Checked	DH	Date 20/12/2018
Designed	CK	Date 20/12/2018
Verified	GT	Date 6/02/2019
Approved	RPEQ No. 1723 G.Tamblyn	DATE 6/02/2019

Client: SUNCENTRAL MAROOCHYDORE PTY LTD
Project: MAROOCHYDORE CITY CENTRE
CIVIL WORKS - STAGE 1B 1C & 1C(1)
Title: SEWERAGE LONG SECTIONS - SHEET 1

Status: FOR TENDER ONLY
NOT TO BE USED FOR CONSTRUCTION PURPOSES

DATUM	Orig. Date	Scale	Size
AHD	21/11/2018	AS SHOWN	A1

Drawing Number: 249402-CI-2411
Revision: 5

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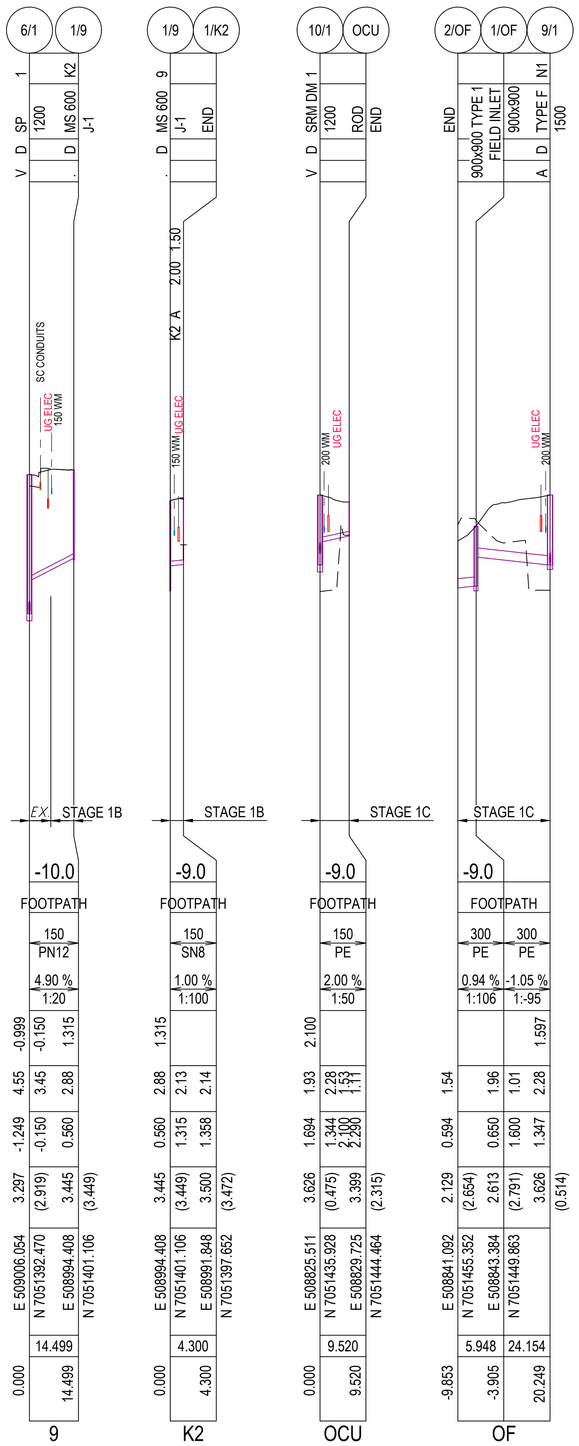
CAD File: P:\249402 MCC Design Package 1_DESIGN\ACAD_CIVIL STAGE 1B & 1C\249402-CI-2411-2412 SEWERAGE LONG SECTIONS.dwg

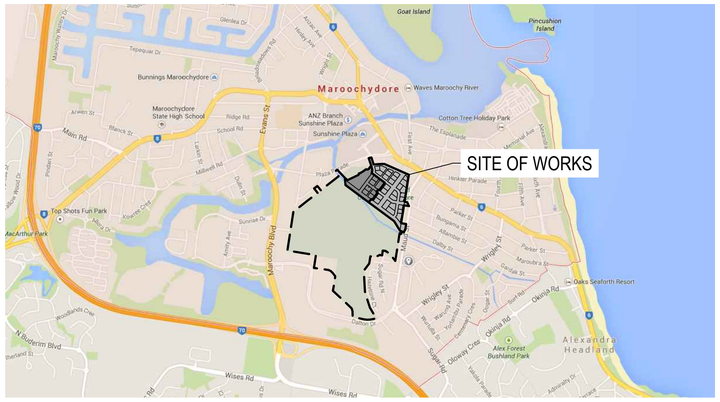
DATE PLOTTED: 15 August 2019 4:11 PM BY: ANTHONY SKORIC

STRUCTURE No	6/1	1/9	1/9	1/K2	10/1	OCU	2/OF	1/OF	9/1
JUNCTION LINE No	1	K2	9						N1
STRUCTURE TYPE	SP	1200	MS 600	J-1	SRM DM 1	1200	END	900x900 TYPE 1 FIELD INLET	900x900	TYPE F	1500
LID TYPE	D	D	D	END	D	ROD	END			D	
DROP TYPE	V	.	.		V	END				A	
HC DEPTH				2.00 1.50							
HC INVERT LEVEL				K2 A							
HC TYPE											
HC LOT No											



| DATUM RL | | | | | | | | | | |

DATE PLOTTED: 17 September 2019 3:11 PM BY: - AARON ELLARD



LOCALITY PLAN

SCALE A1 - N.T.S.
A3 - N.T.S.

WATER MAIN SIZES

SIZE DN	SIZE OD	MATERIAL	LINE TYPE
100		PVC-O SERIES 2 PN16 R.R.J. SN10	W100
150		PVC-O SERIES 2 PN16 R.R.J. SN10	W150
200		PVC-O SERIES 2 PN16 R.R.J. SN10	W200
250		PVC-O SERIES 2 PN16 R.R.J. SN10	W250

ENVIRONMENTAL CONDITIONS

ALL ENVIRONMENT PROTECTION MEASURES SHALL BE IMPLEMENTED PRIOR TO ANY CONSTRUCTION AND CLEARING COMMENCING.

VEGETATION PROTECTION

A. TREES LOCATED ALONG THE FOOTPATH SHALL BE, WHERE POSSIBLE TRANSPLANTED PRIOR TO CONSTRUCTION, OR REPLACED IF DESTROYED.
B. WHEN WORKING WITHIN 4m OF TREES, RUBBER OR HARDWOOD GIRDLES SHALL BE CONSTRUCTED WITH 1.8m BATTENS CLOSELY SPACED AND ARRANGED VERTICALLY FROM GROUND LEVEL. GIRDLES MUST BE STRAPPED TO TREES PRIOR TO CONSTRUCTION AND REMAIN UNTIL COMPLETION.
C. WHERE POSSIBLE, TREE ROOTS SHALL BE TUNNELLED UNDER, RATHER THAN SEVERED. IF ROOTS ARE SEVERED THE DAMAGED AREA SHALL BE TREATED WITH A SUITABLE FUNGICIDE. CONTACT COUNCIL ARBORIST FOR FURTHER ADVICE.
D. ANY TREE LOPPING REQUIRED SHALL BE UNDERTAKEN BY AN APPROVED ARBORIST.

SOIL

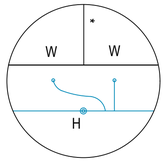
E. TOPSOIL AND SUBSOIL SHALL BE STOCKPILED SEPARATELY.
F. CARE SHOULD BE TAKEN TO PREVENT SEDIMENT FROM ENTERING THE STORMWATER SYSTEM. THIS MAY INVOLVE PLACING APPROPRIATE SEDIMENT CONTROLS AROUND STOCKPILES.
G. ACID SULPHATE SOILS EXIST IN THE WORKS AREA. THE OUTPUTS FROM THE RISK ASSESSMENT BASED ON THE QUEENSLAND ACID SULPHATE SOIL TECHNICAL MANUAL REQUIRES THAT ACID SULPHATE SOIL MANAGED AS FOLLOWS:

REHABILITATION

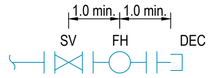
H. PRE-DISTURBANCE SOIL PROFILES AND COMPACTION LEVELS ARE TO BE REINSTATED.
I. PRE-DISTURBANCE VEGETATION PATTERNS SHALL BE RESTORED.

CREEK CROSSINGS

J. SILTATION CONTROL MEASURES SHALL BE PLACED DOWNSTREAM OF ANY EXCAVATION WORK.
K. APPROPRIATE SEDIMENT CONTROLS SHALL BE USED TO PREVENT SEDIMENT FROM ENTERING THE CREEK.
L. NO SOIL SHALL BE STOCKPILED WITHIN 5m OF THE CREEK.



DETAIL WHEN HYDRANT AND WATER SERVICE CONNECTION SHARE A SIDE BOUNDARY (REFER SEQ-WAT-1108-1)



TYPICAL END OF LINE DETAIL
N.T.S.

ALL TEMPORARY AND END OF LINE CONNECTIONS TO BE FLANGE/FLANGE CONNECTIONS

WATER RETICULATION GENERAL NOTES

WG.1. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH CURRENT SEQ WATER SUPPLY DESIGN AND CONSTRUCTION (D&C) CODE SPECIFICATIONS AND STANDARDS.
WG.2. UNLESS SPECIFIED OTHERWISE, ALL MATERIALS AND WORK SHALL COMPLY WITH THE RELEVANT AUSTRALIAN STANDARDS.
WG.3. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION AND DEPTH OF EXISTING SERVICES WITH RELEVANT REGULATORY AUTHORITIES / DIAL BEFORE YOU DIG PRIOR TO COMMENCING WORKS.
WG.4. THE CONTRACTOR SHALL NOTE THE PRESENCE OF EXISTING SERVICES ASSOCIATED WITH THE WORKS. SPECIAL CARE SHALL BE TAKEN BY THE CONTRACTOR IN THE VICINITY OF ALL SERVICES
WG.5. THE WATER AND SEWERAGE CONSTRUCTION WORK UNDERTAKEN BY THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE QUEENSLAND WORK HEALTH AND SAFETY ACT OF 2011, AND WORK HEALTH AND SAFETY REGULATIONS 2011. CONTACT THE DIVISION OF HEALTH AND SAFETY FOR INFORMATION PH 1300 369 915.
WG.6. ALL BURIED FLEXIBLE PIPELINES HAVE BEEN DESIGNED IN ACCORDANCE WITH AS/NZS 2566.2
WG.7. THE CONTRACTOR SHALL UNDERTAKE ALL TEMPORARY, PERMANENT AND PROPOSED WORKS TO ENSURE A SAFE & STABLE WORK SITE, INCLUDING EXCAVATION AND STABILITY OF EXISTING INFRASTRUCTURE ADJACENT TO THE PROPOSED WORKS.
WG.8. IF EXISTING CONCRETE PATHWAYS/DRIVEWAYS NEED TO BE MODIFIED OR CUT, FULL WIDTH PANELS OF PATHWAYS/DRIVEWAYS BETWEEN EXISTING JOINTS ARE TO BE REMOVED. NO PATHWAYS/DRIVEWAYS ARE TO BE CUT LONGITUDINALLY IN HALF OR OTHER PART THEREOF. REINSTATEMENT TO BE IN ACCORDANCE WITH THE STANDARD DRAWING SEQ R-065 FOR PATHWAYS, SEQ R-50, SEQ R-0051 AND SEQ R-56 FOR DRIVEWAYS. WHEN VALVE AND HYDRANTS NEED TO BE INSTALLED WITHIN COUNCIL CONCRETE FOOTPATHS, LOCALISED REINSTATEMENT OF IMMEDIATE FITTING SURROUND IS NOT PERMITTED. NEW CONCRETE PANELS SHALL BE PROVIDED IN ACCORDANCE WITH STANDARD DRAWING SEQ R-065, WITH NEW AND EXISTING CONSTRUCTION JOINTS SPACING NO LESS THAN 1 METRE SPACING.
WG.9. ADOPT LIP OF KERB OR SHOULDER OF ROAD AS PERMANENT LEVEL.
WG.10. CONDUITS TO BE INSTALLED IN ACCORDANCE WITH THE STANDARD DRAWINGS.
WG.11. A WATER METER SUPPLIED AT THE DEVELOPER'S COST, IS TO BE INSTALLED AT THE SERVICE POINT OF EACH LOT IN ACCORDANCE WITH THE STANDARD DRAWING FOR THE SEQ-SP. REFER TO SEQ-WAT-1108-2, 1108-3 FOR UNITYWATER REGION.
WG.12. ALL MATERIALS USED IN THE WORKS SHALL COMPLY WITH THE SEQ-SERVICE PROVIDER'S ACCEPTED PRODUCTS AND MATERIALS LIST OR BE APPROPRIATELY SHOWN, LISTED AND DEFINED IN THE ENGINEERING SUBMISSION SO THAT THE ALTERNATIVE PRODUCT OR MATERIAL CAN BE ASSESSED AND, IF APPROPRIATE, APPROVED BY THE SEQ-SERVICE PROVIDER.
WG.13. ALL CONCRETE FOOTPATHS TO BE CLEAR OF WATER MAINS.
WG.14. TEST/CHLORINATION POINTS TO BE INSTALLED IN ACCORDANCE WITH STANDARD DRAWING NO. SEQ-WAT-1410-1.
WG.15. ALL RETICULATION MAINS AND PROPERTY CONNECTIONS TO HAVE DETECTABLE MARKING TAPE TO BE INSTALLED TO TOP OF EMBEDMENT ZONE IN ACCORDANCE WITH WSA GUIDELINES.
WG.16. PIPES DN100-DN300 SHALL BE PVC-O SERIES 2 PN16 R.R.J. MIN SN10 MRS400 OR MRS450 UNLESS NOTED OTHERWISE.
WG.17. PIPES DN375-DN750 SHALL BE DICL PN35 R.R.J. UNLESS NOTED OTHERWISE. SEAL COAT ON PIPES ≥ DN450. FLANGES SHALL BE PN16 TO AS4087 FIGURE B5.
WG.18. PIPES OD25-OD90 SHALL BE POLYETHELENE PE100 SDR11 PN16 UNLESS NOTED OTHERWISE.
WG.19. ALL REDUCED COVER CROSSINGS UNDER MINOR ROADS TO BE DICL PN35. BENDS INTRODUCED BY JOINT DEFLECTIONS OR FITTINGS TO BE ADEQUATELY RESTRAINED AGAINST UPLIFT BY THE USE OF EITHER VERTICAL THRUST ANCHORS IN ACCORDANCE WITH SEQ-WAT-1207-1 OR RESTRAINED JOINTS SEW-WAT-1208-1.
WG.20. ALL DICL PIPES TO BE PE SLEEVE WRAPPED (OR APPROVED EQUIVALENT) IN ACCORDANCE WITH AS3680, AS3681 AND PIPE MANUFACTURERS SPECIFICATIONS.
WG.21. ALL BURIED NON S/STEEL FLANGES AND BOLTS SHALL BE WRAPPED WITH DENSO (OR APPROVED EQUIVALENT) IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND SEQ-WAT-1313-1. ALL S/STEEL BOLTS SHALL NOT BE WRAPPED IN DENSO.
WG.22. RETICULATION MAINS SHALL BE LAID ON 1.5m ALIGNMENT FROM PROPERTY BOUNDARY UNLESS OTHERWISE DIRECTED BY UNITYWATER'S INSPECTOR.
WG.23. MINIMUM CLEARANCE TO MAINS SHALL BE IN ACCORDANCE WITH SECTION 5.12 OF THE SEQ WATER SUPPLY D&C CODE OF AUSTRALIA.
WG.24. MINIMUM COVER FOR MAINS SHALL BE AS FOLLOWS, UNLESS OTHERWISE DIRECTED BY UNITYWATER, COUNCIL OR DTMR. COVER IN FOOTPATHS IS DEPTH FROM THE LIP OF KERB OR ROAD SHOULDER.

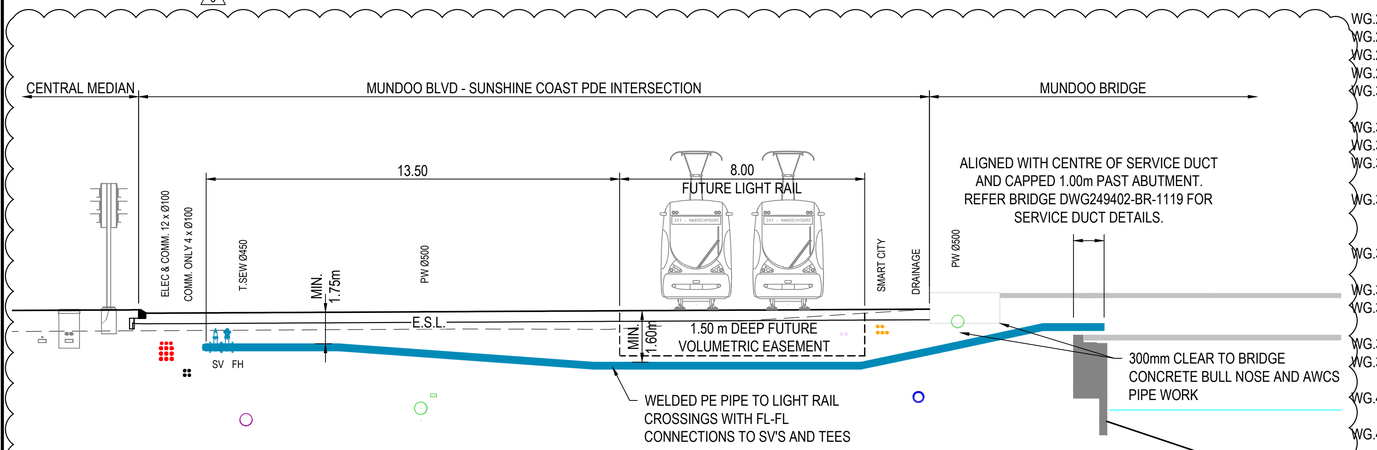
LOCATION	≤DN150	≥DN200
FOOTPATHS	600	1000
ROADWAYS (CONCRETE, ASPHALT, PAVERS, BITUMEN SEAL)	600	1000
DTMR ROAD PAVEMENTS	1200	1200

WG.25. TRENCH INSTALLATION SHALL COMPLY WITH SEQ-WAT-1200-2,1201-1, 1202-1, 1203-1, 1204-1. (MINIMUM PIPE COVER TABLE ON SEQ-WAT-1200-2 DOES NOT APPLY. REFER TO WG.20 FOR MINIMUM COVERS.) TRENCH TYPES SHALL BE AS FOLLOWS, UNLESS NOTED OTHERWISE:

LOCATION	TRENCH TYPE
FOOTPATHS (AND NEW ROADS)	TYPE C
EXISTING SEALED ROADS	TYPE L (CROSSING SEALED ROADS)
	TYPE M OR N (ALONG SEALED ROADS)

WG.26. FOR PIPES TO BE LAID ON CURVES, REFER TO MANUFACTURER'S SPECIFICATIONS AND SEQ WATER SUPPLY D&C CODE
WG.27. WATER MAIN & SERVICE CONNECTIONS TO EXISTING WATER MAINS SHALL BE UNDERTAKEN BY UNITYWATER AT THE DEVELOPER'S COST.
WG.28. FITTINGS FOR CUT-IN SHALL BE SUPPLIED BY UNITYWATER.
WG.29. MAINS SHALL BE FLUSHED IN ACCORDANCE WITH THE SEQ WATER SUPPLY CODE SPECIFICATION.
WG.30. HYDRANT AND VALVE INSTALLATION SHALL BE IN ACCORDANCE WITH SEQ WATER STANDARD DRAWINGS SEQ-WAT-1301-1, 1302-1, 1303-1, 1304-1 AND 1305-1. HYDRANT RISERS TO BE DN100.
WG.31. HYDRANTS SHALL BE CONSTRUCTED AT THE END OF ALL DEAD-END LINES. REFER SEQ-WAT-1302-1, 1303-1.
WG.32. ALL VALVES AND REDUCERS AT WATER MAIN JUNCTIONS SHALL BE FLANGE - FLANGE JOINTED.
WG.33. BLUE RAISED REFLECTIVE PAVEMENT MARKERS (RRPM'S) SHALL BE INSTALLED ON ROAD CENTRE LINE ADJACENT TO ALL NEW HYDRANTS AND YELLOW MARKERS FOR STOP VALVES: TO SEQ-WAT-1300-1.
WG.34. THRUST BLOCKS SHALL BE CONSTRUCTED AT TEES, BENDS, DEFLECTIONS, VALVES, REDUCERS AND DEAD END CAPS ALONG THE WATER MAIN. REFER TO SEQ WATER STANDARD DRAWINGS SEQ-WAT-1205-1 TO 1208-1. THRUST BLOCKS SHALL BE SIZED FOR A TEST PRESSURE OF 1200 kPa. CONCRETE FOR THRUST BLOCKS SHALL BE POURED AGAINST UNDISTURBED GROUND.
WG.35. FOR HOUSE CONNECTION DETAILS REFER SEQ STD. DWGS. SEQ-WAT-1108-1 TO SEQ-WAT-1108-3 WHERE HOUSE-CONNECTIONS PASS THROUGH BIO-RETENTION BASINS, CONSTRUCT HOUSE CONNECTION SIMILAR TO DETAIL A ON SEQ STD DWG SEQ-WAT-1108-1
WG.36. FOR PIPES OF 200mm DIA. OR GREATER, TAPPING BANDS SHALL BE USED.
WG.37. WATER CONDUIT CROSSINGS SHALL BE ALIGNED FROM THE COMMON BOUNDARY OF ALLOTMENTS SERVED . 'W' BRASS INDICATOR DISC SHALL BE PLACED IN THE KERB WHERE CONDUITS CROSS THE KERB. REFER SEQ-WAT-1108-1.
WG.38. COMMERCIAL WATER CONNECTION METERING/FIRE BACK FLOW PROTECTION TO BE NOMINATED BY THE BUILDING SERVICES DESIGNER
WG.39. ALL WATER SERVICE PIPES INSTALLED TO TRAFFIC ISLANDS AND PARKS FOR LANDSCAPING PURPOSES SHALL INCLUDE A NON TESTABLE 40mm DOUBLE CHECK VALVE. WATER METER INSTALLATION SHALL BE ARRANGED WITH UNITYWATER BEFORE USE.
WG.40. THE LOCATIONS OF LANDSCAPING WATER SERVICES ARE INDICATIVE ONLY. IT IS THE CIVIL CONTRACTOR'S RESPONSIBILITY TO LIAISE WITH THE SUPERINTENDENT AND THE LANDSCAPING CONTRACTOR TO CONFIRM FINAL LOCATION.
WG.41. FLANGES SHALL BE PN16 TO AS4087 UNLESS NOTED OTHERWISE. FLANGE JOINTS SHALL COMPLY WITH SEQ-WAT-1313-1. MATING PIPE FLANGES SHALL BE DRILLED TO SUIT THE SPECIFIED DRILLING OF THE ADJOINING VALVE OR EQUIPMENT. RAISED FACE FLANGES SHALL BE MATED WITH RAISED FACE FLANGES. FLAT FACED FLANGES SHALL BE MATED WITH FLAT FACED FLANGES.
WG.42. OFFSET DIMENSIONS ARE TO THE PIPE CENTRE LINE UNLESS OTHERWISE NOTED.
WG.43. THE CONTRACTOR SHALL PLACE BACKFILL IN A MANNER THAT AVOIDS LOADING ON THE PIPE IN EXCESS OF THE STRUCTURAL CAPACITY FOR THE LOADING CONDITION.
WG.44. THE CONTRACTOR SHALL UNDERTAKE NECESSARY ACTION TO PREVENT FLOTATION DURING CONSTRUCTION.
WG.45. TESTING SHALL BE AS DESCRIBED IN THE UNITYWATER STANDARD SPECIFICATIONS. TESTING RESULTS SHALL BE PROVIDED TO SUPERINTENDENT PRIOR TO CONNECTION TO EXISTING SERVICES.

△6



LIGHT RAIL WATERMAIN CROSSING

SCALE A1 - 1 : 100
A3 - 1 : 200

Rev.	Date	Description	Des.	Verif.	Appd.
6	13/09/2019	LIGHT RAIL WATER SECTION DETAIL ADDED	CK	AFH	GGT
5	16/08/2019	TRG REVIEW;	CK	AFH	GGT
4	20/05/2019	TRG REVIEW	CK	AFH	GGT
3	5/04/2019	ISSUED FOR TENDER - STAGE 1C(1) MUNDOO BOULEVARD	AS	DH	GT
2	6/02/2019	ISSUE FOR APPROVAL	CK	DH	GT
1	20/12/2018	FOR INFORMATION ONLY	CK	DH	GT

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Drawn	AE	Date 21/11/2018
Checked	DH	Date 21/11/2018
Designed	CK	Date 21/11/2018
Verified	GT	Date 6/02/2019
Approved	G.Tamblyn	RPEQ No. 1723 DATE 6/02/2019

Client: SUNCENTRAL MAROOCHYDORE PTY LTD
Project: MAROOCHYDORE CITY CENTRE
CIVIL WORKS - STAGE 1B 1C & 1C(1)
Title: WATER TYPICAL NOTES & DETAILS
Status: FOR TENDER ONLY
NOT TO BE USED FOR CONSTRUCTION PURPOSES

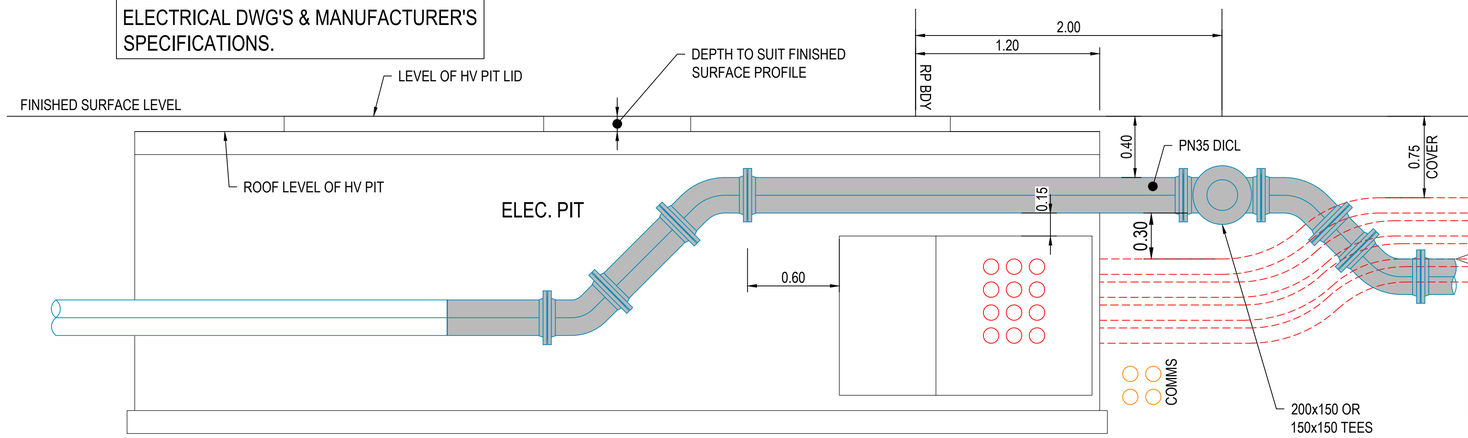
DATUM	Orig. Date	Scale	Size
AHD	21/11/2018	AS SHOWN	A1

Drawing Number: 249402-CI-2500
Revision: 6

XREFs: X:\TITLE BORDER
CAD File: \\AUSCQCFS011\Data\PROJECTS\249402 MCC Design Package 1\1. DESIGN\ACAD_CIVIL STAGE 1B & 1C\249402-CI-2500 WATER TYP NOTES & DETAILS.dwg

DATE PLOTTED: 17 September 2019 3:20 PM BY - AARON ELLARD

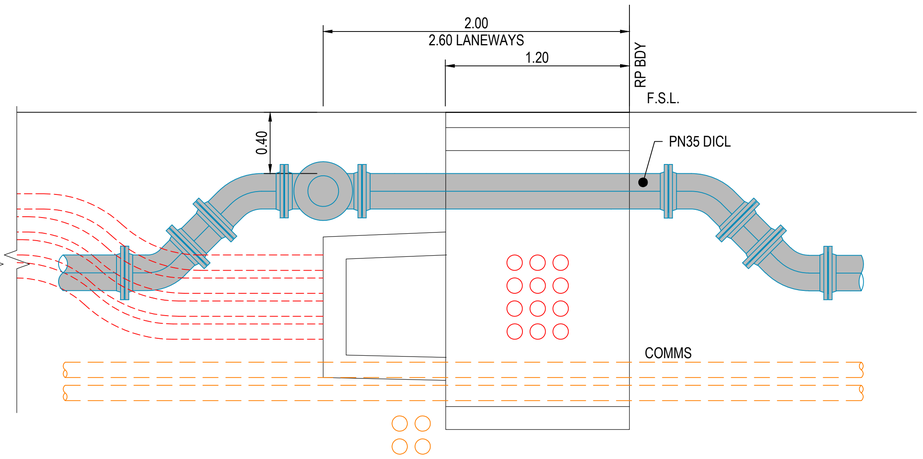
ELECTRICAL PITS IN ACCORDANCE WITH ELECTRICAL DWG'S & MANUFACTURER'S SPECIFICATIONS.



TYPICAL 200Ø WATERMAIN DEFLECTION (150Ø SIMILAR)

ELEVATION 1

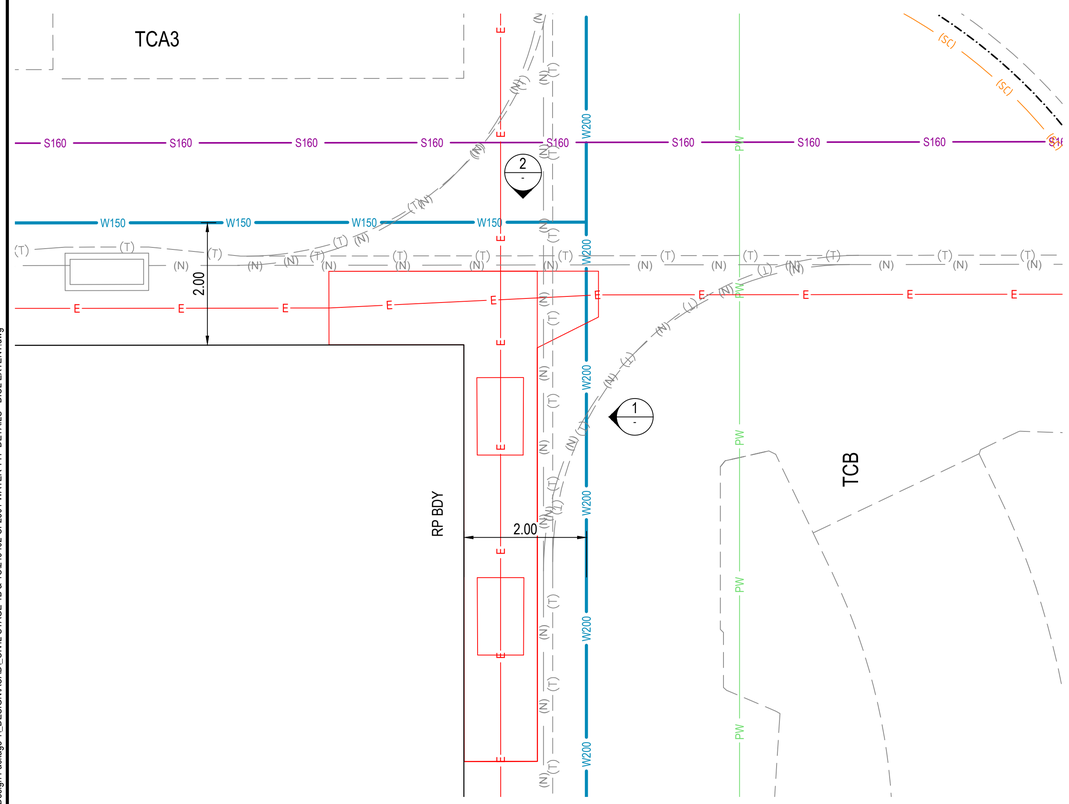
SCALE A1 - 1 : 20
A3 - 1 : 40



TYPICAL 200Ø WATERMAIN DEFLECTION (150Ø SIMILAR)

ELEVATION 2

SCALE A1 - 1 : 20
A3 - 1 : 40



TYPICAL PLAN A

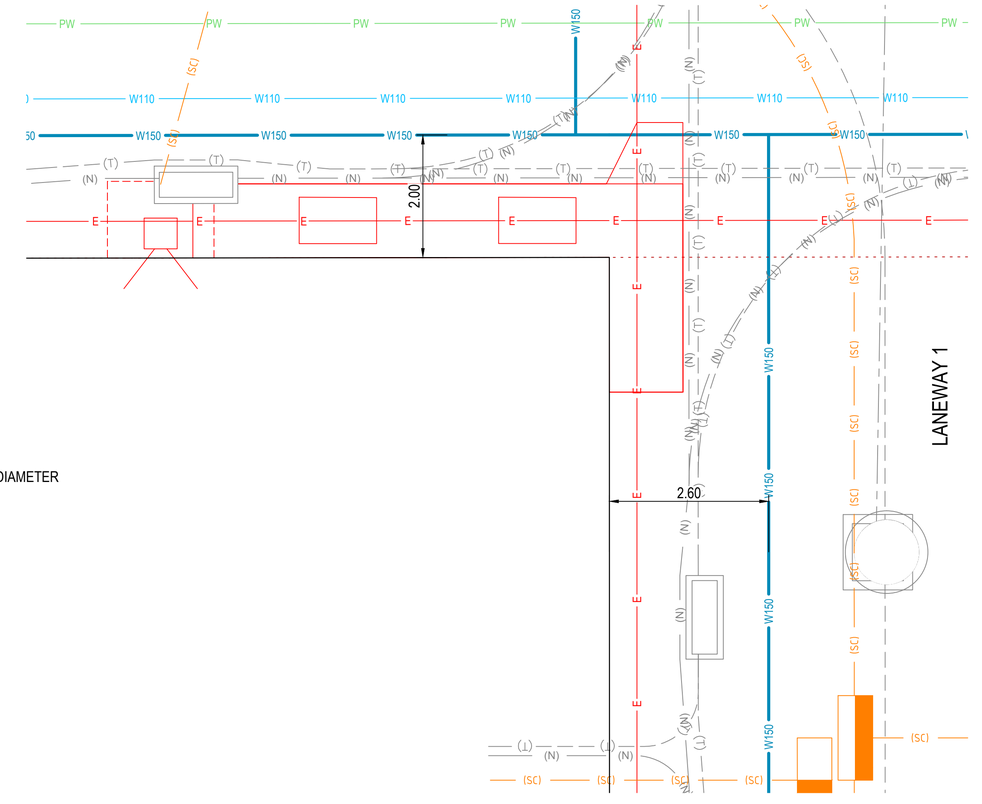
SCALE A1 - 1 : 50
A3 - 1 : 100

0.5 0 0.5 1.0 1.5 2.0 2.5m
Scale 1:50

ALL REDUCED COVER WATERMAIN TO BE DICL FL-FL FITTINGS AND PIPES

LEGEND:

- W100 — WATERMAIN AND PIPE DIAMETER
- W110 — SPS WATER MINING MAIN AND PIPE DIAMETER
- E — ELECTRICAL MAIN
- PW — PNEUMATIC WASTE - BY OTHERS
- (SC) — SMART CITY CONDUITS
- (T) — TELSTRA LINE
- (N) — NBN LINE



TYPICAL PLAN B

SCALE A1 - 1 : 50
A3 - 1 : 100

0.2 0 0.2 0.4 0.6 0.8 1.0m
Scale 1:20

Rev.	Date	Description	Des.	Verif.	Appd.
1	16/08/2019	TRG REVIEW; DRAWING ADDED	CK	AFH	GGT

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Checked	TH	Date 16/08/2019
Designed	CK	Date 16/08/2019
Verified	GT	Date 16/08/2019
Approved	G.Tamblyn	RPEQ No. 1723 DATE 16/08/2019

Client: SUNCENTRAL MAROOCHYDORE PTY LTD

Project: MAROOCHYDORE CITY CENTRE
CIVIL WORKS - STAGE 1B 1C & 1C(1)

Title: WATER TYPICAL DETAILS - DICL EXTENT AT ENERGEX PITS

Status: FOR TENDER ONLY
NOT TO BE USED FOR CONSTRUCTION PURPOSES

DATUM	Orig. Date	Scale	Size
AHD	16/08/2019	AS SHOWN	A1

Drawing Number: 249402-CI-2501

Revision: 1

XREFs: X-TITLE BORDER; X-249402 DESIGN STAGE 1; X-249402 RP BASE; X-249402-ELEC COMM & LIGHT STG01; X-249402 AWCS STAGE 01; X-249402 AWCS STAGE 02
CAD File: \\AUSCOCFS01\Data\PROJECTS\249402 MCC Design Package 1_DESIGN\ACAD_ CIVIL STAGE 1B & 1C\249402-CI-2501 WATER TYP DETAILS - DICL EXTENT.dwg

DATE PLOTTED: 17 September 2019 3:16 PM BY: - AARON ELLARD

LEGEND:

- W100 — WATERMAIN AND PIPE DIAMETER
- FH / SV / W100 — FIRE HYDRANT / STOP VALVE
- R / DEC — REDUCER / DEAD END CAP
- AV / SC / W100 — AIR VALVE / SCOUR VALVE
- CONDUIT 100DIA. UPVC CLASS 9
- TB / W100 — THRUST BLOCK
- (32 NB) — CONDUIT 100 DIA. UPVC CLASS 9 INCLUDING POLYETHYLENE SERVICE AND STOP VALVE
- S150 — SEWER RETICULATION
- SWD — STORMWATER DRAINAGE
- E — ELECTRICAL, PILLAR, COMMS AND LIGHTING
- HV/UG — EXISTING UG HV ELECTRICAL
- PW — PNEUMATIC WASTE - BY OTHERS
- W — EXISTING WATER RETICULATION MAIN
- W100 — EXISTING STOP VALVE/FIRE HYDRANT
- S150 — EXISTING GRAVITY MAIN
- SRM — EXISTING RISING MAIN
- SWD — EXISTING STORMWATER
- E/OH — EXISTING OVERHEAD ELECTRICITY LINE
- E/UG — EXISTING UNDERGROUND ELECTRICITY LINE

NOTES:

1. THIS PLAN IS TO BE READ IN CONJUNCTION WITH DWG. CI-2501 - WATER TYPICAL NOTES AND DETAILS AND DWG. CI-2001 SCHEDULE OF DRAWINGS AND GENERAL NOTES.
2. WATERMAIN ALIGNMENT GENERALLY 2.0m FROM BOUNDARY UNLESS OTHERWISE NOTED. REFER ROAD TYPICAL SECTIONS FOR ALL SERVICE ALIGNMENTS

NORTH

WARNING;
CONSTRUCTION METHODOLOGY CRITICAL AT ELECTRICAL PITS. REFER TO ELECTRICAL AND COMMUNICATIONS DRAWINGS AND THEIR ASSOCIATED UTILITY STANDARDS ONLY FOR SERVICES OTHER THAN WATER TO BE CONSTRUCTED, TYPICAL.

SOUTH SEA ISLANDER WAY

STAGE 1C(1)

STAGE 1A

STAGE 1B

STAGE 1C
CIVIC PARK
N

I3 H1 J1 J2 K2 K1 L2 L1 M E2 E1

MUNDOO BLVD

MARKET LN

LANEWAY 2

LIGHTNING LN

FIRST AVE

FUTURE WAY

MAUD CANAL

SUNSHINE COAST PDE

FUTURE CANAL

FUTURE BRIDGE

BRIDGE

100Ø uPVC CLASS PE100 PN16 CAPPED CONDUIT (14m) FOR FUTURE IRRIGATION. REFER DETAIL A

CONNECTION TO EXISTING MAIN BY UNITYWATER AT DEVELOPERS EXPENSE (TYP)

11.25° BEND

150x150 TEE

2 x 150x150 TEES

2x150x150 TEES

200x150 TEE

200x200 TEE

REFER LOT CONNECTION DETAIL (TYP)

METERING, PARK PLUMBING AND IRRIGATION BY OTHERS

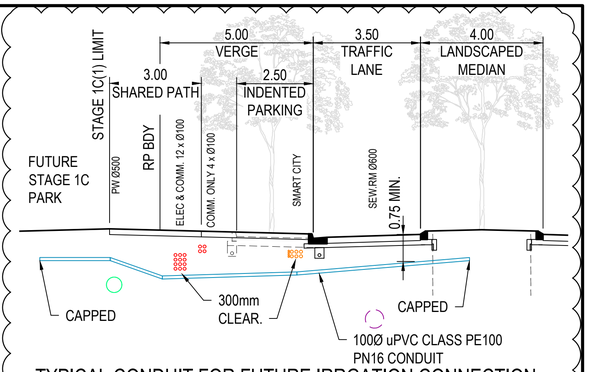
LANDSCAPE PROVISIONS TO BE PROVIDED TO FUTURE CORSO AREAS AND CAPPED 2.0m FROM EDGE OF ROAD AT 2.0m DEEP TO ALLOW FOR CONNECTION UNDER LIGHT RAIL VOLUMETRIC EASEMENT

WELDED PE PIPE AND 1.6m COVER AT FUTURE LIGHT RAIL VOLUMETRIC EASEMENT. REFER DETAIL A ON DRAWING CI-2500

PLAN

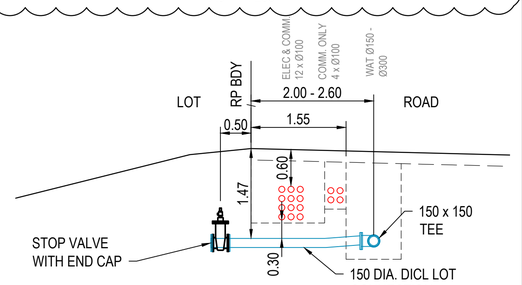
SCALE A1 - 1 : 500
A3 - 1 : 1000

5 0 5 10 15 20 25m
Scale 1:500



TYPICAL CONDUIT FOR FUTURE IRRGATION CONNECTION

DETAIL A
SCALE A1 - 1 : 100
A3 - 1 : 200



TYPICAL LOT CONNECTION

SCALE A1 - 1 : 50
A3 - 1 : 100

Rev.	Date	Description	Des.	Verif.	Appd.
7	13/09/2019	IRRIGATION CONDUITS & DETAIL ADDED	CK	AFH	GGT
6	20/08/2019	TRG REVIEW; MUNGAR ST VERGE WORKS REMOVED	CK	AFH	GGT
5	16/08/2019	TRG REVIEW; STAGE 1C(1) WORKS BOUNDARY AMENDED	CK	AFH	GGT
4	20/05/2019	TRG REVIEW; BACKGROUND LAYERS UPDATED	CK	AFH	GGT
3	5/04/2019	ISSUED FOR TENDER - STAGE 1C(1) MUNDOO BOULEVARD	AS	DH	GT
2	6/02/2019	ISSUE FOR APPROVAL	CK	DH	GT
1	20/12/2018	FOR INFORMATION ONLY	CK	DH	GT

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Drawn	AE	Date 21/11/2018
Checked	DH	Date 21/11/2018
Designed	CK	Date 21/11/2018
Verified	GT	Date 6/02/2019
Approved	G.Tamblyn	RPEQ No. 1723 DATE 6/02/2019

Client: SUNCENTRAL MAROOCHYDORE PTY LTD
Project: MAROOCHYDORE CITY CENTRE
CIVIL WORKS - STAGE 1B 1C & 1C(1)
Title: WATER RETICULATION PLAN

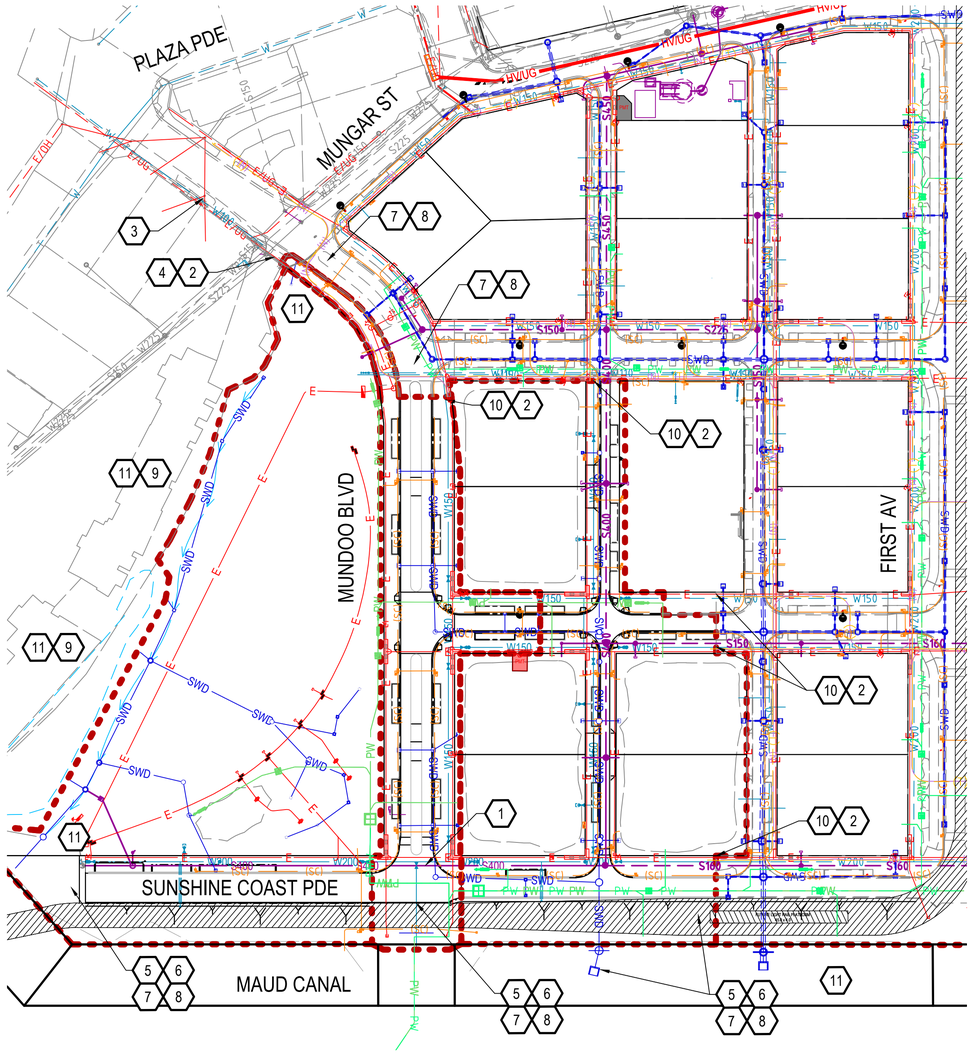
Status: FOR TENDER ONLY
NOT TO BE USED FOR CONSTRUCTION PURPOSES

DATUM	Orig. Date	Scale	Size
AHD	21/11/2018	AS SHOWN	A1

Drawing Number: 249402-CI-2502
Revision: 7

XREFs: X-TITLE BORDER, X-249402-EXISTING, X-249402 DESIGN STAGE 1A EXISTING, X-249402 RP BASE EXTERNAL CADASTRE 150302, X-249402 RP BASE, X-249402 AWCS STAGE 01, X-249402 AWCS STAGE 02, X-249402 DESIGN STAGE 1B & 1C, X-249402-ELEC COMM & LIGHT ST3D1B & 01C, X-249402 DESIGN STAGE 1B & 1C(1)
CAD File: \\AUSCOCFS01\Data\PROJECTS\249402 MCC Design Package 1_DESIGN\ACAD_CIVIL STAGE 1B & 1C\249402-CI-2502 WATER RETICULATION PLAN1.dwg

DATE PLOTTED: 20 August 2019 3:20 PM BY : ADAM HAZELGROVE
XREFs: X-TITLE BORDER, X-249402 RP BASE EXTERNAL, CADASTRE 150302, X-249402-RP BASE, X-249402-EXISTING, X-249402-ELEC COMM & LIGHT ST1018 & 01C, X-249402 AWCS STAGE 01, X-249402 AWCS STAGE 02, X-249402 DESIGN STAGE 1A EXISTING, X-249402 DESIG
CAD File: P:\249402 MCC Design Package 1\1_DESIGN\ACAD_CIVIL STAGE 1B & 1C\249402-CI-2550 SID PLAN.dwg



LEGEND:

- EXISTING RP BOUNDARY
- EXISTING STORMWATER (SWD)
- EXISTING GRAVITY MAIN (S150)
- EXISTING WATER RETICULATION MAIN (W)
- EXISTING OVERHEAD ELECTRICITY LINE (E/OH)
- EXISTING UNDERGROUND ELECTRICITY (E/UG)
- EXISTING TELSTRA LINE (T)
- EXISTING OPTIC FIBRE LINE (OFC)
- EXISTING BUILDING/STRUCTURE
- EXISTING KERB
- POTENTIAL HAZARD - REFER TABLE
- STORMWATER DRAINAGE
- WATERMAIN (W100)
- SEWER MAIN (S150)
- ELECTRICAL MAIN (E)
- PNEUMATIC WASTE - BY OTHERS (PW)
- SMART CITY CONDUITS

PLAN

SCALE A1 - 1 : 1000
A3 - 1 : 2000

GENERAL NOTE:

UNDER THE QUEENSLAND WORK HEALTH AND SAFETY ACT 2011, THE WORK HEALTH AND SAFETY REGULATION AND OTHER LEGISLATION AND GUIDELINES, THE PRINCIPAL CONTRACTOR HAS SPECIFIC OBLIGATIONS IN RELATION TO THE SAFE OPERATION OF THE SITE OF THE WORKS. TO ASSIST THE PRINCIPAL CONTRACTOR IN COMPLYING WITH THESE OBLIGATIONS, THE PROJECT DESIGNERS HAVE IDENTIFIED, BY DRAWING NOTES, OR THROUGH ADVICE AT PRE-CONSTRUCTION WORKSHOPS, AREAS WHERE POTENTIAL HAZARDS MAY ARISE. THESE NOTES OR ADVICE SHALL NOT NECESSARILY BE CONSIDERED TO BE COMPLETE AND ARE BASED UPON THE DESIGNERS' UNDERSTANDING OF THE SAFETY RISKS ASSOCIATED WITH THE WORKS. THESE NOTES OR ADVICE SHALL NOT RELIEVE THE PRINCIPAL CONTRACTOR OF HIS OBLIGATIONS UNDER THE RELEVANT LEGISLATION AND GUIDELINES AND THE PRINCIPAL CONTRACTOR SHALL REMAIN RESPONSIBLE FOR THE PREPARATION OF AN APPROPRIATE SAFETY PLAN FOR THE SITE.

.

ITEM	POTENTIAL HAZARD	POSSIBLE PREVENTATIVE ACTION
1	DEEP EXCAVATION HAZARD	EXCAVATION WORK SHALL BE UNDERTAKEN BY APPROPRIATELY EXPERIENCED AND QUALIFIED PERSONNEL. EXCAVATIONS SHALL BE ADEQUATELY SHORED AND APPROPRIATE BARRICADES ERECTED, IF REQUIRED.
2	UNDERGROUND ELECTRIC POWER HAZARD	WARNING SIGNS AND MARKERS SHALL BE ERECTED ADVISING OF THE PRESENCE OF LIVE UNDERGROUND CABLES. THE CABLE LOCATION SHALL BE IDENTIFIED AND MARKED BY THE SUPPLY AUTHORITY PRIOR TO THE COMMENCEMENT OF EXCAVATION. A REPRESENTATIVE OF THE SUPPLY AUTHORITY SHALL REMAIN ON-SITE DURING EXCAVATION WORK, IF REQUIRED.
3	OVERHEAD POWER HAZARD	WARNING SIGNS AND MARKERS SHALL BE ERECTED ADVISING OF THE PRESENCE OF LIVE OVERHEAD CABLES. THE CABLE LOCATION SHALL BE IDENTIFIED AND MARKED BY THE SUPPLY AUTHORITY PRIOR TO THE COMMENCEMENT OF CONSTRUCTION WORKS. A REPRESENTATIVE OF THE SUPPLY AUTHORITY SHALL REMAIN ON-SITE DURING EXCAVATION WORK, IF REQUIRED.
4	HIGH PRESSURE WATER MAIN HAZARD	WARNING SIGNS AND MARKERS SHALL BE ERECTED ADVISING OF THE PRESENCE OF UNDERGROUND HIGH PRESSURE WATER MAINS. THE LOCATION OF THE MAINS SHALL BE IDENTIFIED AND MARKED BY THE SUPPLY AUTHORITY PRIOR TO THE COMMENCEMENT OF EXCAVATION. A REPRESENTATIVE OF THE SUPPLY AUTHORITY SHALL REMAIN ON-SITE DURING EXCAVATION WORK, IF REQUIRED.
5	POTENTIAL FALL HAZARD	THE POTENTIAL FOR PERSONAL INJURY DUE TO FALLS FROM HEIGHT MAY EXIST ON THIS SITE. WHERE ACTIVITIES ARE TO BE UNDERTAKEN IN SITUATIONS WHERE A FALL HAZARD EXISTS, APPROPRIATE SIGNAGE, BARRIERS AND OTHER SAFETY MEASURES, AS REQUIRED, SHALL BE ERECTED. ALL REQUIRED PERSONAL SAFETY EQUIPMENT SHALL BE WORN.
6	POTENTIAL DROWNING HAZARD	THE POTENTIAL FOR PERSONAL INJURY OR DROWNING DUE TO FALLS INTO WATER MAY EXIST ON THIS SITE. WHERE ACTIVITIES ARE TO BE UNDERTAKEN IN SITUATIONS WHERE A FALL HAZARD INTO WATER EXISTS, APPROPRIATE SIGNAGE, BARRIERS AND OTHER SAFETY MEASURES, AS REQUIRED, SHALL BE ERECTED. ALL REQUIRED PERSONAL SAFETY EQUIPMENT, SUCH AS LIFE JACKETS, SHALL BE WORN.
7	POTENTIAL VEHICLE HAZARD	SITE PERSONNEL SHALL BE ADVISED OF THE POTENTIAL HAZARDS AND APPROPRIATE PROCEDURES FOR WORKING ADJACENT TO OPERATING PUBLIC ROADS OR SITE HAUL ROADS. APPROPRIATE SAFETY CLOTHING SHALL BE WORN AND THE REQUIRED SIGNAGE SHALL BE ERECTED. THE WORK SHALL BE UNDERTAKEN IN A MANNER WHICH DOES NOT COMPROMISE THE SAFETY OF VEHICLES AND THEIR OCCUPANTS OR OF SITE PERSONNEL.
8	POTENTIAL PEDESTRIAN HAZARD	WHERE WORK IS TO BE UNDERTAKEN WITHIN OR ADJACENT TO AREAS TO WHICH THE PUBLIC HAS PEDESTRIAN ACCESS, APPROPRIATE BARRICADES AND SIGNAGE SHALL BE ERECTED. THE WORK SHALL BE UNDERTAKEN IN A MANNER WHICH DOES NOT COMPROMISE THE SAFETY OF THE PUBLIC OR OF SITE PERSONNEL.
9	POTENTIAL NOISE HAZARD	THE POTENTIAL FOR HEARING DAMAGE DUE TO CONSTRUCTION ACTIVITIES INVOLVING MACHINERY AND POWER TOOLS MAY EXIST ON THIS SITE. WHERE ACTIVITIES LIKELY TO PRODUCE EXCESSIVE NOISE LEVELS ARE UNDERTAKEN, APPROPRIATE WORK PROCEDURES ARE TO BE IMPLEMENTED. APPROPRIATE SIGNAGE, BARRIERS AND OTHER SAFETY MEASURES, AS REQUIRED, SHALL BE ERECTED. ALL REQUIRED PERSONAL SAFETY EQUIPMENT SHALL BE WORN.
10	LIVE SEWER AND WATER CONNECTION	ALL LIVE SEWER AND WATER WORKS TO BE UNDERTAKEN BY UNITYWATER.
11	EROSION AND SEDIMENT CONTROL	EROSION AND SEDIMENT CONTROL TO BE IMPLEMENTED IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.

10 0 10 20 30 40 50m
Scale 1:1000

Rev.	Date	Description	Des.	Verif.	Appd.
3	20/08/2019	TRG REVIEW; MUNGAR ST VERGE WORKS REMOVED	CK	AFH	GGT
2	16/08/2019	TRG REVIEW;	CK	AFH	GGT
1	20/05/2019	DWG ADDED	CK	TH	GGT

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Drawn	CK	Date 20/05/2019
Checked	TH	Date 20/05/2019
Designed	CK	Date 20/05/2019
Verified	GT	Date 20/05/2019
Approved	G.T.	

Client: SUNCENTRAL MAROOCHYDORE PTY LTD
Project: MAROOCHYDORE CITY CENTRE
CIVIL WORKS - STAGE 1B 1C & 1C(1)
Title: SAFETY IN DESIGN PLAN

Status: FOR TENDER ONLY
NOT TO BE USED FOR CONSTRUCTION PURPOSES

DATUM	Orig. Date	Scale	Size
AHD	20/05/2019	AS SHOWN	A1

Drawing Number: 249402-CI-2550
Revision: 3

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