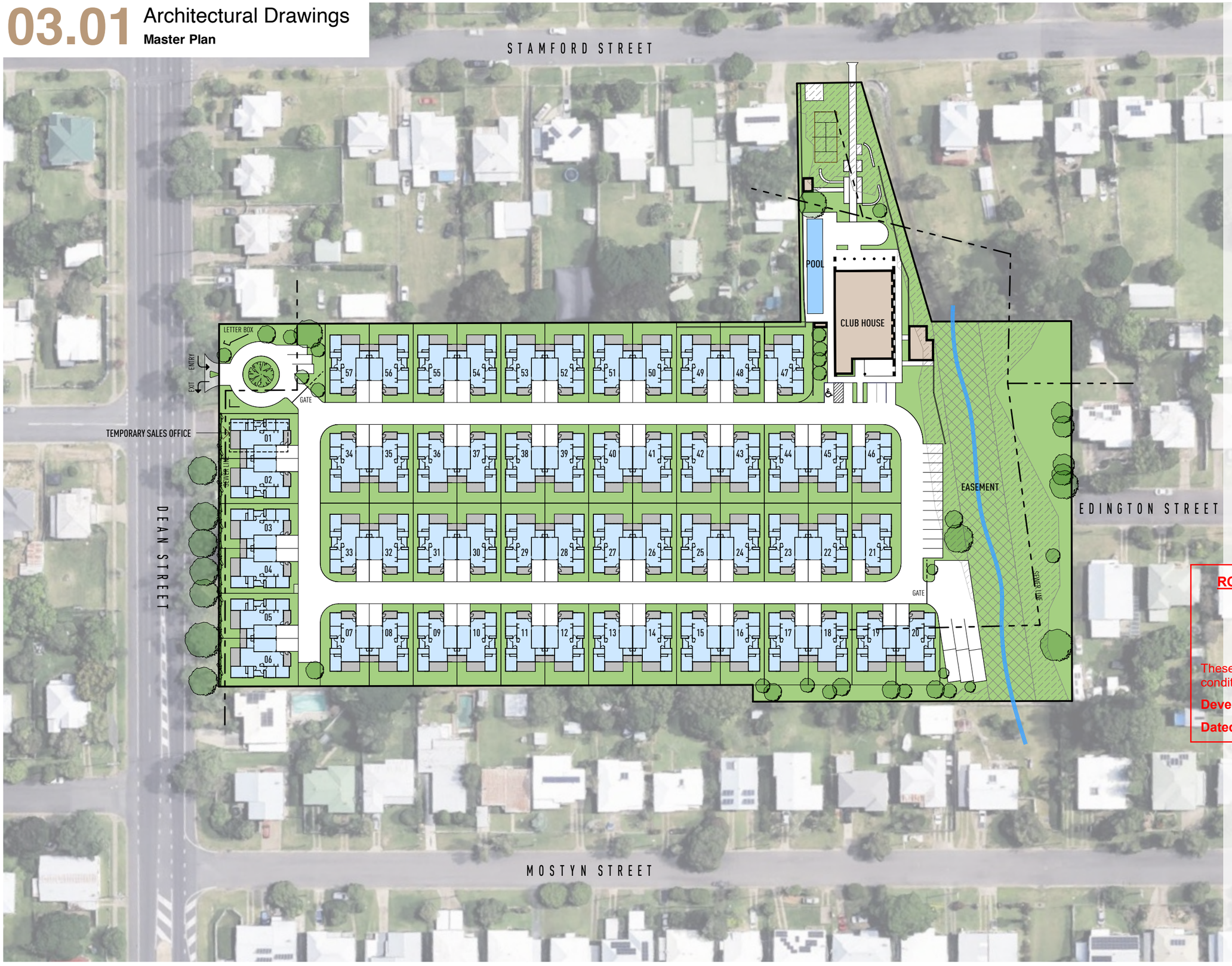
03.01 Architectural Drawings

Master Plan



LEGEND

DWELLING TYPE A - 3 BEDROOMS	57
EASEMENT	
FLOODING ZONE OVERLAY	

DEVELOPMENT SUMMARY

VISITOR CAR PARKING		20
RV PARKING		6
SITE AREA		25 264 m^2
SITE COVER (HOMES + FACILITIES)	(37%)	9 440 m^2
TOTAL SITE COVER (HOMES + FACILITIES + ROADS)	(52%)	13 073 m^2
OPEN SPACE (MIN. DIMENSION OF 2m)	(30%)	7 610 m^2
SITE PERIMETER		789 m

ROCKHAMPTON REGIONAL COUNCIL

AMENDED PLANS APPROVED

29 January 2025

DATE

These plans are approved subject to the current conditions of approval associated with

Development Permit No.: D/170-2022

Dated: 12 June 2023

Note:
This master plan has been updated with Gemlife built form and paths using *A012 hardscape plan rev AA-wip 16.09.2024.*
All changes occurring from this update to master plan are Gemlife's responsibility.

JAREDPOOLEDESIGN
LEVEL 1 33 ELKHORN AVENUE
SURFERS PARADISE, QLD. 4217 AUSTRALIA
PO BOX 42. ISLE OF CAPRI, QLD. 4217
TEL 07 5527 5300
EMAIL INFO@JPD.COM.AU
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Allira

ISSUE	DATE	DESCRIPTION
U	20.11.24	UPDATED LAYOUT
T	17.09.24	UPDATED LAYOUT
S	17.09.24	GEMLIFE'S INFO ADDED
R	12.09.24	LOGO UPDATED
Q	07.06.24	PATH ADDED
P	14.05.24	WESTERN BOUNDARY UPDATED
0	16.04.24	LOT ADDED FOR REVIEW

PROJECT PROPOSED NEW RESIDENCE

Lot 24RP607814 + 8RP607712, Dean Street, Rockhampton QLD 4701

CLIENT Allira

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DRAWING TITLE BP1485/03.01

NORTH

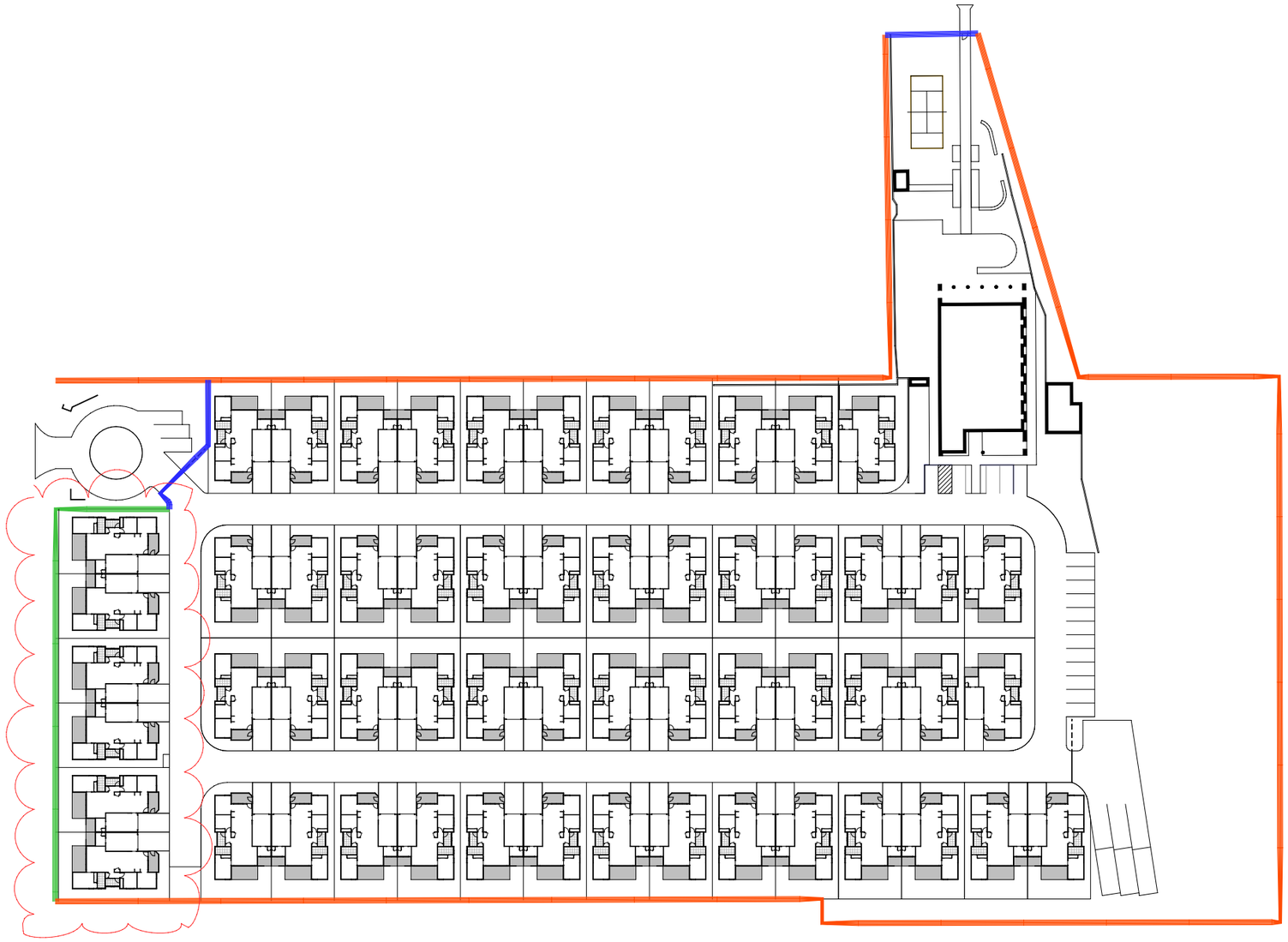
5m 25m 50m

SCALE 1:1000 @ A3

Master Plan

POOLE

03.03 Architectural Drawings
Fencing Plan



LEGEND

1.8m HIGH COLORBOND FENCE

1.8m HIGH STEEL ROD FENCE

1.2m HIGH SOLID FENCE

ROCKHAMPTON REGIONAL COUNCIL

AMENDED PLANS APPROVED

29 January 2025

DATE

These plans are approved subject to the current conditions of approval associated with

Development Permit No.: D/170-2022

Dated: 12 June 2023

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ISSUE	DATE	DESCRIPTION
C	14.05.24	DRAWING UPDATED
B	08.03.24	DRAWING UPDATED
A	01.03.24	PRELIMINARY ISSUE

PROJECT PROPOSED NEW RESIDENCE

Lot 24RP607814 + 8RP607712, Dean Street, Rockhampton QLD 4701

CLIENT Allira

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DRAWING TITLE BP1485/03.03

NORTH

5m 25m 50m

SCALE 1:1000, 1:5.623 @ A3

Fencing Plan

POOLE

Allira

RV Parking Interface Plan

192 Dean Street, Berserker, QLD.

ROCKHAMPTON REGIONAL COUNCIL

AMENDED PLANS APPROVED

12 January 2026

DATE

These plans are approved subject to the current conditions of approval associated with

Development Permit No.: **D/170-2022**

Dated: **12 June 2023**

RV Parking Landscape Design – Fencing & Interface Intent

This plan set illustrates the development RV parking interface intent with ajoining lots 189 & 190 Edington St, Berserker, QLD.

All retaining walls are captured in the Engineering Plans by Westera Partners

PREPARED BY ZONE LANDSCAPE ARCHITECTURE

Project Reference: L24029

Designed: JB/SS

Revision: A | 23.06.25

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Allira

1.0

Landscape Design.

Subject Site
192 Dean Street Berserker | Lot 24 Rp607814 + 8rp607712

1. RV Parking
2. Community Gardens
3. Switchback Ramp Access
4. Stormwater Corridor
5. Pedestrian Access Gate
6. Pedestrian Footpath
7. Pedestrian Gatehouse / Entry
8. Vehicluar Entry Point

Landscape Design

1.1 Landscape Design Master Plan

0m 10 20 30 40 50 100

N

Subject Site
192 Dean Street Berserker | Lot 24 Rp607814 + 8rp607712

1. RV Parking
2. Community Gardens
3. Switchback Ramp Access
4. Stormwater Corridor
5. Pedestrian Access Gate
6. Pedestrian Footpath
7. Pedestrian Gatehouse / Entry
8. Vehicluar Entry Point

Landscape Design
1.2 Landscape Design Callout 01

0m 5 10 15 20 25 50

N

June 2025

Subject Site
192 Dean Street Berserker | Lot 24 Rp607814 + 8rp607712

Fence to Development perimeter to be 100% solid when adjacent to residential land use **(Fence Type B)** or transparent when adjacent to public open space **(Fence Type C).**

B **Fence Type B**
Privacy screening fence (100% solid). Colourbond Trimdek, Timber Good-Neighbor / Lapped and Capped or approved equivalent to meet Australian Standard AS 1397, colour to match architectural finishes palette. This fence is typically used to provide privacy between residences or to the boundary of the development where screening is required. Typical height 1800mm, increased to 2100mm if deemed required. If fencing above typical heights are proposed this will be noted on the fencing plan contained within this design package. Refer Section 5.0 Fences & Walls.

C **Fence Type C**
Aluminum spear top pool fence, colour to match architectural finishes palette. This fence is typically used to the perimeter of the development where views are to be promoted. This fence is also used extensively when associated with significant planting buffers when the use of solid fencing is not required including where lots interface with open space areas).

Typical height 1.2 - 1.8m when located on Dwelling Lot Boundary
Typical height 1.8 - 2.1m when located on Property Boundary

Retaining Walls
Refer Civil Engineering Plans for Retaining Wall Details

Landscape Design
1.3 Landscape Design Section A

Allira

2.0

Fencing Plan.

Subject Site
192 Dean Street Berserker | Lot 24 Rp607814 + 8rp607712

Fence to Development perimeter to be 100% solid when adjacent to residential land use **(Fence Type B)** or transparent when adjacent to public open space **(Fence Type C).**

B **Fence Type B**
Privacy screening fence (100% solid). Colourbond Trimdek, Timber Good-Neighbor / Lapped and Capped or approved equivalent to meet Australian Standard AS 1397, colour to match architectural finishes palette. This fence is typically used to provide privacy between residences or to the boundary of the development where screening is required. Typical height 1800mm, increased to 2100mm if deemed required. If fencing above typical heights are proposed this will be noted on the fencing plan contained within this design package. Refer Section 5.0 Fences & Walls.

C **Fence Type C**
Aluminum spear top pool fence, colour to match architectural finishes palette. This fence is typically used to the perimeter of the development where views are to be promoted. This fence is also used extensively when associated with significant planting buffers when the use of solid fencing is not required including where lots interface with open space areas).

Typical height 1.2 - 1.8m when located on Dwelling Lot Boundary
Typical height 1.8 - 2.1m when located on Property Boundary

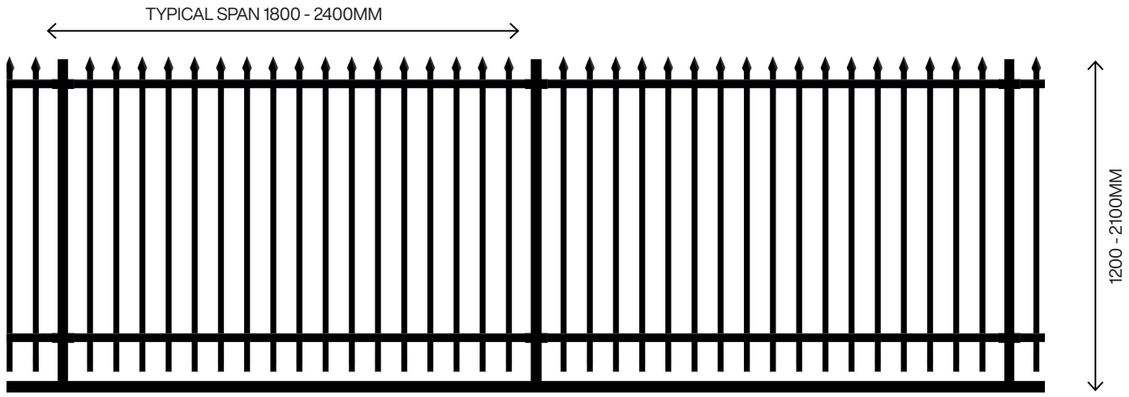
Retaining Walls
Refer Civil Engineering Plans for Retaining Wall Details

Entry Gates
Vehicular pedestrian entry gates.

Fencing Plan
2.1 Fencing Plan Fencing Setout

0m 10 20 30 40 50 100

N



Fence Type C: Typical Elevation

C Fence Type C

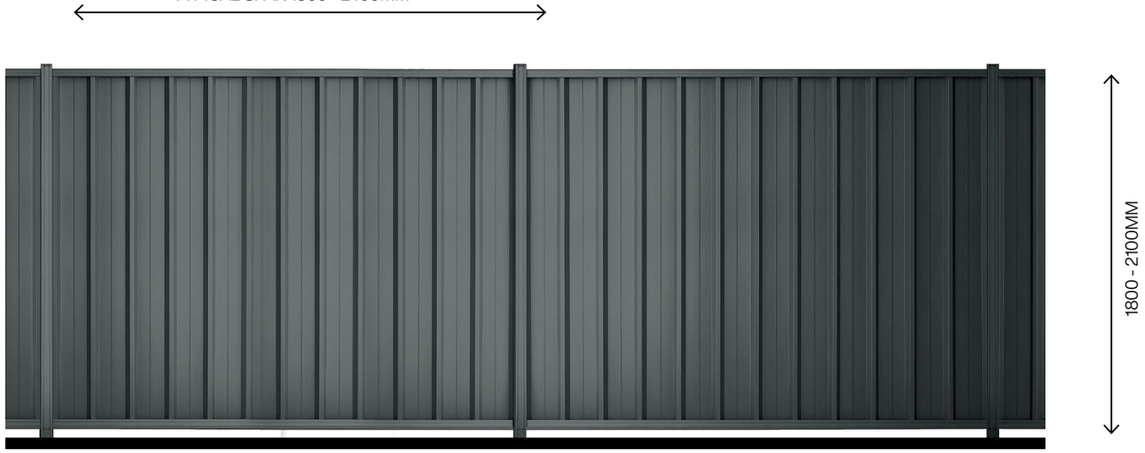
Aluminium spear top pool fence. Typical span is 2400mm. Powder coated aluminium to colour to match architectural finishes palette. Typical finishes illustrated below.

This fence is typically used to the perimeter of the development where views are to be promoted. This fence is also used extensively when associated with significant planting buffers when the use of solid fencing is not required.

Typical height 1200mm when located on Dwelling Lot Boundary
Typical height 1800-2100mm when located on Property Boundary

Monument

Satin Black



Fence Type B: Typical Elevation

B Fence Type B

Privacy screening fence (100% solid). Colourbond Trimdek or approved equivalent to meet Australian Standard AS 1397. Exterior grade lead-free paint (compliant with Australian Standard AS 2728) colour to match architectural finishes palette. Typical finishes illustrated below.

This fence is typically used to provide privacy between residences or to the boundary of the development where significant screening is required. Typical height 1800mm, increased to 2100mm if deemed required. Posts 0.8mm min high tensile steel with fencing panels to min 0.35mm high tensile steel.

Surfmist

Woodland Grey

Monument

Fencing Plan

2.2 Fencing Plan Fencing Palette

Living Gems

192 Dean Street, Berserker

Statement of Landscape Intent

PREPARED BY ZONE LANDSCAPE ARCHITECTURE

Project Reference: L24029

Designed: JB

Revision: C | 16.05.2024

ROCKHAMPTON REGIONAL COUNCIL

AMENDED PLANS APPROVED

3 September 2024

DATE

These plans are approved subject to the current conditions of approval associated with

Development Permit No.: D/170-2022

Dated: 12 June 2023

Document Set ID: 40824048
Version: 1, Version Date: 30/05/2024

Document Revisions

Rev.	Comments	Date	Initial
1	Review 1	12.03.2024	JB
A	Issue A For Approval	15.03.2024	JB
B	Issue B For Approval - Cross Sections & Civil Overlays	18.03.2024	JB
C	Issue C For RFI - Dean Street Frontage & Cross Sections	16.05.2024	JB

Document Sources

Rev.	Base Information	Issued By	Issued
-	Existing Development Permit No.: D/170-2022	JPD	06.2023
L	Architectural Plans | 03.01 Master Plan	JPD	03.2024
-	Survey Data | 861510 4-07-22	Capricorn	07.2022
NFC	Westera Civil Enginnering S24-018	Westera	03.2024
P	Architectural Plans | 03.01 Master Plan	JPD	05.2024

Document Set ID: 40824048
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Living Gems*

1.0

Landscape Design.

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Landscape Master Plan

This Landscape Master Plan provides an illustrative overview of the estate and associated landscape treatments For a more detailed breakdown of landscape treatments refer to **Plan 1.1 Open Space Areas** and **Plan 1.2 Landscape Treatment Areas**.

Existing Approval: Reference has been made to Existing Approval D/170-2022 Dated: 12 June 2023 with landscape treatments proposed generally reflecting existing approval where applicable. In addition, species specified in the existing approval have been included within species palettes provided.

Subject Site
192 Dean Street Berserker | Lot 24 Rp607814 + 8rp607712

1. Hobby Shed
2. Clubhouse
3. Pickleball Court
4. Bbq Facilities
5. Pool & Spa
6. Temporary Sales Office
7. Dog Run
8. Existing Stormwater Infrastructure
9. Entry / Vehicular Gate
10. Secondary / Emergency Access Gate
11. Pedestrian Gatehouse / Entry
12. Entry Statement / Letterboxes
13. Streetscape
14. RV Parking
15. Visitor Parking
16. Passive Open Space (Contains Easement)
17. Walking Path
18. Rest-stops / Shelter & Seating

Landscape Design
1.0 Landscape Design Master Plan

0m 10 20 30 40 50 100

N

May 2024

Document Set ID: 40824048
Version: 1, Version Date: 30/05/2024

Open Space Areas

The Open Space Areas plan illustrates all areas of open space within the Subject Site. These areas encompass both soft and hard landscaping treatments incorporating communal open space, passive open space areas (eastern area of open space incorporating stormwater swale / easement), streetscape as well as recreational amenities such as pickleball courts. For a more detailed breakdown of landscape treatments, please consult **Plan 1.2 Landscape Treatment Areas**.

Subject Site
192 Dean Street Berserker | Lot 24 Rp607814 + 8rp607712

1. Hobby Shed
2. Clubhouse
3. Pickleball Court
4. Bbq Facilities
5. Pool & Spa
6. Temporary Sales Office
7. Dog Run
8. Existing Stormwater Infrastructure
9. Entry / Vehicular Gate
10. Secondary / Emergency Access Gate
11. Pedestrian Gatehouse / Entry
12. Entry Statement / Letterboxes
13. Streetscape
14. RV Parking
15. Visitor Parking
16. Passive Open Space (Contains Easement)
17. Walking Path
18. Rest-stops / Shelter & Seating

Landscape Design
1.1 Landscape Design Open Space Areas

0m 10 20 30 40 50 100

N

Document Set ID: 40824048
Version: 1, Version Date: 30/05/2024

Subject Site
192 Dean Street Berserker | Lot 24 Rp607814 + 8rp607712

1 **Primary Entry Landscaping**
Estate entry to feature tall signature palm trees with copses of mid sized support palms (medium-sized feature trees and shade trees eg Elaeocarpus, Waterhousia or Tristaniopsis species incorporated to delineate property boundary and frome entry views). Understorey plantings of formal layered shrub species and prostrate groundcovers with placement and maximum heights cognisant of maintaining vehicular sightlines where required. RAB of 10.0m diameter to feature large feature palm or shade tree. Understorey plantings of formal layered shrub species to centre and mass planted prostrate groundcovers to outer 1.5m cognisant of maintaining vehicular sightlines.

2 **Streetscape Plantings General**
Primary streetscape landscape zone located to dwelling frontages. Planting area to feature small to medium feature tree set within layered plantings. Street trees will the planted at an average spacing of 12m based on lot width (average of one tree per lot). Tree species planted at minimum 600mm to rear of internal road edge with root guards incorporated as required. Refer to **Section 5.0 Planting Palettes** for street tree species types. Low shrub species to rear with accent species and low mass planted groundcovers.

3 **General Planting**
Layered planting scheme to general planting areas as illustrated this sheet. Planting area to feature tall native palm species and small to medium feature trees set within layered plantings, hedge species incorporated to rear of planting beds (typically along fencelines). Signature character species to be incorporated within all areas to ensure a coherent design outcome is achieved. Mass planted ground cover species to front of planting beds. Groundcover plantings to average height 300-400mm. Accent species planted in copses to frame feature trees and palm species.

4 **Passive Open Space**
Area of passive open space associated with storm water conveyance to be retained as maintained turf with scattered shade trees and passive open space uses including dog run (and the potential to include community gardens). A walking path is located within this space with rest-stops (shelter and/or shade trees and seating) located along pathway.

5 **Pathway**
A walking path is located within the area of passive open space with rest-stops incorporated comprising seating and shade (achieved through shade tress and / or shelter). Pathway provides connectivity to Club House and associated facilities. Shade trees located along pathway as generally illustrated.

6 **OS Perimeter Plantings**
Planting to perimeter of passive open space area including along internal road, RV parking area. Planting areas within Passive Open Space Area dictated by existing trees and areas associated with stormwater conveyance. Planting to reflect General Planting (3) with screening hedges incorporated to fencelines. Medium-sized trees eg Elaeocarpus incorporated to provide additional screening and buffering between development and adjacent landuses with existing vegetation (trees) retained where possible. Plantings to transition to WSUD species in areas where the stormwater function within the space necessitates.

Private Dwelling Open Space
Private dwelling open space (primarily consisting of rear courtyards) to generally reflect the palette and layering principles of General Planting treatment (3) with shrub species located to fencelines, layered groundovers to front and small-medium shade tree. Private landscape works are subject to future design detail.

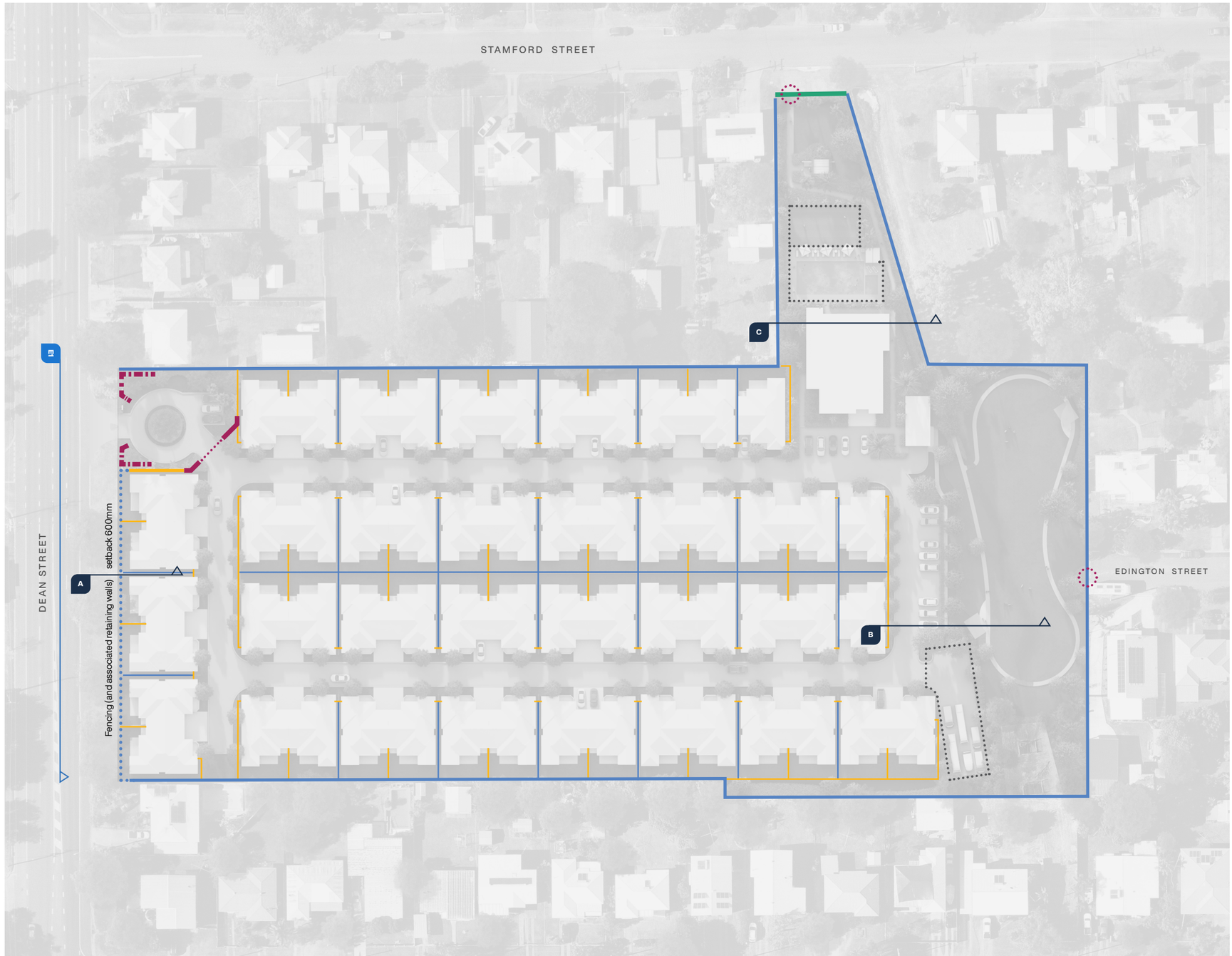
Dean Street Frontage
Dean Street verge to be repaired / reinstated to council standards. Existing street trees to be assessed and retained if deemed healthy and good form. Additional and / or replacement trees incorporated where required, approximate spacings of 12-15m. Retaining wall / fenceline setback 600mm to allow for planting to front. Planting area to feature screening hedge to height 1.5 to 2.5.m (maintained to generally reflect height of retaining wall) - Syzygium Aussie Boomer, Resilience or equivalent. Refer to **5.2 Living Gems Character Species** Hedged Syzygium Species. Refer also Dean Street Elevations & Cross Sections.

Landscape Design
1.2 Landscape Design Treatment Plan

0m 10 20 30 40 50 100 N

May 2024

Document Set ID: 40824048
Version: 1, Version Date: 30/05/2024



Subject Site
192 Dean Street Berserker | Lot 24 Rp607814 + 8rp607712

Fence to Development perimeter to be 100% solid when adjacent to residential land use **(Fence Type B)** or transparent when adjacent to public open space **(Fence Type C).**

Fence Type A
Privacy screening fence (Slatted 50% solid). Horizontal slat fencing with 75mm aluminium blades with 10-15mm spacings to allow filtered views. Typical height 1800mm, this can be extended to 2100mm if required.

Fence Type B
Privacy screening fence (100% solid). Colourbond Trimdek, Timber Good-Neighbor / Lapped and Capped or approved equivalent to meet Australian Standard AS 1397, colour to match architectural finishes palette. This fence is typically used to provide privacy between residences or to the boundary of the development where screening is required. Typical height 1800mm, increased to 2100mm if deemed required. If fencing above typical heights are proposed this will be noted on the fencing plan contained within this design package. Refer Section 5.0 Fences & Walls.

Fencing Height reduced to 1200mm to Dean Street frontage.

Fence Type C
Aluminum spear top pool fence, colour to match architectural finishes palette. This fence is typically used to the perimeter of the development where views are to be promoted. This fence is also used extensively when associated with significant planting buffers when the use of solid fencing is not required including where lots interface with open space areas).

Typical height 1.2 - 1.8m when located on Dwelling Lot Boundary
Typical height 1.8 - 2.1m when located on Property Boundary

Development Entry
Indicative wall alignment illustrated, subject to detailed design phase. Fence / wall arrangement to ensure gated access. Refer to JPD Architectural Package for additional detail.

Wall Type D
Indicative alignment of entry feature wall / letterbox. Blockwork wall (render & painted). Potential to apply additional treatment eg stone cladding or feature cladding to reflect architectural finishes palette when part of entry statement or way-finding signage.

Entry Gates
Potential location of vehicular/ pedestrian entry gates.

Misc Fences
Fences associated with RV Compound, Swimming Pool / Courts.

Landscape Design
1.3 Landscape Plan Primary Walls & Fences

0m 10 20 30 40 50 100

N

Document Set ID: 40824048
Version: 1, Version Date: 30/05/2024

Subject Site
192 Dean Street Berserker | Lot 24 Rp607814 + 8rp607712

Retaining Walls illustrated reflect Westera Engineers Plans March 2024.
Refer to Engineering Plans for all retaining wall details.

Primary Retaining Wall 01
Height: </= 1.0m

Primary Retaining Wall 02
Height: 1.0 - 2.0m

Primary Retaining Wall 03
Height: 2.0 - 3.0m

Landscape Design

1.4 Landscape Plan Retaining Walls

0m 10 20 30 40 50 100

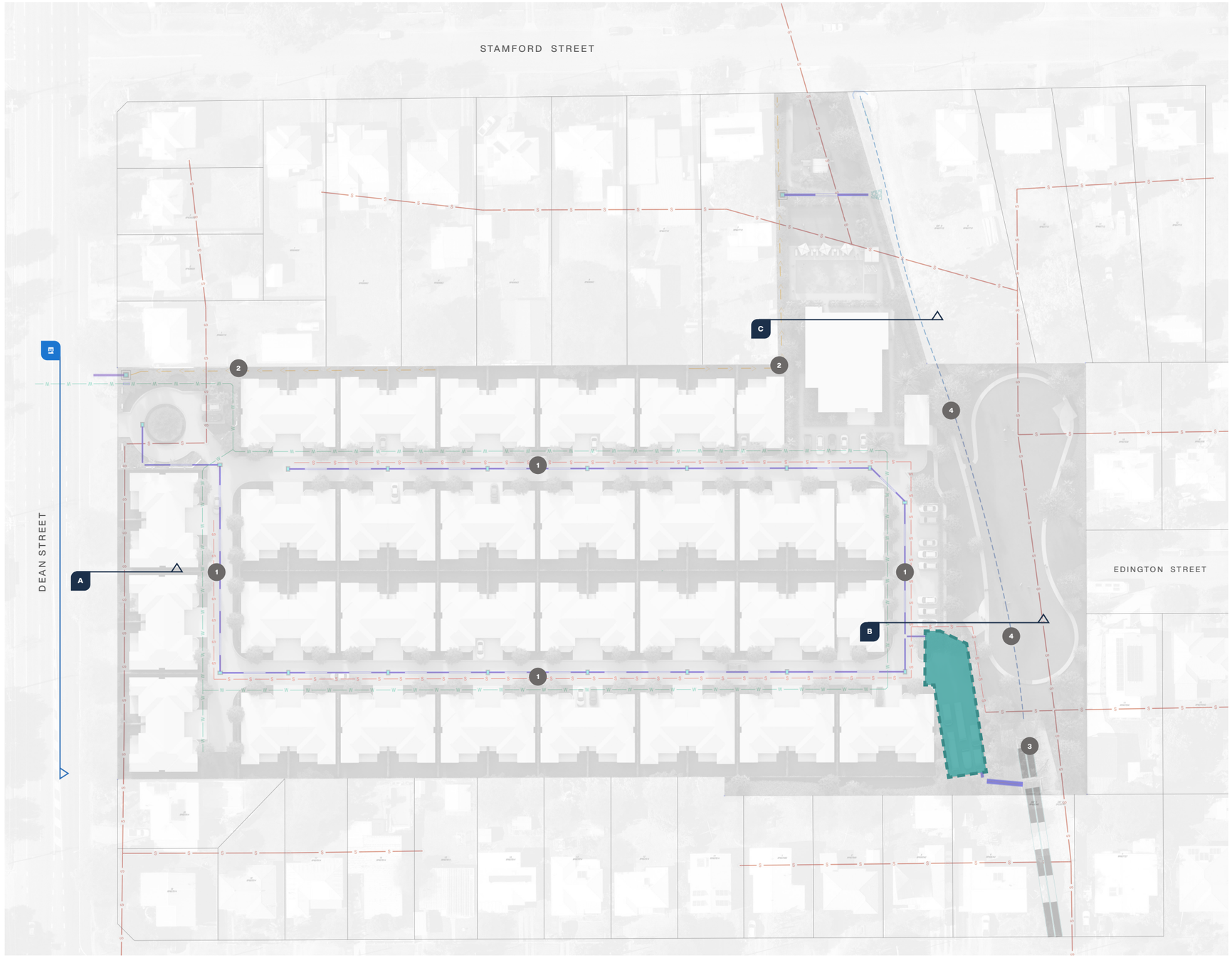
N

May 2024

Zone Landscape Architecture | L24029 192 Dean Street Berserker

Document Set ID: 40824048
Version: 1, Version Date: 30/05/2024

Misc Fences
Fences associated with RV Compound, Swimming Pool and



Subject Site
192 Dean Street Berserker | Lot 24 Rp607814 + 8rp607712

Fence to Development perimeter to be 100% solid when adjacent to residential land use **(Fence Type B)** or transparent when adjacent to public open space **(Fence Type C).**

Proposed Stormwater Detention Tank
Nil Tree species over Detention Tank extents. Landscape treatment limited to turf, groundcovers, accents and shrubs, small palm species incorporated where depth allows. Refer to Engineering Plans for specifications of all storm water infrastructure. Refer to 1.5 Landscape Design Master Plan for typical tree placement and arrangement of open space landscape treatments.

1 **Proposed Primary Infrastructure (Services)**
Proposed Services. Location of proposed landscape treatments (primarily trees) arrange to respond to proposed services. with root guards incorporated where required. Refer to **2.5 Landscape Design Master Plan** for typical tree placement and arrangement of open space landscape treatments.

2 **Proposed Swale**
WSUD species (sedges) to propsed swales. Refer to Engineering Plans for specifications of all stormwater infrastructure.

3 **Existing Stormwater Infrastructure**
Existing stormweater Infrastructure (concrete catch basin with drain 2 x 1500 Dia RCP)

4 **Existing Grass Swale**
Existing low-flow line of grass swale located with passive open space / easement.

Landscape Design
1.5 Landscape Plan Civil Overlay & Stormwater

0m 10 20 30 40 50 100

N

Document Set ID: 40824048
Version: 1, Version Date: 30/05/2024

1. Clubhouse
2. Hobby Shed
3. Pickleball Court | Bbq Facilities | Pool & Spa
4. Pedestrian Gatehouse / Entry
5. **General Planting**
   Layered planting scheme to general planting areas as illustrated this sheet. Planting area to feature tall native palm species and small to medium feature trees set within layered plantings, hedge species incorporated to rear of planting beds (typically along fencelines). Signature character species to be incorporated within all areas to ensure a coherent design outcome is achieved. Mass planted ground cover species to front of planting beds. Groundcover plantings to average height 300-400mm. Accent species planted in copses to frame feature trees and palm species.
6. **Passive Open Space**
   Area of passive open space associated with storm water conveyance to be retained as maintained turf with scattered shade trees and passive open space uses including dog run (and the potential to include community gardens). A walking path is located within this space with rest-stops (shelter and/or shade trees and seating) located along pathway.
7. **Pathway**
   A walking path is located within the area of passive open space with rest-stops incorporated comprising seating and shade (achieved through shade tress and / or shelter). Pathway provides connectivity to Club House and associated facilities. Shade trees located along pathway as generally illustrated.
8. **Streetscape Plantings General**
   Primary streetscape landscape zone located to dwelling frontages. Planting area to feature small to medium feature tree set within layered plantings. Street trees will the planted at an average spacing of 12m based on lot width (average of one tree per lot). Tree species planted at minimum 600mm to rear of internal road edge with root guards incorporated as required. Refer to **Section 5.0 Planting Palettes** for street tree species types. Low shrub species to rear with accent species and low mass planted groundcovers.
9. **OS Perimeter Plantings**
   Planting to perimeter of passive open space area including along internal road, RV parking area. Planting areas within Passive Open Space Area dictated by existing trees and areas associated with stormwater conveyance. Planting to reflect General Planting (3) with screening hedges incorporated to fencelines. Medium-sized trees eg Elaeocarpus incorporated to provide additional screening and buffering between development and adjacent landuses with existing vegetation (trees) retained where possible. Plantings to transition to WSUD species in areas where the stormwater function within the space necessitates.
10. **Private Dwelling Open Space**
    Private dwelling open space (primarily consisting of rear courtyards) to generally reflect the palette and layering principles of General Planting treatment (3) with shrub species located to fencelines, layered groundovers to front and small-medium shade tree. Private landscape works are subject to future design detail.
11. **Primary Entry Landscaping**
    Estate entry to feature tall signature palm trees with copses of mid sized support palms (medium-sized feature trees and shade trees eg Elaeocarpus, Waterhousia or Tristaniopsis species incorporated to delineate property boundary and frome entry views). Understorey plantings of formal layered shrub species and prostrate groundcovers with placement and maximum heights cognisant of maintaining vehicular sightlines where required. RAB of 10.0m diameter to feature large feature palm or shade tree. Understorey plantings of formal layered shrub species to centre and mass planted prostrate groundcovers to outer 1.5m cognisant of maintaining vehicular sightlines.
12. **Dean Street Road Reserve**
    Dean Street verge to be repaired / reinstated to council standards. Existing street trees to be assessed and retained if deemed healthy and good form. Additional and / or replacement trees incorporated where required, approximate spacings of 12-15m. Retaining wall / fenceline setback 600mm to allow for planting to front. Refer also Dean Street Elevations & Cross Sections.

Landscape Design

1.6 Landscape Design Master Plan

0m 10 20 30 40 50 100

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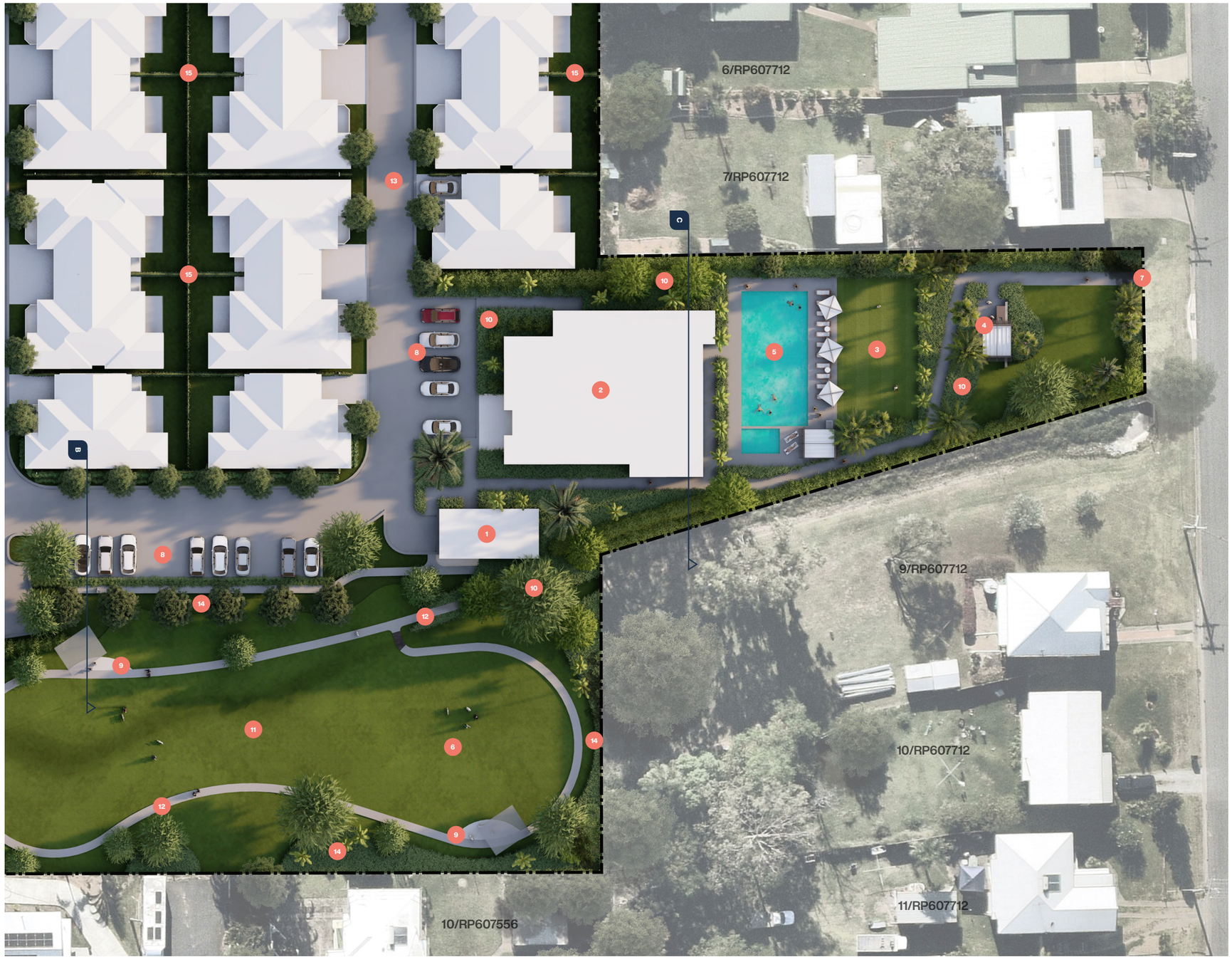
May 2024

Document Set ID: 40824048
Version: 1, Version Date: 30/05/2024



Subject Site
192 Dean Street Berserker | Lot 24 Rp607814 + 8rp607712

1. Hobby Shed
2. Clubhouse
3. Pickleball Court
4. Bbq Facilities
5. Pool & Spa
6. Dog Run
7. Pedestrian Gatehouse / Entry
8. Parking
9. Rest-stops / Shelter & Seating
10. **General Planting**
Layered planting scheme to general planting areas as illustrated this sheet. Planting area to feature tall native palm species and small to medium feature trees set within layered plantings, hedge species incorporated to rear of planting beds (typically along fencelines). Signature character species to be incorporated within all areas to ensure a coherent design outcome is achieved. Mass planted ground cover species to front of planting beds. Groundcover plantings to average height 300-400mm. Accent species planted in copses to frame feature trees and palm species.
11. **Passive Open Space**
Area of passive open space associated with storm water conveyance to be retained as maintained turf with scattered shade trees and passive open space uses including dog run (and the potential to include community gardens). A walking path is located within this space with rest-stops (shelter and/or shade trees and seating) located along pathway.
12. **Pathway**
A walking path is located within the area of passive open space with rest-stops incorporated comprising seating and shade (achieved through shade tress and / or shelter). Pathway provides connectivity to Club House and associated facilities. Shade trees located along pathway as generally illustrated.
13. **Streetscape Plantings General**
Primary streetscape landscape zone located to dwelling frontages. Planting area to feature small to medium feature tree set within layered plantings. Street trees will the planted at an average spacing of 12m based on lot width (average of one tree per lot). Tree species planted at minimum 600mm to rear of internal road edge with root guards incorporated as required. Refer to **Section 5.0 Planting Palettes** for street tree species types. Low shrub species to rear with accent species and low mass planted groundcovers.
14. **OS Perimeter Plantings**
Planting to perimeter of passive open space area including along internal road, RV parking area. Planting areas within Passive Open Space Area dictated by existing trees and areas associated with stormwater conveyance. Planting to reflect General Planting (3) with screening hedges incorporated to fencelines. Medium-sized trees eg Elaeocarpus incorporated to provide additional screening and buffering between development and adjacent landuses with existing vegetation (trees) retained where possible. Plantings to transition to WSUD species in areas where the stormwater function within the space necessitates.
15. **Private Dwelling Open Space**
Private dwelling open space (primarily consisting of rear courtyards) to generally reflect the palette and layering principles of General Planting treatment (3) with shrub species located to fencelines, layered groundovers to front and small-medium shade tree. Private landscape works are subject to future design detail.

Landscape Design
1.7 Landscape Design Callout 01

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Version: 1, Version Date: 30/05/2024

Living Gems*

2.0

Dwelling Design.

Document Set ID: 40824048
Version: 1, Version Date: 30/05/2024

Dwelling Design

2.1 Dwelling Frontage & Streetscape Setout 01

Base 3D prepared / provided by JPD. ZLA Edit

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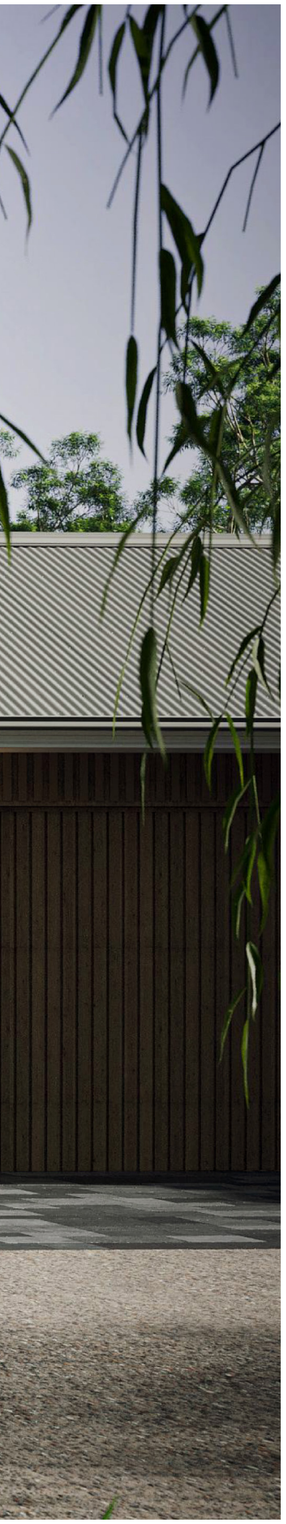

1 **Primary Landscape Zone**
Primary landscape zone located within the dwelling setback as typically illustrated. Planting area to feature small to medium feature tree set within layered plantings (refer Dwelling Frontage species schedule). There are **four planting schemes** proposed ensure a range of treatments are incorporated. Signature character species will be repeated within these to ensure a coherent design outcome is achieved.

2 **Secondary Landscape Zone**
Secondary landscape zone located within the dwelling setback as typically illustrated. The landscaped areas are located between access pathways and driveways and range in width from 500mm to 1000mm depending on lot frontages and context within the development. Planting will consist primarily of groundcovers with accent species incorporated where space permits. Species to reflect those used in the associated Primary Landscape Zone.

A **Shrub / Hedge Layer**
Shrub species planted to rear of garden beds as illustrated.
Refer to planting palettes for shrub species options.
Spacings: Average of 750mm centres.

B **Accents** (Optional - dependent on planting scheme type)
Accent species planted as illustrated. Generally planted in groups of 3-4 centered to base of tree.
Refer to planting palettes for accent species options.
Spacings: 500-600mm centres.

C **Ground Cover**
Ground cover species to average height 300-400mm planted in pattern as illustrated.
Refer to planting palettes for groundcover species options.
Spacings: 200-300mm centres.

D **Tree Species**
Tree species planted 600mm to rear of internal road edge with root guards incorporated as required. Tree species are assigned by street and in this way are independent to the dwelling planting schemes. This ensures that a strong coherent design character is achieved within the streetscape through the repetition of tree species. Street trees will the planted at an average spacing of 12m (dictated by lot width with an average of one tree provided per dwelling lot where services locations, dwelling offsets and adherence to vehicular and pedestrian sight lines permit). Refer to planting palettes for street tree species types. **Refer to Planting Palettes** for street tree species types.

Refer to planting palettes for tree species options.

Important Note
The illustrations within this landscape concept package are representations of general layout and landscape treatments. Planting palette to take precedent over the rendered dwelling and streetscape treatments.

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Living Gems*

3.0

Sections & Elevations.

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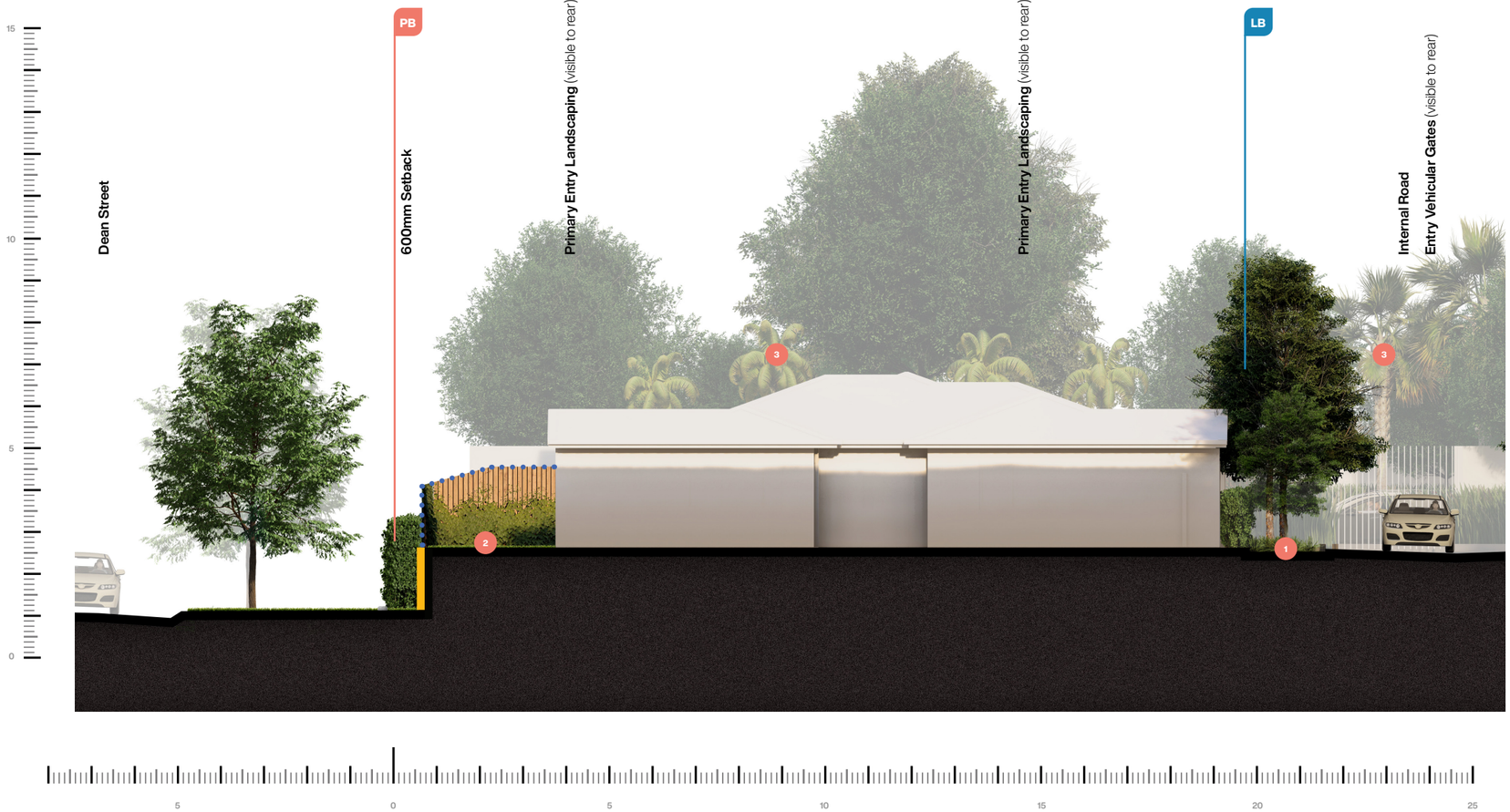
Version: 1, Version Date: 30/05/2024



Dean St Berserker

Site Sections Typical Sectional Elevation A

May 2024

PB **Subject Site Property Boundary**
192 Dean Street Berserker | Lot 24 Rp607814 + 8rp607712

LB **Lot Boundary**
Dwelling Lot Boundary

1 **Streetscape Plantings General**
Primary streetscape landscape zone located to dwelling frontages. Planting area to feature small to medium feature tree set within layered plantings. Street trees will the planted at an average spacing of 12m based on lot width (average of one tree per lot). Tree species planted at minimum 600mm to rear of internal road edge with root guards incorporated as required. Refer to **Section 5.0 Planting Palettes** for street tree species types. Low shrub species to rear with accent species and low mass planted groundcovers.

2 **Private Dwelling Open Space**
Private dwelling open space (primarily consisting of rear courtyards) to generally reflect the palette and layering principles of General Planting treatment (3) with shrub species located to fencelines, layered groundovers to front and small-medium shade tree. Private landscape works are subject to future design detail.

3 **Primary Entry Landscaping (visible to rear)**
Estate entry to feature tall signature palm trees with copses of mid sized support palms (medium-sized feature trees and shade trees eg Elaeocarpus, Waterhousia or Tristaniopsis species incorporated to delineate property boundary and frome entry views). Understorey plantings of formal layered shrub species and prostrate groundcovers with placement and maximum heights cognisant of maintaining vehicular sightlines where required. RAB of 10.0m diameter to feature large feature palm or shade tree. Understorey plantings of formal layered shrub species to centre and mass planted prostrate groundcovers to outer 1.5m cognisant of maintaining vehicular sightlines.

4 **Dean Street Road Reserve**
Dean Street verge to be repaired / reinstated to council standards. Existing street trees to be assessed and retained if deemed healthy and good form. Additional and / or replacement trees incorporated where required, approximate spacings of 12-15m.

Retaining wall / fenceline setback 600mm to allow for planting to front. Planting area to feature screening hedge to height 1.5 to 2.5.m (maintained to generally reflect height of retaining wall) - Syzygium Aussie Boomer, Resilience or equivalent. Refer to **5.2 Living Gems Character Species** Hedged Syzygium Species.

Primary Retaining Wall 02
Height: 1.0 - 2.0m
Refer to Retaining Walls Plan this document and to Westera Engineering Plans for further details.

Fence Type B
Privacy screening fence (100% solid). Colourbond Trimdek, Timber Good-Neighbor / Lapped and Capped or approved equivalent to meet Australian Standard AS 1397, colour to match architectural finishes palette. This fence is typically used to provide privacy between residences or to the boundary of the development where screening is required.
Typical height to Dean Street frontage: 1200mm (Colourbond)
Typical height to Lot side boundaries: 1800mm

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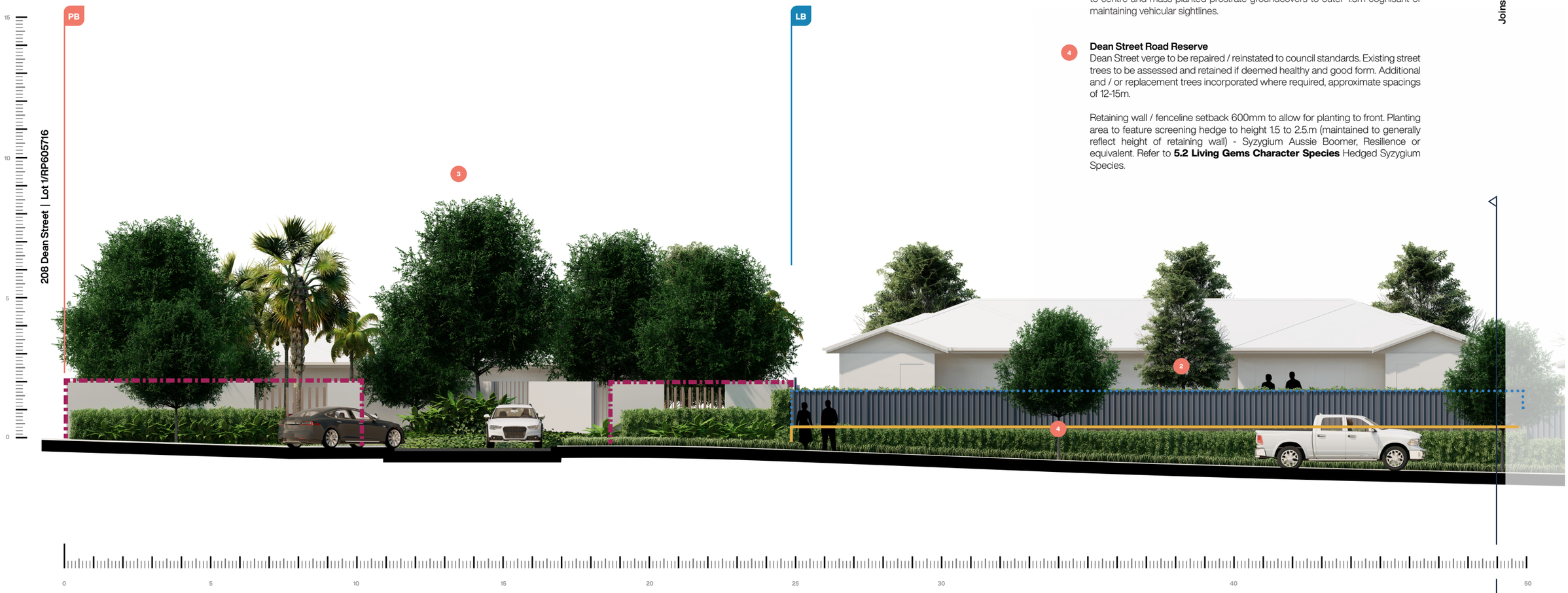
Primary Retaining Wall 02
Height: 1.0 - 2.0m

Primary Retaining Wall 03
Height: 2.0 - 3.0m

Wall Type D
Indicative alignment of entry feature wall / letterbox. Blockwork wall (render & painted). Potential to apply additional treatment eg stone cladding or feature cladding to reflect architectural finishes palette when part of entry statement or way-finding signage.



Private Dwelling Open Space
Private dwelling open space (primarily consisting of rear courtyards) to generally reflect the palette and layering principles of General Planting treatment (3) with shrub species located to fencelines, layered groundovers to front and small-medium shade tree. Private landscape works are subject to future design detail.

Primary Entry Landscaping
Estate entry to feature tall signature palm trees with copses of mid sized support palms (medium-sized feature trees and shade trees eg Elaeocarpus, Waterhousia or Tristaniopsis species incorporated to delineate property boundary and frome entry views). Understorey plantings of formal layered shrub species and prostrate groundcovers with placement and maximum heights cognisant of maintaining vehicular sightlines where required. RAB of 10.0m diameter to feature large feature palm or shade tree. Understorey plantings of formal layered shrub species to centre and mass planted prostrate groundcovers to outer 1.5m cognisant of maintaining vehicular sightlines.

Dean Street Road Reserve
Dean Street verge to be repaired / reinstated to council standards. Existing street trees to be assessed and retained if deemed healthy and good form. Additional and / or replacement trees incorporated where required, approximate spacings of 12-15m.

Retaining wall / fenceline setback 600mm to allow for planting to front. Planting area to feature screening hedge to height 1.5 to 2.5m (maintained to generally reflect height of retaining wall) - Syzygium Aussie Boomer, Resilience or equivalent. Refer to **5.2 Living Gems Character Species** Hedged Syzygium Species.

Joins Elevation Part B

Fence Type B
Privacy screening fence (100% solid). Colourbond Trimdek, Timber Good-Neighbor / Lapped and Capped or approved equivalent to meet Australian Standard AS 1397, colour to match architectural finishes palette. This fence is typically used to provide privacy between residences or to the boundary of the development where screening is required.
Typical height to Dean Street frontage: 1200mm (Colourbond)
Typical height to Lot side boundaries: 1800mm

Dean St Berserker

Site Elevation Typical Elevation E1 (Part A)

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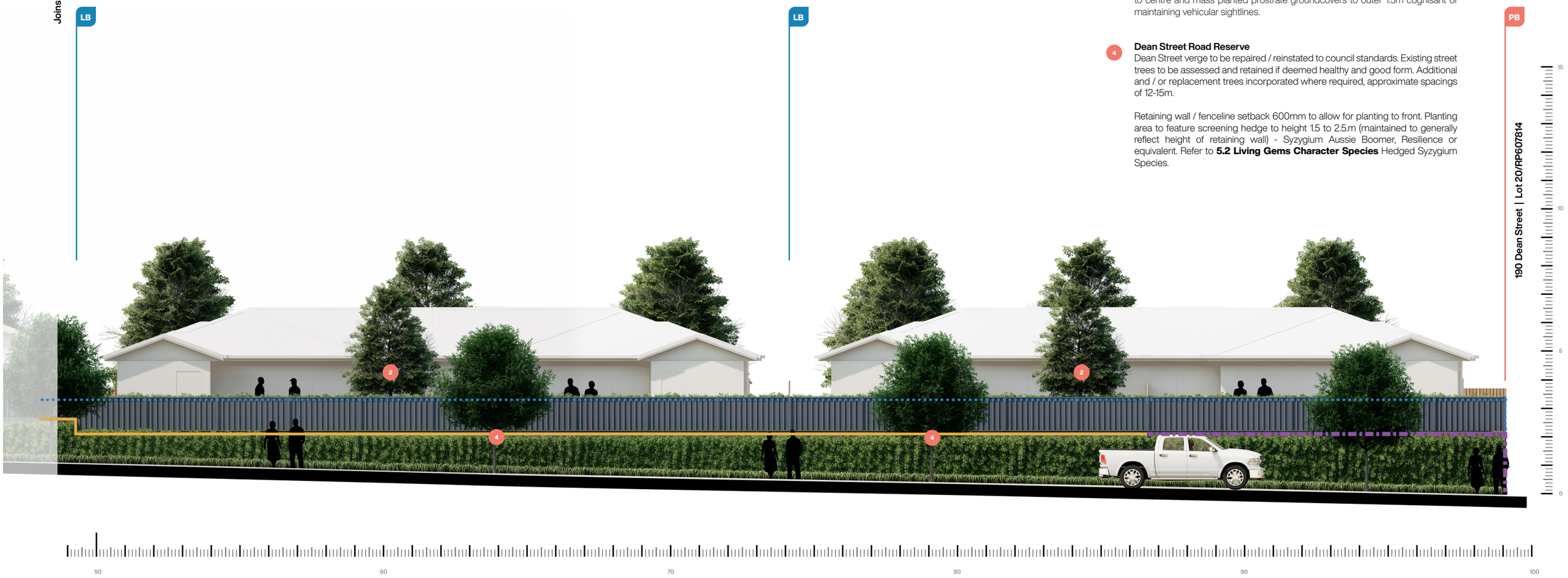
Primary Retaining Wall 02
Height: 1.0 - 2.0m

Primary Retaining Wall 03
Height: 2.0 - 3.0m



2 **Private Dwelling Open Space**
Private dwelling open space (primarily consisting of rear courtyards) to generally reflect the palette and layering principles of General Planting treatment (3) with shrub species located to fencelines, layered groundovers to front and small-medium shade tree. Private landscape works are subject to future design detail.

3 **Primary Entry Landscaping**
Estate entry to feature tall signature palm trees with copses of mid sized support palms (medium-sized feature trees and shade trees eg Elaeocarpus, Waterhousia or Tristaniopsis species incorporated to delineate property boundary and frome entry views). Understorey plantings of formal layered shrub species and prostrate groundcovers with placement and maximum heights cognisant of maintaining vehicular sightlines where required. RAB of 10.0m diameter to feature large feature palm or shade tree. Understorey plantings of formal layered shrub species to centre and mass planted prostrate groundcovers to outer 1.5m cognisant of maintaining vehicular sightlines.

4 **Dean Street Road Reserve**
Dean Street verge to be repaired / reinstated to council standards. Existing street trees to be assessed and retained if deemed healthy and good form. Additional and / or replacement trees incorporated where required, approximate spacings of 12-15m.

Retaining wall / fenceline setback 600mm to allow for planting to front. Planting area to feature screening hedge to height 1.5 to 2.5m (maintained to generally reflect height of retaining wall) - Syzygium Aussie Boomer, Resilience or equivalent. Refer to **5.2 Living Gems Character Species** Hedged Syzygium Species.

Fence Type B
Privacy screening fence (100% solid). Colourbond Trimdek, Timber Good-Neighbor / Lapped and Capped or approved equivalent to meet Australian Standard AS 1397, colour to match architectural finishes palette. This fence is typically used to provide privacy between residences or to the boundary of the development where screening is required.
Typical height to Dean Street frontage: 1200mm (Colourbond)
Typical height to Lot side boundaries: 1800mm

Dean St Berserker

Site Elevation Typical Elevation E1 (Part B)

May 2024

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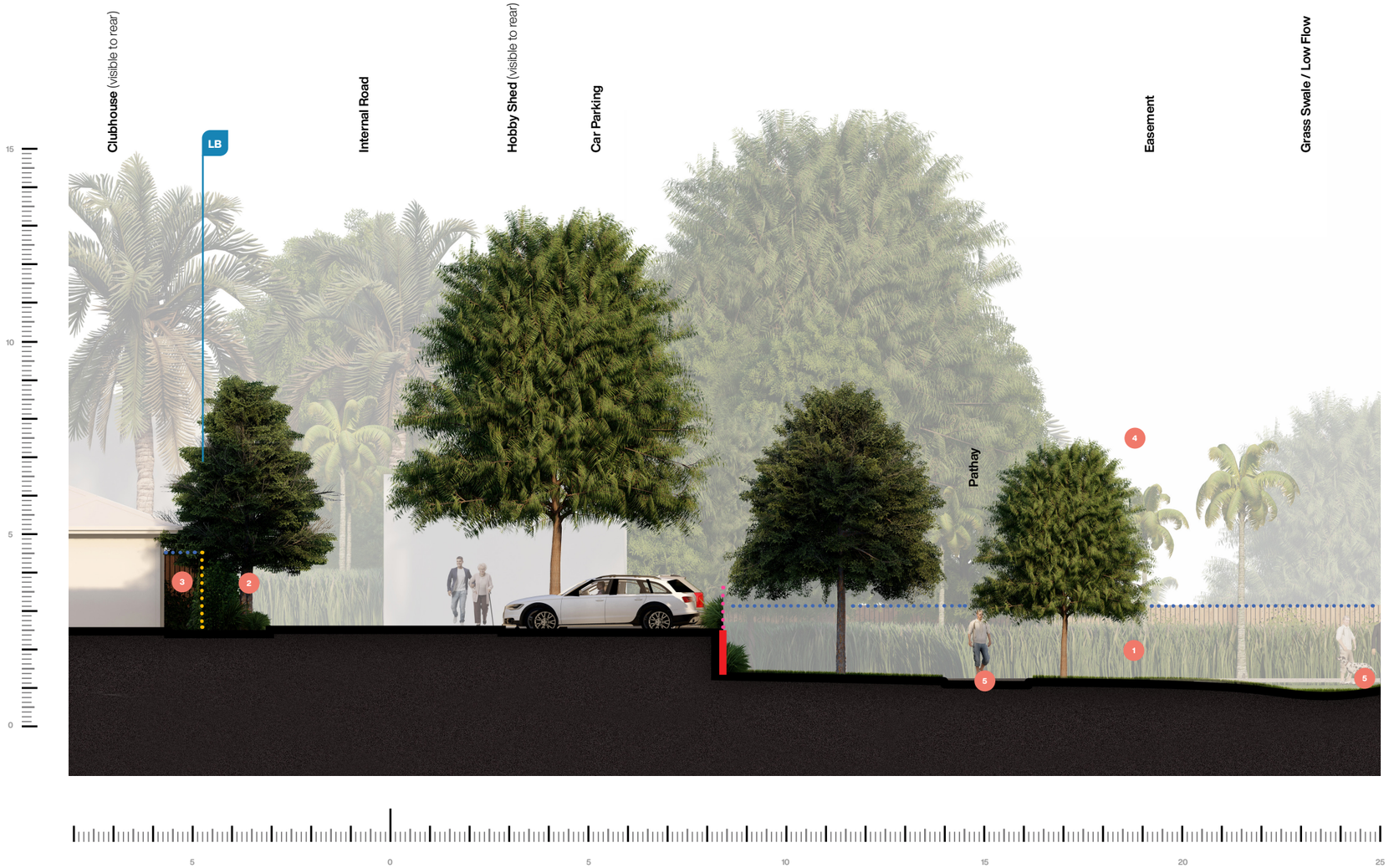

PB **Subject Site Property Boundary**
192 Dean Street Berserker | Lot 24 Rp607814 + 8rp607712

LB **Lot Boundary**
Dwelling Lot Boundary

1 **OS Perimeter Plantings**
Planting to perimeter of passive open space area including along internal road, RV parking area. Planting areas within Passive Open Space Area dictated by existing trees and areas associated with stormwater conveyance. Planting to reflect General Planting (3) with screening hedges incorporated to fencelines. Medium-sized trees eg Elaeocarpus incorporated to provide additional screening and buffering between development and adjacent landuses with existing vegetation (trees) retained where possible. Plantings to transition to WSUD species in areas where the stormwater function within the space necessitates.

2 **Streetscape Plantings General**
Primary streetscape landscape zone located to dwelling frontages. Planting area to feature small to medium feature tree set within layered plantings. Street trees will the planted at an average spacing of 12m based on lot width (average of one tree per lot). Tree species planted at minimum 600mm to rear of internal road edge with root guards incorporated as required. Refer to **Section 5.0 Planting Palettes** for street tree species types. Low shrub species to rear with accent species and low mass planted groundcovers.

3 **Private Dwelling Open Space**
Private dwelling open space (primarily consisting of rear courtyards) to generally reflect the palette and layering principles of General Planting treatment (3) with shrub species located to fencelines, layered groundovers to front and small-medium shade tree. Private landscape works are subject to future design detail.

4 **Passive Open Space**
Area of passive open space associated with storm water conveyance to be retained as maintained turf with scattered shade trees and passive open space uses including dog run (and the potential to include community gardens). A walking path is located within this space with rest-stops (shelter and/or shade trees and seating) located along pathway.

5 **Pathway**
A walking path is located within the area of passive open space with rest-stops incorporated comprising seating and shade (achieved through shade tress and / or shelter). Pathway provides connectivity to Club House and associated facilities. Shade trees located along pathway as generally illustrated on master plan.

Primary Retaining Wall 01
Height: </= 1.0m
Refer to Retaining Walls Plan this document and to Westera Engineering Plans for further details.

Fence Type A
Privacy screening fence (Slatted 50% solid). Horizontal slat fencing with 75mm aluminium blades with 10-15mm spacings to allow filtered views. Typical height 1800mm, this can be extended to 2100mm if required.

Fence Type B
Privacy screening fence (100% solid). Colourbond Trimdek, Timber Good-Neighbor / Lapped and Capped or approved equivalent to meet Australian Standard AS 1397, colour to match architectural finishes palette. This fence is typically used to provide privacy between residences or to the boundary of the development where screening is required. Typical height 1800mm, increased to 2100mm if deemed required. If fencing above typical heights are proposed this will be noted on the fencing plan contained within this design package. Refer Section 5.0 Fences & Walls.

Fence Type D
Safety Rail: Handrail/ Guardrail to a minimum height of 900mm.

Dean St Berserker

Site Sections Typical Sectional Elevation B

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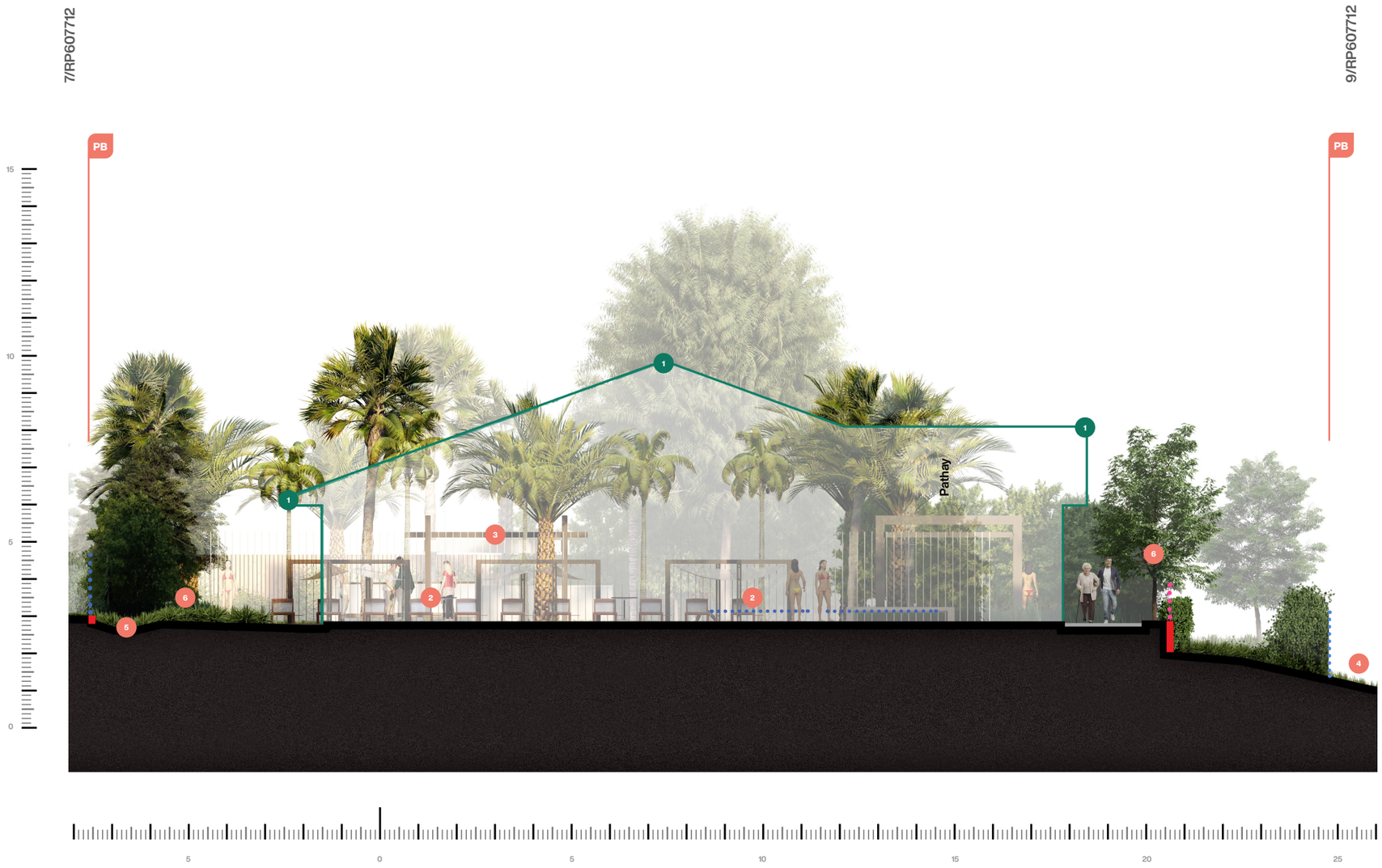

PB **Subject Site Property Boundary**
192 Dean Street Berserker | Lot 24 Rp607814 + 8rp607712

LB **Lot Boundary**
Dwelling Lot Boundary

1 **Club House**
Club House illustrated (in foreground) as transparent overlay for reference.

2 **Swimming Pool Area**

3 **BBQ Facilities (**visible to rear)

4 **Easement (**located in neighboring Lot)

5 **Swale**
WSUD Plantings (primarily sedges) to ensure nil impact to water conveyance.

6 **General Planting**
Layered planting scheme to general planting areas as illustrated on Master Plan and Landscape Treatment Plan. Planting area to feature tall native palm species and small to medium feature trees set within layered plantings, hedge species incorporated to rear of planting beds (typically along fencelines). Signature character species to be incorporated within all areas to ensure a coherent design outcome is achieved. Mass planted ground cover species to front of planting beds. Groundcover plantings to average height 300-400mm. Accent species planted in copses to frame feature trees and palm species.

Primary Retaining Wall 01
Height: </= 1.0m
Refer to Retaining Walls Plan this document and to Western Engineering Plans for further details.

Fence Type A
Privacy screening fence (Slatted 50% solid). Horizontal slat fencing with 75mm aluminium blades with 10-15mm spacings to allow filtered views. Typical height 1800mm, this can be extended to 2100mm if required.

Fence Type B
Privacy screening fence (100% solid). Colourbond Trimdek, Timber Good-Neighbor / Lapped and Capped or approved equivalent to meet Australian Standard AS 1397, colour to match architectural finishes palette. This fence is typically used to provide privacy between residences or to the boundary of the development where screening is required. Typical height 1800mm, increased to 2100mm if deemed required. If fencing above typical heights are proposed this will be noted on the fencing plan contained within this design package. Refer Section 5.0 Fences & Walls.

Fence Type D
Safety Rail: Handrail/ Guardrail to a minimum height of 900mm.

Dean St Berserker

Site Sections Typical Sectional Elevation C

May 2024

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Living Gems*

4.0

Fences & Walls.

Important Note This section contains a number of **Living Gems Typical Fence & Wall Types** not all types contained herein are necessarily proposed within this development. Further detail on fencing and retaining wall locations will be provided in detailed design phase.

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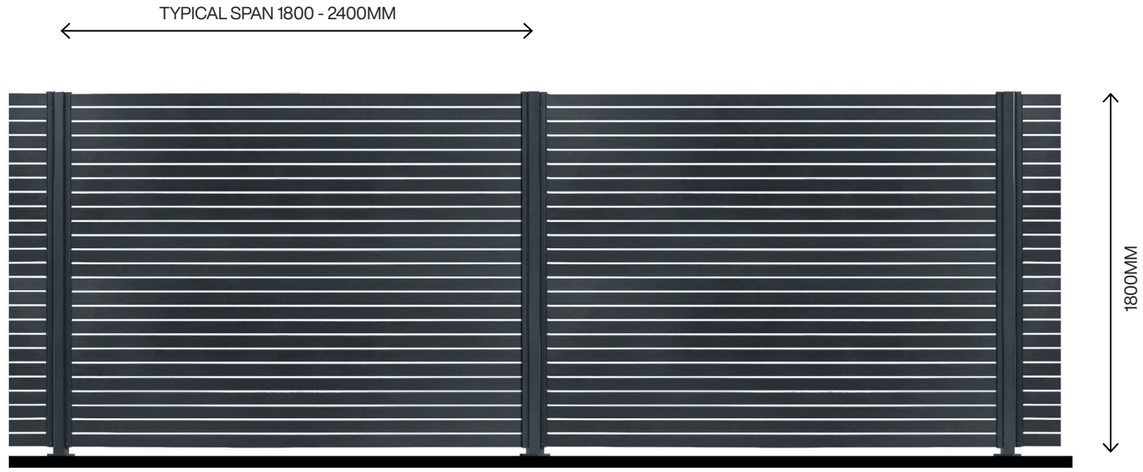
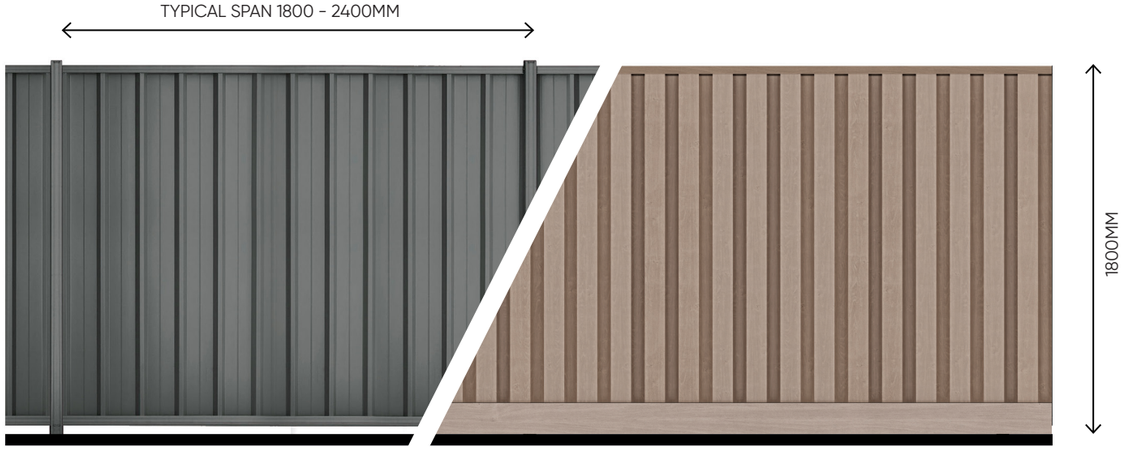


Fence Type A: Typical Elevation

A Fence Type A

Privacy screening fence. Horizontal slat fencing with 75mm aluminium blades with 10-15mm spacings to allow filtered views. Typical span is 2400mm. Powder coated aluminium to colour to match architectural finishes palette. Stratco EzySlat Fencing or approved equivalent. This fence is typically used to the secondary frontage of corner lots to provide privacy to the residence without the use of solid fencing. Typical height 1800mm, this can be extended to 2100mm if required. If fencing above typical heights are proposed this will be noted on the fencing plan contained within this design package.

Landscaping to feature layered plantings to provide softening to fence line. Landscape form as per typical elevations this sheet. Refer to fence line planting modules and schedules for species listings. Refer **Section 1.5 - Fencing Locations** and **Section 3.0 - Site Sections** for further information regarding layout and location of fence types and associated landscape treatments.



Fence Type B: Typical Elevation

B Fence Type B

Privacy screening fence (100% solid). Colourbond Trimdek, Timber Good-Neighbor / Lapped and Capped or approved equivalent to meet Australian Standard AS 1397. Exterior grade lead-free paint (compliant with Australian Standard AS 2728) colour to match architectural finishes palette. Typical finishes illustrated below. This fence is typically used to provide privacy between residences or to the boundary of the development where significant screening is required. Typical height 1800mm, increased to 2100mm if deemed required. Posts 0.8mm min high tensile steel with fencing panels to min 0.35mm high tensile steel.

Landscaping to feature layered plantings to provide softening to fenceline. Landscape form as per typical elevations this sheet. Refer to fenceline planting modules and schedules for species listings. Refer to **Section 3.0 Site Sections** for additional information regarding wall alignments and associated landscape treatments.

Fences & Walls

4.1 Fence & Wall Types

Important Note This section contains a number of **Living Gems Typical Fence & Wall Types** not all types contained herein are necessarily proposed within this development. Further detail on fencing and retaining wall locations will be provided in detailed design phase.

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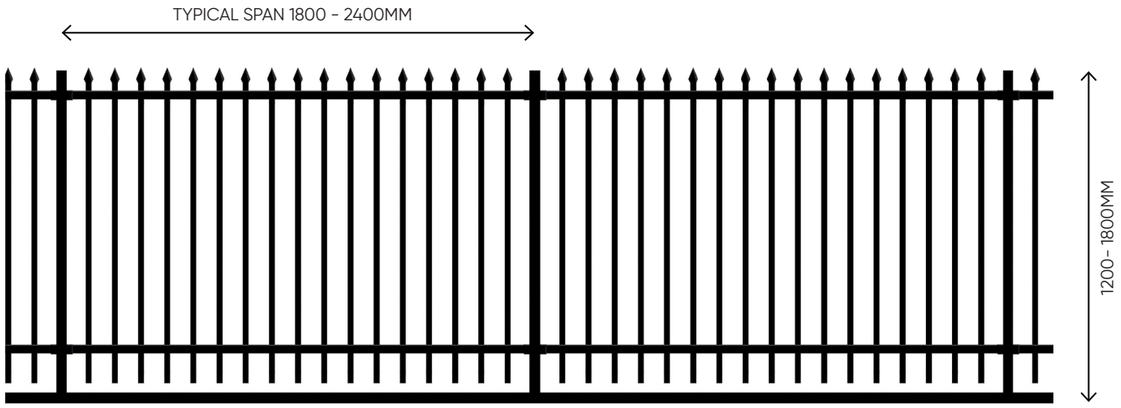


Fence Type C: Typical Elevation

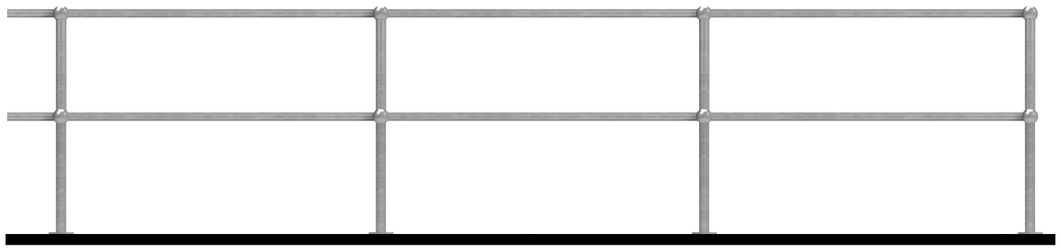
C Fence Type C

Aluminium spear top pool fence. Typical span is 2400mm. Powder coated aluminium to colour to match architectural finishes palette. Typical finishes illustrated below. This fence is typically used to the perimeter of the development where views are to be promoted. This fence is also used extensively when associated with significant planting buffers when the use of solid fencing is not required.

Typical height 1200mm when located on Dwelling Lot Boundary
Typical height 1800-2100mm when located on Property Boundary

Landscaping to feature layered plantings to provide softening to fence line. Landscape form as per typical elevations this sheet. Refer to fence line planting modules and schedules for species listings. Refer to **Section 3.0 Site Sections** for additional information regarding wall alignments and associated landscape treatments.

Refer to **Section 1.5 - Fencing Locations** for proposed location and alignment of Fence Type C.



Fence Type D: Typical Elevation

D Fence Type D

Safety Rail: Handrail/ Guardrail to a minimum height of 900mm. Where fall from height is significant it is recommended to increase the height of the guardrail to at least 1000mm.

The maximum distance between the base and the bottom of the intermediate rail is 560mm to comply with AS 1657, as a toeboard or kickplate is not necessary within this context.

Handrails proposed to provide edge protection at the edge of fall zones where required for maintenance staffs safety. Landscaping to feature layered plantings to provide softening to safety rail and associated retaining wall structure if / as incorporated.

Refer to **Section 3.0 Site Sections** for additional information regarding wall alignments and associated landscape treatments.

Important Note This section contains a number of **Living Gems Typical Fence & Wall Types** not all types contained herein are necessarily proposed within this development. Further detail on fencing and retaining wall locations will be provided in detailed design phase.

Important Note This section contains a number of **Living Gems Typical Fence & Wall Types** not all types contained herein are necessarily proposed within this development. Further detail on fencing and retaining wall locations will be provided in detailed design phase.

Fences & Walls

4.2 Fence & Wall Types

Document Set ID: 40824048
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Wall Type A: Typical Elevation

Wall Type A

Concrete sleeper walls: Standard sleeper is 1800mm (200mm x 75mm) up to 2400mm where required (200mm x 120mm) weighing approximately 125kgs. The sleepers are steel reinforced and manufactured to engineer standards.

Concrete sleeper walls. Standard sleeper is 1800mm (200mm x 75mm) up to 2400mm where required (200mm x 120mm) weighing approximately 125kgs. The sleepers are steel reinforced and manufactured to engineer standards. Galvenised steel H posts with integrated fence brackets as illustrated to allow for fence mounting direct to retaining structure. Finish: charcoal coloured oxide illustrated.

Landscaping to feature layered plantings to provide softening to retaining structure and associated fenceline if this is incorporated.

Refer to **Section 3.0 Site Sections** for additional information regarding wall alignments and associated landscape treatments.

Wall Type B: Typical Elevation

Important Note This section contains a number of **Living Gems Typical Fence & Wall Types** not all types contained herein are necessarily proposed within this development. Further detail on fencing and retaining wall locations will be provided in detailed design phase.

Wall Type B

Keystone retaining wall: Typical block dimensions 455 x 315 x 200mm x 500 x 1000mm. This retaining wall type is typically restricted to visually prominent areas where tiered retaining is required and where space permits to incorporate. Wall to maximum height of 1200mm unless designed by engineers to exceed this height.

Landscaping to feature layered plantings to provide softening to retaining structure and associated fence line if this is incorporated. Landscape form as per typical elevations Fence Type A to C. Refer to fence line planting modules and schedules for species listings. Refer to fence plan sheet and typical cross section for further information regarding layout and location of fence types and associated landscape treatments.

Refer to **Section 3.0 Sections & Elevations** for additional information regarding wall alignments and associated landscape treatments.

Refer Engineering Plans for all Retaining Wall details.

Fences & Walls

4.3 Fence & Wall Types

Important Note This section contains a number of **Living Gems Typical Fence & Wall Types** not all types contained herein are necessarily proposed within this development. Further detail on fencing and retaining wall locations will be provided in detailed design phase.

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Wall Type C: Typical Elevation

Wall Type C

Core filled block work retaining wall: Typical block dimensions 390 x 190 x 190mm. Wall to be laid in stretcher bond format and located only in areas where internal and external views to not allow views of the retaining wall.

Refer to **Section 3.0 Sections & Elevations** for additional information regarding wall alignments and associated landscape treatments.

Finish: Rendered & Painted to match architectural finishes palette (Typical Illustrated).

Block work walls to engineers details.

Wall Type D: Typical Elevation

Wall Type D

Core filled block work retaining wall: Typical block dimensions 390 x 190 x 190mm. Wall to be laid in stretcher bond format and located only in areas where internal and external views to not allow views of the retaining wall.

*Retaining and / or non retaining function. This wall may also feature at entry points or to development frontages. Potential stone cladding incorporated when part of entry statement or way-finding signage.

Refer to **Section 3.0 Sections & Elevations** for additional information regarding wall alignments and associated landscape treatments.
Finish: Rendered & Painted to match architectural finishes palette. Block work walls to engineers details.

D1

Wall Type D1
Estate Entry
Wall Type D with portions of Fence Type C (50% transparent fencing) incorporated. Wall Type D as panels or to serve as pillars between spans of transparent fencing.

4.4 Fence & Wall Types

Important Note This section contains a number of **Living Gems Typical Fence & Wall Types** not all types contained herein are necessarily proposed within this development. Further detail on fencing and retaining wall locations will be provided in detailed design phase.

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Colourbond Acoustic Fence: Typical Elevation

Fence Type E

Acoustic fence (100% solid)

Acoustic barrier 2m high above pad level of adjacent lot. Fence to be in accordance with Acoustic report prepared by Acoustic Works:

The acoustic barriers shall be constructed using materials that achieve a minimum surface density of at least 12kg/m2. Suitable materials may include lapped 19mm thick pine palings with 40% overlap, 9mm fibre cement sheet, masonry, aerated concrete, 6.38mm laminate glass or other materials which satisfy the minimum surface density requirement. The barriers shall be free of gaps and holes.

Fencing & Walls

4.5 Fence & Wall Types

Important Note This section contains a number of **Living Gems Typical Fence & Wall Types** not all types contained herein are necessarily proposed within this development. Further detail on fencing and retaining wall locations will be provided in detailed design phase.

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Living Gems*

5.0

Planting Palettes.

Document Set ID: 40824048
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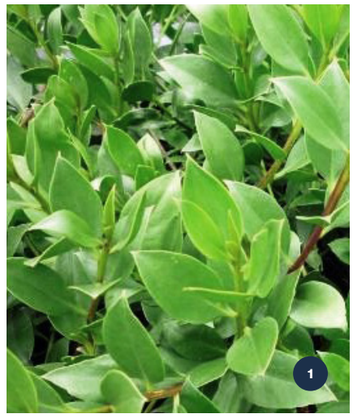

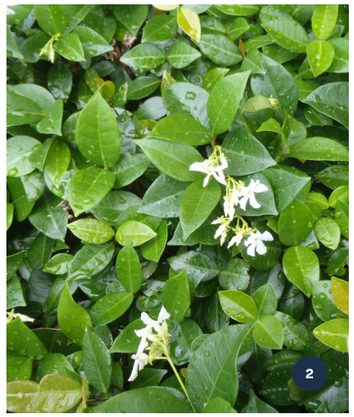

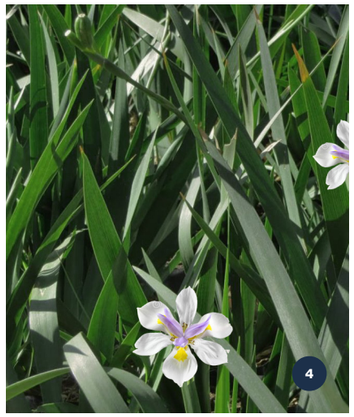

Groundcover Low

1	***Myoporum ellipticum***	Coastal Myoporum
2	***Trachelospermum jasminoides***	Star Jasmine
3	***Trachelospermum jasminoides 'Tricolor'***	Tricolor Star Jasmine

Groundcover Mid

4	***Dietes grandiflora***	Wild Iris
	Liriope Evergreen Giant	Evergreen Giant

Accents High

5	***Aspidistra elatior***	Cast Iron Plant
6	***Alpinia zerumbet***	Native Ginger
7	***Philodendron Emerald Green***	Emerald Green
8	***Zamia furfuracea***	Cardboard Palm

Casdcading Podium Planting

	Casuarina Glauca	Cousin It
	Rosmarinus Prostrate Rosemary	Trailing Rosemary
	Trachelospermum jasminoides 'Tricolor'	Tricolor Star Jasmine
	Trachelospermum jasminoides	Star Jasmine
	Myoporum ellipticum	Coastal Myoporum

Planting Palette

5.1 Living Gems Character Species Groundcovers & Accents

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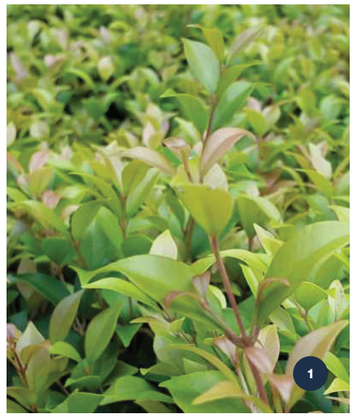

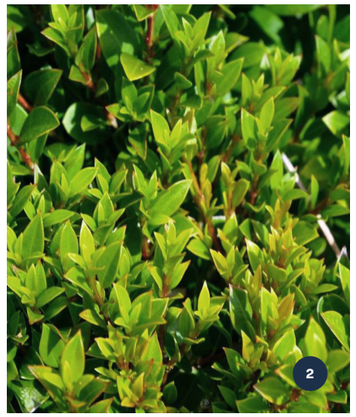

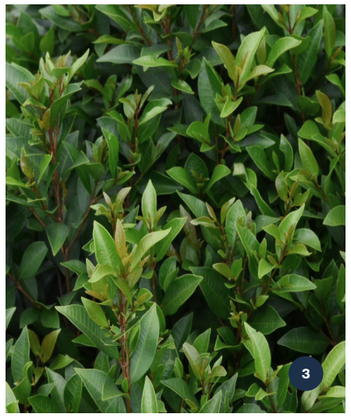

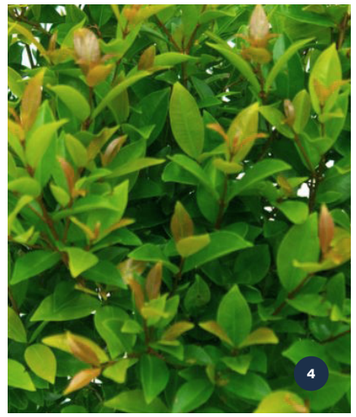

Shrub Layer

1	***Acmena Allyn Magic***	Maintained to height	~0.5m
2	***Syzygium Tiny Trev***	Maintained to height	~0.6m
3	***Syzygium Baby Boomer***	Maintained to height	~1.0m - 1.5m
4	***Syzygium Aussie Boomer***	Maintained to height	~1.5m
5	***Syzygium Resilience***	Maintained to height	~1.5 - 2.0m
6	***Syzygium Express***	Maintained to height	~2.5 - 3.0m

Syzygium species included this sheet allow for a range of heights. Hedge species within communal areas (streetscapes, entry areas, community use facilities) to be hedged. Shrub species are utilised within the development to screen fences, provide delineation and separation of uses, provide privacy to private open spaces and provide a dense backdrop to layered planting beds. A range of alternative / substitution species is included within **Supplementary Species** listings.

Planting Palette

5.2 Living Gems Character Species Hedged Syzygium Species

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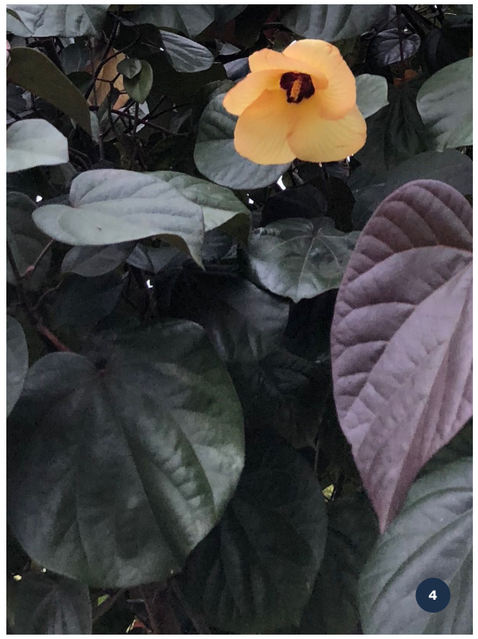

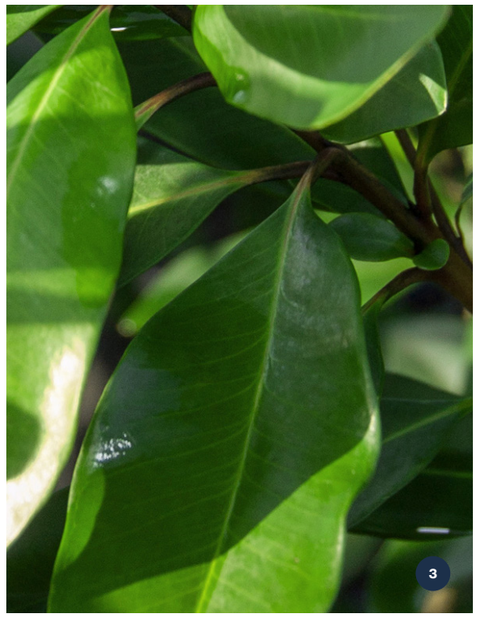

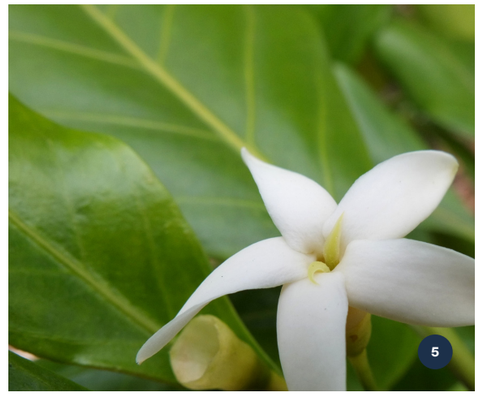

Trees & Palms

1	***Magnolia grandiflora***	Teddy Bear
2	***Magnolia grandiflora***	Little Gem
3	***Tristaniopsis laurina 'Luscious'***	Water Gum 'Luscious'
4	***Hibiscus tilleaceus Rubra***	Hibiscus Rubra
5	***Randia fitzalani***	Native Gardenia
6	***Waterhousia floribunda***	Weeping Lily Pilly
6	***Archontophoenix alexandrae***	Alex Palm
6	***Wodyetia bifurcata***	Foxtail Palm
6	***Phoenix canariensis***	Canary Island Date Palm

Planting Palette

5.3 Living Gems Character Species Trees & Palms

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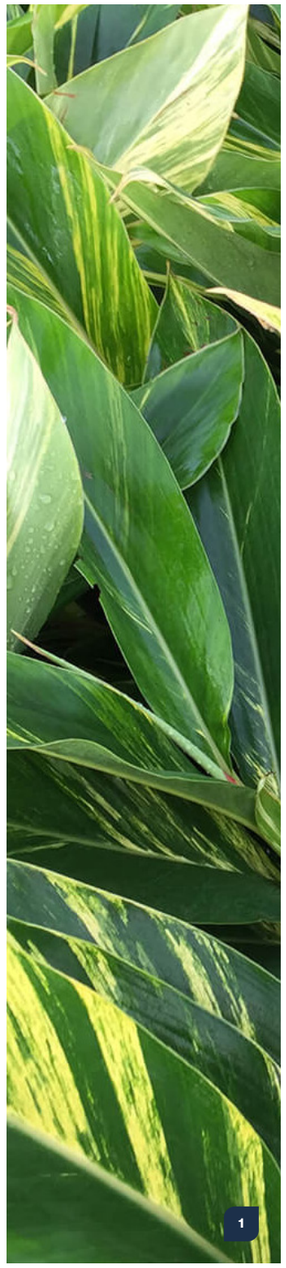

Accent Planting

1	***Varigated Alpinea***	Native Ginger
2	***Cordyline fruiticosa***	Cordyline Red Rubra
3	***Crinum pendunculatum***	Swamp Lilly
4	***Zamia furfuracea***	Cardboard Palm
5	***Aspidistra elatior***	Majestic Palm
6	***Phoenix canariensis***	Canary Island Date Palm

Planting Palette

5.4 Supplementary Species Accents

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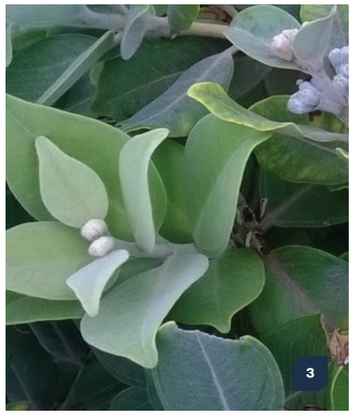
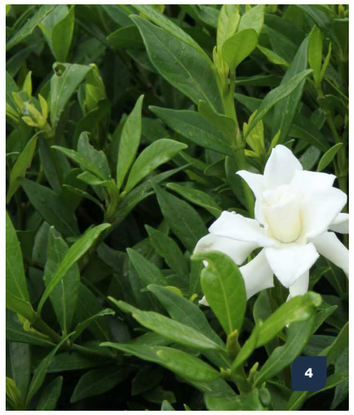
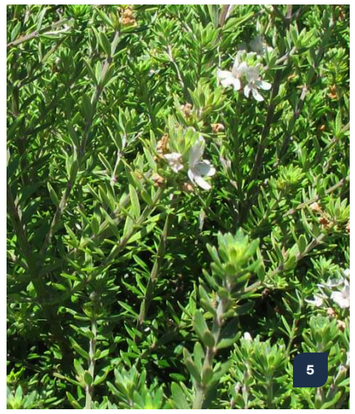
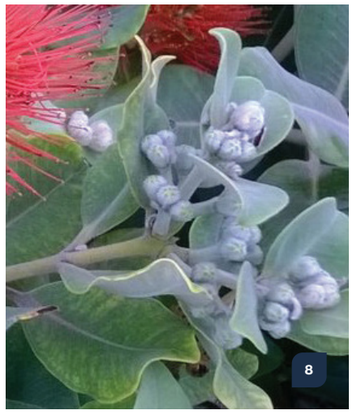
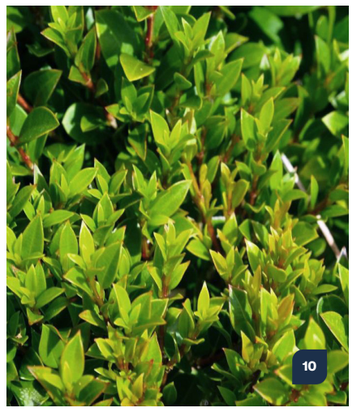
Version: 1, Version Date: 30/05/2024

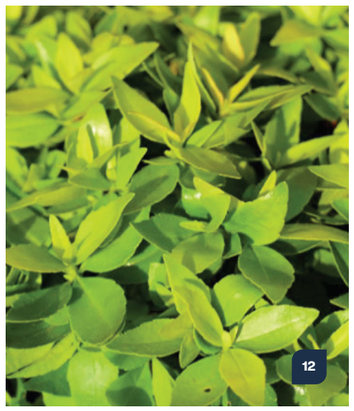












Shrub Type 1 (~1.5m Height)

1	***Michella figo***	Port Wine Magnolia Michelia Figo
2	***Syzygium Various***	Various
3	***Metrocideros 'Fiji Fire'***	Fiji Fire
4	***Gardenia Various***	Various
5	***Westringea Various***	Various

Shrub Type 2 (~1.0m Height)

6	***Murraya paniculata***	Murraya Min or Hip High
7	***Buxus microphylla var. japonica***	Japanese Box
8	***Metrocideros excelsa 'Mini Christmas'***	Mini Christmas

Shrub Type 3 (~0.6m Height)

9	***Abelia grandiflora***	Little Gold
10	***Syzygium australe 'Tiny Trev'***	Isabella
11	***Myoporum ellipticum***	Coastal Myoporum
12	***Abelia grandiflora***	Little Gold

Planting Palette

5.5 Supplementary Species Shrubs

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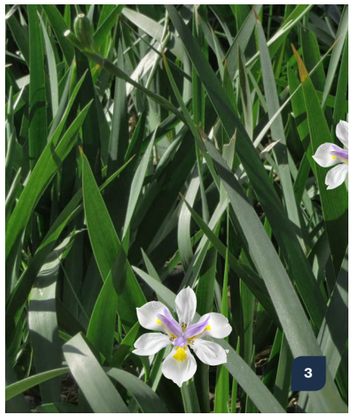
Version: 1, Version Date: 30/05/2024



Groundcover Low

1	***Liriope Isabella***	Isabella
2	***Ophiopogon japonicus***	Dwarf Mondo Grass

Groundcover High

3	***Dietes grandiflora***	Wild Iris
4	***Liriope Evergreen Giant***	Evergreen Giant

Accent Layer

5	***Aspidistra elatior***	Cast Iron Plant
6	***Philodendron 'var'***	Hope

Shrub Layer

7	***Syzygium Baby Boomer***	Baby Boomer

Refer to Section 3.0 for dwelling planting setout details.

Planting Palette

5.6 Dwelling Frontages: Type 1

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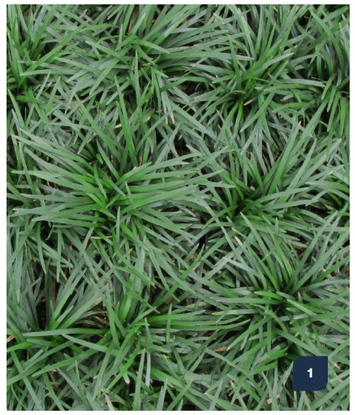
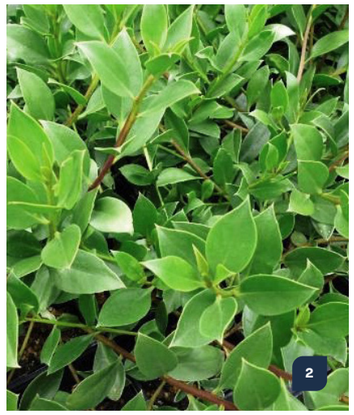
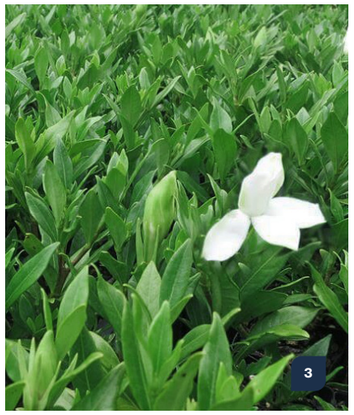
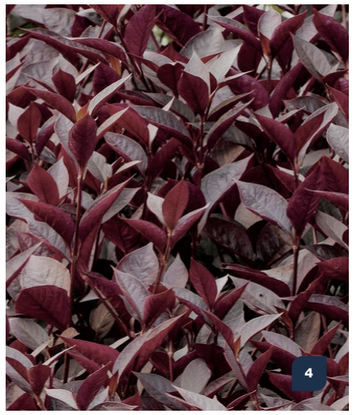
Version: 1, Version Date: 30/05/2024









Groundcover Low

1	***Ophiopogon japonicus***	Dwarf Mondo Grass
2	***Myoporum ellipticum***	Coastal Myoporum

Groundcover High

3	***Gardenia randicans***	Various dwarf species available
4	***Alternanthera dentata***	Little Ruby

Accent Layer

5	***Alpinea sp.***	Native Ginger
6	***Cordyline fruiticosa***	Cordyline Red Rubra

Shrub Layer

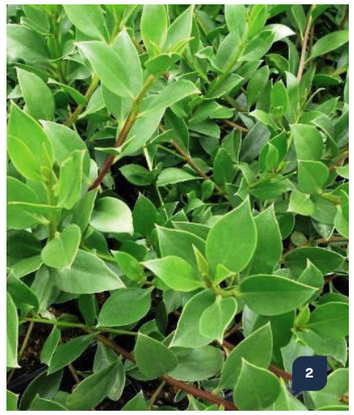
7	***Syzygium Baby Boomer***	Baby Boomer

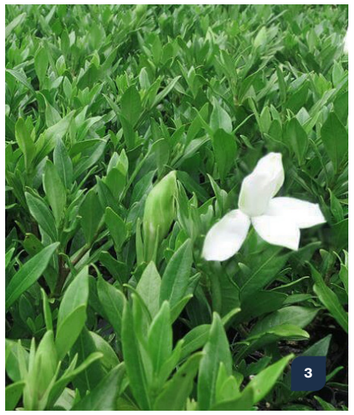
Refer to Section 3.0 for dwelling planting setout details.

Planting Palette

5.7 Dwelling Frontages: Type 2

Document Set ID: 40824048
Version: 1, Version Date: 30/05/2024





Groundcover Low

1	***Trachelospermum jasminoides***	Star Jasmine
2	***Myoporum ellipticum***	Coastal Myoporum

Groundcover High

3	***Gardenia randicans***	Various dwarf species available
4	***Liriope Evergreen Giant***	Evergreen Giant

Accent Layer

5	***Alpinea sp.***	Native Ginger
6	***Zamia furfuracea***	Cardboard Palm

Shrub Layer

7	***Gardenia sp.***	Various

Refer to Section 3.0 for dwelling planting setout details.

Planting Palette

5.8 Dwelling Frontages: Type 3

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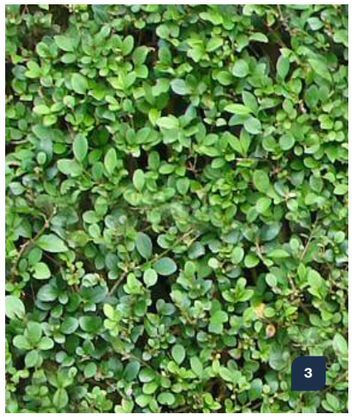
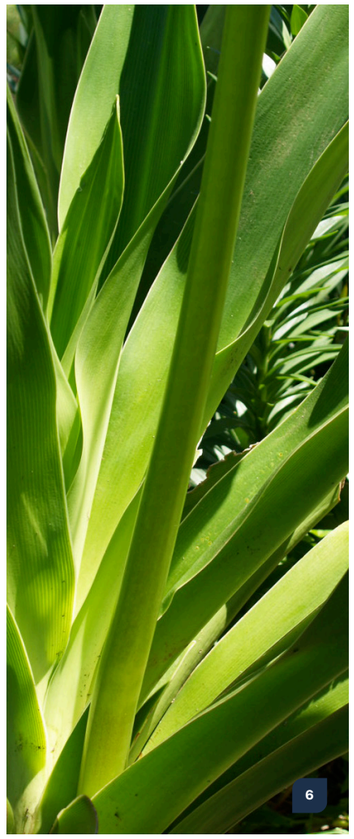
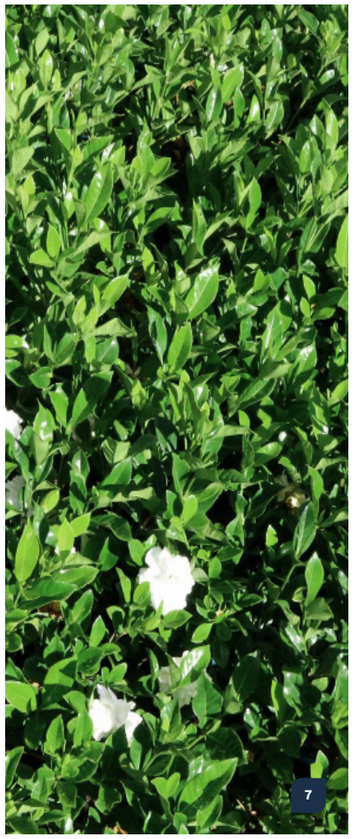
Version: 1, Version Date: 30/05/2024







Groundcover Low

1	***Liriope Silver Dragon***	Silver Dragon
2	***Ophiopogon japonicus***	Dwarf Mondo Grass

Groundcover High

3	***Syzygium australe 'Tiny Trev'***	Tiny Trev
4	***Buxus japonica***	Japanese Box Hedge

Accent Layer

5	***Agave attenuata***	Foxtail Agave
6	***Crinum pendunculatum***	Swamp Lilly

Shrub Layer

7	***Gardenia sp.***	Various
8	***Syzygium Baby Boomer***	Baby Boomer

Refer to Section 3.0 for dwelling planting setout details.

Planting Palette

5.9 Dwelling Frontages: Type 4

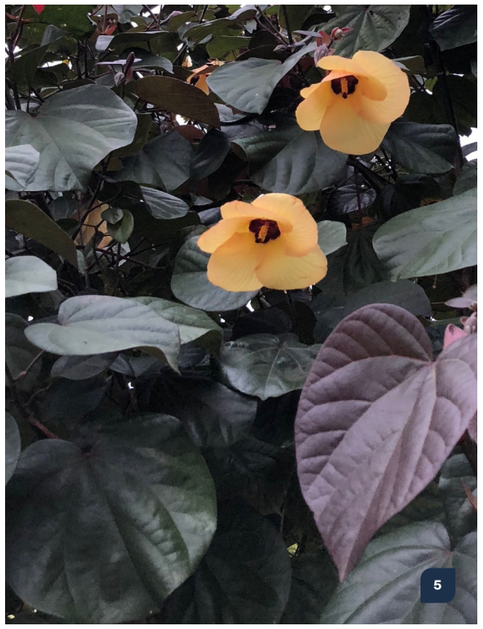
Document Set ID: 40824048
Version: 1, Version Date: 30/05/2024

1

2

3

4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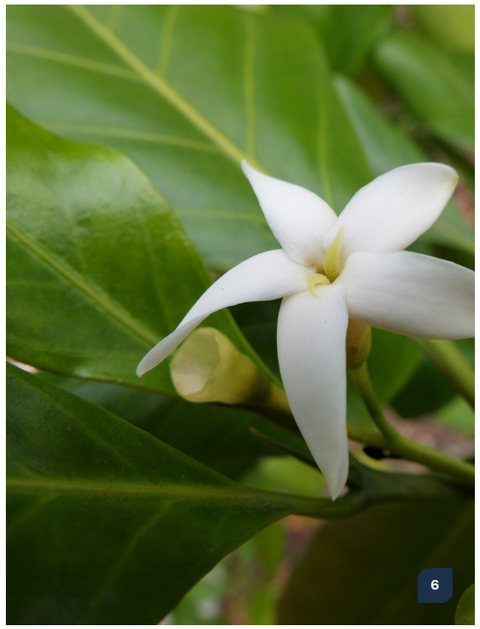
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Trees

1	***Cupaniopsis anacardioides***	Tuckeroo
2	***Magnolia grandiflora***	Teddy Bear
3	***Magnolia grandiflora***	Little Gem
4	***Tristaniopsis laurina 'Luscious'***	Water Gum 'Luscious'
5	***Hibiscus tilleaceus Rubra***	Hibiscus Rubra
6	***Randia fitzalani***	Native Gardenia

Refer to Section 3.0 for dwelling planting setout details.

Street Trees

	Brachychiton acerifolius	Illawarra flame tree
	Corymbia ptychocarpa	Swamp Bloodwood
	Backhousia citriodora	Lemon Myrtle
	Cupaniopsis anacardioides	Tuckeroo
	Cupaniopsis parvifolia	Fine-leaved Tuckeroo
	Elaeocarpus eumundii	Eumundi quandong
	Harpullia pendula	Tulipwood
	Harpullia hillii	Blunt leaf Tulipwood
	Lophostemon confertus	Brushbox
	Tristaniopsis laurina 'Luscious'	Water Gum 'Luscious'

Planting Palette

5.10 Dwelling Frontages & Streetscapes

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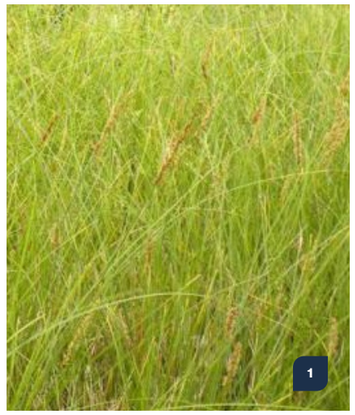
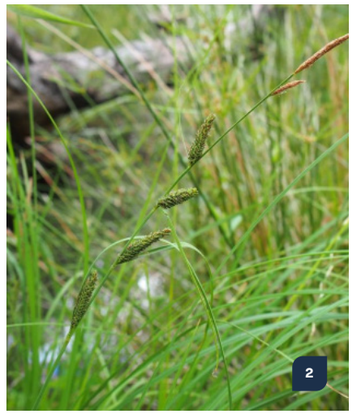
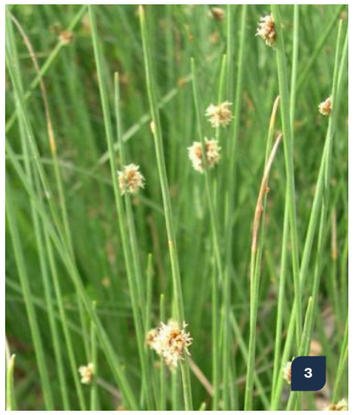
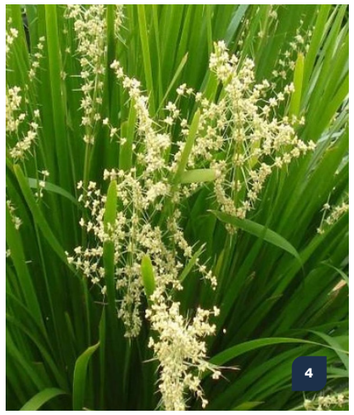
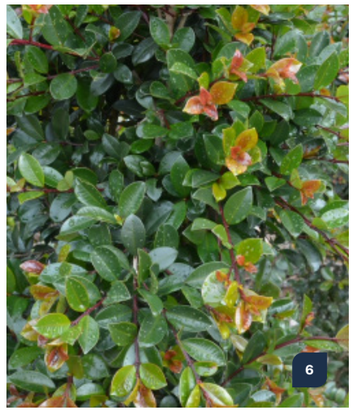
Version: 1, Version Date: 30/05/2024

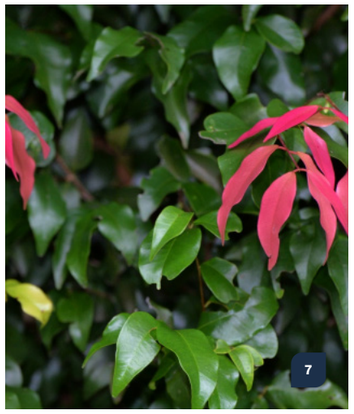


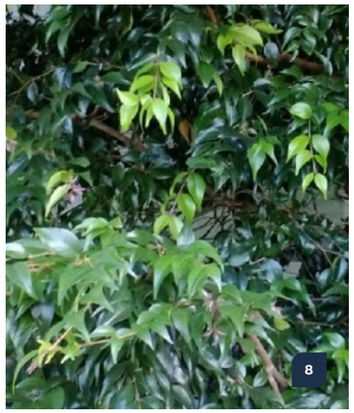


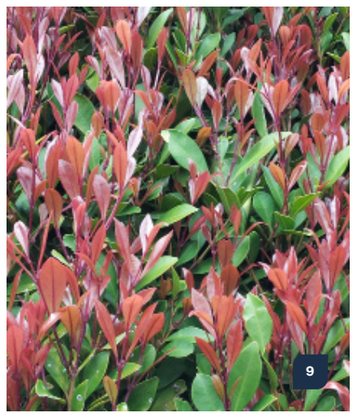


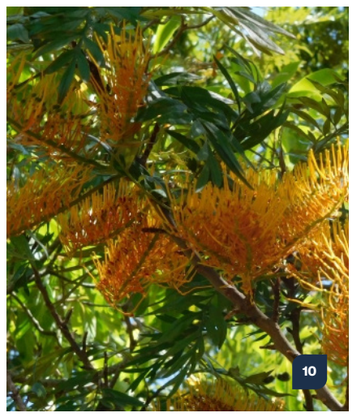


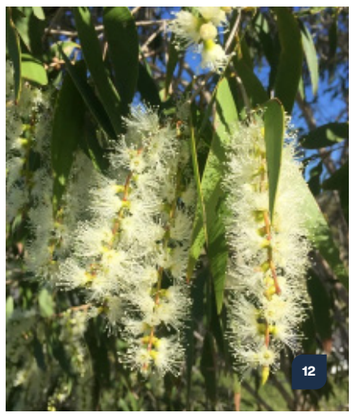












Groundcover

1	***Carex appressa***	Tall Sedge
2	***Carex gaudichaudiana***	Sedge
3	***Ficinia nodosa***	Knobby Club Rush
4	***Lomandra hystrix***	A Mat-rush
5	***Lomandra longifolia***	Spiny-headed Mat-rush

Shrubs & Accents

6	***Syzygium australe***	Coastal Rosemary
7	***Syzygium francisii***	Aussie Boomer
	Syzygium hemilamprum	Baby Boomer
	Syzygium moorei	Dwarf Japanese Box
8	***Syzygium luehmannii***	Various
9	***Syzygium smithii***	Lilly Pilly
	Crinum pendunculatum	Spider Lilly
	Doryanthes palmeri	Giant Spear Lilly

Trees

10	***Grevillea robusta***	Silky Oak
11	***Casuarina glauca***	Swamp Oak
	Melaleuca linarifolia	Flax-leaved Paperbark
12	***Melaleuca quinquenervia***	Broad-leaved Paperbark
	Livistonia australis	Cabbage Palm
	Archontophoenix alexandrae	Alex Palm

Planting Palette

5.11 Stormwater & Riparian

May 2024

Document Set ID: 40824048
Version: 1, Version Date: 30/05/2024

Living Gems

Prepared By Zone Landscape Architecture | www.zonelandscape.com.au

Document Set ID: 40824048
Version: 1, Version Date: 30/05/2024

Stormwater Management Report

Proposed Retirement Living Estate

192 Dean Street,
Berserker

ROCKHAMPTON REGIONAL COUNCIL
AMENDED PLANS APPROVED
12 January 2026
DATE
These plans are approved subject to the current conditions of approval associated with
Development Permit No.: D/170-2022
Dated: 12 June 2023

For: Ruby Developments Pty Ltd

22 March 2025

Ref: S24-018

A QUALITY ASSURED COMPANY

CERTIFIED QUALITY ASSURANCE – ISO AS/NZS 9001, 4801 & 14001

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DOCUMENT INFORMATION

Project Name: Proposed Retirement Living Estate

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Certified for Issue by:

Jared Hill RPEQ 19891

22 March 2025

Document Control:

Revision	Author	Checked for Issue	Date
A	P. Baxter	J. Hill RPEQ 19891	15.03.2024
A	P. Baxter	J. Hill RPEQ 19891	22.03.2025

This report has been prepared for Ruby Developments Pty Ltd for the purpose of accompanying a Change Application to Rockhampton Regional Council. This report must only be used by Ruby Developments Pty Ltd for this purpose and must not be used or relied upon by any other person for any other purpose.

The assessment, conclusions or recommendations in this report are based on conditions encountered and information received at the time of preparing the report and may not be relied upon as site conditions or operations vary over time.

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1 INTRODUCTION

Westera Partners Pty Ltd has been commissioned by Ruby Developments Pty Ltd to prepare a Stormwater Management Report to accompany a change application for a proposed retirement living development. The site has an existing approval for 60 multiple dwellings (file ref D170-2022) which is proposed to be changed.

The proposal involves 57 dwellings including associated internal access roads, carparking and ground level features. The primary access point will be provided from Dean Street.

This report documents how stormwater runoff will be managed on site in accordance with Rockhampton Regional Council's (RRC's) requirements.

2 SITE DESCRIPTION

2.1 Location and Land Use

The proposed development site is located at 192 Dean St, also known as Lot 24 on RP607814 and Lot 8 on RP607712. The site area is approximately 2.526Ha, and the development proposal will occur over approximately 1.995Ha. The site is currently vacant, with previous records indicating Lot 24 was once occupied by a commercial building with the granular pavement still present, which used to service this building. The site currently falls towards the south-east corner and south-west corner from a crest located approximately 50m from Dean St on the northern boundary of Lot 24 on RP607814, and the site also falls from Stamford Rd towards the culvert structure at a nominal grade of 2.5% along the line of the overland flow path.

The site is bound by urban residential developments to the north, east, and south and Dean St to the west. Beyond these residential developments is Stamford St to the north, Mostyn St to the south, and Edington St adjoins the eastern boundary. Refer to Figure 1 for an indicative site location and Appendix E for detailed site survey information.

Figure 1 – Indicative site location (Nearmap, 2024)

2.2 Existing Infrastructure

There is currently stormwater infrastructure within the proposed development site located in the southeast corner as well as an existing open channel along the east boundary of the site which then discharges into two large inlet structures. The open channel receives stormwater runoff from the north and has a drainage easement registered over it. Two 1500mm diameter stormwater pipes direct runoff from the inlet structures south towards Mostyn St.

2.3 Lawful Point of Discharge

Stormwater drainage for the proposed development shall ensure no adverse impact on upstream, downstream, or adjoining properties. The existing site currently has two lawful points of discharge: the Dean St road reserve and the existing drainage infrastructure in the south-east corner of the site. It is estimated that approximately a quarter of the site discharges toward Dean St, with the remainder discharging runoff to the existing drainage infrastructure in the east portion of the site. The proposed lawful point of discharge for the development shall be the existing stormwater infrastructure in the site's southeast corner, with minor amounts of stormwater to continue to discharge to Dean St kerb and channel. Stormwater runoff from the proposed development portion of the site will be collected and discharged to this existing infrastructure via a proposed connection the existing stormwater infrastructure. The existing drainage easement, which is situated on the eastern boundary and collects stormwater from the north, is to be maintained.

2.4 Upstream Drainage Connection

The site does not have any upslope properties that would require a piped stormwater drainage connection through the subject site to achieve a lawful point of discharge. It is noted however that nuisance overland flow currently reaches the development site from properties to the north in north-west corner of the site and from properties to the west along the Stamford St access handle portion of the site. This nuisance flow shall be managed through the construction of cut off drains and shall be directed to Dean Street and the existing open channel respectively.

2.5 Flooding

The development site is within the Fitzroy River Flood Study extent but is not impacted by the extent of the mapped flood water. The site is also impacted by Local Catchment Flood overlay, however this mapping indicates the flood water is contained within the existing channel. All proposed buildings on site will need to achieve a minimum 300mm freeboard to the adjoining top bank of the open channel. Refer to the flood overlay mapping in Appendix C.

3 STORMWATER QUANTITY MANAGEMENT

The stormwater quantity analysis of the existing and developed site conditions has been undertaken with reference to the requirements and procedure outlined by:

- Queensland Urban Drainage Manual (QUDM)
- Australian Rainfall and Runoff 2019 (ARR2019)

The following section of the report discusses the proposed development's impact on peak stormwater runoff from the site and compares the existing site condition to ensure no adverse impact to downstream properties. Areas of the site adjacent to the waterway corridors that will not be impacted by development works have been excluded from the quantity analysis.

The DRAINS software package has been used for modelling the peak flows off site. ARR2019 rainfall patterns have been adopted in drains utilising an Initial Loss – Continuing Loss (IL-CL) hydrological model with loss parameter input as specified by the ARR2019 data hub for Rockhampton.

The following losses have been adopted in the DRAINS hydrological model:

- Effective impervious area initial loss 1 mm
- Effective impervious area continuing loss 0 mm/hr
- Remaining area initial loss 35 mm
- Remaining area continuing loss 1.7 mm/hr

Design ARR2019 storms for Rockhampton have been added into DRAINS utilising a rainfall pattern file downloaded from the ARR data hub along with IFD rainfall depth files downloaded from the Bureau of Meteorology (BOM) website.

3.1 Existing Catchment

Catchment Area

The existing site is primarily vacant, with the granular road that used to service the commercial building still present. The total site area is approximately 2.526Ha, with the development proposal to occur over approximately 1.995Ha footprint. As previously noted, the site currently discharges stormwater to two separate locations, Dean Street and the existing stormwater infrastructure in the south-east corner of the site. The proposed development layout will not accommodate any stormwater management infrastructure along the west portion of the site and therefore the existing catchment discharging runoff to Dean St has been excluded from the existing site calculations. Historical satellite imagery has also been used to assess footprint of the building that occupied the site to determine appropriate site impervious area fraction. Refer to the engineering plans within Appendix D for further information on the modelled catchments.

The existing site catchment details are outlined in Table 1.

Table 1 - Existing Catchment Details

Catchment	Area (Ha)	% Impervious	Time of Concentration (T_c)
Existing	1.852	30%	**15mins** This comprises: • Recommend roof drainage system travel times (QUDM – Table 4.6.3) • 116m sheet flow 4% slope average grass – 15mins (QUDM figure 4.4)

3.1.1 DRAINS results for existing site

Peak flow rates from the existing site and external catchments have been determined by modelling various storm durations for each AEP storm ensemble. The peak flow rate for the median AEP storm event is given in Table 2.

Table 2 - Existing site peak flow rates

AEP Storm Event	Peak flow rate (m3/s)
1EY	0.171

AEP Storm Event	Peak flow rate (m3/s)
0.5EY	0.279
0.2EY	0.357
10%	0.477
5%	0.599
2%	0.798
1%	0.955

3.2 Developed Site

Catchment Area

The proposed development involves the construction of 57 residential dwellings, including community facilities, ground-level features, and landscaped areas.

The catchment area for the developed site will consider the entire development area. This area includes the existing open channel and undeveloped east portion of the site. The developed site catchment details are summarised in Table 3:

Table 3 – Developed catchment details including external catchments

Catchment	Area (Ha)	% Impervious	Time of Concentration (T_c)
Development	2.526	79%	7mins

3.2.1 DRAINS results for developed site

Peak flow rates from the developed site have been determined by modelling various storm durations for each AEP storm ensemble. The peak flow rate for the median AEP storm event is given in Table 4.

Table 4 - Developed site peak flow rates

AEP Storm Event	Peak flow rate (m3/s)
1EY	0.487
0.5EY	0.602
0.2EY	0.736
10%	0.871
5%	1.14
2%	1.58

AEP Storm Event	Peak flow rate (m3/s)
1%	1.84

3.2.2 DRAINS results calibration

The DRAINS results for both the existing site and developed site are compared against rational method calculated flow rates in Table 5 below. Rainfall intensities have been obtained from the BOM IFD 2016 tool and other catchment parameters are as provided in Table 5.

Table 5 – Developed flow rate comparison – Rational Method

AEP Storm Event	Existing peak flow rate (m3/s) (DRAINS)	Existing peak flow rate (m3/s) (rational method)	Developed peak flow rate (m3/s) (DRAINS)	Developed peak flow rate (m3/s) (rational method)
1EY	0.171	0.26	0.487	0.48
0.5EY	0.279	0.34	0.602	0.63
0.2EY	0.357	0.46	0.736	0.86
10%	0.477	0.56	0.871	1.04
5%	0.599	0.68	1.14	1.26
2%	0.798	0.80	1.58	1.63
1%	0.955	1.02	1.84	1.90

As shown in Table 5 above, the existing and developed DRAINS model output is considered to generally achieve a good fit with peak flow rates calculated using the rational method when considering losses are greatly simplified by the rational method.

3.3 Water Quantity Comparison

Table 6 compares the peak flow rates for the median design storm for the existing and developed cases.

Table 6 - Difference in existing vs developed peak flow rates

AEP Storm Event	Existing peak flow rate (m3/s)	Developed peak flow rate (m3/s)	Difference (m3/s)
1EY	0.171	0.487	0.316
0.5EY	0.279	0.602	0.323
0.2EY	0.357	0.736	0.379
10%	0.477	0.871	0.394
5%	0.599	1.14	0.541

AEP Storm Event	Existing peak flow rate (m3/s)	Developed peak flow rate (m3/s)	Difference (m3/s)
2%	0.798	1.58	0.782
1%	0.955	1.84	0.885

As shown in Table 6, the peak flow rate of stormwater runoff has increased for the development as a result of the increase in impervious area. Stormwater detention is therefore required to offset this increase in peak flow rate.

3.4 Stormwater Detention

Stormwater detention for the development is proposed to be provided via additional depth in the proposed open bioretention basin. Refer to Table 7 and Appendix D for further details of the modelled detention tanks.

Table 7 - Detention System Details

Description	Specification
Assumed total roof catchment from lots & additional roof areas to detention basin	0.941 Ha (100% impervious)
Assumed total road & ground catchment area to detention basin	1.188 Ha (46% impervious)
Assumed catchment bypassing detention (including RV storage area)	0.483 Ha (60% impervious)
Detention basin geometry	360m^2 total area 2.56m total depth (above treatment volume) 899m^3 total volume 921.6m^3 detention volume (excludes treatment volume)
Detention basin outlet configuration	• 375mm dia low flow outlet w/ 290mm orifice plate set within low flow field inlet set at treatment EDD height • 600mm dia high flow outlet w/ 400mm orifice plate set within high flow manhole set 1.90m above low flow field inlet level

Figure 2 illustrates the DRAINS model layout developed for this detention system.

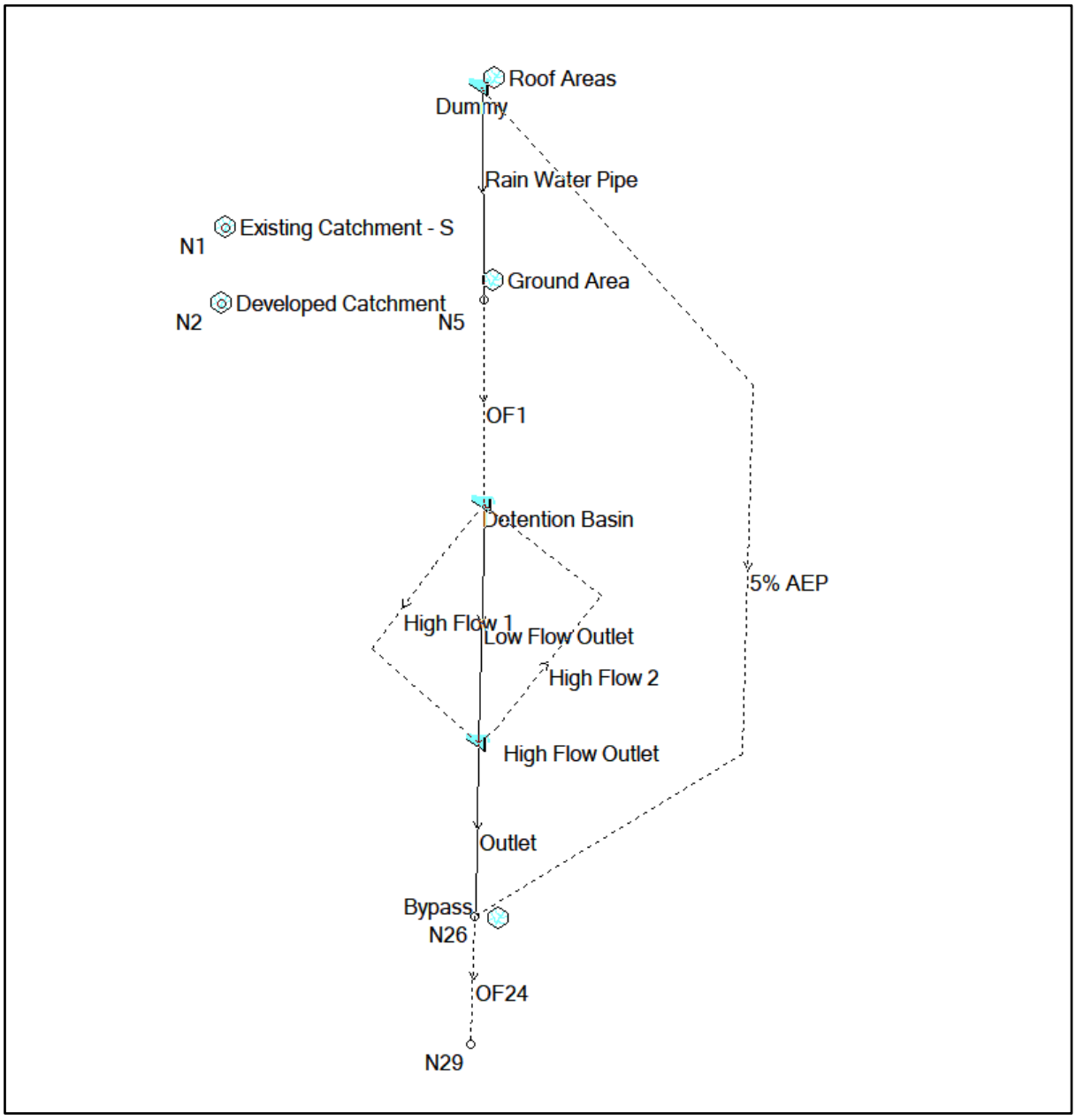


Figure 2 - Drains model layout

A comparison of modelled flow rates determined for the existing, developed, and mitigated cases are outlined in Table 8 below.

Table 8 – Comparison of mitigated peak flow rates

AEP Storm Event	Existing peak flow rate (m^3/s)	Developed peak flow rate (m3/s)	Mitigated peak flow rate (m3/s)
1EY	0.171	0.487	0.172 (+0.001)
0.5EY	0.279	0.602	0.211 (-0.068)
0.2EY	0.357	0.736	0.267 (-0.090)

AEP Storm Event	Existing peak flow rate (m^3/s)	Developed peak flow rate (m3/s)	Mitigated peak flow rate (m3/s)
10%	0.477	0.871	0.301 (-0.176)
5%	0.599	1.14	0.579 (-0.020)
2%	0.798	1.58	0.736 (-0.062)
1%	0.955	1.84	0.79 (-0.165)

As demonstrated by Tables 8, the proposed detention tanks adequately mitigate the increase in peak flow rate for all design storms up to the 1% AEP. The modelling has been undertaken on the basis of runoff in excess of the 5% AEP (20 year ARI) design storm bypassing the detention tanks to account for runoff in excess of the design event not being entirely captured by underground infrastructure.

Refer to Figures 3 & 4 for the 10% & 1% AEP DRAINS model runs respectively.

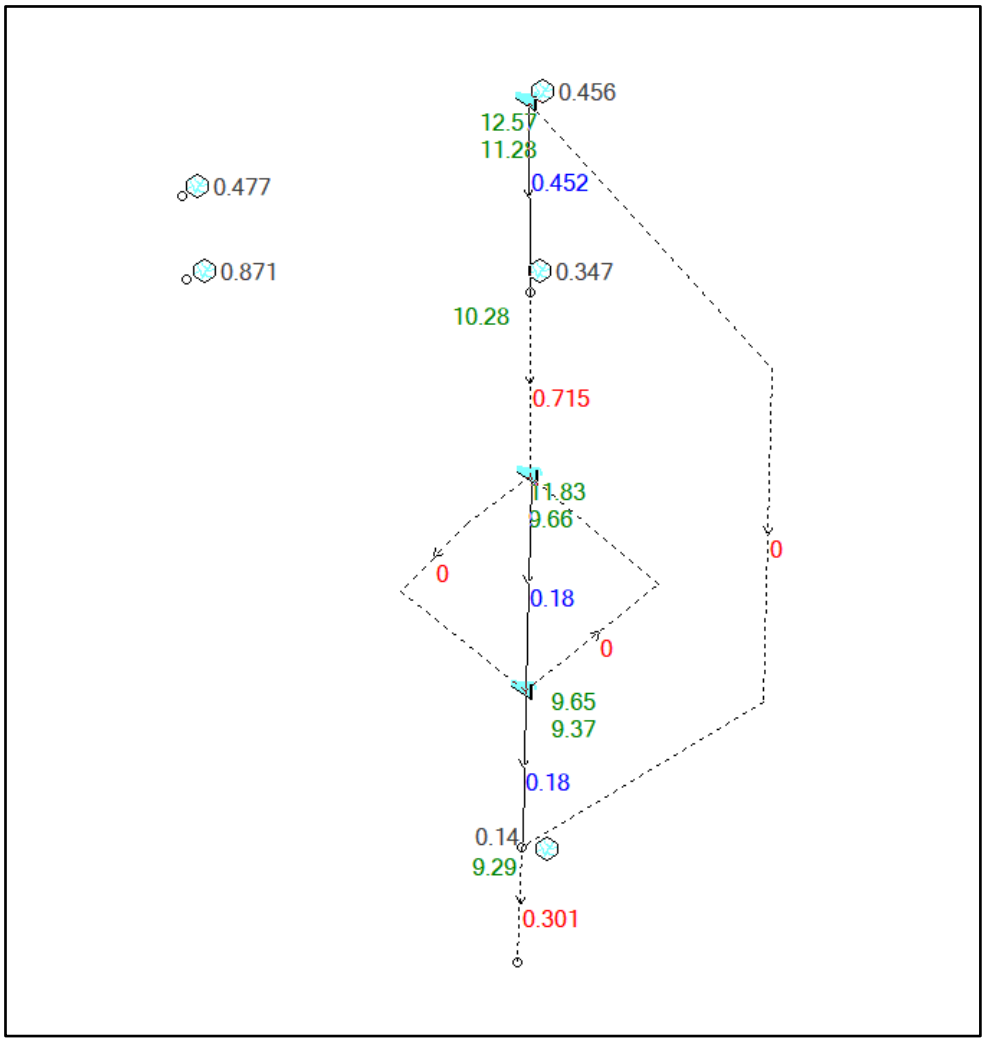


Figure 3 - 10% AEP DRAINS model run

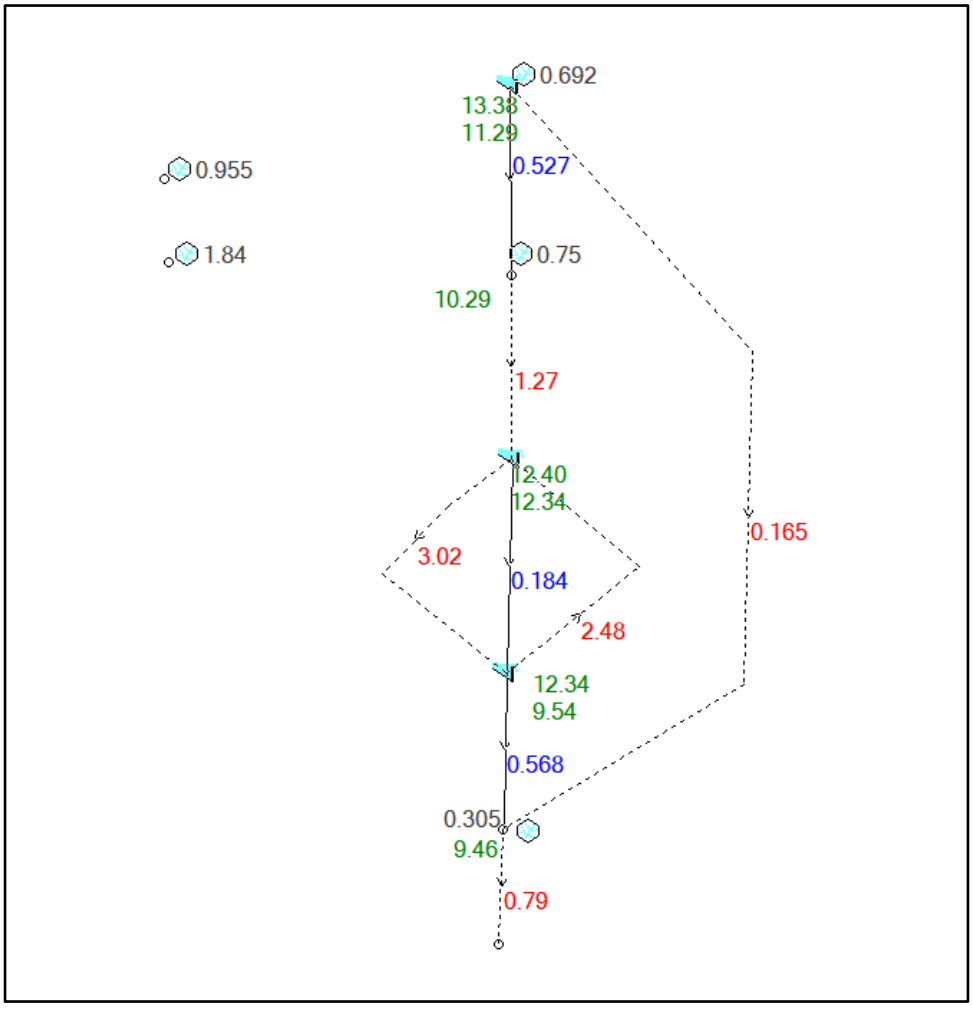


Figure 4 - 1% AEP DRAINS model run

4 WATER QUALITY MANAGEMENT

4.1 Operational Phase

The proposed development must address the State Planning Policy (SPP 2017) as the development site area exceeds 2500m^2. The development shall ensure that environmental values of receiving waters downstream of the development are maintained or enhanced during the construction and operation of the development in accordance with State Legislation and Local Government requirements. The stormwater quality management proposed for the development are required to achieve the following pollutant load reduction objectives in accordance with SPP requirements for Central Queensland (south):

- ≥ 85 % reduction in total suspended solids load (TSS)
- ≥ 65 % reduction in total phosphorus load (TP)
- ≥ 45 % reduction in total nitrogen load (TN)
- ≥ 90 % reduction in gross pollutant load

Pollutants typically generated during the operational phase of the development include:

- Litter/gross pollutants;
- Sediment;

- Nutrients (N & P);
- Hydrocarbons (oils and grease); and
- Heavy metals.

Stormwater treatment measures are shown on the attached stormwater management drawings and include:

- Bioretention basin to be constructed with detention storage over to provide treatment to the main development footprint.
- Buffer – minor treatment will be provided by the runoff from the RV storage yard that will sheet flow across vegetation to the turfed open channel through the site.

Stormwater modelling has been carried out using MUSIC modelling software to determine the required infrastructure needed to meet the Water Quality Objectives (WQO's) above.

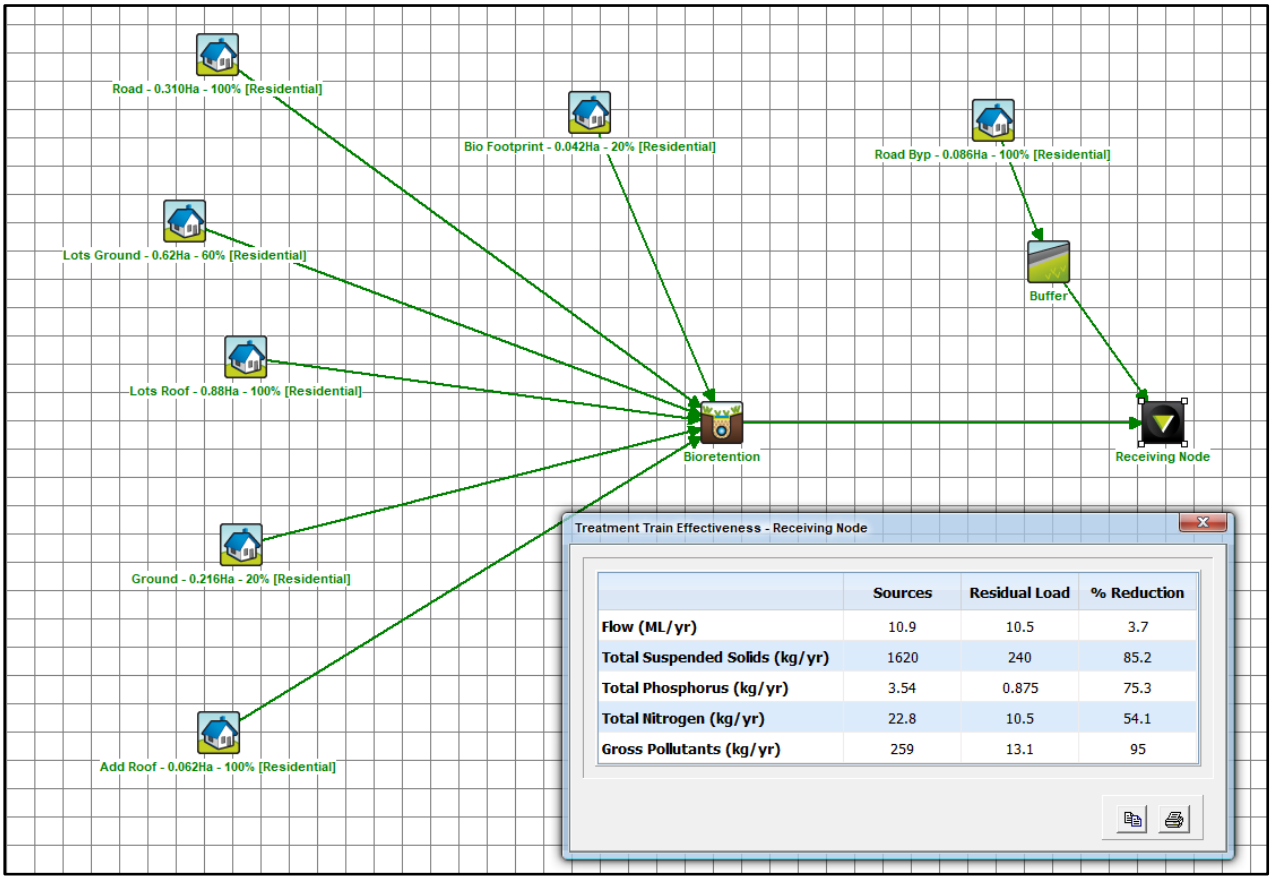
4.2 MUSIC Model

MUSIC modelling for this development has been carried out using MUSIC Version 6.3 and rainfall data obtained from the pluviograph tool on the eWATER website for Rockhampton. The developed site catchment and treatment measure details included in the MUSIC model are outlined in Table 9.

The stormwater easement where no works are proposed has been excluded from the model as this area will generally remain unchanged by the proposal.

Table 9 – MUSIC model parameters

Description	Specification
Road catchment to all treatment	0.310 Ha (100% impervious)
Lots ground catchment to all treatment (assumed to be 40% of lot area)	0.620 Ha (60% impervious)
Ground catchment to ATLAN Filters only	0.216 Ha (20% impervious)
Lots roof catchment to ATLAN Filters only (assumed to be 60% of lot area)	0.880 Ha (100% impervious)
Additional roof catchment to ATLAN Filters only	0.062 Ha (100% impervious)
RV storage area to buffer only	0.086 Ha (100% impervious)
Bioretention basin parameters	Filter area – 235m^2 Surface area – 290m^2 Hydraulic conductivity - 200mm/hr Filter depth – 0.5m
Area of stormwater easement not modelled	0.397 (100% pervious)



The MUSIC model layout is shown in Figure 5.

Figure 5 - MUSIC layout for development

The developed site treatment train effectiveness is outlined in Table 10.

Table 10 - Treatment train effectiveness.

Modelled Parameters	Source nodes	Residual load	% Reduction
Flow (ML/yr)	10.9	10.5	3.7
Total Suspended Solids (kg/yr)	1620	240	85.2
Total Phosphorus (kg/yr)	3.54	0.875	75.3
Total Nitrogen (kg/yr)	22.8	10.5	54.1
Gross Pollutants (kg/yr)	259	13.1	95

Based on the MUSIC modelling results in Table 10 above, the proposed treatment train achieves the required pollutant load reduction objectives for all pollutants. The proposed proprietary treatment measures are therefore considered adequate for the development.

4.3 Construction Phase

Management of stormwater runoff during construction and the implementation of an erosion & sediment control program is necessary to avoid impacts to receiving waters from pollutants typically generated during the construction phase. Typical pollutants are described in Table 11 below:

Table 11 – Pollutants Typically Generated During the Construction Phase

Pollutant	Sources
Litter (Gross Pollutants)	Paper, construction packaging, food packaging, cement bags.
Sediment	Unprotected exposed soils and stockpiles during earthworks and building.
Hydrocarbons	Fuel and oil spills, leaks from construction equipment.
Toxic materials	Cement slurry, asphalt prime, solvents, cleaning agents, wash waters.
pH altering substances	Acid sulphate soils, cement slurry and wash waters.

In addition to the degradation of receiving waters, impacts of inadequate erosion and sediment control downstream from the site include:

- traffic safety problems;
- blocked drains;
- local flooding problems;
- aesthetic pollution of drainage paths; and
- damage to local ecosystems.

4.3.1 Design Objectives

Management of stormwater runoff during construction should be undertaken in accordance with Appendix 2 of the SPP (July 2017). The SPP outlines the design objectives for construction phase stormwater management. These are presented in Table 12, Table 13 and Table 14.

Table 12 – SPP Appendix 2: Part 1 Construction Phase – Stormwater Management Design Objectives

Issue	Desired Outcomes
Drainage Control	1. Manage stormwater flows around or through areas of exposed soil to avoid contamination. 2. Manage sheet flows in order to avoid or minimise the generation of rill or gully erosion. 3. Provide stable concentrated flow paths to achieve the construction phase stormwater management design objectives for temporary drainage works (part 2). 4. Provide emergency spillways for sediment basins to achieve the construction phase stormwater management design objectives for emergency spillways on temporary sediment basins (part 3).

Issue	Desired Outcomes
Erosion Control	1. Stage clearing and construction works to minimise the area of exposed soil at any one time. 2. Effectively cover or stabilise exposed soils prior to predicted rainfall. 3. Prior to completion of works for the development, and prior to removal of sediment controls, all site surfaces must be effectively stabilised using methods which will achieve effective short-term stabilisation.
Sediment Control	1. Direct runoff from exposed site soils to sediment controls that are appropriate to the extent of disturbance and level of erosion risk. 2. All exposed areas greater than 2500 metres must be provided with sediment controls which are designed, implemented and maintained to a standard which would achieve at least 80% of the average annual runoff volume of the contributing catchment treated (i.e. 80% hydrological effectiveness) to 50mg/L Total Suspended Solids (TSS) or less, and pH in the range (6.5–8.5).
Litter, Hydrocarbons and other contaminants	1. Remove gross pollutants and litter. 2. Avoid the release of oil or visible sheen to released waters. 3. Dispose of waste containing contaminants at authorised facilities.
Waterway Stability and flood flow management	1. Where measures are required to meet post-construction waterway stability objectives, these are either installed prior to land disturbance and are integrated with erosion and sediment controls, or equivalent alternative measures are implemented during construction. 2. Earthworks and the implementation of erosion and sediment controls are undertaken in ways which ensure flooding characteristics (including stormwater quantity characteristics) external to the development site are not worsened during construction for all events up to and including the 1 in 100 year ARI (1% AEP).

Table 13 – SPP Appendix 2: Part 2 Construction Phase – Stormwater Management Design Objectives for Temporary Drainage Works

Temporary Drainage Works	Anticipated Operation Design Life and Minimum Design Storm Event		
	<12 Months	12-24 Months	>24 Months
Drainage Structure	1 in 2 year ARI/39% AEP	1 in 5 year ARI/18% AEP	1 in 10 year ARI/10% AEP

Temporary Drainage Works	Anticipated Operation Design Life and Minimum Design Storm Event		
	<12 Months	12-24 Months	>24 Months
Where located immediately up-slope of an occupied property that would be adversely affected by the failure or overtopping of the structure	1 in 10 year ARI/10% AEP		
Culvert Crossing	1 in 1 year ARI/63% AEP		

Table 14 – SPP Appendix 2: Part 3 Construction Phase – Stormwater Management Design Objectives for Emergency Spillways on Temporary Sediment Basins

Drainage Structure	Anticipated Operation Design Life and Minimum Design Storm Event		
	<3 Months	3-12 Months	>12 Months
Emergency spillways on temporary sediment basins	1 in 10 year ARI/10% AEP	1 in 20 year ARI/5% AEP	1 in 50 year ARI/2% AEP

Best practice erosion and sediment controls must be installed to minimise the discharge of sediment laden runoff during construction and to achieve the objectives outlined in Tables 12-14. This is discussed in the following section.

4.3.2 Erosion and Sediment Control

Management of stormwater runoff during construction is necessary to avoid pollution of downstream waterways from sediment and gross pollutant loading. Impacts of inadequate erosion and sediment control downstream from the site include:

- traffic safety problems;
- blocked drains;
- local flooding problems;
- aesthetic pollution of drainage paths; and
- damage to local ecosystems.

Best practice erosion and sediment controls must be installed to minimise the discharge of sediment laden runoff during construction. Erosion and sediment control plans are included within Appendix

Erosion and sediment control plans are based on three sets of control measures:

- drainage control;
- erosion control; and
- sediment control.

These control measures must be maintained in an effective operational condition. Sediment disposal from site is to occur to the satisfaction of Rockhampton Regional Council. Defects in erosion and

sediment control devices, such as sediment fences, are to be inspected and documented. Upon Inspection, the Contractor is to determine whether the device should be replaced or repaired. Documentation is to include how the damage was caused and what measures can be implemented to reduce the possibility of repeat occurrences. Any damage to either permanent or temporary water quality control structures or devices is to be immediately rectified at the contractor's expense.

The effectiveness of the erosion and sediment control devices can be monitored by visual audits. All ESC measures are to be inspected:

- at least daily (when work is occurring on site) or weekly (when work is not occurring on site);
- within 24 hours of expected rain; and
- within 18 hours of a rainfall event (i.e. an event of sufficient intensity and duration to mobilise sediment on site).

Drainage paths are to be inspected to ensure the sediment fences are not being bypassed as a result of soil erosion.

Sediment laden runoff shall be prevented from entering neighbouring properties. This shall be achieved by landscaping disturbed areas immediately and prior to a rainfall event.

The proposed development has scored a '25' on the IECA erosion hazard assessment with trigger score value exceeded as a result of the development land area (refer Appendix A for details).

4.3.3 Maintenance and Monitoring Requirements

Periodic maintenance and monitoring of stormwater devices proposed in this report is crucial to ensure effective operation and design life.

Inspect field inlet grates, pits and underground pipes for blockage or damage at least 6 monthly or after significant rainfall event. Any installed filter baskets shall be inspected and maintained preferably by the manufacturer to avoid damage to units and to ensure adequate cleaning and record keeping. For the first 12 months routine inspections of filter baskets shall be carried out monthly with routine clean out at alternate months. Results of the initial 12 months maintenance program shall be used to determine future maintenance intervals. Refer manufactures maintenance and monitoring methodology for specific details. Maintenance of ESC measures must occur in accordance with Table 15.

Table 15 - ESC maintenance requirements.

ESC Measure	Maintenance Trigger	Timeframe for Completion of Maintenance
Sediment basins	When settled sediment exceeds the volume of the sediment storage zone	Within 7 days of the inspection.
Other ESC measures	The capacity of ESC measures falls below 75%.	By the end of the day.

Sediment accumulation on ESC devices is to be removed and disposed of to the satisfaction of Rockhampton Regional Council.

5 CONCLUSION

This Stormwater Management Report outlines how stormwater runoff from the site will be managed in order to not adversely impact the receiving environment.

Stormwater runoff from the development site shall be directed to the existing stormwater infrastructure in the site's southeast corner through the construction of new on-site stormwater infrastructure. Stormwater detention is proposed to be provided by an open combined bioretention basin providing 921.6m^3 of detention volume.

Stormwater quality treatment is proposed to be managed on site to achieve the water quality objectives through construction of a bioretention basin. MUSIC modelling has been undertaken to demonstrate runoff from the development site achieves the water quality pollution load reduction targets of the State Planning Policy.

By implementing the proposed stormwater management system, and providing adequate maintenance, the downstream environment and neighbouring properties will not experience any adverse deterioration of water quality as a result of the proposed development.

6 APPENDICES

Appendix A – Erosion Hazard Assessment

Erosion Hazard Assessment Form

Condition	Points	Score	Trigger value
AVERAGE SLOPE OF DISTURBANCE AREA [1]			
• not more than 3% [3% . 33H:1V]	0		
• more than 3% but not more than 5% [5% = 20H:1V]	1	**1**	**4**
• more than 5% but not more than 10% [10% = 10H:1V]	2		
• more than 10% but not more than 15% [15% . 6.7H:1V]	4		
• more than 15%	6		
SOIL CLASSIFICATION GROUP (AS1726) [2]			
• GW, GP, GM, GC	0		
• SW, SP, OL, OH	1	**3**	
• SM, SC, MH, CH	2		
• ML, CL, or if *imported fill* is used, or if soils are untested	3		
EMERSON (DISPERSION) CLASS NUMBER [3]			
• Class 4, 6, 7, or 8	0		
• Class 5	2	**4**	**6**
• Class 3, (default value if soils are untested)	4		
• Class 1 or 2	6		
DURATION OF SOIL DISTURBANCE [4]			
• not more than 1 month	0		
• more than 1 month but not more than 4 months	2	**4**	**6**
• more than 4 months but not more than 6 months	4		
• more than 6 months	6		
AREA OF DISTURBANCE [5]			
• not more than 1000 m^2	0		
• more than 1000 m^2 but not more than 5000 m^2	1	**4**	**4**
• more than 5000 m^2 but not more than 1 ha	2		
• more than 1 ha but not more than 4 ha	4		
• more than 4 ha	6		
WATERWAY DISTURBANCE [6]			
• No disturbance to a watercourse, open drain or channel	0	**1**	**2**
• Involves disturbance to a constructed open drain or channel	1		
• Involves disturbance to a natural watercourse	2		
REHABILITATION METHOD [7]			
Percentage of area (relative to total disturbance) revegetated by seeding without light mulching (i.e. worst-case revegetation method).			
• not more than 1%	0	**0**	
• more than 1% but not more than 5%	1		
• more than 5% but not more than 10%	2		
• more than 10%	4		
RECEIVING WATERS [8]			
• Saline waters only	0	**2**	
• Freshwater body (e.g. creek or freshwater lake or river)	2		
SUBSOIL EXPOSURE [9]			
• No subsoil exposure except of service trenches	0	**2**	
• Subsoils are likely to be exposed	2		
EXTERNAL CATCHMENTS [10]			
• No external catchment	0	**1**	
• External catchment diverted around the soil disturbance	1		
• External catchment not diverted around the soil disturbance	2		
ROAD CONSTRUCTION [11]			
• No road construction	0	**2**	
• Involves road construction works	2		
pH OF SOILS TO BE REVEGETATED [12]			
• more than pH 5.5 but less than pH 8	0	**1**	
• other pH values, or if soils are untested	1		
Total Score [13]		**25**	

Explanatory notes

Requirements: Specific issues or actions required by the proponent.

Warnings: Issues that should be considered by the proponent.

Comments: General information relating to the topic.

[1] **REQUIREMENTS:**
For sites with an average slope of proposed land disturbance greater than 10%, a preliminary ESCP must be submitted to the regulatory authority for approval during planning negotiations.

Proponents must demonstrate that adequate erosion and sediment control measures can be implemented on-site to effectively protect downstream environmental values.

If site or financial constraints suggest that it is not reasonable or practicable for the prescribed water quality objectives to be achieved for the proposal, then the proponent must demonstrate that alternative designs or construction techniques (e.g. pole homes, suspended slab) cannot reasonably be implemented on the site.

WARNINGS:
Steep sites usually require more stringent drainage and erosion controls than flatter grade sites.

COMMENTS:
The steeper the land, the greater the need for adequate drainage controls to prevent soil and mulch from being washed from the site.

[2] **REQUIREMENTS:**
If the actual soil K-factor is known from soil testing, then the Score shall be determined from Table 1.

If a preliminary ESCP is required during planning negotiations, then it must be demonstrated that adequate space is available for the construction and operation of any major sediment traps, including the provision for any sediment basins and their associated embankments and spillways. It must also be demonstrated that all reasonable and practicable measures can be taken to divert the maximum quantity of sediment-laden runoff (up to the specified design storm) to these sediment traps throughout the construction phase and until the contributing catchment is adequately stabilised against erosion.

WARNINGS:
The higher the point score, the greater the need to protect the soil from raindrop impact and thus the greater the need for effective erosion control measures. A point score of 2 or greater will require a greater emphasis to be placed on revegetation techniques that do not expose the soil to direct rainfall contact during vegetation establishment, e.g. turfing and *Hydromulching*.

COMMENTS:
Table 2 provides an *indication* of soil conditions likely to be associated with a particular Soil group based on a statistical analysis of soil testing across NSW. This table provides only an initial estimate of the likely soil conditions.

The left-hand-side of the table provides an indication of the type of sediment basin that will be required (Type C, F or D). The right-hand-side of the table provides an indication of the likely erodibility of the soil based on the Revised Universal Soil Loss Equation (RUSLE) K-factor.

Table 3 provides some general comments on the erosion potential of the various soil groups.

Table 1 – Score if soil K-factor is known

	RUSLE soil erodibility K-factor			
	K < 0.02	**0.02<K<0.04**	**0.04<K<0.06**	**K > 0.06**
Score	0	1	2	3

Table 2 – Statistical analysis of NSW soil data [1]

Unified Soil Class System	Likely sediment basin classification (%)			Probable soil erodibility K-factor (%) [2]			
	Dry	Wet		Low	Moderate	High	Very High
	Type C	Type F	Type D	K < 0.02	0.02<K<0.04	0.04<K<0.06	K > 0.06
GM	30	**58**	12	12	**51**	26	12
GC	**42**	33	25	13	**71**	17	0
SW	40	**48**	12	**49**	39	12	0
SP	**53**	32	15	**76**	18	5	1
SM	21	**67**	12	26	**48**	25	1
SC	26	**50**	24	16	**64**	18	2
ML	5	**63**	32	4	35	**45**	16
CL	9	**51**	39	12	**56**	19	13
OL	2	**80**	18	34	**61**	5	1
MH	12	41	**48**	15	19	**41**	25
CH	5	44	**51**	39	**43**	11	7

Notes: [1] Analysis of soil data presented in Landcom (2004).

[2] Soil erodibility based on Revised Universal Soil Loss Equation (RUSLE) K-factor.

Unified Soil Classification System (USCS)

GW Well graded gravels, gravel-sand mixtures, little or no fines
GP Poorly graded gravels, gravel-sand mixture, little or no fines
GM Silty gravels, poorly graded gravel-sand-silt mixtures
GC Clayey gravels, poorly graded gravel-sand-clay mixtures
SW Well graded sands, gravelly sands, little or no fines
SP Poorly graded sands, gravelly sands, little or no fines
SM Silty sands, poorly graded sand-silt mixtures
SC Clayey sands, poorly graded sand-clay mixtures
ML Inorganic silts & very fine sands, rock flour, silty or clayey fine sands with slight plasticity
CL Inorganic clays, low–medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
OL Organic silts and organic silt-clays of low plasticity
MH Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts
CH Inorganic clays of high plasticity, fat clays
OH Organic clays of medium to high plasticity

Table 3 – Typical properties of various soil groups [1]

Soil Groups	Typical properties [2]
GW, GP	• Low erodibility potential.
GM, GC	• Low to medium erodibility potential. • May create turbid runoff if disturbed as a result of the release of silt and clay particles.
SW, SP	• Low to medium erodibility potential.
SM, SC	• Medium erodibility potential. • May create turbid runoff if disturbed as a result of the release of silt and clay particles.
MH, CH	• Highly variable (low to high) erodibility potential. • Will generally create turbid runoff if disturbed.
ML, CL	• High erodibility potential. • Tendency to be dispersive. • May create some turbidity in runoff if disturbed.

Note: [1] After Soil Services & NSW DLWC (1998).
[2] Any soil can represent a high erosion risk if the binding clays or silts are unstable.

Table 4 provides **general** guidelines on the suitability of various soil groups to various engineering applications.

Table 4 – Engineering suitability based on Unified Soil Classification [1]

Unified Soil Class	USC Group	Embankments		Fill	Slope stability	Untreated roads
		Water retaining	Non water retaining			
Well graded gravels	GW	Unsuitable	Excellent	Excellent	Excellent	Average
Poorly graded gravel	GP	Unsuitable	Average	Excellent	Average	Unsuitable
Silty gravels	GM	Unsuitable	Average	Good	Average	Average
Clayey gravels	GC	Suitable	Average	Good	Average	Excellent
Well graded sands	SW	Unsuitable	Excellent	Excellent	Excellent	Average
Poorly graded sands	SP	Unsuitable	Average	Good	Average	Unsuitable
Silty sands	SM	Suitable [2]	Average	Average	Average	Poor
Clayey sands	SC	Suitable	Average	Average	Average	Good
Inorganic silts	ML	Unsuitable	Poor	Average	Poor	Unsuitable
Inorganic clays	CL	Suitable [2]	Good	Average	Good	Poor
Organic silts	OL	Unsuitable	Unsuitable	Poor	Unsuitable	Unsuitable
Inorganic silts	MH	Unsuitable	Poor	Poor	Poor	Unsuitable
Inorganic clays	CH	Suitable [2]	Average	Unsuitable	Average	Unsuitable
Organic clays	OH	Unsuitable	Unsuitable	Unsuitable	Unsuitable	Unsuitable
Highly organic soils	Pt	Unsuitable	Unsuitable	Unsuitable	Unsuitable	Unsuitable

Notes: [1] Modified from Hazelton & Murphy (1992)
[2] Suitable only after modifications to soil such as compaction and/or erosion protection

[3] If the soils have not been tested for Emerson Class, then adopt a score of 4.

REQUIREMENTS:
Works proposed on sites containing Emerson Class 1 or 2 soils have a very high pollution potential and must submit a conceptual ESCP to the regulatory authority for review and/or approval (as required by the authority) during planning negotiations.

WARNINGS:
Class 3 and 5 soils disturbed by cut and fill operations or construction traffic are highly likely to discolour stormwater (i.e. cause turbid runoff). Chemical stabilisation will likely be required if these soils are placed immediately adjacent to a retaining wall. Any disturbed Class 1, 2, 3 and 5 soils that are to be revegetated must be covered with a non-dispersive topsoil as soon as possible (unless otherwise agreed by the regulatory authority).

Class 1 and 2 soils are highly likely to discolour (pollute) stormwater if exposed to rainfall or flowing water. Treatment of these soils with gypsum (or other suitable substance) will most likely be required. These soils should not be placed directly behind a retaining wall unless it has been adequately treated (stabilised) or covered with a non-dispersible soil.

[4] The duration of disturbance refers to the total duration of soil exposure to rainfall up until a time when there is at least 70% coverage of all areas of soil.

REQUIREMENTS:
All land developments with an expected soil disturbance period greater than 6 months must submit a conceptual ESCP to the regulatory authority for review and/or approval (as required by the authority) during planning negotiations.

COMMENTS:
Construction periods greater than 3 months will generally experience at least some significant storm events, independent of the time of year that the construction (soil disturbance) occurs.

[5] **REQUIREMENTS:**
Development proposals with an expected soil disturbance in excess of 1ha must submit a conceptual ESCP to the regulatory authority for review and/or approval (as required by the regulatory authority) during planning negotiations.

The area of disturbance refers to the total area of soil exposed to rainfall or dust-producing winds either as a result of:

(a) the removal of ground cover vegetation, mulch or sealed surfaces;
(b) past land management practices;
(c) natural conditions.

WARNINGS:
A *Sediment Basin* will usually be required if the disturbed area exceeds 0.25ha (2500m^2) within any sub-catchment (i.e. land flowing to one outlet point).

COMMENTS:
For soil disturbances greater than 0.25ha, the revegetation phase should be staged to minimise the duration for which soils are exposed to wind, rain and concentrated runoff.

[6] **REQUIREMENTS:**
All developments that involve earthworks or construction within a natural watercourse (whether that watercourse is in a natural or modified condition) must submit a conceptual ESCP to the regulatory authority for review and/or approval (as required by the regulatory authority) during planning negotiations.

Permits and/or licences may be required from the State Government, including possible submission of the ESCP to the relevant Government department.

[7] **REQUIREMENTS:**
No areas of soil disturbance shall be left exposed to rainfall or dust-producing winds at the end of a development without an adequate degree of protection and/or an appropriate action plan for the establishment of at least 70% cover.

COMMENTS:
Grass seeding without the application of a light mulch cover is considered the least favourable revegetation technique. A light mulch cover is required to protect the soil from raindrop impact, excessive temperature fluctuations, and the loss of essential soil moisture.

[8] **COMMENTS:**
All receiving waters can be adversely affected by unnatural quantities of sediment-laden runoff. Freshwater ecosystems are generally more susceptible to ecological harm resulting from the inflow of fine or dispersible clays than saline water bodies. The further inland a land disturbance is, the greater the potential for the released sediment to cause environmental harm as this sediment travels towards the coast.

For the purpose of this clause it is assumed that all sediment-laden runoff will eventually flow into saline waters. Thus, sediment-laden discharges that flow first into freshwater are likely to adversely affect both fresh and saline water bodies and are therefore considered potentially more damaging to the environment.

This clause does **not** imply that sediment-laden runoff will not cause harm to saline waters.

[9] **COMMENTS:**
This clause refers to subsoils exposed during the construction phase either as a result of past land practices or proposed construction activities. The exposure of subsoils resulting from the excavation of minor service trenches should not be considered.

[10] **WARNINGS:**
The greater the extent of external catchment, the greater the need to divert up-slope stormwater runoff around any soil disturbance.

COMMENTS:
The ability to separate “clean” (i.e. external catchment) stormwater runoff from “dirty” site runoff can have a significant effect on the size, efficiency and cost of the temporary drainage, erosion, and sediment control measures.

[11] **REQUIREMENTS:**
Permission must be obtained from the owner of a road reserve before placing any erosion and sediment control measures within the road reserve.

WARNINGS:
Few sediment control techniques work efficiently when placed on a road and/or around roadside stormwater inlets. Great care must be taken if sediment control measures are located on a public roadway, specifically:

- safety issues relating to road users;
- the risk of causing flooding on the road or within private property.

The construction of roads (whether temporary or permanent) will usually modify the flow path of stormwater runoff. This can affect how "dirty" site runoff is directed to the sediment control measures.

COMMENTS:
"On-road" sediment control devices are at best viewed as secondary or supplementary sediment control measures. Only in special cases and/or on very small projects (e.g. kerb and channel replacement) might these controls be considered as the "primary" sediment control measure.

[12] **WARNINGS:**
Soils with a pH less than 5.5 or greater than 8 will usually require treatment in order to achieve satisfactory revegetation. Soils with a pH of less than 5 (whether naturally acidic or in acid sulfate soil areas) may also limit the choice of chemical flocculants (e.g. Alum) for use in the flocculation of *Sediment Basins*.

[13] **REQUIREMENTS:**
A preliminary ESCP must be submitted to the local government for approval during the planning phase for any development that obtains a total point score of 17 or greater or when any trigger value is scored or exceeded.

Appendix B – Rockhampton Regional Council Flood Overlay Mapping

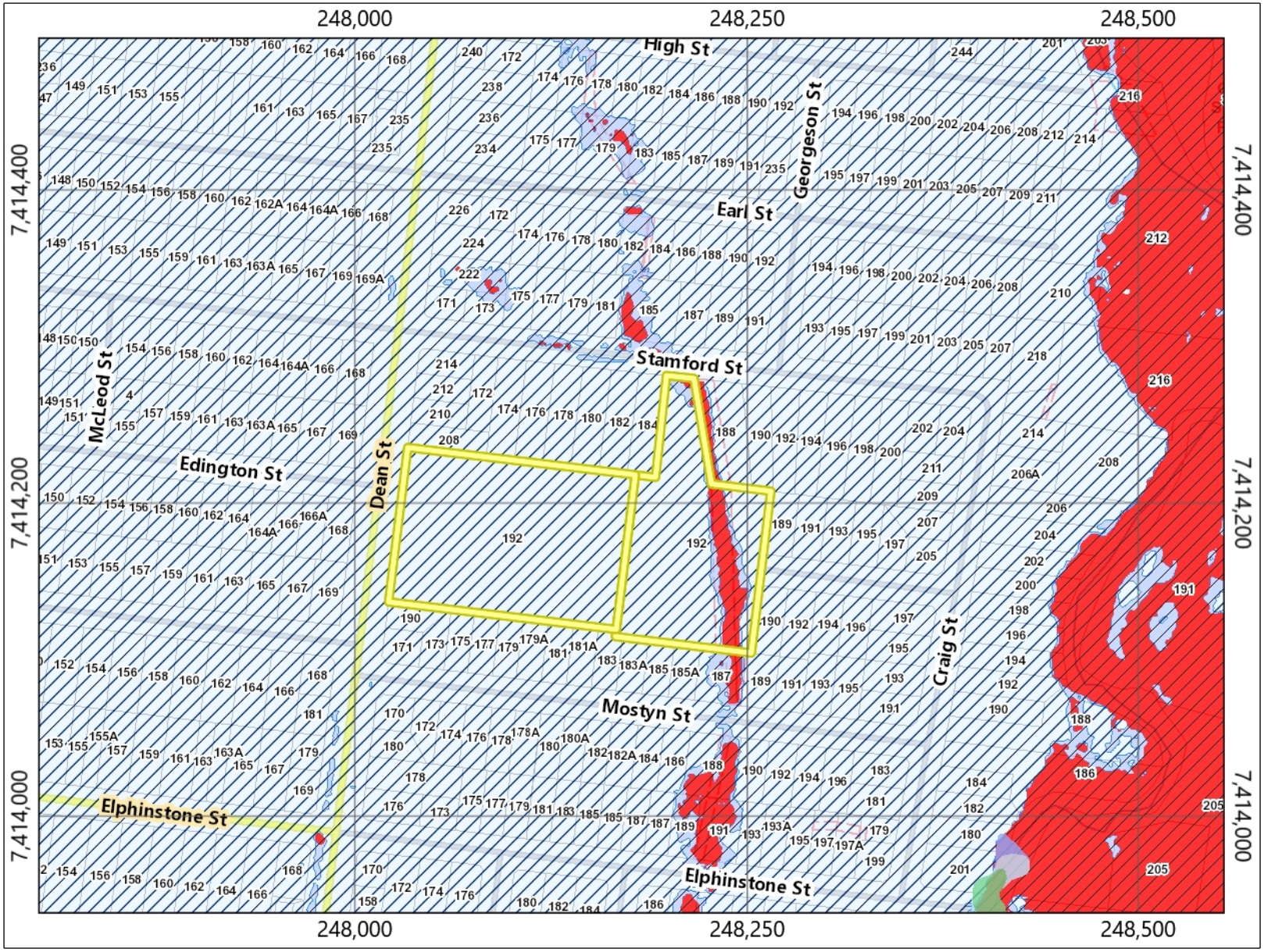
RichTextBox1

Spatial reference

GDA2020_MGA_Zone_56

A4 Page scale at 1: 3,765.40

Printed from RRPS on 13/03/24



Legend

- Development Information
- Fitzroy River Flood
  - H1 (Low)
  - H2 (Medium)
  - H3 (High)
  - H4 (High)
  - H5 (Extreme)
  - H6 (Extreme)
- Fitzroy River Flood Study Extent
- Floodplain Investigation Area
- North Rockhampton Flood Management Area
- Planning Area 1
- Planning Area 2
- Local Catchment DFE
- Roads2
  - Main roads
  - Major council roads
  - Standard council roads
  - Access roads
  - Private roads
- Easements
- Property Parcels
- Ocean
- DCDB Parks
- CQ LGA Boundaries

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GDA 2020

Rockhampton Regional Council

Appendix C – Engineering Plans

PROPOSED RETIREMENT LIVING ESTATE

192 DEAN STREET, BERSERKER

RUBY DEVELOVMENT PTY LTD

Project Number: S24-018

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S24-018-G02 SAFETY IN DESIGN
S24-018-G03 CIVIL SERVICES LAYOUT PLAN

CIVIL DRAWINGS

S24-018-C01 CIVIL NOTES & LEGEND
S24-018-C02 SITE PLAN
S24-018-C03 EXISTING FEATURES & DEMOLITION PLAN
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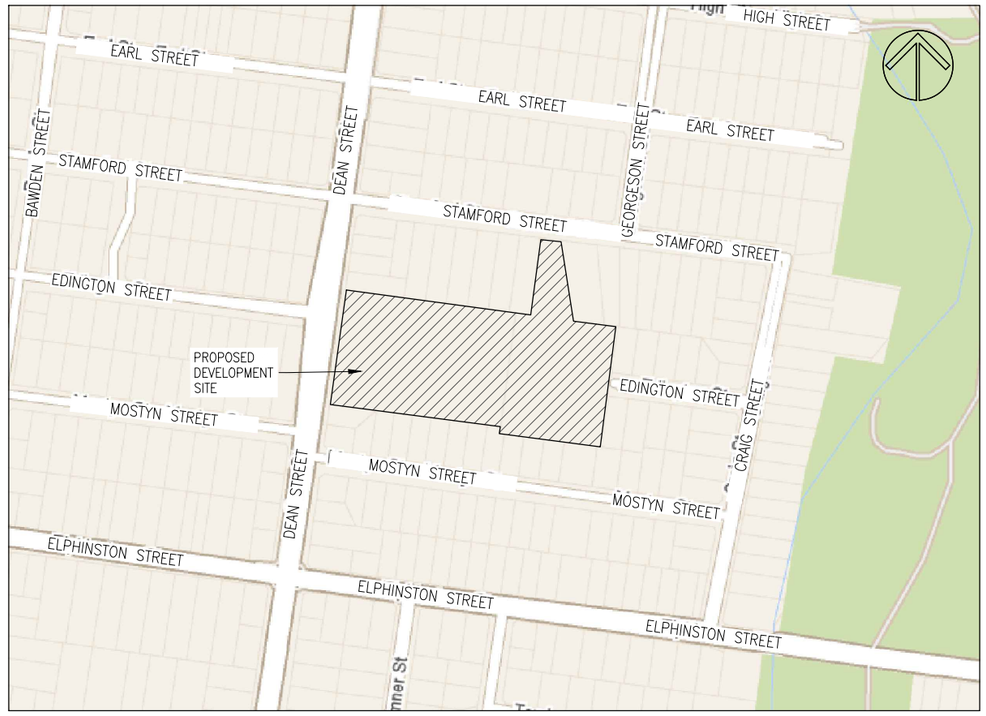
S24-018-W05 PRIVATE WATER WORKS PLAN 3 of 4
S24-018-W06 PRIVATE WATER WORKS PLAN 4 of 4



LOCALITY PLAN

NOT TO SCALE

No.	DATE	REVISIONS	DES	DRN	CHK	APD
B	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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SURVEYOR
CAPRICORN SURVEY GROUP CQ
PHONE 07 4927 5199

DATUM A.H.D.
P.M.
R.L.

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PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE COVER SHEET
CLIENT RUBY DEVELOPMENT PTY LTD

DRAWING STATUS: FOR CONSTRUCTION
DRAWING NUMBER: S24-018-G01
SHEET NUMBER: 01 OF 03
REVISION: B

S24-018-G_Coversheet.dwg

STANDARD SAFE DESIGN REPORT (STD SDR REPORT)

IN ACCORDANCE WITH THE WORK HEALTH AND SAFETY ACT AND REGULATIONS 2011 THE FOLLOWING CHECKED ☑ TASKS AND HAZARDS HAVE BEEN IDENTIFIED AS POTENTIAL CONSTRUCTION RELATED HAZARDS ASSOCIATED WITH IMPLEMENTING THE DESIGN AS DOCUMENTED.

- ☑ (CCD) CONSTRUCTION CONFORMANCE TO DESIGN - SDR1,2,3,4,5,6,7,11,12,13,16,18,26,28 RISK LEVEL = 3
- ☐ (SA&SWP) SITE ACCESS CONTROL AND FENCING INCLUDING STAIRS, SCAFFOLD, LADDERS, RAILINGS, SAFE WORK PLATFORMS FREE FROM FALLING DEBRIS AND ADEQUATE WORKSPACE - SDR8,14,21,23,28 RISK LEVEL = 6
- ☑ (GSW) GENERAL SITE WORKS - SDR2,6,9,10,11,12,14,15,17,19,25,26,28 RISK LEVEL = 6
- ☑ (CE) USE OF CONSTRUCTION EQUIPMENT - SDR18,24,28 RISK LEVEL = 6
- ☑ (SWD&E) STORMWATER, DRAINAGE AND ELECTRICAL SERVICES WORK - SDR9,10,14,19,28 RISK LEVEL = 6
- ☐ (W@H) WORKING AT HEIGHTS - SDR21,22,23,28 RISK LEVEL = 7
- ☐ (DEM) DEMOLITION - SDR10,15,18,20,26,28 RISK LEVEL = 7
- ☑ (EA) ENVIRONMENTAL GROUND VIBRATIONS, NOISE AND DUST - SDR7,9,28 RISK LEVEL = 6
- ☑ (SP&IT) SURROUNDING PROPERTY AND INFRASTRUCTURE INCLUDING TREES - SDR9,10,28 RISK LEVEL = 5
- ☑ (EX) TRENCHING AND EXCAVATIONS >1m - SDR10,14,28 RISK LEVEL = 7
- ☑ (CS) CONFINED SPACES - SDR10,14,16,27,28 RISK LEVEL = 7
- ☑ (U/AGS) - WORK AROUND UNDERGROUND AND ABOVE GROUND SERVICES AND OBSTRUCTIONS - SDR9,10,28 RISK LEVEL = 7
- ☐ (HM) EXPOSING AND HANDLING HAZARDOUS MATERIALS - SDR16,25,28 RISK LEVEL = 4
- ☑ (FC) FORMWORK CONSTRUCTION - SDR21,22,23,28 RISK LEVEL = 6
- ☑ (LSC) LIFTING AND POSITIONING OF STRUCTURAL COMPONENTS - SDR15,18,28 RISK LEVEL = 6
- ☐ (SIC) STRUCTURE/MEMBER INSTABILITY DURING CONSTRUCTION - SDR7,8,12,14,20,28 RISK LEVEL = 6
- ☑ (OL) OVER LOADING DUE TO CONSTRUCTION & MAINTENANCE LOADS - SDR7,8,15,28 RISK LEVEL = 5
- ☐ (AMH) ADDITIONAL MATERIAL HAZARDS EXIST. REFER TO PROJECT SID HAZARD CHECKLIST (FORM WHS 006 a & b)

THE ABOVE LISTED TASKS AND HAZARDS HAVE BEEN ASSESSED AND ARE TO BE FURTHER MITIGATED BY
1) FOLLOWING RISK REDUCTION MEASURES AS INDICATED ABOVE.
2) COMPLY WITH RISK TABLE '2' SUGGESTED ACTIONS.
3) IMPLEMENTING AND COMPLY WITH RISK REDUCTION MEASURES INDICATED IN THE PROJECT SID-ARAM (FORM WHS-006b) IF ABOVE (AMH) - ADDITIONAL MATERIAL HAZARD BOX IS CHECKED.

SDR1 IT IS THE CLIENT'S RESPONSIBILITY TO PROVIDE THIS 'SAFE DESIGN REPORT' TO THE BUILDER, PROJECT MANAGER AND/OR PRINCIPAL CONTRACTOR AND THEIR MUTUAL RESPONSIBILITY TO HAVE A SAFETY MANAGEMENT PLAN ("SMP") FOR SITE ACCESS AND SAFE WORKING. (CCD) (SA&SWP)

SDR2 IT IS THE BUILDER, PROJECT MANAGER OR PRINCIPAL CONTRACTOR'S RESPONSIBILITY TO BUILD THE WORKS STRICTLY IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND NOT TO MAKE ANY VARIATIONS TO THE CONSTRUCTION WITHOUT THE SPECIFIC WRITTEN APPROVAL OF THE DESIGNER. (CCD) (GSW)

SDR3 IT IS THE CLIENT'S RESPONSIBILITY, THROUGH CONSULTATION AND ENGAGEMENT OF SUITABLY QUALIFIED PROFESSIONALS, TO MAKE THE DESIGNER AWARE OF ANY INFORMATION RELATING TO HAZARDS AND RISKS WHERE CONSTRUCTION WORK IS TO BE CARRIED OUT, INCLUDING BUT NOT LIMITED TO: THE LOCATION OF UNDER GROUND AND ABOVE GROUND SERVICES, IDENTIFICATION OF CONTAMINATED SOILS OR UNEXPECTED SOILS AND OTHER MATERIALS OR THE PRESENCE OF DANGEROUS MATERIALS INCLUDING ASBESTOS. (CCD)

SDR4 THIS DESIGN HAS BEEN DOCUMENTED IN ACCORDANCE WITH RELEVANT AUSTRALIAN STANDARDS, LOCAL AUTHORITY REGULATIONS AND STANDARD BUILDING CODES OF PRACTICE UNLESS NOTED OTHERWISE. EACH LEVEL OF CONSTRUCTION IS TO BE STRUCTURALLY COMPLETED AND INSPECTED TO ENSURE DESIGN COMPLIANCE BY THE CERTIFYING AUTHORITY PRIOR TO ADVANCING TO THE NEXT STAGE OF WORK. IT IS THE BUILDER, PROJECT MANAGER OR PRINCIPAL CONTRACTOR'S RESPONSIBILITY TO PROGRAM THE WORKS IN A SAFE MANNER AND TO HIGHLIGHT TO THE DESIGNER ANY ASPECTS OF THE WORK THAT MAY REQUIRE FURTHER CLARIFICATION OR ADVICE WITH REGARD TO THE HEALTH AND SAFETY OF THE PROJECT. (CCD)

SDR5 ALL ASPECTS DETAILED OR NOTED IN THE WESTERA CIVIL/ENVIRONMENTAL/STRUCTURAL DOCUMENTS ARE THOSE REQUIRED FOR THE COMPLETED PROJECT OR DEVELOPMENT ONLY. THE BUILDER, PROJECT MANAGER OR PRINCIPAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ANY NECESSARY TEMPORARY CONNECTIONS AS WELL AS SUPPORTS AND BRACING TO MAINTAIN THE STABILITY AND SAFETY OF THE RELEVANT STRUCTURES THROUGHOUT THE CONSTRUCTION PERIOD. THIS INCLUDES ELEMENTS SUCH AS PREFABRICATED TIMBER AND STEEL ELEMENTS, UNRESTRAINED WALLS, CONCRETE COLUMNS, BEAMS AND SLABS, PRECAST PANELS, ETC WHICH REQUIRE TEMPORARY SUPPORT OR PROPPING TO PREVENT OVER STRESS, EXCESSIVE DEFORMATION OR INSTABILITY UNTIL THE FINAL STRUCTURAL SYSTEM IS COMPLETED. THE DESIGNER IS TO BE CONTACTED FOR FURTHER ADVICE IF REQUIRED. (CCD)

SDR6 WHERE THESE DESIGN DRAWINGS ONLY DOCUMENT PART OF A PROJECT OR DEVELOPMENT, IT IS THE BUILDER, PROJECT MANAGER OR PRINCIPAL CONTRACTOR'S RESPONSIBILITY TO ENSURE ALL DESIGN DRAWINGS ARE COORDINATED BETWEEN CONSULTANTS. FOR EXAMPLE, CO-ORDINATION TO ENSURE APPROPRIATE SLAB THICKENINGS AND DETAILING FOR SEWAGE/STORMWATER CONNECTIONS, LOAD-BEARING AND BRACING WALL ELEMENTS, CAST IN FIXINGS, ETC. (CCD) (GSW)

SDR7 NO ALLOWANCE HAS BEEN MADE FOR CONSTRUCTION LOADS INCLUDING STACKING OF MATERIALS ON DECKS, FLOORS OR ROOF PLATFORMS, LOADS IMPOSED DUE TO PLANT, MACHINERY, LIFTING DEVICES, IMPACT/VIBRATION/CYCLIC LOADS, ETC. IT IS THE BUILDER, PROJECT MANAGER OR PRINCIPAL CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE DESIGNER OF ANY LOADS, THAT ARE NOT DOCUMENTED, THAT THE STRUCTURE MAY BE SUBJECTED TO DURING CONSTRUCTION. (SIC) (OL) (EA) (CCD)

SDR8 UNLESS NOTED ON THE DRAWINGS NO ADDITIONAL ALLOWANCE HAS BEEN MADE FOR SPECIFIC LOADS ASSOCIATED WITH THE MAINTENANCE OF THE STRUCTURE OR DEVLEOPMENT.
THE DESIGNER IS TO BE INFORMED OF ANY REQUIREMENTS NECESSARY TO EXTERNALLY SUPPORT PLATFORMS, CRANES, SCAFFOLDS ETC AS REQUIRED. (SIC) (SA&SWP) (CCD) (OL)

SDR9 DURING CONSTRUCTION, THE BUILDER, PROJECT MANAGER OR PRINCIPAL CONTRACTOR SHALL PROTECT NEIGHBOURING PROPERTIES FROM NOISE AND DUST IN ACCORDANCE WITH LOCAL AUTHORITY REQUIREMENTS, RADIATION, GROUND VIBRATIONS, STORMWATER FLOWS AND OTHER CONSTRUCTION HAZARDS. CONDITION REPORTS ON NEIGHBOURING PROPERTIES AND STRUCTURES ARE RECOMMENDED PRIOR TO CONSTRUCTION. (EA) (SWD&E) (U/AGS) (P&IT) (GSW)

SDR10 THE BUILDER, PROJECT MANAGER OR PRINCIPAL CONTRACTOR IS REQUIRED TO VERIFY AND IF NECESSARY CONDUCT FURTHER SEARCHES TO ACCURATELY LOCATE EASEMENTS, UNDER GROUND AND ABOVE GROUND SERVICES, PROPERTY BOUNDARIES, TREES, EXISTING STRUCTURES AND OTHER OBSTRUCTIONS PRIOR TO DEMOLITION AND OR CONSTRUCTION. THE DESIGNER IS TO BE IMMEDIATELY NOTIFIED OF ANY ELEMENTS NOT SHOWN ON THE APPROVED DRAWINGS AS THE DESIGN AND SAFETY DESIGN REPORT MAY REQUIRE AMENDING. (DEM) (SP&IT) (U/AGS) (GSW) (SWD&E)

SDR11 THE BUILDER, PROJECT MANAGER OR PRINCIPAL CONTRACTOR MUST OBTAIN DESIGN AND INSPECTION CERTIFICATES ON ALL SUNDRY ELEMENTS OF THE STRUCTURE AND DEVELOPMENT INCLUDING BUT NOT LIMITED TO COMPACTION TESTING, PIPELINE TESTING, CLADDING DESIGN AND FIXINGS, WINDOWS, BALUSTRADES, STAIRS, SUSPENDED CEILINGS, INTERNAL FIT-OUT ITEMS AND ALL OTHER ELEMENTS NOT DETAILED IN THE DESIGN DOCUMENTS. (GSW) (CCD)

SDR12 THE CONSTRUCTION IS TO BE FULLY CARRIED OUT IN ACCORDANCE WITH ALL DESIGN DRAWINGS AND NOTES AS DOCUMENTED. IF CONSTRUCTION CEASES AT ANY STAGE, THE DESIGNER IS TO BE NOTIFIED TO PROVIDE ADVICE ON THE SAFETY OF COMPLETED CONSTRUCTION WORK AT THAT TIME. (SIC) (GSW) (CCD)

SDR13 IT IS THE BUILDER, PROJECT MANAGER OR PRINCIPAL CONTRACTOR'S RESPONSIBILITY TO INFORM THE DESIGNER OF ANY CHANGE TO CONTRACTUAL ARRANGEMENTS BETWEEN THE CLIENT AND THEMSELVES WHICH MAY IMPACT ON THE DESIGN AND SAFETY OF THE DESIGN. (CCD)

SDR14 THE BUILDER, PROJECT MANAGER OR PRINCIPAL CONTRACTOR SHALL PROVIDE SUITABLE WARNING SIGNS, BARRIERS AND ACCESS CONTROLS TO CONFINED SPACES AND FENCING AROUND ALL EXCAVATIONS. AT NO STAGE SHOULD AN EXCAVATION BE APPROACHED OR ENTERED INTO UNLESS AN APPROVED AND CERTIFIED SHORING SYSTEM HAS BEEN INSTALLED OR THE BANKS HAVE BEEN BATTERED AND/OR BENCHED IN ACCORDANCE WITH THE PROJECTS GEOTECHNICAL ENGINEERING SPECIFICATION AND/OR WRITTEN INSTRUCTIONS BY THE INSPECTING GEOTECHNICAL ENGINEER. (SA&SWP) (EX) (GSW) (SIC) (SWD&E)

SDR15 AT NO STAGE SHALL SITE PERSONNEL PASS UNDER MATERIALS BEING LIFTED AND MOVED AROUND ON SITE. IT IS THE BUILDER, PROJECT MANAGER OR PRINCIPAL CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT SITE MATERIALS ARE DELIVERED, TRANSPORTED, STORED AND POSITIONED IN A SAFE MANNER AND IN ACCORDANCE WITH THE PRODUCT SPECIFICATION, THE SITE SPECIFIC SAFETY PLAN AND GENERAL SAFETY INDUCTION REGULATIONS. (LSC) (GSW) (OL) (DEM)

SDR16 BUILDERS AND CONTRACTORS ARE REQUIRED TO OBTAIN AND COMPLY WITH MATERIAL PRODUCT SPECIFICATIONS AND RECOMMENDATIONS WHEN USING MATERIALS AND ELEMENTS SPECIFIED IN THE DESIGN DOCUMENTS. (HM) (CCD)

SDR17 THE BUILDER, PROJECT MANAGER OR PRINCIPAL CONTRACTOR MUST ELIMINATE OR LIMIT (SO FAR AS REASONABLE PRACTICABLE) SLIP HAZARDS AND PROTRUDING, SHARP OR ABRASIVE ELEMENTS ON SITE. HAZARDOUS ELEMENTS MUST BE CAPPED, ADEQUATELY SCREENED OR CLEARLY MARKED TO ENSURE SITE SAFETY. (GSW)

SDR18 IT IS THE BUILDER, PROJECT MANAGER OR PRINCIPAL CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT SITE WORKERS ARE SUITABLY QUALIFIED, TRAINED AND INSURED FOR THE TASKS BEING UNDERTAKEN ON SITE. (CCD) (CE)

SDR19 IT IS THE BUILDER, PROJECT MANAGER OR PRINCIPAL CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ALL SITE PERSONNEL ARE PROVIDED ADEQUATE SPACE, VENTILATION AND APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT TO UNDERTAKE THE WORKS REQUIRED. ALL CONSTRUCTION EQUIPMENT IS TO BE USED IN ACCORDANCE WITH BEST INDUSTRY SAFETY PRACTICES AND REGULATIONS. (GSW) (SWD&E)

SDR20 DEMOLITION WORKS ARE REQUIRED TO BE CARRIED OUT IN A SAFE, SYSTEMATIC AND ORDERLY MANNER IN ACCORDANCE WITH THE SITE SPECIFIC SAFETY PLAN AND ALL GENERAL SAFETY INDUCTION REGULATIONS. TEMPORARY PROPPING OF MEMBERS MAYBE REQUIRED IN ACCORDANCE WITH THE DIRECTION OF A SUITABLY QUALIFIED PROFESSIONAL IN ACCORDANCE WITH RELEVANT SAFETY PRACTICES AND REGULATIONS. (DEM) (SIC)

SDR21 AT ALL TIMES THE BUILDER, PROJECT MANAGER, OR PRINCIPAL CONTRACTOR IS TO PROVIDE LOCAL TRAFFIC AND PEDESTRIAN MANAGEMENT PLANS AS NEEDED TO ENSURE SAFE ACCESS AROUND AND ONTO THE BUILDING SITE. CONSIDERATION MUST ALSO BE GIVEN TO SAFE WORKER ACCESS TO ALL WORK AREA INCLUDING ADEQUATE WALKWAYS AND STAIRS, SCAFFOLDING, SECURE LADDER ACCESS, SAFE WORKING PLATFORMS, ACCESS PATHS FREE FROM FALLING OBJECTS, ADEQUATE RAILINGS, FALL ARREST SYSTEMS, ETC. ALL PITS, FLOOR CAVITIES AND RELATED COVERS AND GRATES MUST BE MADE SAFE. (SA&SWP) (W@H) (FC)

SDR22 ALL FORMWORK AND SCAFFOLDING SYSTEMS ARE TO BE DESIGNED AND CERTIFIED BY A LICENSED CONTRACTOR TO COMPLY WITH RELEVANT AUSTRALIAN STANDARDS AND KEPT AND MAINTAINED IN A GOOD WORKING ORDER. REGULAR CHECKS ON ERECTED MEMBERS AND FIXINGS MUST BE CARRIED OUT BY A QUALIFIED PROFESSIONAL TO ENSURE COMPLIANCE WITH THE DESIGN. (FC) (W@H)

SDR23 CLIMBING ON SCAFFOLDING OR FORMWORK AND WORKING AT HEIGHTS WITHOUT SUITABLY APPROVED RAILINGS, BARRIERS AND RESTRAINTS FIXED OFF TO CERTIFIED ANCHOR POINTS IS STRICTLY PROHIBITED. (FC) (W@H) (SA&SWP)

SDR24 ALL SITE MACHINERY AND ELECTRICAL EQUIPMENT IS TO BE KEPT IN GOOD WORKING ORDER WITH CURRENT SAFETY TAGGING AND SERVICING WHERE APPLICABLE. (CE) (SWD&E)

SDR25 THE BUILDER, PROJECT MANAGER OR PRINCIPAL CONTRACTOR IS TO ADEQUATELY TREAT AND DISPOSE OF DANGEROUS SITE MATERIALS INCLUDING CONTAMINATED SOILS AND ASBESTOS IN ACCORDANCE WITH AUTHORITY REGULATIONS, INDUSTRY STANDARDS AND PRACTICES. (HM) (GSW)

SDR26 THE BUILDER, PROJECT MANAGER OR PRINCIPAL CONTRACTOR IS TO ENSURE THAT THE SITE IS MAINTAINED IN A SAFE WORKING MANNER AND THAT ALL SITE PRACTICES ARE IN ACCORDANCE WITH CURRENT WORK PLACE HEALTH AND SAFETY LAWS AND REGULATIONS. (CCD) (GSW)

SDR27 IDENTIFIED CONFINED SPACES COMPLY WITH RELEVANT STANDARDS FOR REASONABLY SAFE ACCESS AND MINIMIZED FOR ENTRY. THE BUILDER, PROJECT MANAGER AND/OR THE PRINCIPAL CONTRACTOR HAS RESPONSIBILITY TO CONTROL ACCESS AND MANAGE ASSOCIATED HAZARDS AND RESIDUAL RISKS WHICH MAY INCLUDE INUNDATION, BIOLOGICAL, ENGULFMENT, ASPHYXIATION, ETC. THROUGH ACCESS CONTROL, PERMITS, AND MONITORING PROCESSES. (CS)

SDR28 REFER DRAWING SHEETS FOR ANY SPECIFIC ADDITIONAL REQUIREMENTS.

RISK TABLE '2' MITIGATED HAZARD RISK ASSESSMENT TOOL WITH RECOMMENDED ACTIONS BY PCBU REPRESENTATIVE

RISK LEVEL = CONSEQUENCE x PROBABILITY	CONSEQUENCE IF IT DID OCCUR				
PROBABILITY OF EVENT OCCURRING	1 - INSIGNIFICANT. (NO DAMAGE).	2 - MINOR. (SOME DAMAGE AND/OR FIRST AID TREATMENT).	3 - CONSIDERABLE. (REPAIRABLE DAMAGE AND/OR INJURIES CAUSING LOST TIME).	4 - EXTREME. (SERIOUS DAMAGE AND/OR FATALITY OR PERMANENT DISABILITY).	5 - CATASTROPHIC. (MAJOR DAMAGE AND/OR MULTIPLE FATALITIES).
1 - WILL ONLY OCCUR IN EXCEPTIONAL CIRCUMSTANCES	1	2	3	4	5
2 - COULD OCCUR AT SOMETIME	2	4	6	8	10
3 - LIKELY TO OCCUR SOMETIME	3	6	9	12	15
4 - WILL PROBABLY OCCUR	4	8	12	16	20
5 - EXPECTED TO OCCUR	5	10	15	20	25

RISK LEVEL	1 TO 3 = MINOR	4 TO 6 = LOW	7 TO 8 = MODERATE	9 TO 10 = SIGNIFICANT	11 TO 18 = MAJOR	19 TO 25 = EXTREME
SUGGESTED ACTIONS BY PRINCIPAL BUILDER AND/OR PROJECT MANAGER	BE AWARE OF THE RISK AND CONSEQUENCES. TAKE ADEQUATE PRECAUTIONS.	ENSURE ADEQUATE CONTROL MEASURES. ENSURE ALL CONTRACTORS HAVE ADEQUATE TRAINING.	PREPARE WORK METHOD STATEMENTS, ENSURE ADEQUATE MONITORING OF THE WORKS. ADHERE CLOSELY TO THE ASSOCIATED NOTES ON THE DESIGN DOCUMENTS.	BEFORE CARRYING OUT WORKS NECESSITATING THIS RISK, MEET WITH THE DESIGNER TO DISCUSS ALL MEASURES OUTLINED IN THE DESIGN DOCUMENTS SO THAT NO MITIGATION MEASURES ARE MISSED. PREPARE DETAILED WORK PLANS, SAFE WORK METHOD STATEMENTS (SWMS), PERMIT TO START, MONITORING, TRAINING, ETC.	UNACCEPTABLE RISK FURTHER MITIGATIONS ARE REQUIRED. ALTERNATIVELY, CHANGED TO THE DESIGN CONCEPT MAY BE REQUIRED TO MEET WESTERA'S SAFE DESIGN REQUIREMENTS.	UNACCEPTABLE RISK. THE HAZARD HAS NOT BEEN MITIGATED TO THE "REASONABLE PRACTICABLE "RISK REDUCTION STANDARD. THE DESIGN AD HAZARD REDUCTION APPROACH IS INADEQUATE.

No.	DATE	REVISIONS	DES	DRN	CHK	APD	DOCUMENT CONTROL
							DESIGNED S.C.M
							DRAWN J.J.D
							CHECKED J.M.H
B	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H	APPROVED J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H	DATE JULY 2024

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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SURVEYOR CAPRICORN SURVEY GROUP CQ PHONE 07 4927 5199
DATUM A.H.D. P.M. R.L.

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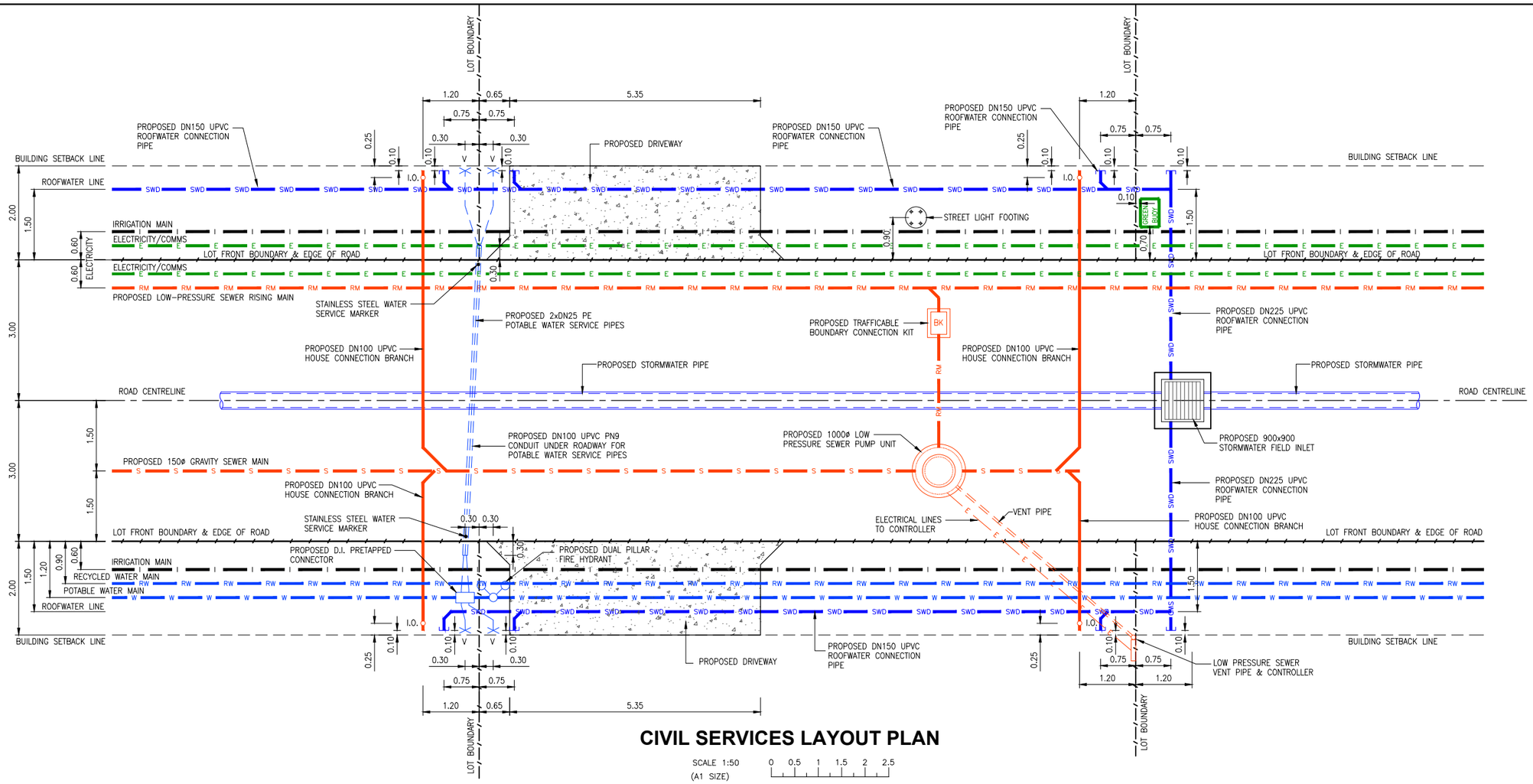
PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE SAFETY IN DESIGN
CLIENT RUBY DEVELOPMENT PTY LTD

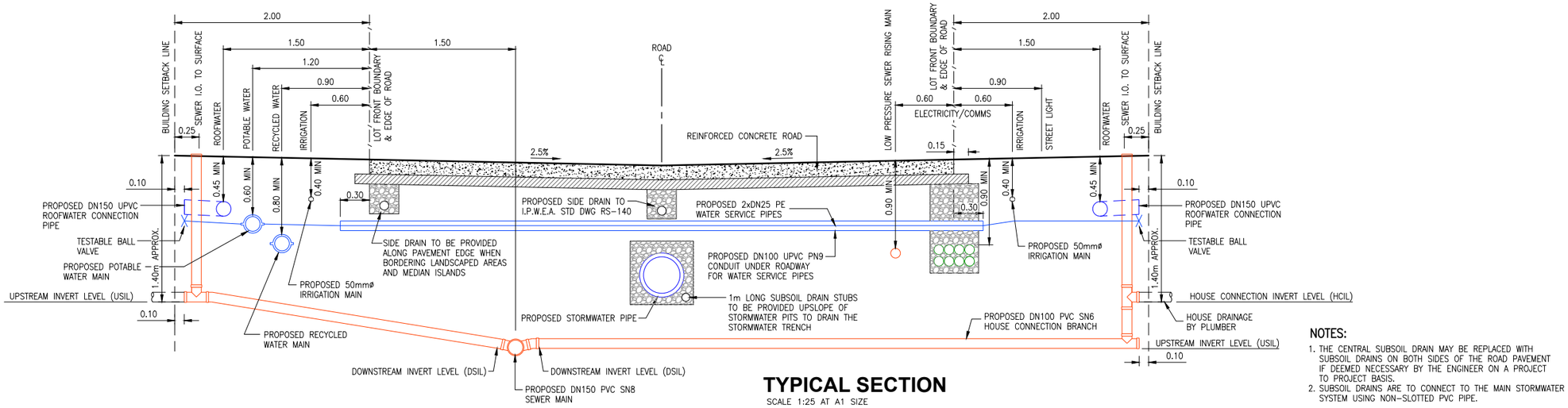
DRAWING STATUS FOR CONSTRUCTION
DRAWING NUMBER S24-018-G02
SHEET NUMBER 02 OF 03
REVISION B

S24-018-G_SID.dwg



CIVIL SERVICES LAYOUT PLAN

SCALE 1:50 (A1 SIZE)



TYPICAL SECTION

SCALE 1:25 AT A1 SIZE

NOTES:

1. THE CENTRAL SUBSOIL DRAIN MAY BE REPLACED WITH SUBSOIL DRAINS ON BOTH SIDES OF THE ROAD PAVEMENT IF DEEMED NECESSARY BY THE ENGINEER ON A PROJECT TO PROJECT BASIS.
2. SUBSOIL DRAINS ARE TO CONNECT TO THE MAIN STORMWATER SYSTEM USING NON-SLOTTED PVC PIPE.

No.	DATE	REVISIONS	DES	DRN	CHK	APD
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A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DOCUMENT CONTROL: DESIGNED S.C.M; DRAWN J.J.D; CHECKED J.M.H; APPROVED J.M.H; DATE JULY 2024

J. HILL RPEQ 19891
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APPROVED

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SURVEYOR: CAPRICORN SURVEY GROUP CQ, PHONE 07 4927 5199
DATUM A.H.D. P.M. R.L.

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PROJECT: PROPOSED RETIREMENT LIVING ESTATE
LOCATION: LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE: CIVIL SERVICES LAYOUT PLAN
CLIENT: RUBY DEVELOPMENT PTY LTD

DRAWING STATUS: FOR CONSTRUCTION
DRAWING NUMBER: S24-018-G03
SHEET NUMBER: 03 OF 03
REVISION: B

S24-018-G_Civil_Services.dwg

GENERAL NOTES

G1 WESTERA PARTNERS HAS LIMITED CONTROL OR INPUT TO LOCAL GOVERNMENT OR OTHER LEGISLATED APPROVALS UNLESS SPECIFICALLY ENGAGED BY IT'S CLIENT. ANY CHANGES TO APPROVAL REQUIREMENTS (INCLUDING ORDERS FOR SUSPENSION OF WORKS ETC) SHOULD BE COMMUNICATED TO WESTERA PARTNERS AND ALL OTHER RELEVANT DESIGNERS TO ALLOW ASSESSMENT OF POTENTIAL RISKS AND ENSURE DESIGN AND SAFETY COMPLIANCE.

G2 ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE LOCAL AUTHORITIES STANDARD DRAWINGS & SPECIFICATIONS AND COMPLETED TO THE SATISFACTION OF THE SUPERINTENDENT AND LOCAL AUTHORITY.

G3 UNLESS SPECIFIED OTHERWISE ALL MATERIALS AND WORK SHALL COMPLY WITH THE RELEVANT AUSTRALIAN STANDARDS.

G4 PRIOR TO THE COMMENCEMENT OF CONSTRUCTION THE CONTRACTOR MUST LOCATE ALL EXISTING SERVICES AND PROMPTLY PROVIDE THE LOCATION DATA TO THE DESIGN ENGINEER TO ASSESS IMPACTS ON THE DESIGN.

G5 ALL CONNECTIONS TO EXISTING SEWERS AND WATER MAINS ARE TO BE CONSTRUCTED BY THE LOCAL AUTHORITY OR AN APPROVED CONTRACTOR. THE CONTRACTOR IS TO ALLOW IN HIS CONTRACT SUM FOR THE COST OF ANY PROPOSED CONNECTIONS.

G6 ALL SEWERS ARE TO BE 150MM DIA. U.P.V.C. CLASS SN8 RUBBER RING JOINTED AND PROPERTY CONNECTIONS ARE TO BE 100MM DIA. U.P.V.C CLASS SN6 UNLESS NOTED OTHERWISE

G7 THE PAVEMENT DEPTHS SHOWN ARE PRELIMINARY ONLY AND ARE TO BE VERIFIED FOLLOWING SUB-SOIL TESTS OF THE SUB-GRADE MATERIAL.

G8 ALL ROOFWATER CONNECTIONS FROM KERB ADAPTERS ARE TO BE 100MM DIA CLASS SN10 AT A MIN GRADE OF 1.0% UNLESS SHOWN OTHERWISE. ROOFWATER CONNECTIONS FROM FIELD INLETS OR GULLY PITS ARE TO BE 150MM DIA CLASS SN8 AT A MIN GRADE OF 1.0% UNLESS NOTED OTHERWISE.

G9 ALL U.P.V.C. STORMWATER DRAINAGE PIPES ARE TO BE CLASS SN8 (U.N.O.)

ALL R.C. PIPES ARE TO BE CLASS 3 (U.N.O.)
< 900ø = USE SPIGOT AND SOCKET PIPES WITH RUBBER RING JOINTS
900ø < PIPES < 1050ø = USE FLUSH JOINTED PIPES WITH EXTERNAL ELASTOMERIC BAND
1050ø < PIPES = USE FLUSH JOINTED PIPES WITH EXTERNAL ELASTOMERIC BAND AND INTERNAL CEMENT MORTAR JOINT

ALL F.R.C. PIPES ARE TO BE FRCPIPE+ CLASS 4 (U.N.O.) AND SHALL BE DUAL RUBBER RING JOINT WITH COLLAR. PIPES SHALL BE FROM 225ø TO 600ø ONLY.

POLYPROPYLENE/POLYETHYLENE STORMWATER PIPE MINIMUM CLASS SN8 (U.N.O.) SUBJECT TO ACCEPTANCE BY CERTIFYING ENGINEER AND LOCAL AUTHORITY. CONSTRUCTION AND EMBEDMENT TO BE IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.

G10 WATER PIPES SHALL BE;
- P.V.C.-M WATER PIPES ARE TO BE SERIES 2 PN16 SN10 R.R.J.
- D.I.C.L. WATER PIPES ARE TO BE PN35 WITH ALL FITTINGS TO BE FUSION BONDED POLYMERIC COATED.
- PE WATER PIPES ARE TO BE PN16 SDR11 PE100. DN25 AND DN32 WATER SERVICES SHALL BE PE80B.

G11 ALL "AS CONSTRUCTED" INFORMATION IS TO BE RECORDED AS REQUIRED BY THE LOCAL AUTHORITY AND SUBMITTED TO THE SUPERINTENDENT IMMEDIATELY AFTER COMPLETION OF THE WORKS.

G12 ALL ALLOTMENTS ARE TO BE GRADED AT A MINIMUM GRADE OF 1 IN 200.

CONCRETE NOTES

C1 ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS3600 CONCRETE STRUCTURES CODE AND THE REFERENCED STANDARDS THEREIN.

C2 THE CONCRETE STRENGTH GRADE AND THE COVER TO REINFORCEMENT FOR THE VARIOUS CONCRETE ELEMENTS SHALL BE AS LISTED BELOW:
- CLIMATE ZONE: TROPICAL / TEMPERATE / ARID
- LOCATION: COASTAL / NEAR COASTAL / INLAND

ELEMENT	EXPOSURE CLASSIFICATION	STRENGTH GRADE	MINIMUM COVER
MANHOLES	B1	N32	40
	C2	S50	65
FIELD INLET PITS	B1	N32	40
	C2	S50	65
HEADWALLS	B1	N32	40
	C2	S50	65
INTERNAL ROADS	B1	N40	40
KERB/CHANNEL	B1	N32	–
FOOTPATHS	B1	N32	40
RETAINING WALL PANELS	B1	N32	30*
	C2	S50	60*
BORED PIERS	B1	N32	40
	C2	S50	65

*RIGID FORMWORK & INTENSE COMPACTION

C3 CONCRETE TO HAVE A MAXIMUM AGGREGATE SIZE OF 20mm WITH 80mm MAXIMUM SLUMP, A WATER/CEMENT RATIO OF NOT GREATER THAN 0.65 AND A MAXIMUM FINAL BASIC DRYING SHRINKAGE STRAIN OF 800 x 10^{-6} UNLESS APPROVED OTHERWISE.

C4 NO ADDITIVES SHALL BE ADDED OF APPLIED TO THE CONCRETE MIX WITHOUT THE APPROVAL OF THE ENGINEER.

C5 THE MAXIMUM PERMISSIBLE TRANSPORT TIME FOR CONCRETE BETWEEN BATCHING AND PLACEMENT ON SITE SHALL BE IN ACCORDANCE WITH THE FOLLOWING TABLE.

AMBIENT AIR TEMPERATURE	MAX. BATCHING TO PLACEMENT TIME
10° – 24°C	120 MINUTES
25° – 27°C	90 MINUTES
28° – 30°C	60 MINUTES
31° – 33°C	45 MINUTES
34° – 36°C	30 MINUTES
37°C+	NO PLACEMENT OF CONCRETE UNLESS CHILLED WATER OR ICE IN MIX

C6 ALL CONCRETE SHALL BE MECHANICALLY VIBRATED. VIBRATORS SHALL NOT BE USED TO SPREAD CONCRETE.

C7 ALL CONCRETE SHALL BE SAMPLED AND TESTED IN ACCORDANCE WITH AS1379 ADOPTING THE PROJECT ASSESSMENT METHOD FOR COMPRESSIVE STRENGTH AND SLUMP COMPLIANCE. THE RESULTS OF ALL TESTS SHALL BE PROMPTLY SUBMITTED TO THE ENGINEER FOR REVIEW.

C8 WHEN THE AIR TEMPERATURE EXCEEDS 30°C, ALIPHATIC ALCOHOL SHALL BE APPLIED TO THE CONCRETE SURFACE OF SLABS IMMEDIATELY AFTER THE INITIAL SCREED AND AGAIN AFTER BULL FLOATING.

C9 CURING OF ALL CONCRETE SURFACES SHALL COMMENCE IMMEDIATELY AFTER COMPLETING CONCRETE FINISHING AND SHALL CONTINUE FOR 7 DAYS. CONTRACTOR TO CONFIRM METHOD OF CURING WITH ENGINEER PRIOR TO USE.

C10 SIZES OF CONCRETE ELEMENTS DO NOT INCLUDE THICKNESS OF APPLIED FINISHES.

C11 BEAM DEPTHS ARE WRITTEN FIRST AND INCLUDE SLAB THICKNESS, IF ANY.

C12 NO HOLES, CHASES OR EMBEDDED ITEMS OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE MADE IN CONCRETE MEMBERS WITHOUT PRIOR APPROVAL OF THE ENGINEER. CONDUITS, PIPES ETC. SHALL NOT BE PLACED IN THE COVER THICKNESS OF THE CONCRETE.

C13 WHERE SERVICE PIPES PENETRATE CONCRETE ELEMENTS, PROVISION SHOULD BE MADE TO ALLOW FOR MOVEMENT OF THE ELEMENT.

C14 FORMWORK SHALL BE DESIGNED, CONSTRUCTED AND STRIPPED IN ACCORDANCE WITH AS3610 FORMWORK CODE, UNLESS NOTED OTHERWISE ON THE DRAWINGS.

C15 REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY AND NOT NECESSARILY SHOWN IN TRUE PROJECTION OR SCALE.

C16 ALL REINFORCEMENT SHALL BE SECURELY SUPPORTED IN ITS CORRECT POSITION ON PLASTIC BAR CHAIRS, GENERALLY AT NOT GREATER THAN 800mm CENTRES IN BOTH DIRECTIONS.

C17 WELDING AND HEATING OF REINFORCEMENT SHALL NOT BE PERMITTED WITHOUT APPROVAL OF THE ENGINEER.

C18 ALL STEEL REINFORCEMENT IN CONCRETE ELEMENTS SHALL BE INSPECTED BY THE ENGINEER AND PASSED PRIOR TO POURING OF ANY CONCRETE.

C19 LAP REINFORCEMENT ONLY AT LOCATIONS SHOWN ON THE DRAWINGS OR AS APPROVED BY THE ENGINEER.

C20 SLAB FABRIC SHALL BE LAPPED ONE FULL PANEL OF FABRIC PLUS 50mm SO THAT THE TWO OUTERMOST TRANSVERSE WIRES OF ONE SHEET OVERLAP THE TWO OUTERMOST TRANSVERSE WIRES OF THE SHEET BEING LAPPED BY 50mm.

C21 BAR REINFORCEMENT SHALL BE LAPPED IN ACCORDANCE WITH THE FOLLOWING TABLE.

TYPICAL BAR REINFORCEMENT LAP LENGTHS		
BAR	LAP LENGTH UNO	HORIZONTAL BARS WITH GREATER THAN 300mm OF CONCRETE CAST BELOW THEM
N12	550	750
N16	800	1100
N20	1100	1400
N24	1250	1600
N28	1400	1800
N32	1600	2100
N36	2000	2500

WHERE LAPS ARE SHOWN ON THE DRAWINGS THE ABOVE LAP LENGTHS SHALL BE ADOPTED UNLESS NOTED OTHERWISE. WHERE BARS OF DIFFERENT DIAMETER ARE SHOWN LAPPED, ADOPT THE LAP LENGTH APPROPRIATE TO THE SMALLER DIAMETER BAR.

C22 A VAPOUR BARRIER OF 0.2mm (200um) MINIMUM THICK POLYTHENE SHEETING SHALL BE PLACED BENEATH SLABS ON GROUND UNLESS NOTED OTHERWISE.

LEGEND

GENERAL

- ASPHALTIC CONCRETE PAVEMENT
- REINFORCED CONCRETE PAVEMENT
- REINFORCED CONCRETE PATHWAY/CROSSOVER
- TURF
- STONE PITCHING
- CEMENT GROUTED STONE PITCHING
- T — TELECOMMUNICATION
- G — GAS MAIN
- V — ELECTRICITY OVERHEAD
- E — ELECTRICITY UNDERGROUND
- LP — LIGHT POLE
- PP — POWER POLE
- PIT (TELSTRA/ELEC)
- EDGE OF BITUMEN
- FENCE
- ×2.53 — EXISTING SURFACE LEVEL
- × 2.53 — FINISHED SURFACE LEVEL
- RETAINING WALL CONCRETE SLEEPER
- RETAINING WALL MASONRY BLOCK
- SWALE

STORMWATER DRAINAGE

NEW	EXISTING	
		STORMWATER PIPE
		SAG GULLY PIT
		ON GRADE GULLY PIT
		MANHOLE
		600 x 600 FIELD INLET
		900 x 600 FIELD INLET
		1050 DIA FIELD INLET
		HEADWALL
SWD		KERB ADAPTER WITH ROOFWATER PIPE
2A		STORMWATER STRUCTURE LABEL

WATER

EXISTING	DISUSED	NEW	
W W	W W	W W	WATER MAIN
W FH W	W FH W	W FH W	FIRE HYDRANT
W DFH W	W DFH W	W DFH W	DUAL OUTLET FIRE HYDRANT
W SFH W	W SFH W	W SFH W	SWABBING FIRE HYDRANT
W V W	W V W	W V W	ISOLATION VALVE
W W	W W	W W	SCOUR VALVE
W AV W	W AV W	W AV W	AIR VALVE
W W	W W	W W	DEAD END
		W W	TEST/CHLORINATION POINT
150 W 100 W	150 W 100 W	150 W 100 W	REDUCER
PVC W DICL W	PVC W DICL W	PVC W DICL W	PIPE MATERIAL CHANGE
		W W	WATER SERVICE PRE-TAPPED TEE
		DN25ø	WATER SERVICE PIPE & CONDUIT
		WM	FLOW METER
		F	FLUSHING POINT

SEWERAGE

EXISTING	DISUSED	NEW	
S S	s s	S S	GRAVITY SEWER MAIN
SRM SRM		SRM SRM	SEWER RISING MAIN
VW VW		VW VW	SEWER VACUUM MAIN
1/1 S S	1/1 s s	1/1 S S	MAINTENANCE HOLE & END OF LINE
1/1 E/1 S	1/1 E/1 s	1/1 E/1 S	END OF LINE
1/1 S S	1/1 s s	1/1 S S	MAINTENANCE SHAFT
VB1/1 HB1/1 S S	VB1/1 HB1/1 s s	VB1/1 HB1/1 S S	HORIZONTAL/VERTICAL BEND
CB1/1 S S	CB1/1 s s	CB1/1 S S	COMPOUND BEND
		S S	STUB / TEMPORARY END
		RE/1 S S	RODDING END
		S S	PROPERTY CONNECTION
		OFMH S S	OVERFLOW MAINTENANCE HOLE
		SRM SRM	ISOLATION VALVE
		SRM SRM	SCOUR VALVE AND CHAMBER
		GRV SRM SRM	GAS RELEASE VALVE
		F SRM SRM	FLUSHING POINT
		DMH SRM S	DISCHARGE MAINTENANCE HOLE
		SRM SRM	NON-RETURN/REFLUX VALVE
			VENT POLE / ODOUR CONTROL UNIT

No.	DATE	REVISIONS	DES	DRN	CHK	APD
B	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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CAPRICORN SURVEY GROUP CQ
PHONE 07 4927 5199

DATUM A.H.D.
P.M.
R.L.

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PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE CIVIL NOTES & LEGEND
CLIENT RUBY DEVELOPMENT PTY LTD

DRAWING STATUS FOR CONSTRUCTION
DRAWING NUMBER S24-018-C01
SHEET NUMBER 01 OF 37
REVISION B

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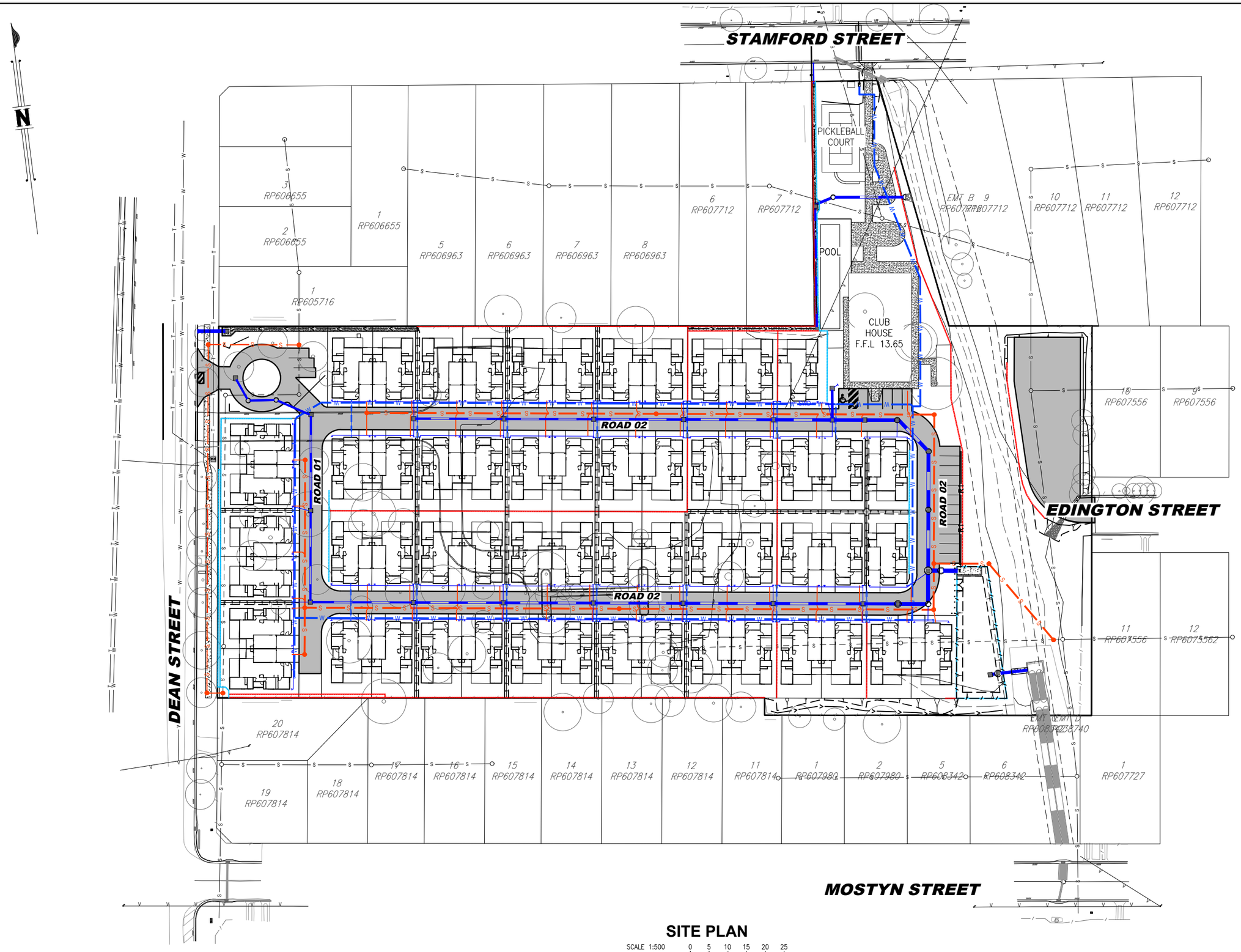

SITE PLAN

SCALE 1:500 (A1 SIZE)

0 5 10 15 20 25

NOTE:
THE INVERT LEVEL & LOCATION OF ALL EXISTING STORMWATER & SEWER INFRASTRUCTURE SHALL BE CONFIRMED ON SITE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.

CONSTRUCTION NOTE:
CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE LOCAL AUTHORITIES STANDARD DRAWINGS AND SPECIFICATIONS. WORKS MUST BE COMPLETED TO THE SATISFACTION OF THE SUPERINTENDENT AND LOCAL AUTHORITY. REFER TO SHEET C01 FOR CONSTRUCTION NOTES AND DETAILED DRAWING LEGEND.

No.	DATE	REVISIONS	DES	DRN	CHK	APD
G	14.03.25	GENERAL AMENDED	S.C.M	J.J.D	J.M.H	J.M.H
F	16.12.24	WATER AMENDED	S.C.M	J.J.D	J.M.H	J.M.H
E	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
D	08.11.24	RETAINING WALL UPDATE	S.C.M	J.J.D	J.M.H	J.M.H
C	29.10.24	GENERAL AMENDEMENT	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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SURVEYOR
CAPRICORN SURVEY GROUP CQ
PHONE 07 4927 5199

DATUM A.H.D.
P.M.
R.L.

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PROJECT: PROPOSED RETIREMENT LIVING ESTATE
LOCATION: LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE: SITE PLAN
CLIENT: RUBY DEVELOPMENT PTY LTD

DRAWING STATUS: FOR CONSTRUCTION
DRAWING NUMBER: S24-018-C02
SHEET NUMBER: 02 OF 37
REVISION: G

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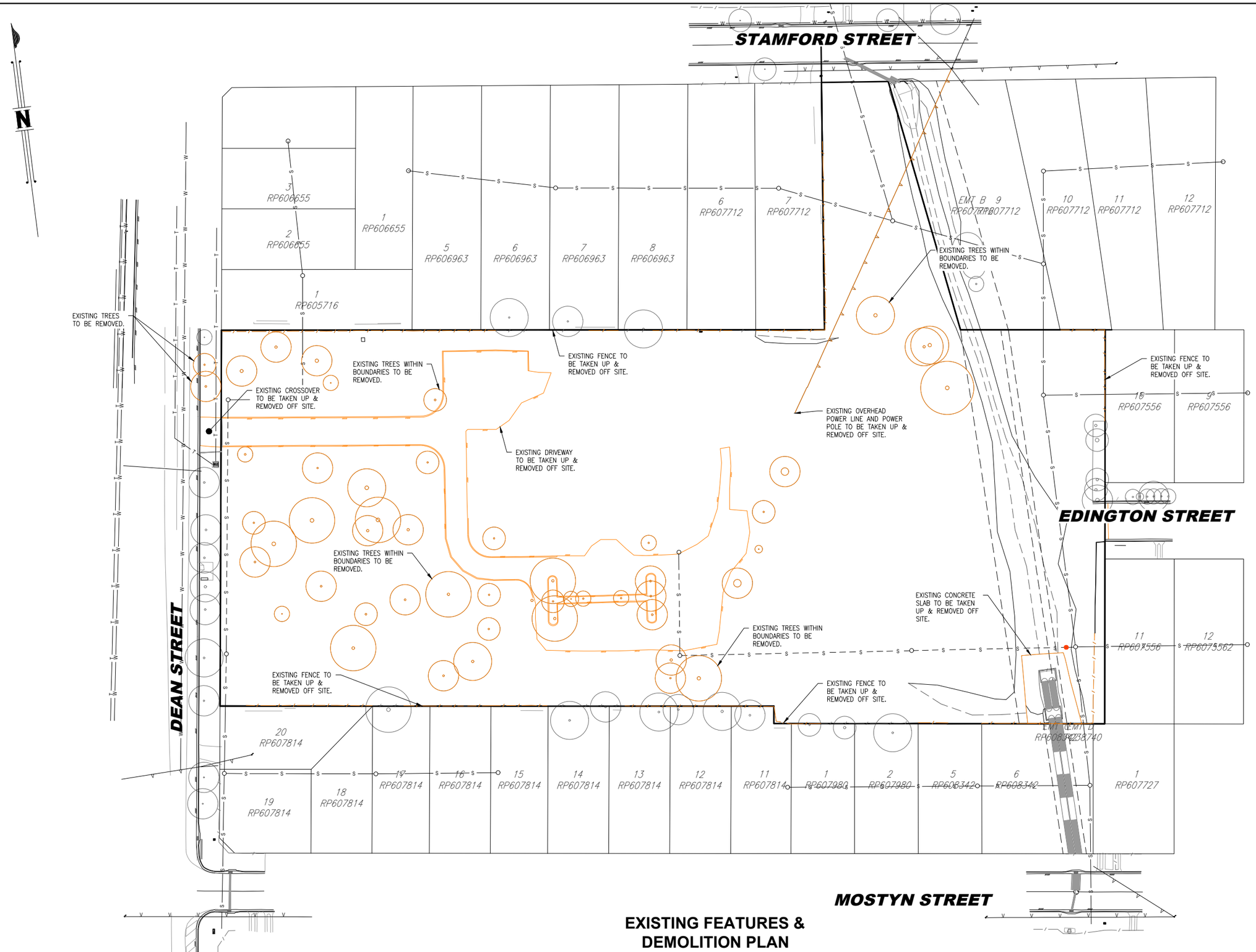

EXISTING FEATURES & DEMOLITION PLAN

SCALE 1:500 (A1 SIZE)

0 5 10 15 20 25

NOTE:
THE ITEMS SHOWN FOR REMOVAL ON THIS DRAWING ARE INDICATIVE ONLY AND ARE NOT TO BE TAKEN AS AN EXHAUSTIVE LIST. THE CONTRACTOR IS TO MAKE THEMSELVES FAMILIAR WITH THE SITE AND ALLOW FOR REMOVAL OF ALL ITEMS REQUIRED FOR CONSTRUCTION OF THE DOCUMENTED CIVIL WORKS.

NOTE:
ALL CLEARING & GRUBBING TO BE COMPLETED IN ACCORDANCE WITH MBRC STANDARDS & SPECIFICATIONS. GRUBBING IS TO BE COMPLETED TO A DEPTH OF 0.5m BELOW THE NATURAL SURFACE OR TO A DEPTH OF 1.50m BELOW FINISHED SURFACE, WHICH EVER IS THE LOWER.

No.	DATE	REVISIONS	DES	DRN	CHK	APD
B	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL
APPROVED

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.

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SURVEYOR
CAPRICORN SURVEY GROUP CQ
PHONE 07 4927 5199

DATUM A.H.D.
P.M.
R.L.

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PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE EXISTING FEATURES & DEMOLITION PLAN
CLIENT RUBY DEVELOPMENT PTY LTD

DRAWING STATUS FOR CONSTRUCTION
DRAWING NUMBER S24-018-C03
SHEET NUMBER 03 OF 37
REVISION B

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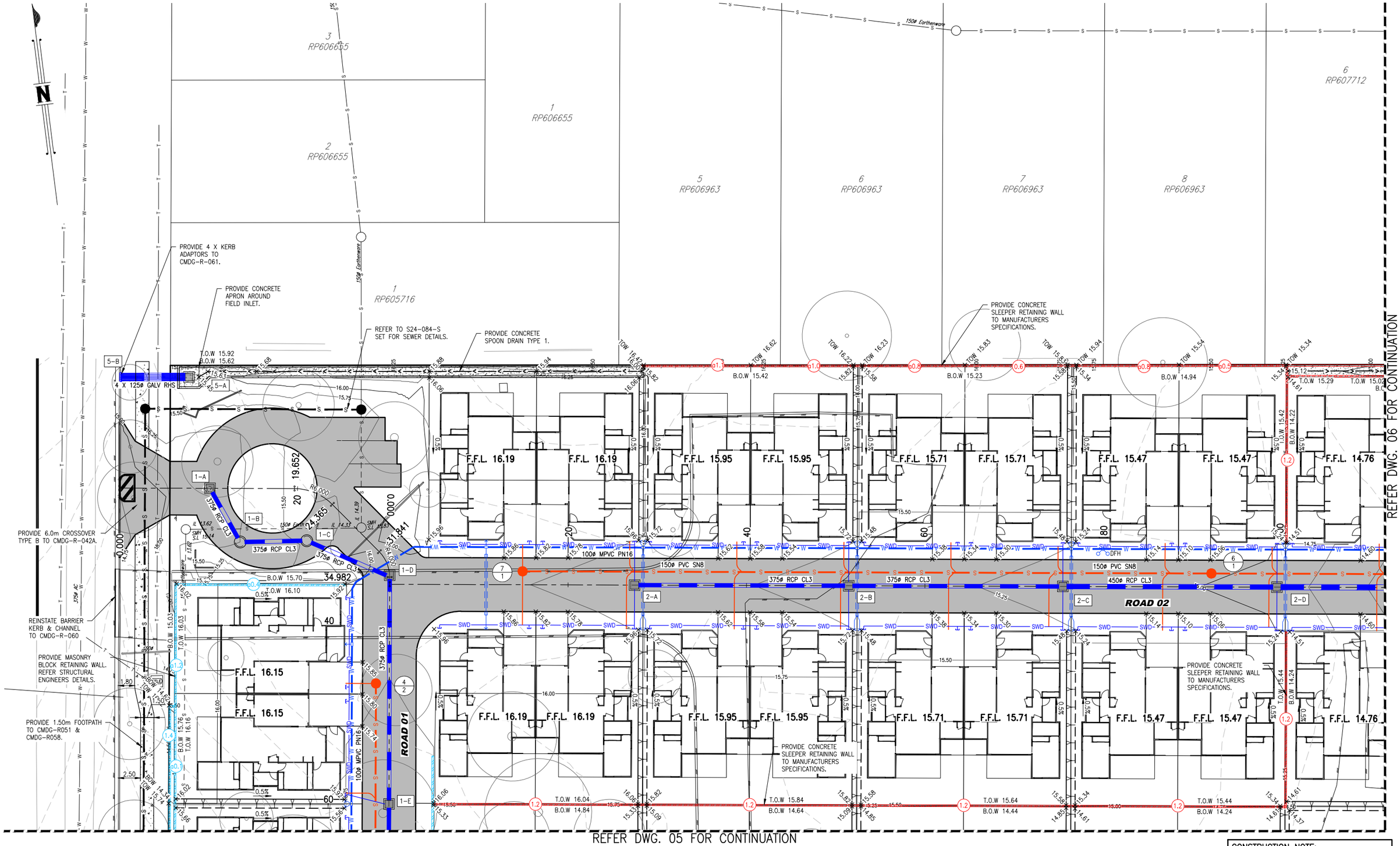

NOTE:
ALL FIELD INLETS DISCHARGING TO THE ATLAN FILTER CARTRIDGE CHAMBER ARE TO BE FITTED WITH STORMSACKS.

CIVIL WORKS PLAN

SCALE 1:200 (A1 SIZE)

RETAINING WALL VEHICLE BARRIERS:
VEHICLE BARRIERS ARE REQUIRED WHERE THE DROP FROM PAVEMENT TO A LOWER LEVEL EXCEEDS 600mm. REFER STRUCTURAL ENGINEERS DRAWINGS FOR DETAILS

NOTE:
THE INVERT LEVEL & LOCATION OF ALL EXISTING STORMWATER & SEWER INFRASTRUCTURE SHALL BE CONFIRMED ON SITE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.

CONSTRUCTION NOTE:
CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE LOCAL AUTHORITIES STANDARD DRAWINGS AND SPECIFICATIONS. WORKS MUST BE COMPLETED TO THE SATISFACTION OF THE SUPERINTENDENT AND LOCAL AUTHORITY. REFER TO SHEET C01 FOR CONSTRUCTION NOTES AND DETAILED DRAWING LEGEND.

No.	DATE	REVISIONS	DES	DRN	CHK	APD
F	16.12.24	WATER AMENDED	S.C.M	J.J.D	J.M.H	J.M.H
E	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
D	10.12.24	RETAINING WALL LEVELS UPDATE	S.C.M	J.J.D	J.M.H	J.M.H
C	29.10.24	GENERAL AMENDEMENT	S.C.M	J.J.D	J.M.H	J.M.H
B	18.10.24	GENERAL AMENDMENT	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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CENTRAL VICTORIA T 03 5441 0922 E centralvic@westerapartners.com.au

SURVEYOR
CAPRICORN SURVEY GROUP CQ
PHONE 07 4927 5199

DATUM A.H.D.
P.M.
R.L.

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PROJECT: PROPOSED RETIREMENT LIVING ESTATE
LOCATION: LOT 24 ON RP607814 & LOT 8 ON RP607712
192 DEAN STREET, BERSERKER
TITLE: CIVIL WORKS PLAN 1 of 4
CLIENT: RUBY DEVELOPMENT PTY LTD

DRAWING STATUS: FOR CONSTRUCTION
DRAWING NUMBER: S24-018-C04
SHEET NUMBER: 04 OF 37
REVISION: F

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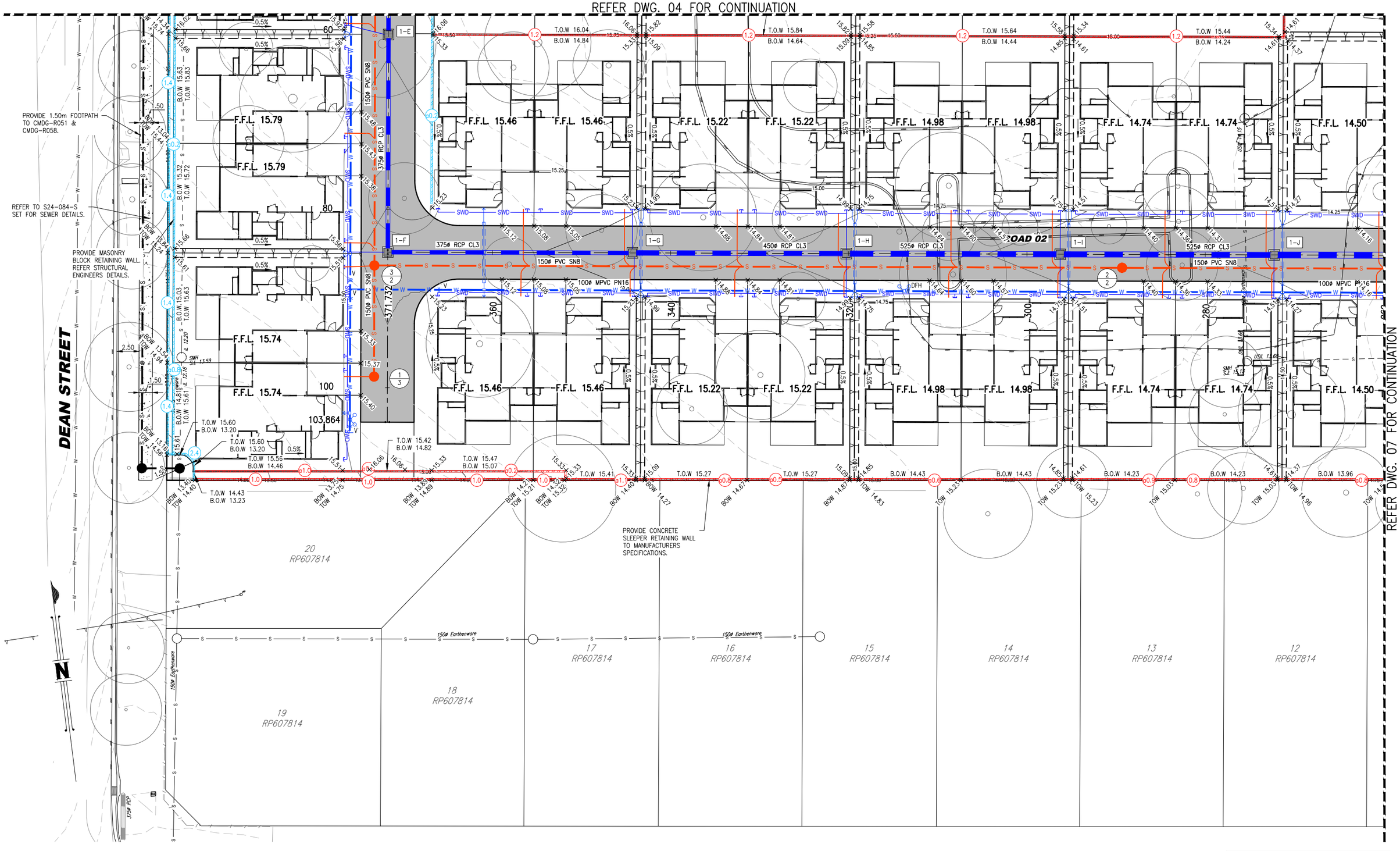

NOTE:
ALL FIELD INLETS DISCHARGING TO THE ATLAN FILTER CARTRIDGE CHAMBER ARE TO BE FITTED WITH STORMSACKS.

CIVIL WORKS PLAN

SCALE 1:200 (A1 SIZE)

RETAINING WALL VEHICLE BARRIERS:
VEHICLE BARRIERS ARE REQUIRED WHERE THE DROP FROM PAVEMENT TO A LOWER LEVEL EXCEEDS 600mm. REFER STRUCTURAL ENGINEERS DRAWINGS FOR DETAILS

NOTE:
THE INVERT LEVEL & LOCATION OF ALL EXISTING STORMWATER & SEWER INFRASTRUCTURE SHALL BE CONFIRMED ON SITE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.

CONSTRUCTION NOTE:
CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE LOCAL AUTHORITIES STANDARD DRAWINGS AND SPECIFICATIONS. WORKS MUST BE COMPLETED TO THE SATISFACTION OF THE SUPERINTENDENT AND LOCAL AUTHORITY. REFER TO SHEET C01 FOR CONSTRUCTION NOTES AND DETAILED DRAWING LEGEND.

No.	DATE	REVISIONS	DES	DRN	CHK	APD
G	16.12.24	WATER AMENDED	S.C.M	J.J.D	J.M.H	J.M.H
F	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
E	10.12.24	RETAINING WALL LEVELS UPDATE	S.C.M	J.J.D	J.M.H	J.M.H
D	08.11.24	RETAINING WALL UPDATE	S.C.M	J.J.D	J.M.H	J.M.H
C	29.10.24	GENERAL AMENDEMENT	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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CENTRAL VICTORIA T 03 5441 0922 E centralvic@westerapartners.com.au

SURVEYOR
CAPRICORN SURVEY GROUP CQ
PHONE 07 4927 5199

DATUM A.H.D.
P.M.
R.L.

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PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712
192 DEAN STREET, BERSERKER
TITLE CIVIL WORKS PLAN 2 of 4
CLIENT RUBY DEVELOPMENT PTY LTD

DRAWING STATUS FOR CONSTRUCTION
DRAWING NUMBER S24-018-C05
SHEET NUMBER 05 OF 37
REVISION G

S24-018-C_Civilwks.dwg

REFER DWG. 04 FOR CONTINUATION

PROVIDE KERB ADAPTOR TO CMDG-R-061.

PROVIDE NEW WATER SERVICE FOR DEVELOPMENT. REFER TO S24-084-W SET FOR DETAILS.

PROVIDE CONCRETE SPOON DRAIN TYPE 2.

PROVIDE WATER METER ASSEMBLY.

PROVIDE CONCRETE SPOON DRAIN TYPE 2.

PROVIDE STONE PITCHING TO STORMWATER OUTLET.

PROVIDE CONCRETE APRON AROUND FIELD INLET.

PROVIDE MASONRY BLOCK RETAINING WALL. REFER STRUCTURAL ENGINEERS DETAILS.

PROVIDE CONCRETE SLEEPER RETAINING WALL TO MANUFACTURERS SPECIFICATIONS.

PROVIDE CONCRETE SPOON DRAIN TYPE 1.

PROVIDE CONCRETE SLEEPER RETAINING WALL TO MANUFACTURERS SPECIFICATIONS.

BOTTOM OF 1:6 BATTER

BOTTOM OF 1:6 BATTER

BOTTOM OF 1:4 BATTER

PROVIDE BOLLARD

PROVIDE CONCRETE SLEEPER RETAINING WALL TO MANUFACTURERS SPECIFICATIONS.

PICKLEBALL COURT

POOL

CLUB HOUSE F.F.L 13.65

F.F.L. 14.76 F.F.L. 14.76 F.F.L. 14.30

125X75ø GALV RHS

100ø MPVC PN16

450ø RCP CL3

150ø Earthenware

300ø Concrete

525ø RCP CL3 675ø RCP CL3 675ø RCP CL3 675ø RCP CL3

150ø PVC SN8

7 RP607712 | EMT B RP607712 | 9 RP607712 | 10 RP607712 | 11 RP607712 | 12 RP607712

10 RP607556 | 9 RP607556

REFER DWG. 07 FOR CONTINUATION

CONSTRUCTION NOTE:
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NOTE:
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RETAINING WALL VEHICLE BARRIERS:
VEHICLE BARRIERS ARE REQUIRED WHERE THE DROP FROM PAVEMENT TO A LOWER LEVEL EXCEEDS 600mm. REFER STRUCTURAL ENGINEERS DRAWINGS FOR DETAILS

NOTE:
ALL FIELD INLETS DISCHARGING TO THE ATLAN FILTER CARTRIDGE CHAMBER ARE TO BE FITTED WITH STORMSACKS.

CIVIL WORKS PLAN

SCALE 1:200 (A1 SIZE) 0 2 4 6 8 10

No.	DATE	REVISIONS	DES	DRN	CHK	APD
F	14.03.25	GENERAL AMENDED	S.C.M	J.J.D	J.M.H	J.M.H
E	16.12.24	WATER AMENDED	S.C.M	J.J.D	J.M.H	J.M.H
D	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
C	29.10.24	GENERAL AMENDEMENT	S.C.M	J.J.D	J.M.H	J.M.H
B	18.10.24	GENERAL AMENDMENT	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M | DRAWN J.J.D | CHECKED J.M.H | APPROVED J.M.H | DATE JULY 2024

DOCUMENT CONTROL

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APPROVED

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CENTRAL VICTORIA T 03 5441 0922 E centralvic@westerapartners.com.au

SURVEYOR CAPRICORN SURVEY GROUP CQ PHONE 07 4927 5199
DATUM A.H.D. P.M. R.L.

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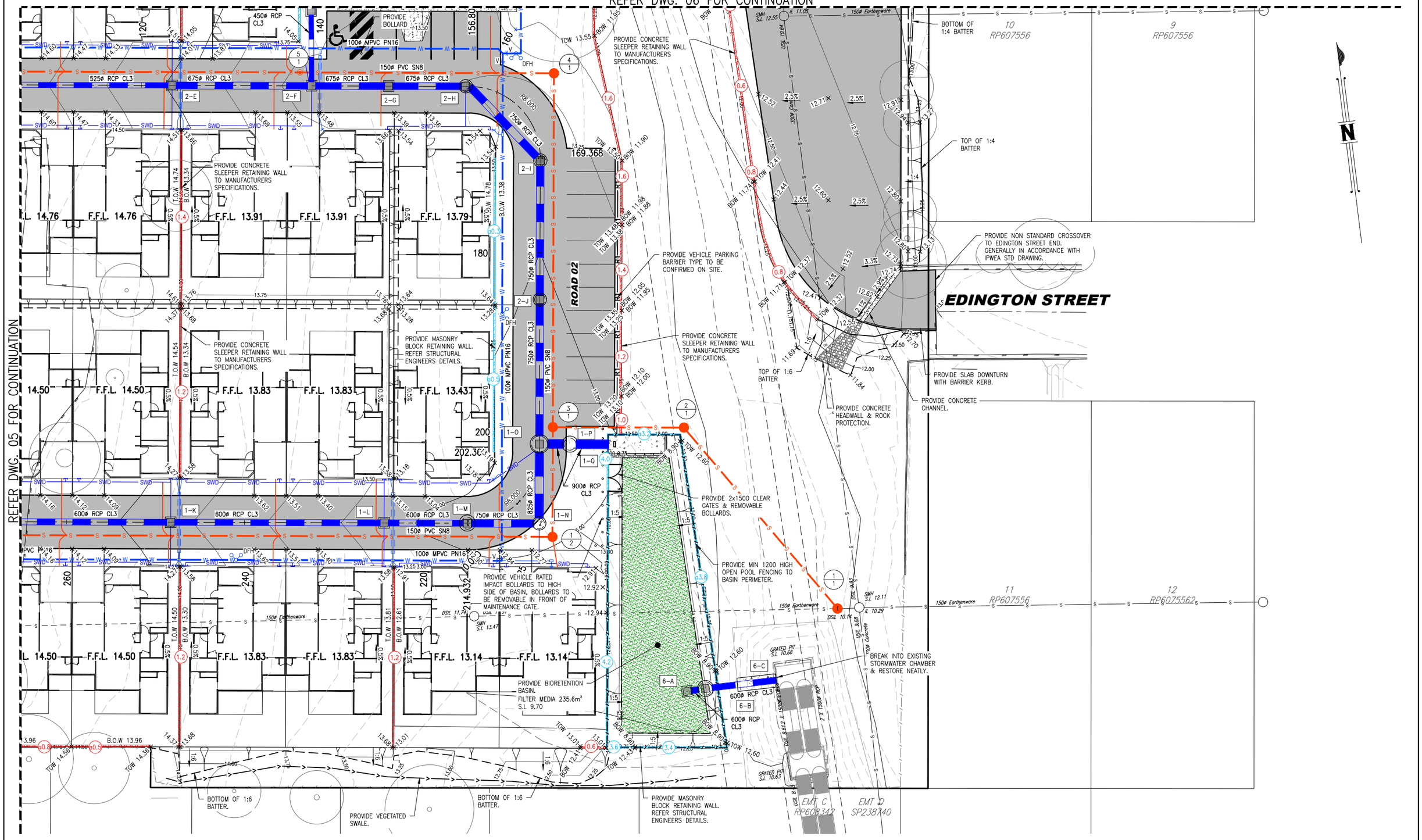
PROJECT: PROPOSED RETIREMENT LIVING ESTATE
LOCATION: LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE: CIVIL WORKS PLAN 3 of 4
CLIENT: RUBY DEVELOPMENT PTY LTD

DRAWING STATUS: FOR CONSTRUCTION
DRAWING NUMBER: S24-018-C06
SHEET NUMBER: 06 OF 37
REVISION: F

S24-018-C_Civilwks.dwg

REFER DWG. 06 FOR CONTINUATION

REFER DWG. 05 FOR CONTINUATION



NOTE:
ALL FIELD INLETS DISCHARGING TO THE ATLAN FILTER CARTRIDGE CHAMBER ARE TO BE FITTED WITH STORMSACKS.

CIVIL WORKS PLAN

SCALE 1:200 (A1 SIZE)

0 2 4 6 8 10

RETAINING WALL VEHICLE BARRIERS:
VEHICLE BARRIERS ARE REQUIRED WHERE THE DROP FROM PAVEMENT TO A LOWER LEVEL EXCEEDS 600mm. REFER STRUCTURAL ENGINEERS DRAWINGS FOR DETAILS

NOTE:
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No.	DATE	REVISIONS	DES	DRN	CHK	APD
G	12.03.25	GENERAL AMENDED	S.C.M	J.J.D	J.M.H	J.M.H
F	16.12.24	WATER AMENDED	S.C.M	J.J.D	J.M.H	J.M.H
E	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
D	10.12.24	RETAINING WALL LEVELS UPDATE	S.C.M	J.J.D	J.M.H	J.M.H
C	29.10.24	GENERAL AMENDEMENT	S.C.M	J.J.D	J.M.H	J.M.H

DOCUMENT CONTROL: DESIGNED S.C.M | DRAWN J.J.D | CHECKED J.M.H | APPROVED J.M.H | DATE JULY 2024

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CENTRAL VICTORIA T 03 5441 0922 E centralvic@westerapartners.com.au

SURVEYOR: CAPRICORN SURVEY GROUP CQ
PHONE 07 4927 5199
DATUM A.H.D. P.M. R.L.

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PROJECT: PROPOSED RETIREMENT LIVING ESTATE
LOCATION: LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE: CIVIL WORKS PLAN 4 of 4
CLIENT: RUBY DEVELOPMENT PTY LTD

DRAWING STATUS: FOR CONSTRUCTION
DRAWING NUMBER: S24-018-C07
SHEET NUMBER: 07 OF 37
REVISION: G

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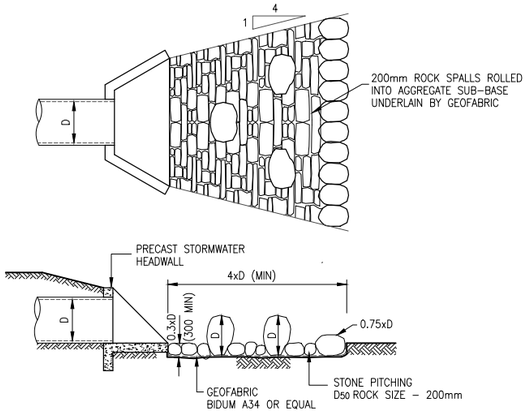
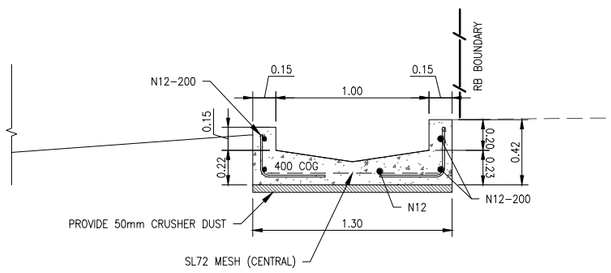


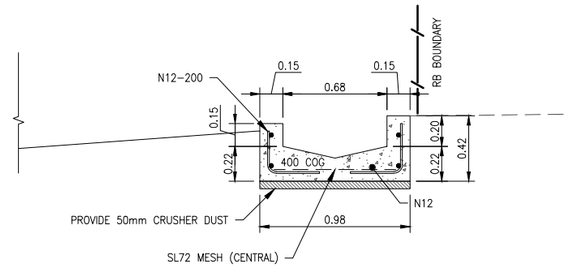
STONE PITCHING DETAIL

SCALE A1 – N.T.S.
A3 – N.T.S.



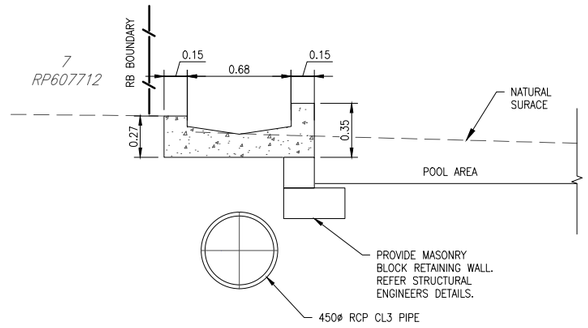
CONCRETE SPOON DRAIN TYPE 1

SCALE A1 – 1 : 20
A3 – 1 : 40



CONCRETE SPOON DRAIN TYPE 2

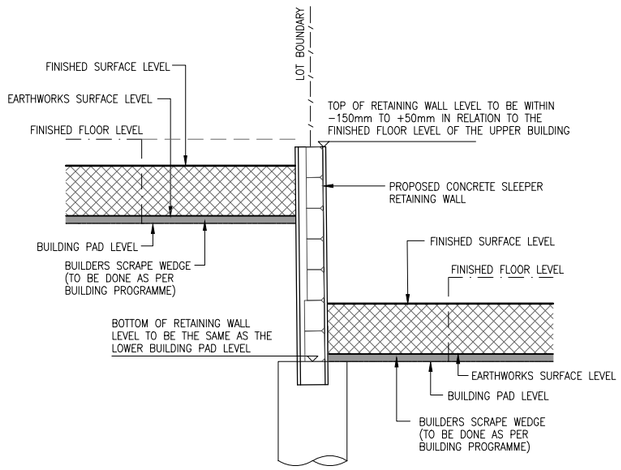
SCALE A1 – 1 : 20
A3 – 1 : 40



SECTION A

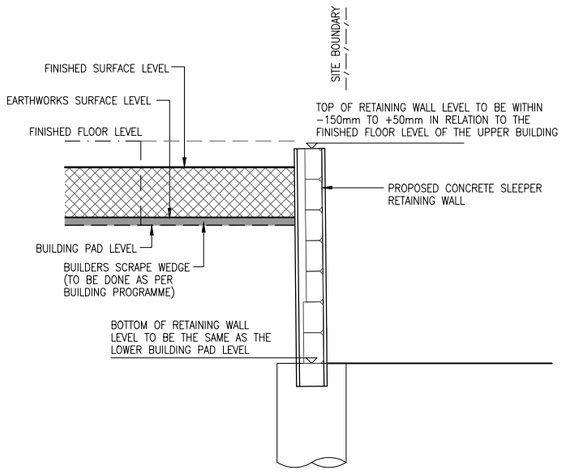
SCALE A1 – 1 : 20
A3 – 1 : 40

06



TYPICAL LOT BOUNDARY RETAINING WALL

SCALE A1 – 1 : 20
A3 – 1 : 40



TYPICAL SITE BOUNDARY RETAINING WALL

SCALE A1 – 1 : 20
A3 – 1 : 40

No.	DATE	REVISIONS	DES	DRN	CHK	APD
C	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
B	18.10.24	GENERAL AMENDMENT	S.C.M	J.J.D	J.M.H	J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

J. HILL RPEQ 19891
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SURVEYOR
CAPRICORN SURVEY GROUP CQ
PHONE 07 4927 5199

DATUM A.H.D.
P.M.
R.L.

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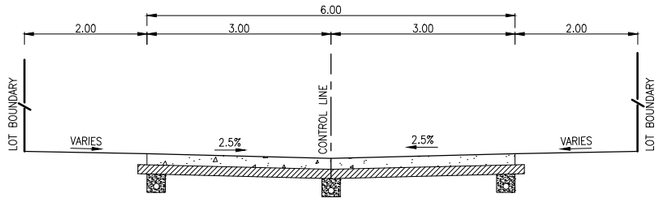
PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE TYPICAL DETAILS
CLIENT RUBY DEVELOPMENT PTY LTD

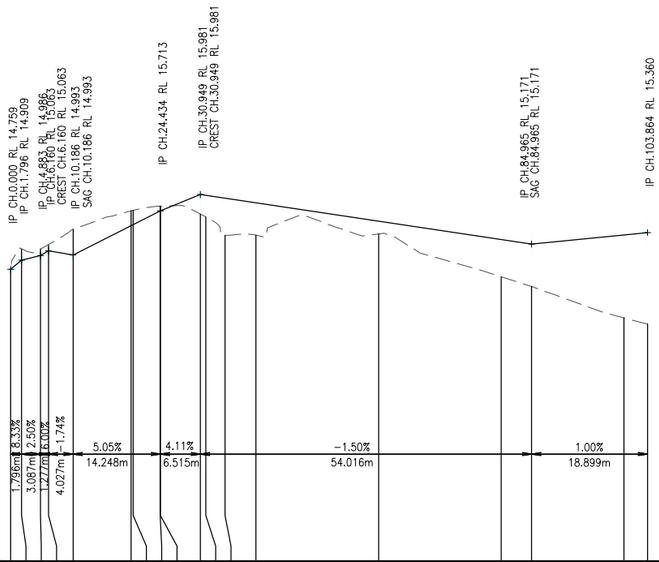
DRAWING STATUS: FOR CONSTRUCTION
DRAWING NUMBER: S24–018–C08
SHEET NUMBER: 08 OF 37
REVISION: C

S24-018-C_Typ_Det.dwg



TYPICAL ROAD CROSS SECTION

SCALE A1 – 1 : 50
A3 – 1 : 100



DATUM R.L.10.0

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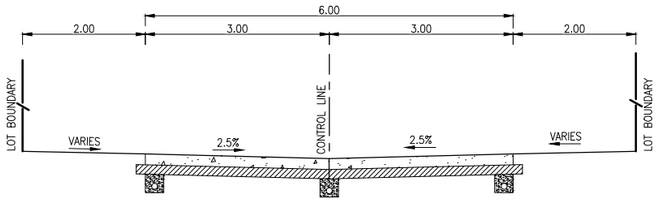
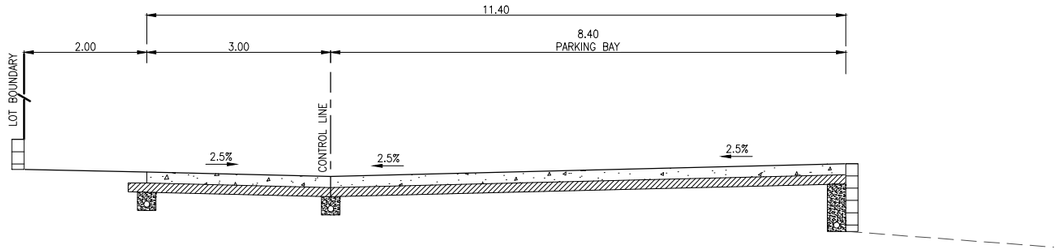


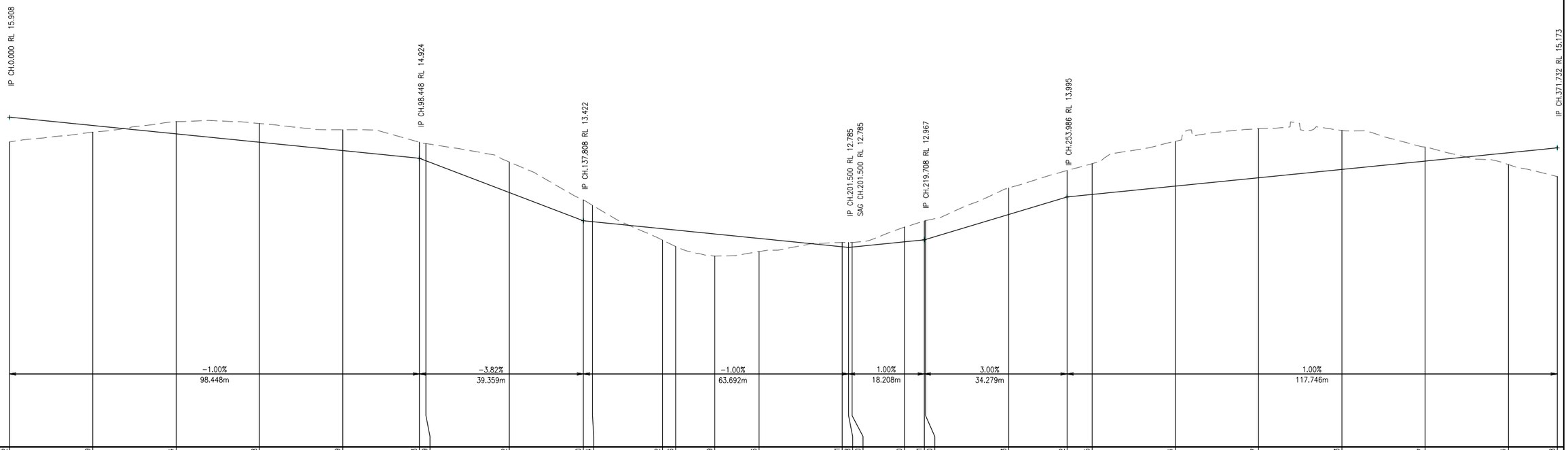
TYPICAL ROAD CROSS SECTION

SCALE A1 – 1 : 50
A3 – 1 : 100



TYPICAL ROAD CROSS SECTION

SCALE A1 – 1 : 50
A3 – 1 : 100



DATUM R.L.8.0

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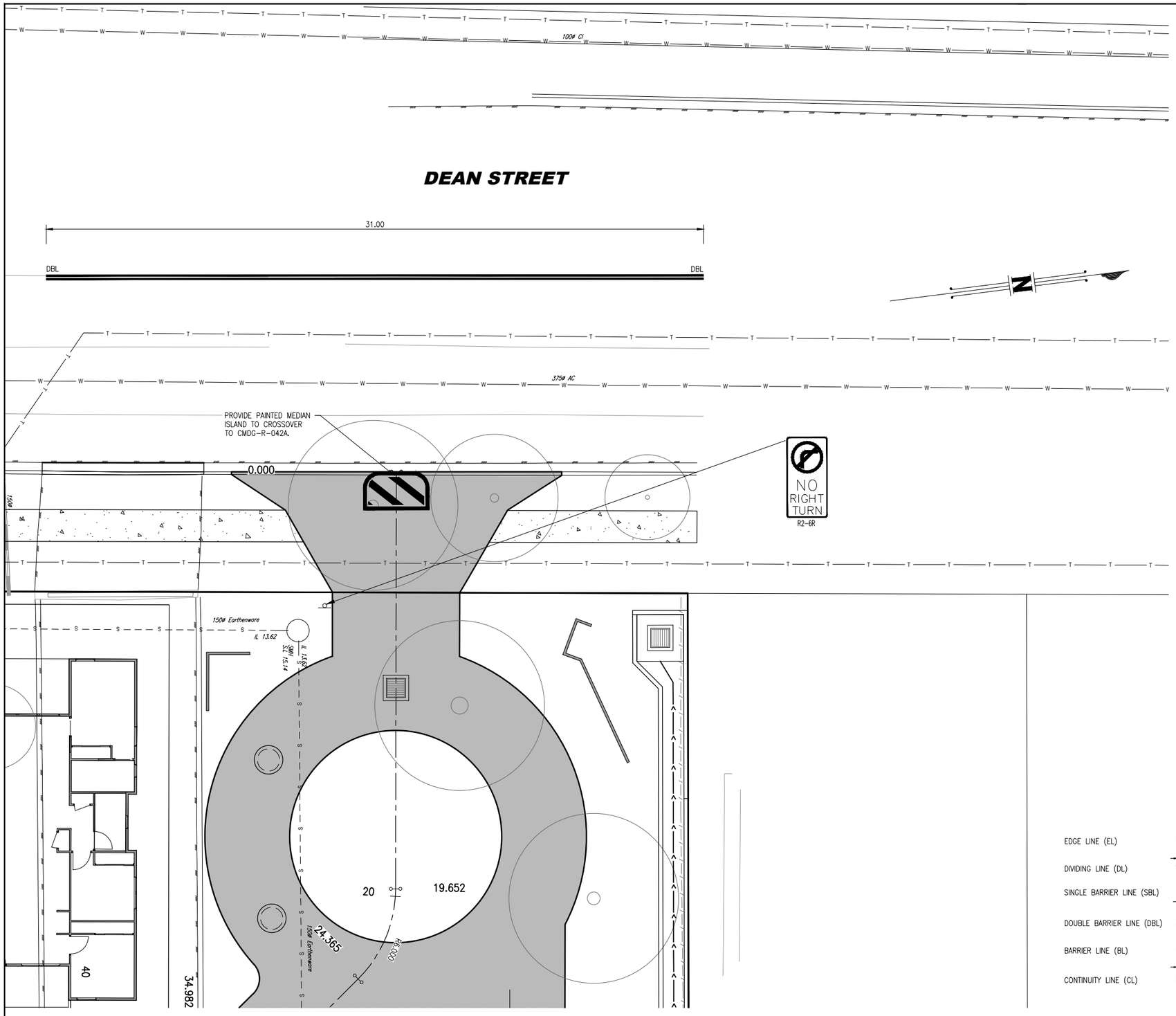

LEGEND

EDGE LINE (EL) — 150

DIVIDING LINE (DL) — 3m 9m 3m 9m 3m 9m 3m — 100

SINGLE BARRIER LINE (SBL) — 80 80 80

DOUBLE BARRIER LINE (DBL) — 80 80 80

BARRIER LINE (BL) — 100

CONTINUITY LINE (CL) — 1m 3m 1m 3m 1m 3m 1m — 200

CONTINUITY LINE (CL) — 1m 3m 1m 3m 1m 3m 1m — 200

UNBROKEN LANE LINE (UBL) — 100

GIVE WAY LINE (GL) — 600mm stripe and gap — 300

GUIDE POST

WHITE UNIDIRECTIONAL RRPM

YELLOW BIDIRECTIONAL RRPM

SIGNS & LINEMARKING PLAN

SCALE 1:100 (A1 SIZE) 0 1 2 3 4 5

No.	DATE	REVISIONS	DES	DRN	CHK	APD
D	16.12.24	WATER AMENDED	S.C.M	J.J.D	J.M.H	J.M.H
C	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
B	29.10.24	GENERAL AMENDMENT	S.C.M	J.J.D	J.M.H	J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024

DOCUMENT CONTROL

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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NORTHERN NSW T 02 6674 8047 E nsw@westerapartners.com.au
CENTRAL VICTORIA T 03 5441 0922 E centralvic@westerapartners.com.au

SURVEYOR
CAPRICORN SURVEY GROUP CQ
PHONE 07 4927 5199

DATUM A.H.D.
P.M.
R.L.

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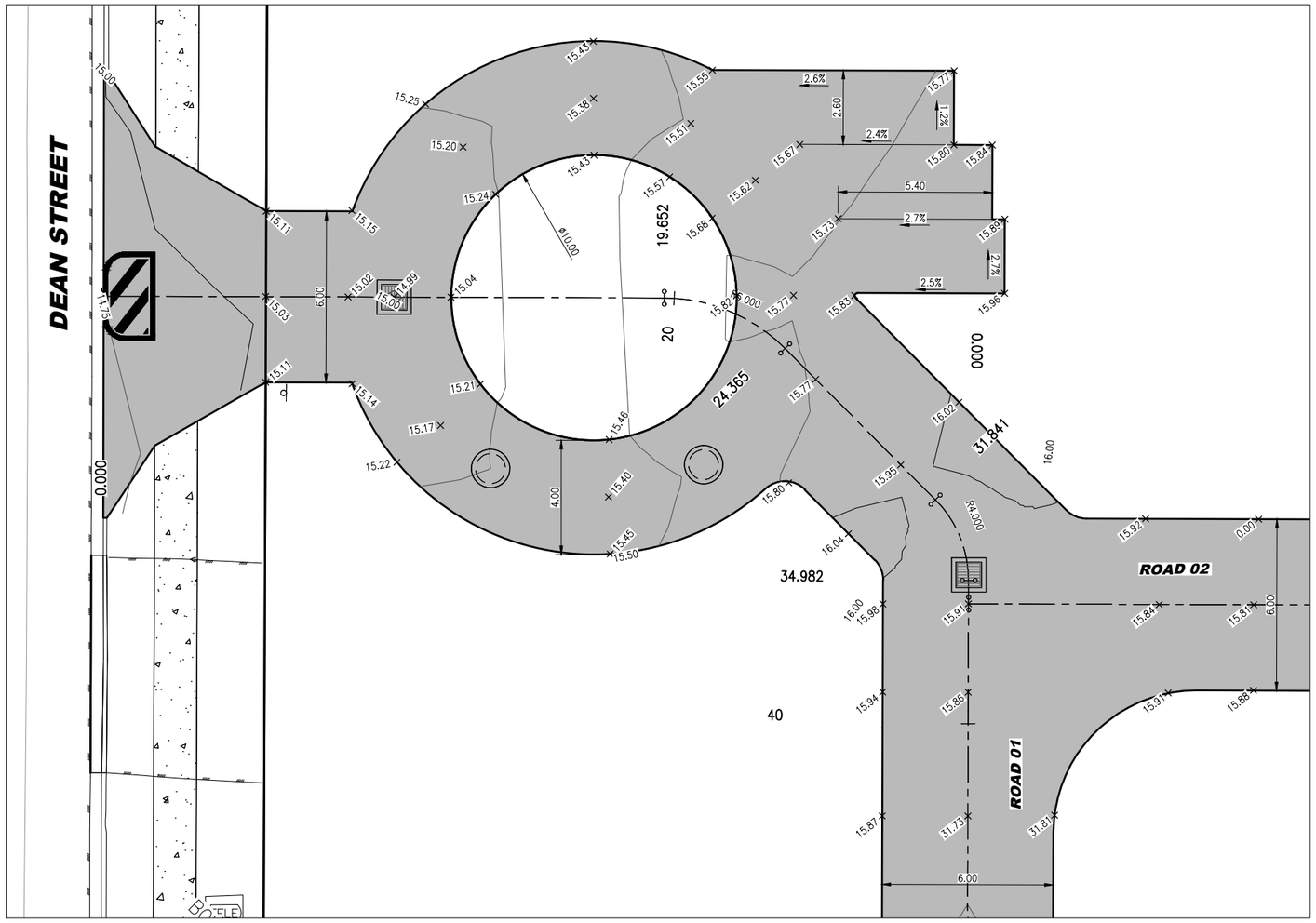
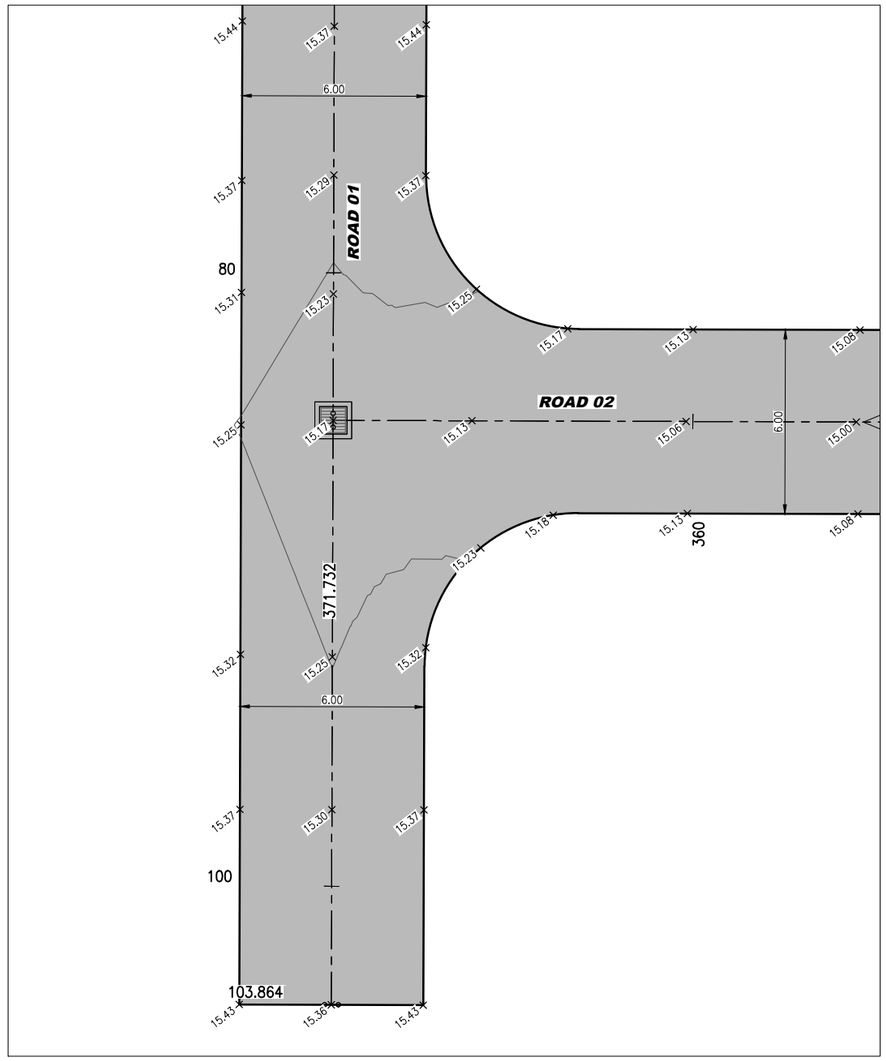
PROJECT: PROPOSED RETIREMENT LIVING ESTATE
LOCATION: LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE: SIGNS & LINEMARKING PLAN
CLIENT: RUBY DEVELOPMENT PTY LTD

DRAWING STATUS: FOR CONSTRUCTION
DRAWING NUMBER: S24-018-C11
SHEET NUMBER: 11 OF 37
REVISION: D

S24-018-C_Signs & Linemark.dwg





INTERSECTION PLAN

SCALE 1:100 (A1 SIZE) 0 1 2 3 4 5

No.	DATE	REVISIONS	DES	DRN	CHK	APD
B	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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SURVEYOR CAPRICORN SURVEY GROUP CQ PHONE 07 4927 5199
DATUM A.H.D. P.M. R.L.

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PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE INTERSECTION DETAILS 1 of 2
CLIENT RUBY DEVELOPMENT PTY LTD

DRAWING STATUS FOR CONSTRUCTION
DRAWING NUMBER S24-018-C12
SHEET NUMBER 12 OF 37
REVISION B

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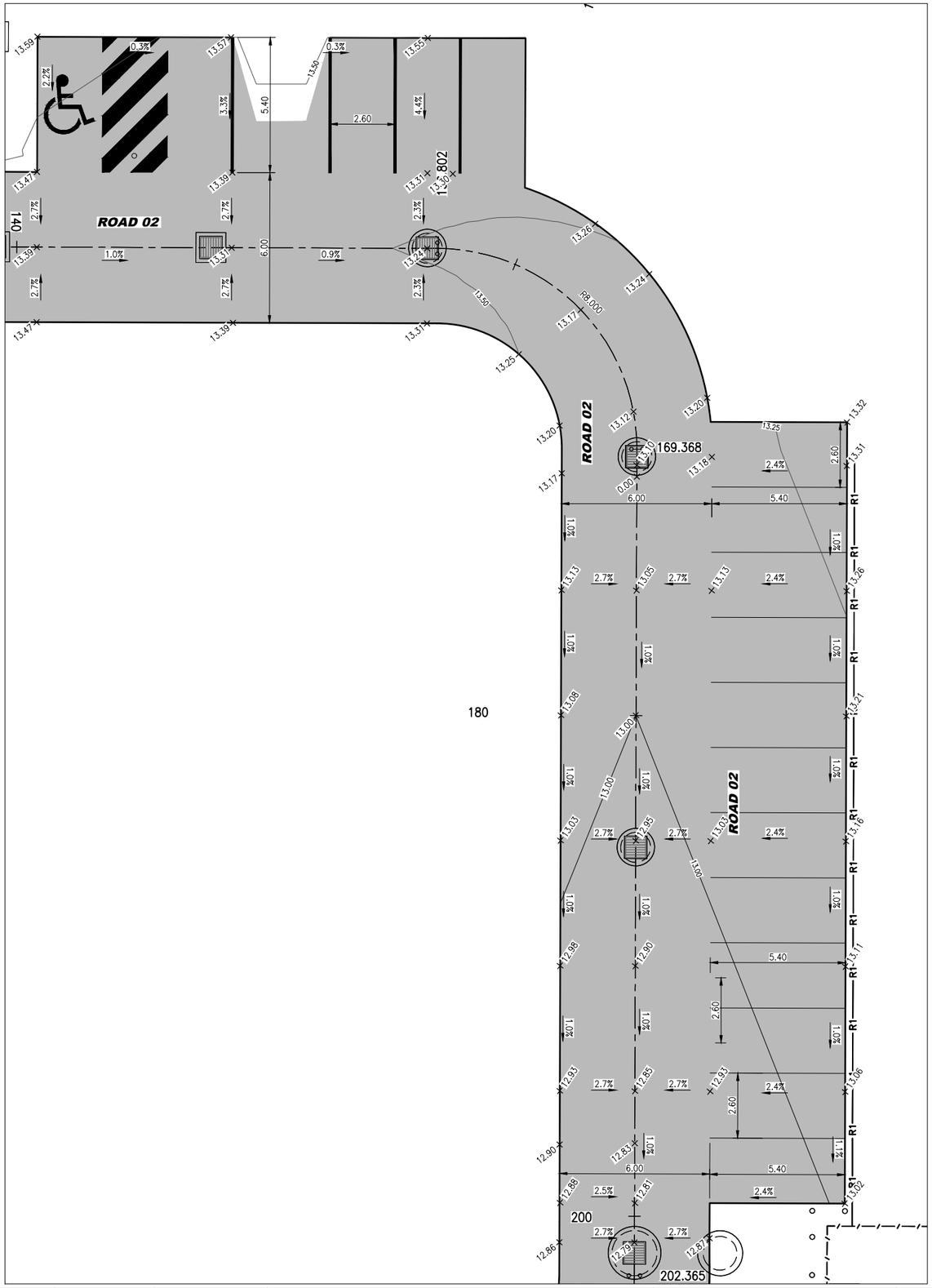

N

INTERSECTION PLAN

SCALE 1:100 (A1 SIZE)

0 1 2 3 4 5

No.	DATE	REVISIONS	DES	DRN	CHK	APD
D	14.03.25	GENERAL AMENDED	S.C.M	J.J.D	J.M.H	J.M.H
C	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
B	18.10.24	GENERAL AMENDMENT	S.C.M	J.J.D	J.M.H	J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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NORTHERN NSW T 02 6674 8047 E nsw@westerapartners.com.au
CENTRAL VICTORIA T 03 5441 0922 E centralvic@westerapartners.com.au

SURVEYOR
CAPRICORN SURVEY GROUP CQ
PHONE 07 4927 5199

DATUM A.H.D.
P.M.
R.L.

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PROJECT: PROPOSED RETIREMENT LIVING ESTATE
LOCATION: LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE: INTERSECTION DETAILS 2 of 2
CLIENT: RUBY DEVELOPMENT PTY LTD

DRAWING STATUS: FOR CONSTRUCTION
DRAWING NUMBER: S24-018-C13
SHEET NUMBER: 13 OF 37
REVISION: D

S24-018-C_Intersec.dwg

REFER BELOW FOR CONTINUATION

REFER BELOW FOR CONTINUATION

ROAD 01

ROAD 02

ROAD 02

ROAD 02

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71.732

3.864

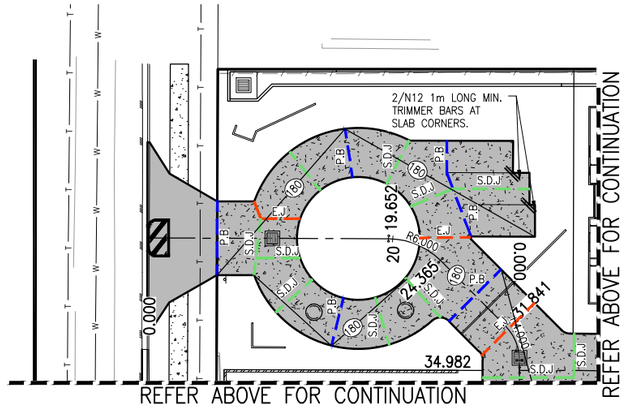
156.802

169.368

202.365

214.932

3.425



PAVEMENT & JOINTING PLAN

SCALE 1:250 (A1 SIZE)

0 2.5 5 7.5 10 12.5

LEGEND

- EXPANSION JOINT (E.J.)
- POUR BREAK (P.B.)
- SAWN DOWELLED JOINT (S.D.J)
- EXPOSED AGGREGATE CONCRETE

N

PAVEMENTS SUBGRADE PREPARATION

1. FOLLOWING EARTHWORKS THE PAVEMENT SUBGRADE SHALL BE PROOF ROLLED AND ANY AREAS SHOWING EXCESSIVE MOVEMENT SHALL BE TREATED BY TYNING AND DRYING OUT OR EXCAVATING AND REPLACING WITH SUITABLE IMPORTED MATERIAL AND RE-COMPACTING UNDER ENGINEERS SUPERVISION.
2. ONCE A HARD FLAT SUBGRADE IS ACHIEVED A BEDDING LAYER OF MINIMUM 50 GRANULAR MATERIAL (CRUSHER DUST OR EQ.) SHALL BE PLACED AND PROFILED TO ACHIEVE THE SPECIFIED SLAB THICKNESS.
3. A LAYER OF 200 MICRON HDPE SHEET SHALL BE PLACED OVER THE BEDDING MATERIAL PRIOR TO STEELING UP.

No.	DATE	REVISIONS	DES	DRN	CHK	APD
E	14.03.25	GENERAL AMENDED	S.C.M	J.J.D	J.M.H	J.M.H
D	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
C	29.10.24	GENERAL AMENDEMENT	S.C.M	J.J.D	J.M.H	J.M.H
B	18.10.24	GENERAL AMENDMENT	S.C.M	J.J.D	J.M.H	J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE PAVEMENT & JOINTING PLAN
CLIENT RUBY DEVELOPMENT PTY LTD

DRAWING STATUS FOR CONSTRUCTION
DRAWING NUMBER S24-018-C14
SHEET NUMBER 14 OF 37
REVISION E

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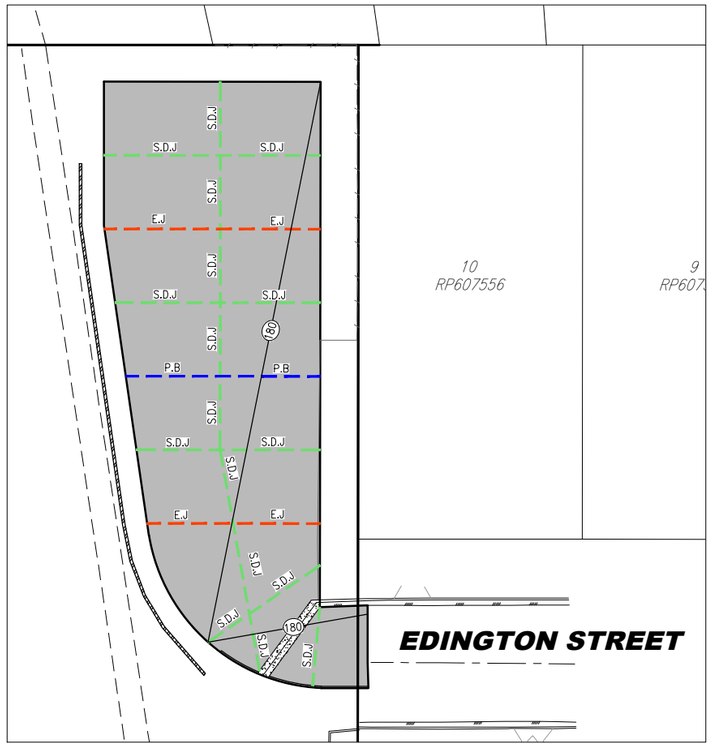


LEGEND

- EXPANSION JOINT (E.J.)
- POUR BREAK (P.B.)
- SAWN DOWELLED JOINT (S.D.J)
- EXPOSED AGGREGATE CONCRETE

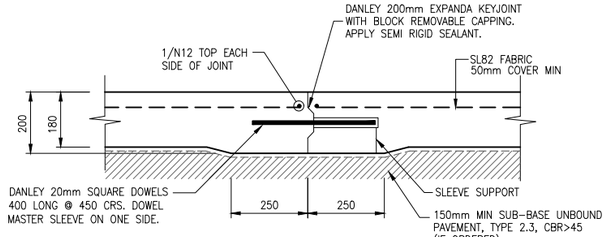
PAVEMENT & JOINTING PLAN

SCALE 1:250 (A1 SIZE)

0 2.5 5 7.5 10 12.5

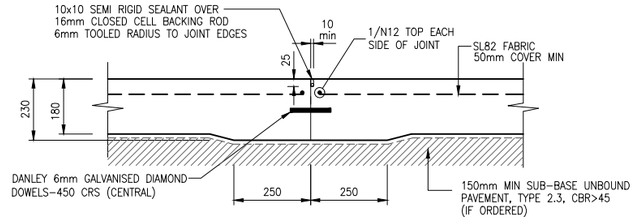
PAVEMENTS SUBGRADE PREPARATION

1. FOLLOWING EARTHWORKS THE PAVEMENT SUBGRADE SHALL BE PROOF ROLLED AND ANY AREAS SHOWING EXCESSIVE MOVEMENT SHALL BE TREATED BY TYNING AND DRYING OUT OR EXCAVATING AND REPLACING WITH SUITABLE IMPORTED MATERIAL AND RE-COMPACTING UNDER ENGINEERS SUPERVISION.
2. ONCE A HARD FLAT SUBGRADE IS ACHIEVED A BEDDING LAYER OF MINIMUM 50 GRANULAR MATERIAL (CRUSHER DUST OR EQ.) SHALL BE PLACED AND PROFILED TO ACHIEVE THE SPECIFIED SLAB THICKNESS.
3. A LAYER OF 200 MICRON HDPE SHEET SHALL BE PLACED OVER THE BEDDING MATERIAL PRIOR TO STEELING UP.



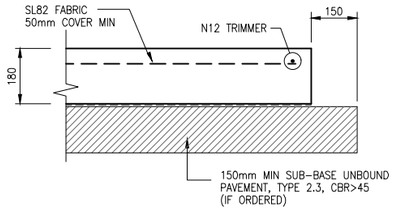
EXPANSION JOINT (E.J.)

SCALE A1 – 1 : 10
A3 – 1 : 20



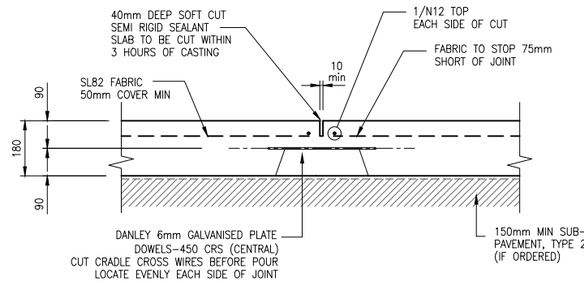
POUR BREAK (P.B.)

SCALE A1 – 1 : 10
A3 – 1 : 20



TYPICAL EDGE TREATMENT

SCALE A1 – 1 : 10
A3 – 1 : 20

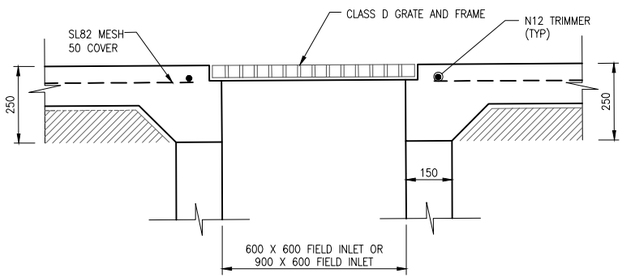


SAWN DOWELLED JOINT (S.D.J.)

SCALE A1 – 1 : 10
A3 – 1 : 20

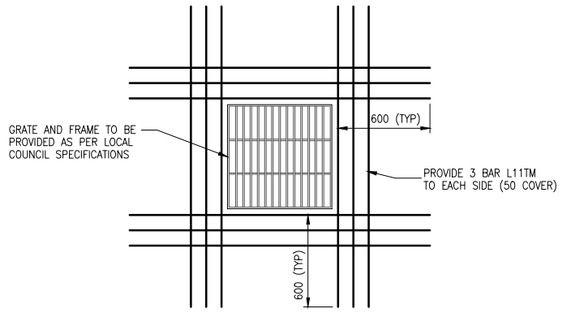
NOTES:

1. CONCRETE STRENGTH TO BE N40
2. THE PAVEMENT DEPTHS SHOWN ARE PRELIMINARY ONLY AND ARE TO BE VERIFIED FOLLOWING CBR TESTS OF THE SUBGRADE MATERIAL
3. MARK PROPOSED JOINT LOCATIONS CLEARLY ON EDGE FORMS
4. POUR BREAK JOINTS ARE TO BE PLACED AT NOT MORE THAN PRIOR TO POURING.
5. EXPANSION JOINTS ARE TO BE PLACED AT NOT MORE THAN 36m MAXIMUM SPACINGS.
6. SAWN DOWELLED JOINTS ARE TO BE PLACED AT NOT MORE THAN 12m MAXIMUM SPACINGS.
7. JOINT SPACING AND ARRANGEMENT MAY BE ALTERED ONSITE WITH 6m MAXIMUM SPACINGS. THE APPROVAL OF THE INSPECTING ENGINEER.



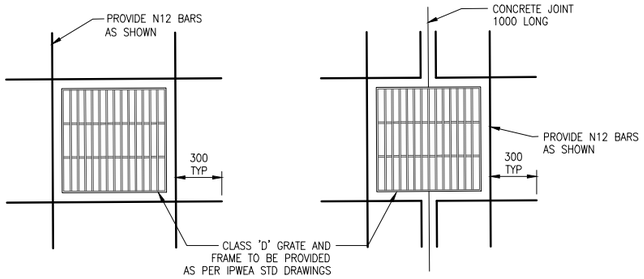
TYPICAL FIELD INLET DETAIL

SCALE A1 – 1 : 10
A3 – 1 : 20



STORMWATER GRATE ADDITIONAL STEEL DETAIL

SCALE A1 – 1 : 20
A3 – 1 : 40



PLAN

PLAN - WITH JOINT

No.	DATE	REVISIONS	DES	DRN	CHK	APD
C	14.03.25	GENERAL AMENDEMENT	S.C.M	J.J.D	J.M.H	J.M.H
B	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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SURVEYOR
CAPRICORN SURVEY GROUP CQ
PHONE 07 4927 5199
DATUM A.H.D.
P.M.
R.L.

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PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE PAVEMENT & JOINTING DETAILS
CLIENT RUBY DEVELOPMENT PTY LTD

DRAWING STATUS: FOR CONSTRUCTION
DRAWING NUMBER: S24-018-C15
SHEET NUMBER: 15 OF 37
REVISION: C

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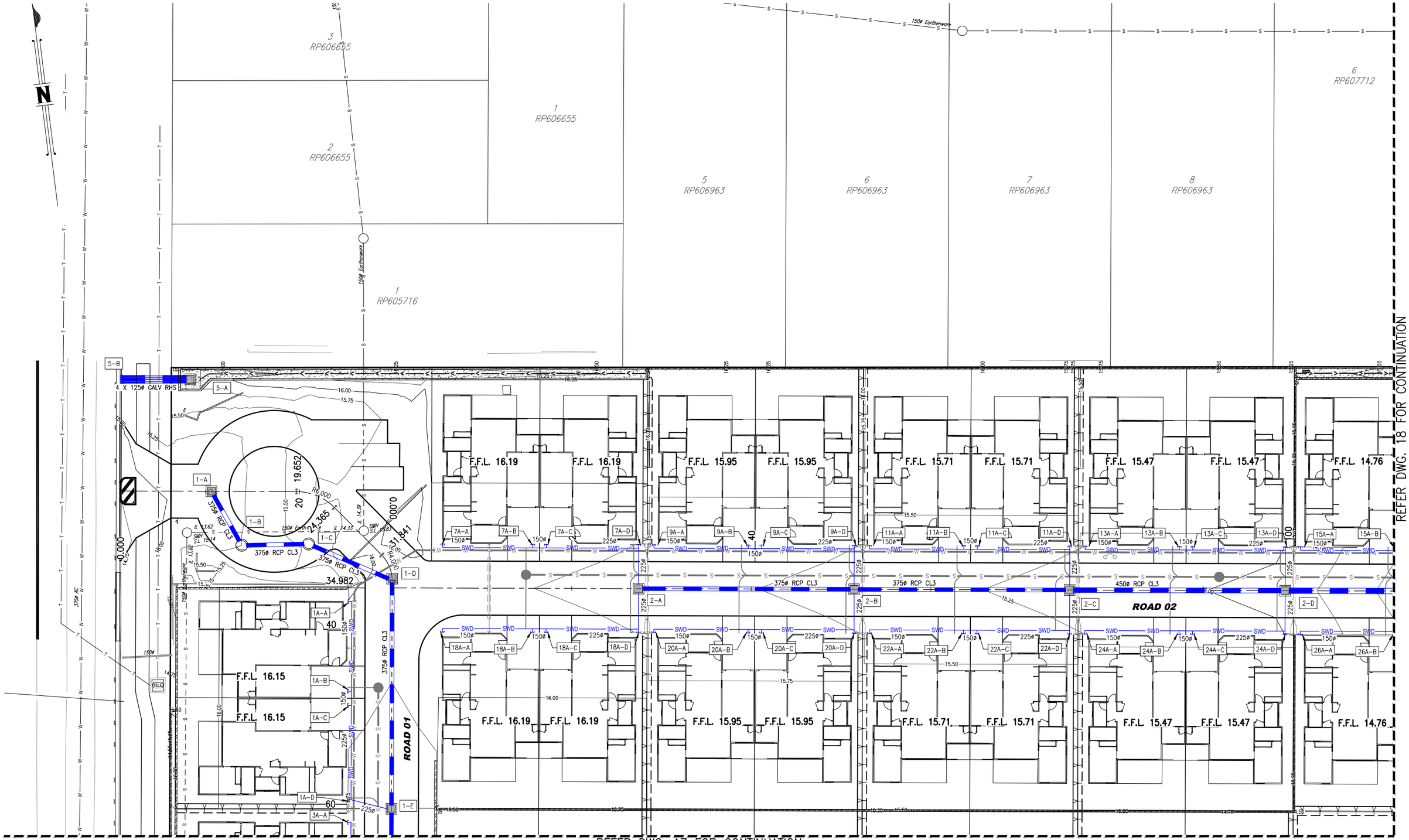

NOTE:
ALL FIELD INLETS DISCHARGING TO THE ATLAN FILTER CARTRIDGE CHAMBER ARE TO BE FITTED WITH STORMSACKS.

STORMWATER LAYOUT PLAN

SCALE 1:200 (A1 SIZE)

0 2 4 6 8 10

No.	DATE	REVISIONS	DES	DRN	CHK	APD
D	16.12.24	WATER AMENDED	S.C.M	J.J.D	J.M.H	J.M.H
C	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
B	18.10.24	GENERAL AMENDMENT	S.C.M	J.J.D	J.M.H	J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024

DOCUMENT CONTROL

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For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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CENTRAL VICTORIA T 03 5441 0922 E centralvic@westerapartners.com.au

SURVEYOR
CAPRICORN SURVEY GROUP CQ
PHONE 07 4927 5199

DATUM A.H.D.
P.M.
R.L.

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PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712
192 DEAN STREET, BERSERKER
TITLE STORMWATER LAYOUT PLAN 1 of 4
CLIENT RUBY DEVELOPMENT PTY LTD

DRAWING STATUS: FOR CONSTRUCTION
DRAWING NUMBER: S24-018-C16
SHEET NUMBER: 16 OF 37
REVISION: D

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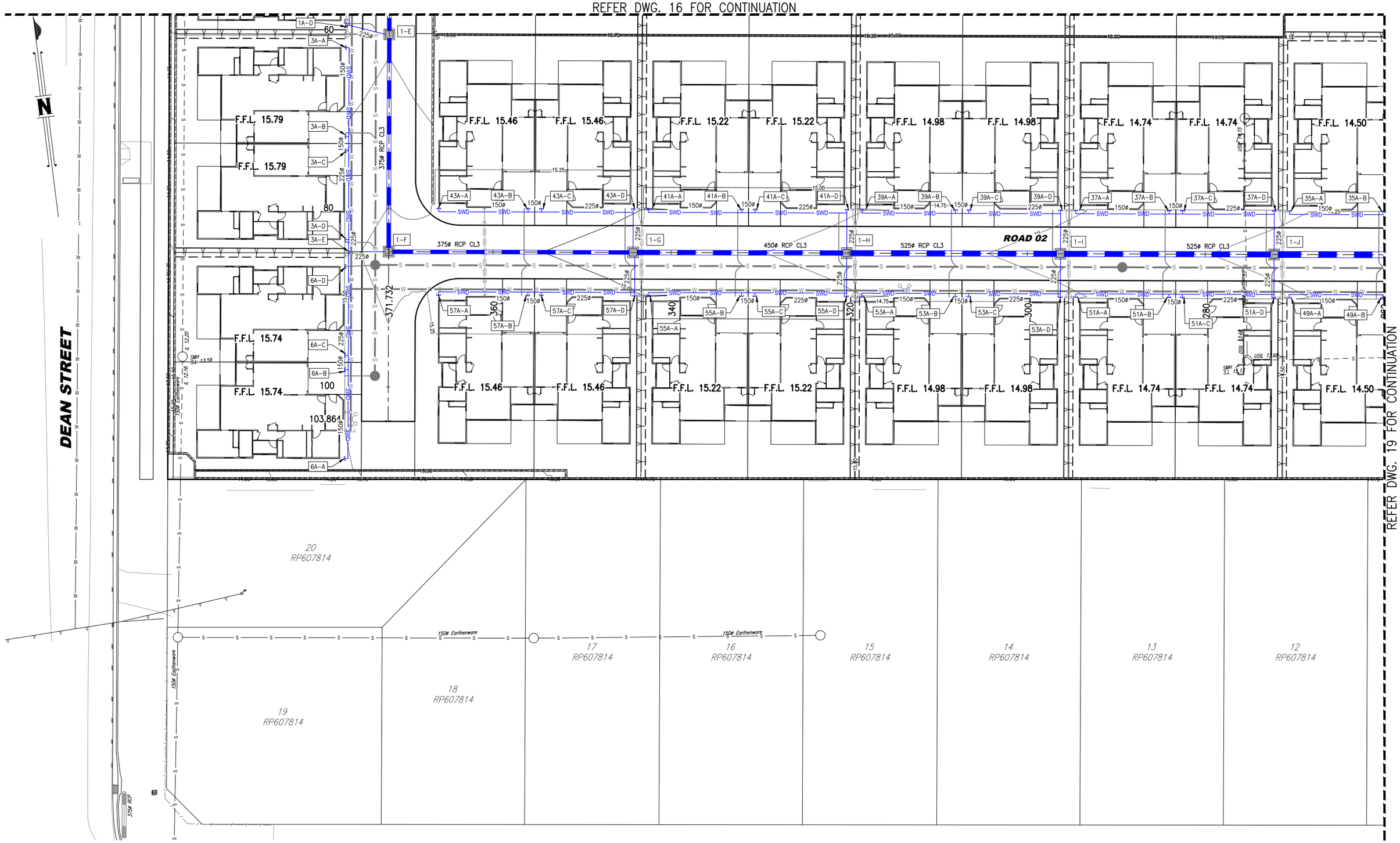
REFER DWG. 16 FOR CONTINUATION



REFER DWG. 19 FOR CONTINUATION

NOTE:
ALL FIELD INLETS DISCHARGING TO THE ATLAN FILTER CARTRIDGE CHAMBER ARE TO BE FITTED WITH STORMSACKS.

STORMWATER LAYOUT PLAN

SCALE 1:200 (A1 SIZE)

No.	DATE	REVISIONS	DES	DRN	CHK	APD
E	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
D	08.11.24	RETAINING WALL UPDATE	S.C.M	J.J.D	J.M.H	J.M.H
C	29.10.24	GENERAL AMENDEMENT	S.C.M	J.J.D	J.M.H	J.M.H
B	18.10.24	GENERAL AMENDMENT	S.C.M	J.J.D	J.M.H	J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DOCUMENT CONTROL: DESIGNED S.C.M; DRAWN J.J.D; CHECKED J.M.H; APPROVED J.M.H; DATE JULY 2024

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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CENTRAL VICTORIA T 03 5441 0922 E centralvic@westerapartners.com.au

SURVEYOR: CAPRICORN SURVEY GROUP CQ, PHONE 07 4927 5199
DATUM A.H.D. P.M. R.L.

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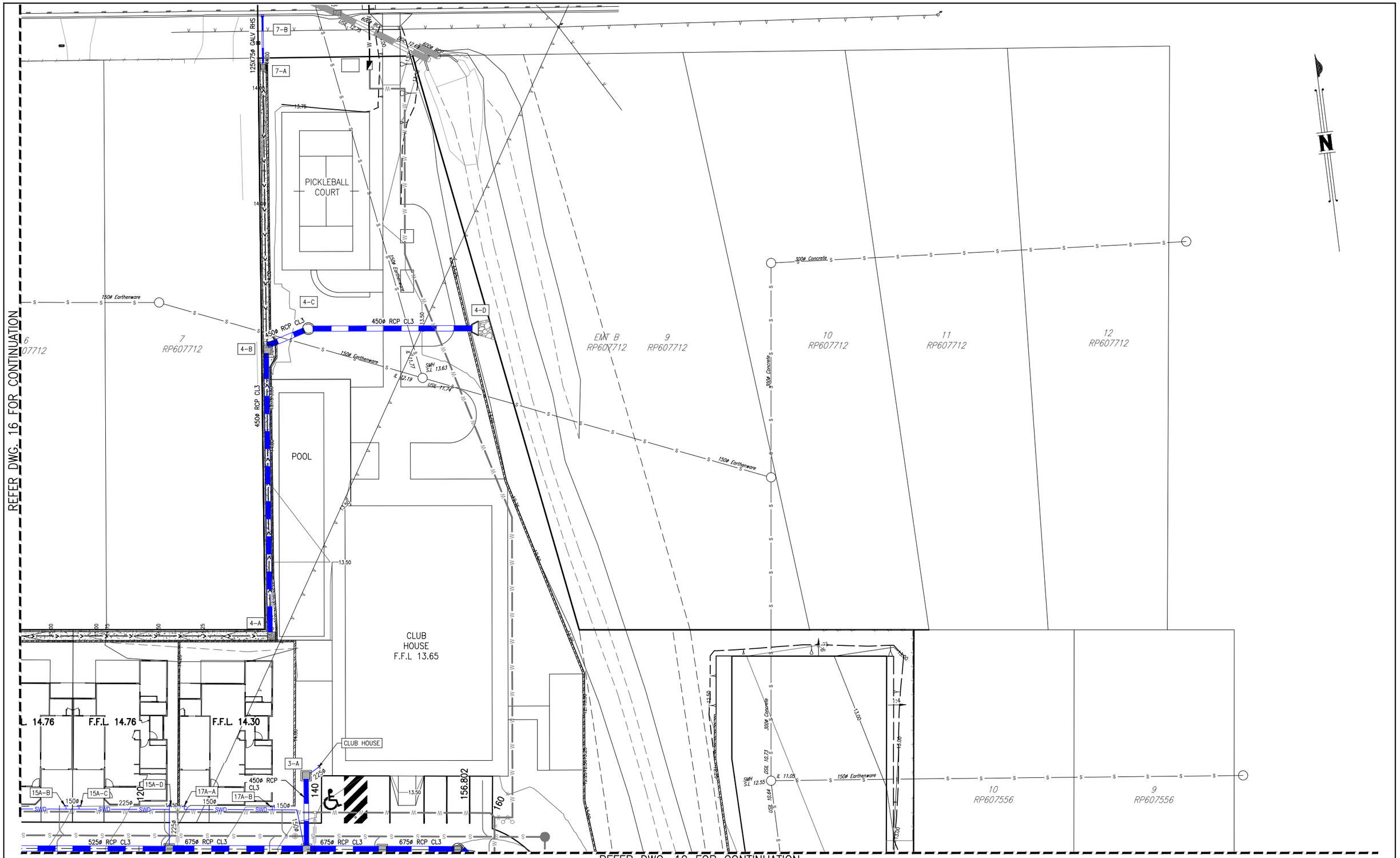
PROJECT: PROPOSED RETIREMENT LIVING ESTATE
LOCATION: LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE: STORMWATER LAYOUT PLAN 2 of 4
CLIENT: RUBY DEVELOPMENT PTY LTD

DRAWING STATUS: FOR CONSTRUCTION
DRAWING NUMBER: S24–018–C17
SHEET NUMBER: 17 OF 37
REVISION: E

S24–018–C_Stm_Layout.dwg



NOTE:
ALL FIELD INLETS DISCHARGING TO THE ATLAN FILTER CARTRIDGE CHAMBER ARE TO BE FITTED WITH STORMSACKS.

STORMWATER LAYOUT PLAN

SCALE 1:200 (A1 SIZE) 0 2 4 6 8 10

No.	DATE	REVISIONS	DES	DRN	CHK	APD	DOCUMENT CONTROL
F	14.03.25	GENERAL AMENDED	S.C.M	J.J.D	J.M.H	J.M.H	DESIGNED S.C.M
E	16.12.24	WATER AMENDED	S.C.M	J.J.D	J.M.H	J.M.H	DRAWN J.J.D
D	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H	CHECKED J.M.H
C	29.10.24	GENERAL AMENDEMENT	S.C.M	J.J.D	J.M.H	J.M.H	APPROVED J.M.H
B	18.10.24	GENERAL AMENDMENT	S.C.M	J.J.D	J.M.H	J.M.H	DATE JULY 2024

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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SURVEYOR CAPRICORN SURVEY GROUP CQ PHONE 07 4927 5199
DATUM A.H.D. P.M. R.L.

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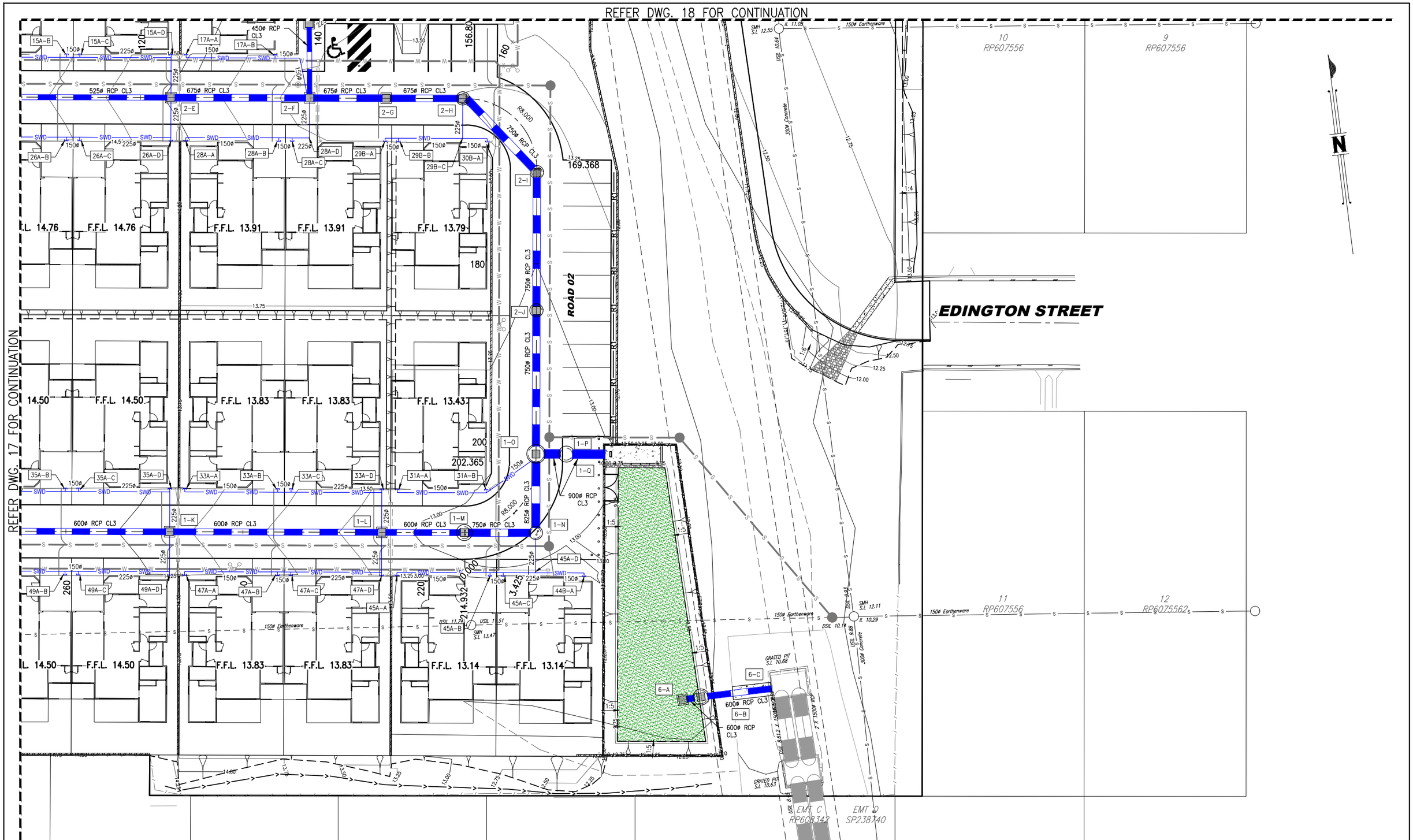
PROJECT	PROPOSED RETIREMENT LIVING ESTATE
LOCATION	LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE	STORMWATER LAYOUT PLAN 3 of 4
CLIENT	RUBY DEVELOPMENT PTY LTD

DRAWING STATUS	FOR CONSTRUCTION
DRAWING NUMBER	S24-018-C18
SHEET NUMBER	18 OF 37
REVISION	F

S24-018-C_Stm_Layout.dwg

REFER DWG. 18 FOR CONTINUATION

REFER DWG. 17 FOR CONTINUATION



NOTE:
ALL FIELD INLETS DISCHARGING TO THE ATLAN FILTER CARTRIDGE CHAMBER ARE TO BE FITTED WITH STORMSACKS.

STORMWATER LAYOUT PLAN

SCALE 1:200 (A1 SIZE)

0 2 4 6 8 10

No.	DATE	REVISIONS	DES	DRN	CHK	APD
E	12.03.25	GENERAL AMENDED	S.C.M	J.J.D	J.M.H	J.M.H
D	16.12.24	WATER AMENDED	S.C.M	J.J.D	J.M.H	J.M.H
C	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
B	18.10.24	GENERAL AMENDMENT	S.C.M	J.J.D	J.M.H	J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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NORTHERN NSW T 02 6674 8047 E nsw@westerapartners.com.au
CENTRAL VICTORIA T 03 5441 0922 E centralvic@westerapartners.com.au

SURVEYOR
CAPRICORN SURVEY GROUP CQ
PHONE 07 4927 5199

DATUM A.H.D.
P.M.
R.L.

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PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE STORMWATER LAYOUT PLAN 4 of 4
CLIENT RUBY DEVELOPMENT PTY LTD

DRAWING STATUS FOR CONSTRUCTION
DRAWING NUMBER S24-018-C19
SHEET NUMBER 19 OF 37
REVISION E

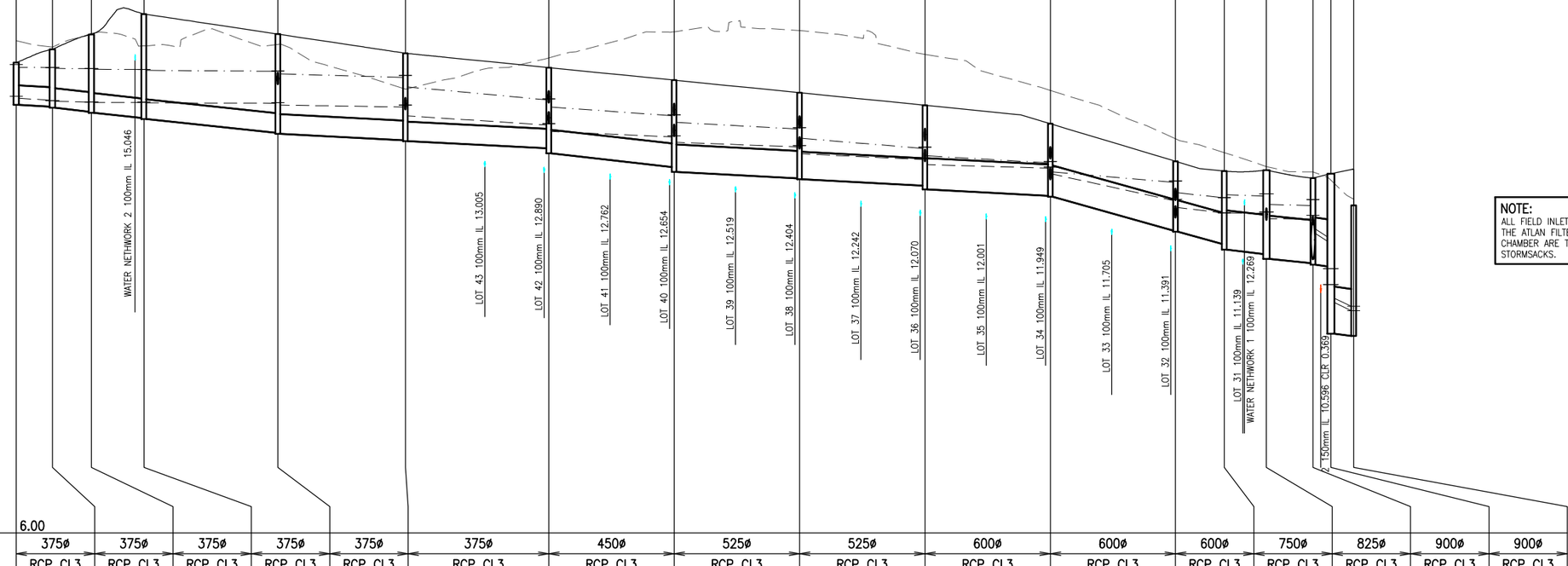
S24-018-C_Stm_Layout.dwg

PIT TYPE	1-A FIELD INLET TYPE 2	1-B MANHOLE	1-C MANHOLE	1-D FIELD INLET TYPE 2	1-E FIELD INLET TYPE 2	1-F FIELD INLET TYPE 2	1-G FIELD INLET TYPE 2	1-H FIELD INLET TYPE 2	1-I FIELD INLET TYPE 2	1-J FIELD INLET TYPE 2	1-K FIELD INLET TYPE 2	1-L FIELD INLET TYPE 2	1-M FIELD INLET TYPE 2 GRATE	1-N MANHOLE	1-O FIELD INLET TYPE 2 GRATE	1-P MANHOLE	1-Q
PIT SIZE	0.900 0.900 CLASS D	1.050ø CLASS D	1.050ø CLASS D	0.900 0.900 CLASS D	0.900 0.900 CLASS D	0.900 0.900 CLASS D	0.900 0.900 CLASS D	0.900 0.900 CLASS D	0.900 0.900 CLASS D	0.900 0.900 CLASS D	0.900 0.900 CLASS D	0.900 0.900 CLASS D	1.350ø 0.900SQ CLASS D GRATE	1.200ø CLASS D	1.800ø 0.900SQ CLASS D GRATE	1.350ø CLASS D	BIO BASIN
PIPE FLOW (L/s)	30.7	30.6	30.5	31.7	68.0	140.3	196.3	257.3	317.5	377.0	434.7	492.5	498.5	516.1	1014.9	1013.9	
PART PIPE VELOCITY (m/s)	0.93	1.19	1.19	1.22	1.15	1.27	2.00	1.58	1.59	1.73	3.43	3.45	2.45	2.35	2.93	2.93	
FULL PIPE VELOCITY (m/s)	0.28	0.28	0.28	0.29	0.62	1.27	1.23	1.19	1.47	1.33	1.54	1.74	1.13	0.97	1.60	1.59	
PIT LOSS FACTOR	9.70	2.39	1.77	2.52	1.85	2.06	1.57	1.42	1.22	1.07	0.96	0.88	0.00	2.15	2.11	2.09	

LEGEND

— — — DENOTES 5% AEP HGL

— · — · — DENOTES 1% AEP HGL



DATUM (m)	6.00																
PIPE SIZE (mm)	375ø	375ø	375ø	375ø	375ø	375ø	450ø	525ø	525ø	600ø	600ø	600ø	750ø	825ø	900ø	900ø	
PIPE CLASS	RCP CL3	RCP CL3	RCP CL3	RCP CL3	RCP CL3	RCP CL3	RCP CL3	RCP CL3	RCP CL3	RCP CL3	RCP CL3	RCP CL3	RCP CL3	RCP CL3	RCP CL3	RCP CL3	
PIPE GRADE (%)	0.50%	1.00%	1.00%	1.02%	0.50%	0.50%	1.09%	0.50%	0.50%	0.50%	2.70%	2.51%	1.00%	0.88%	1.00%	1.00%	
HYDRAULIC GRADE LINE	14.350 14.312	14.266	14.255	14.240	14.231	14.236	14.224	14.226	14.181	14.182	13.975	13.827	13.678	13.593	13.469	13.408	13.250	13.156	13.042	12.995	12.860	12.379	12.221	12.121	12.135	12.007	12.073	11.727	10.749	10.405	10.247
DEPTH TO INVERT	0.808	1.100	1.120	1.476	1.496	1.989	2.009	1.887	1.907	1.663	1.683	1.544	1.639	1.661	1.756	1.636	1.656	1.536	1.611	1.377	1.397	1.325	1.345	1.393	1.505	1.604	1.699	1.625	1.655	1.772	3.060		2.500
INVERT LEVEL	14.185	14.150	14.130	14.055	14.035	13.935	13.915	13.652	13.632	13.510	13.490	13.354	13.259	12.997	12.902	12.782	12.762	12.642	12.567	12.447	12.427	11.781	11.761	11.527	11.415	11.334	11.239	11.161	11.131	11.097	9.809	9.765	9.765
FINISHED SURFACE LEVEL	14.993	15.250	15.532	15.924	15.539	15.173	14.898	14.659	14.419	14.179	13.824	13.106	12.920	12.938	12.786	12.869	12.265																
PIPE CHAINAGE	0.000	6.915	14.381	24.450	50.067	74.476	101.920	125.920	149.920	173.920	197.920	221.870	231.202	239.270	248.178	251.597	255.973																
PIPE LENGTH	6.915	7.466	10.069	25.617	24.409	27.444	24.000	24.000	24.000	24.000	23.950	9.332	8.068	8.908	3.419	4.376																	

LINE 1

NOTE:
ALL FIELD INLETS DISCHARGING TO THE ATLAN FILTER CARTRIDGE CHAMBER ARE TO BE FITTED WITH STORMSACKS.

STORMWATER MAIN LONGITUDINAL SECTIONS LINE 1

SCALE A1 – 1:500(H) 1:50(V)
A3 – 1:1000(H) 1:100(V)

No.	DATE	REVISIONS	DES	DRN	CHK	APD
C	14.03.25	GENERAL AMENDEMENT	S.C.M	J.J.D	J.M.H	J.M.H
B	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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NORTHERN NSW T 02 6674 8047 E nsw@westerapartners.com.au
CENTRAL VICTORIA T 03 5441 0922 E centralvic@westerapartners.com.au

SURVEYOR
CAPRICORN SURVEY GROUP CQ
PHONE 07 4927 5199

DATUM A.H.D.
P.M.
R.L.

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PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE STORMWATER LONGITUDINAL SECTIONS LINE 1
CLIENT RUBY DEVELOPMENT PTY LTD

DRAWING STATUS: FOR CONSTRUCTION
DRAWING NUMBER: S24-018-C20
SHEET NUMBER: 20 OF 37
REVISION: C

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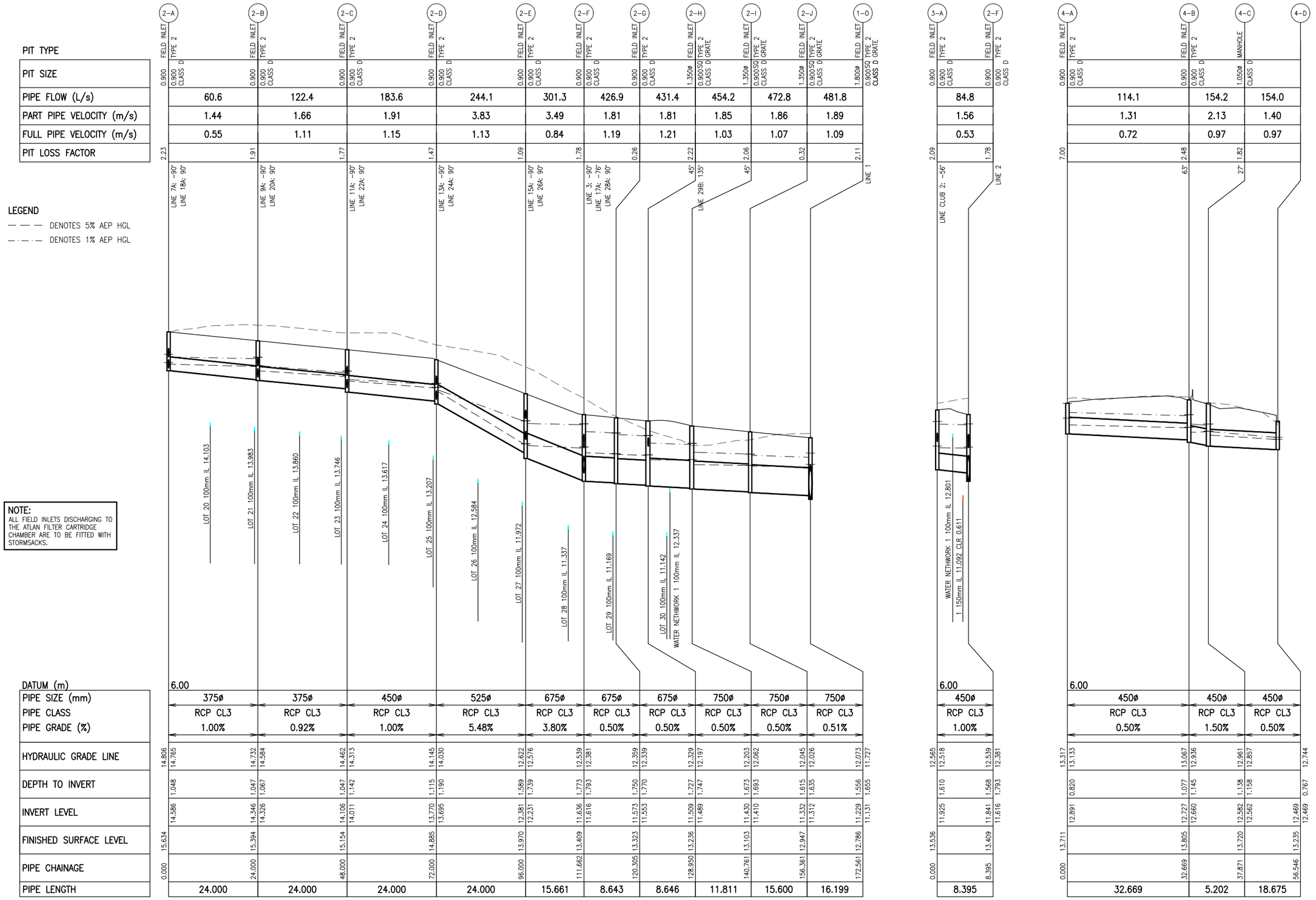

PIT TYPE

PIT SIZE	0.900	0.900	0.900	0.900	0.900	0.900	0.900	1.350ø	1.350ø	1.350ø	1.800ø
PIPE FLOW (L/s)	60.6	122.4	183.6	244.1	301.3	426.9	431.4	454.2	472.8	481.8	
PART PIPE VELOCITY (m/s)	1.44	1.66	1.91	3.83	3.49	1.81	1.81	1.85	1.86	1.89	
FULL PIPE VELOCITY (m/s)	0.55	1.11	1.15	1.13	0.84	1.19	1.21	1.03	1.07	1.09	
PIT LOSS FACTOR	2.23	1.91	1.77	1.47	1.09	1.78	0.26	2.22	2.06	0.32	2.11

DATUM (m)	6.00										
PIPE SIZE (mm)	375ø	375ø	450ø	525ø	675ø	675ø	675ø	750ø	750ø	750ø	
PIPE CLASS	RCP CL3	RCP CL3	RCP CL3	RCP CL3	RCP CL3	RCP CL3	RCP CL3	RCP CL3	RCP CL3	RCP CL3	
PIPE GRADE (%)	1.00%	0.92%	1.00%	5.48%	3.80%	0.50%	0.50%	0.50%	0.50%	0.51%	
HYDRAULIC GRADE LINE	14.806	14.765 / 14.732	14.584 / 14.462	14.313 / 14.145	14.030 / 12.622	12.576 / 12.539	12.381 / 12.359	12.339 / 12.329	12.197 / 12.203	12.062 / 12.045	12.026 / 12.073	11.727
DEPTH TO INVERT	1.048	1.047 / 1.067	1.047 / 1.142	1.115 / 1.190	1.589 / 1.739	1.773 / 1.793	1.750 / 1.770	1.727 / 1.747	1.673 / 1.693	1.615 / 1.635	1.556 / 1.655	
INVERT LEVEL	14.586	14.346 / 14.326	14.106 / 14.011	13.770 / 13.695	12.381 / 12.231	11.636 / 11.616	11.573 / 11.553	11.509 / 11.489	11.430 / 11.410	11.332 / 11.312	11.229 / 11.131	
FINISHED SURFACE LEVEL	15.634	15.394	15.154	14.885	13.970	13.409	13.323	13.236	13.103	12.947	12.786	
PIPE CHAINAGE	0.000	24.000	48.000	72.000	96.000	111.662	120.305	128.950	140.761	156.361	172.561	
PIPE LENGTH	24.000	24.000	24.000	24.000	15.661	8.643	8.646	11.811	15.600	16.199		

LINE 2

DATUM (m)	6.00		
PIPE SIZE (mm)	450ø		
PIPE CLASS	RCP CL3		
PIPE GRADE (%)	1.00%		
HYDRAULIC GRADE LINE	12.565	12.518 / 12.539	12.381
DEPTH TO INVERT	1.610	1.568 / 1.793	
INVERT LEVEL	11.925	11.841 / 11.616	
FINISHED SURFACE LEVEL	13.536	13.409	
PIPE CHAINAGE	0.000	8.395	
PIPE LENGTH	8.395		

LINE 3

DATUM (m)	6.00			
PIPE SIZE (mm)	450ø	450ø	450ø	
PIPE CLASS	RCP CL3	RCP CL3	RCP CL3	
PIPE GRADE (%)	0.50%	1.50%	0.50%	
HYDRAULIC GRADE LINE	13.317	13.133 / 13.067	12.936 / 12.961	12.857 / 12.744
DEPTH TO INVERT	0.820	1.077	1.145 / 1.138	1.158 / 0.767
INVERT LEVEL	12.891	12.727 / 12.660	12.582 / 12.562	12.469 / 12.469
FINISHED SURFACE LEVEL	13.711	13.805	13.720	13.235
PIPE CHAINAGE	0.000	32.669	37.871	56.546
PIPE LENGTH	32.669	5.202	18.675	

LINE 4

LEGEND

— — — DENOTES 5% AEP HGL

—·—·— DENOTES 1% AEP HGL

NOTE:
ALL FIELD INLETS DISCHARGING TO THE ATLAN FILTER CARTRIDGE CHAMBER ARE TO BE FITTED WITH STORMSACKS.

STORMWATER MAIN LONGITUDINAL SECTIONS LINES 2 - 4

SCALE A1 – 1:500(H) 1:50(V)
A3 – 1:1000(H) 1:100(V)

No.	DATE	REVISIONS	DES	DRN	CHK	APD
D	14.03.25	GENERAL AMENDED	S.C.M	J.J.D	J.M.H	J.M.H
C	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
B	18.10.24	GENERAL AMENDMENT	S.C.M	J.J.D	J.M.H	J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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DATUM A.H.D.
P.M.
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PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE STORMWATER LONGITUDINAL SECTIONS LINES 2 – 4
CLIENT RUBY DEVELOPMENT PTY LTD

DRAWING STATUS FOR CONSTRUCTION
DRAWING NUMBER S24-018-C21
SHEET NUMBER 21 OF 37
REVISION D

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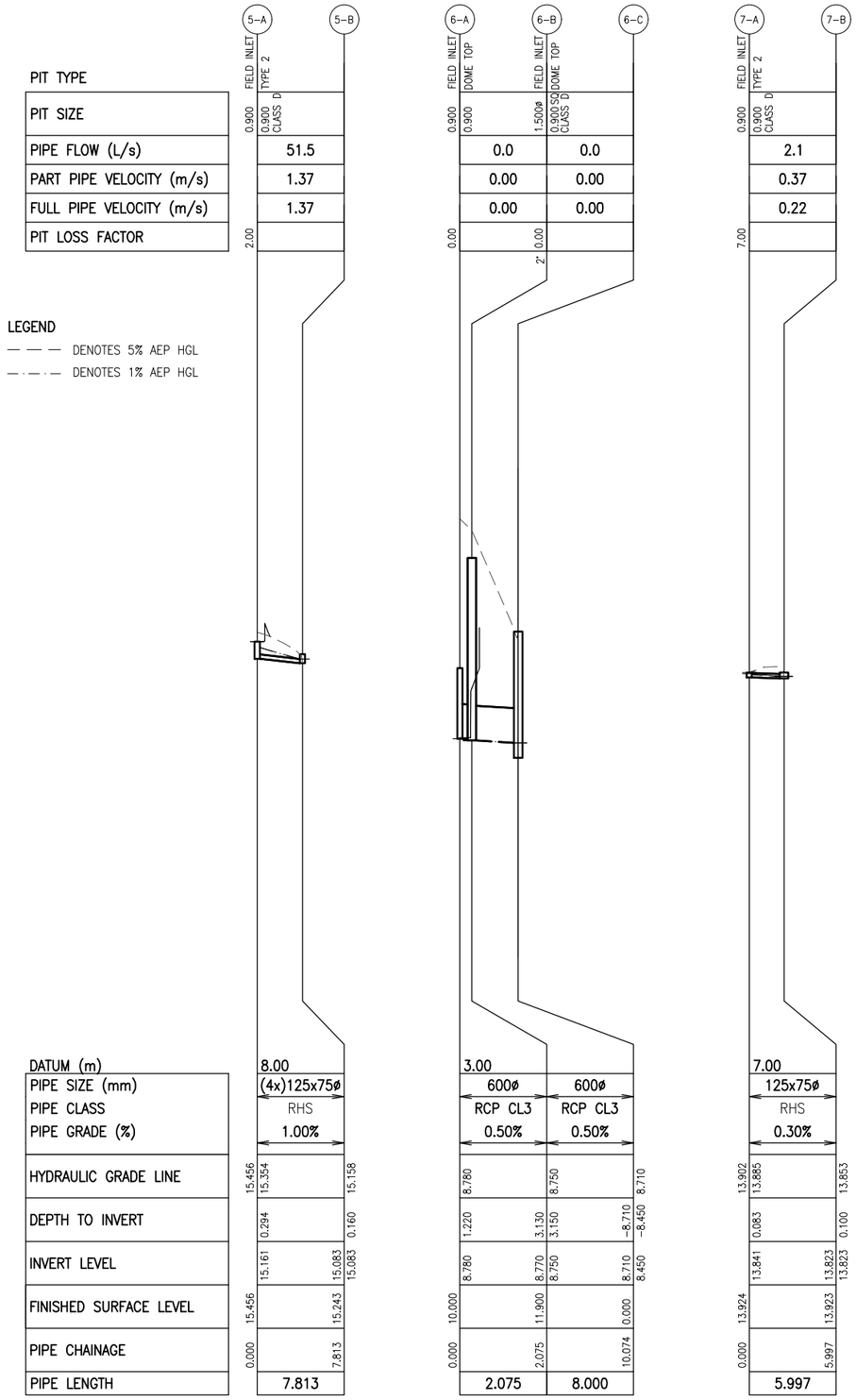

PIT TYPE			
PIT SIZE	0.900 0.900 CLASS D	0.900 0.900 1.500ø 0.900SQ CLASS D	0.900 0.900 CLASS D
PIPE FLOW (L/s)	51.5	0.0	0.0	2.1
PART PIPE VELOCITY (m/s)	1.37	0.00	0.00	0.37
FULL PIPE VELOCITY (m/s)	1.37	0.00	0.00	0.22
PIT LOSS FACTOR	2.00	0.00	0.00	7.00

DATUM (m)	8.00	3.00		7.00
PIPE SIZE (mm)	(4x)125x75ø	600ø	600ø	125x75ø
PIPE CLASS	RHS	RCP CL3	RCP CL3	RHS
PIPE GRADE (%)	1.00%	0.50%	0.50%	0.30%
HYDRAULIC GRADE LINE	15.456 15.354 15.158	8.780 8.750 8.710		13.902 13.885 13.853
DEPTH TO INVERT	0.294 0.160	1.220 3.130 3.150 8.710 8.450		0.083 0.100
INVERT LEVEL	15.161 15.083 15.083	8.780 8.770 8.750 8.710 8.450		13.841 13.823 13.823
FINISHED SURFACE LEVEL	15.456 15.243	10.000 11.900 0.000		13.924 13.923
PIPE CHAINAGE	0.000 7.813	0.000 2.075 10.074		0.000 5.997
PIPE LENGTH	7.813	2.075	8.000	5.997

LEGEND

— — — DENOTES 5% AEP HGL

—·—·— DENOTES 1% AEP HGL

NOTE:
ALL FIELD INLETS DISCHARGING TO THE ATLAN FILTER CARTRIDGE CHAMBER ARE TO BE FITTED WITH STORMSACKS.

STORMWATER MAINS LONGITUDINAL SECTIONS LINES 5 - 6

SCALE A1 – 1:500(H) 1:50(V)
A3 – 1:1000(H) 1:100(V)

No.	DATE	REVISIONS	DES	DRN	CHK	APD
C	14.03.25	GENERAL AMENDEMENT	S.C.M	J.J.D	J.M.H	J.M.H
B	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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CENTRAL VICTORIA T 03 5441 0922 E centralvic@westerapartners.com.au

SURVEYOR
CAPRICORN SURVEY GROUP CQ
PHONE 07 4927 5199

DATUM A.H.D.
P.M.
R.L.

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PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE STORMWATER LONGITUDINAL SECTIONS LINE 5 – 6
CLIENT RUBY DEVELOPMENT PTY LTD

DRAWING STATUS FOR CONSTRUCTION
DRAWING NUMBER S24-018-C22
SHEET NUMBER 22 OF 37
REVISION C

S24-018-C_Stm_Lsec.dwg

PIT TYPE

PIT SIZE					
PIPE FLOW (L/s)	5.0	10.0	14.9	19.9	
PART PIPE VELOCITY (m/s)	0.77	0.92	1.79	1.09	
FULL PIPE VELOCITY (m/s)	0.28	0.56	0.38	0.50	
PIT LOSS FACTOR	2.00	2.00	2.00	2.00	1.85

LEGEND

— — — DENOTES 5% AEP HGL

— · — · — DENOTES 1% AEP HGL

NOTE:
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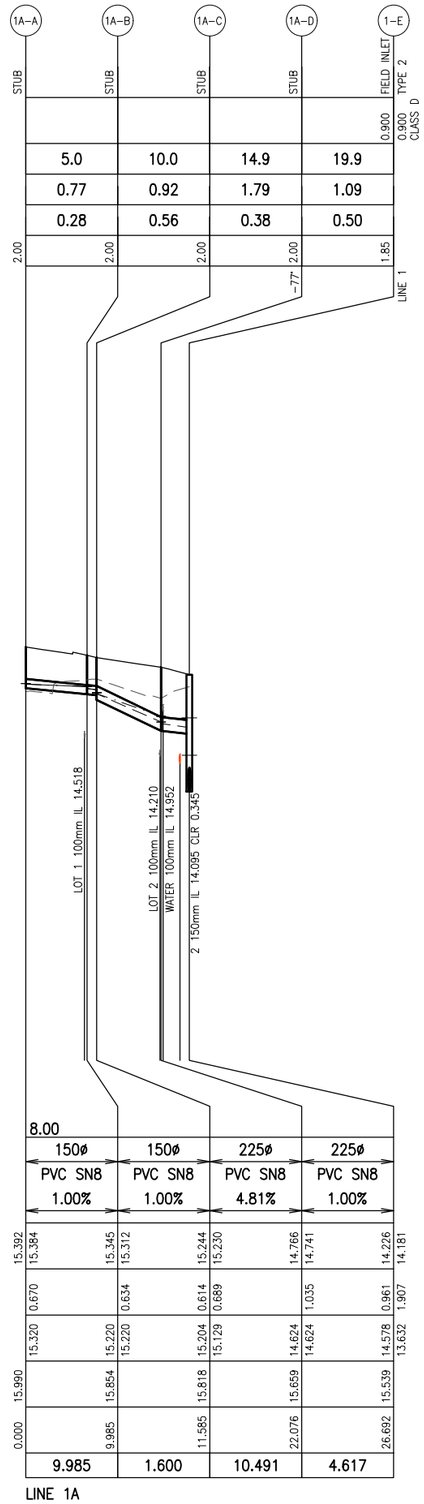
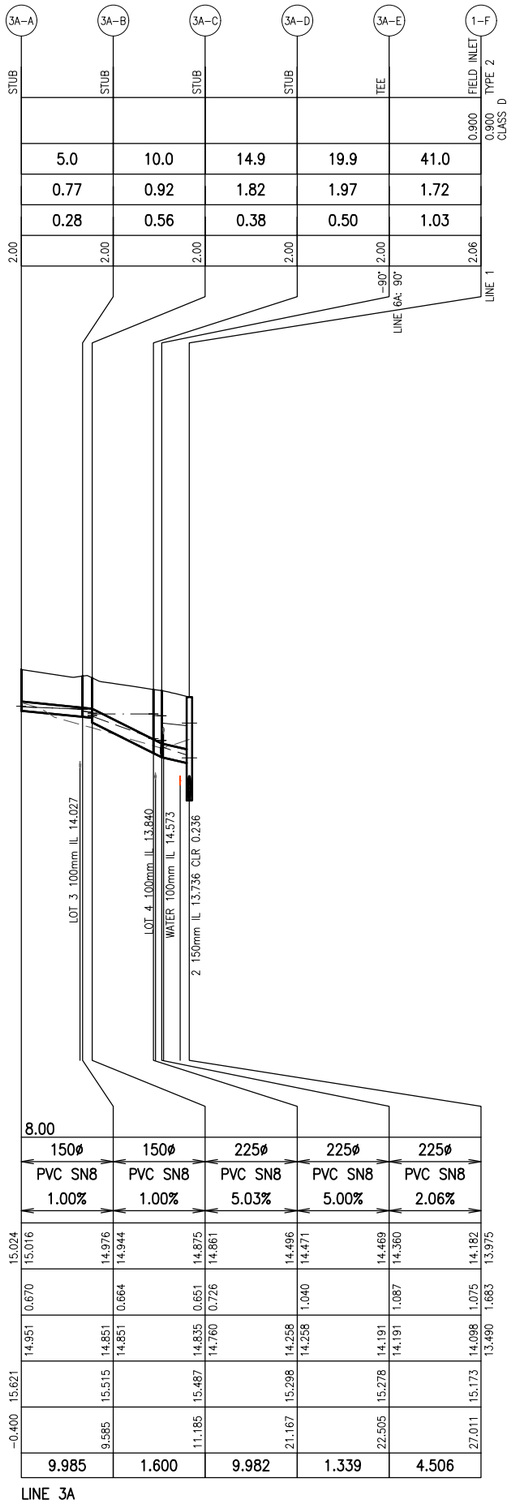


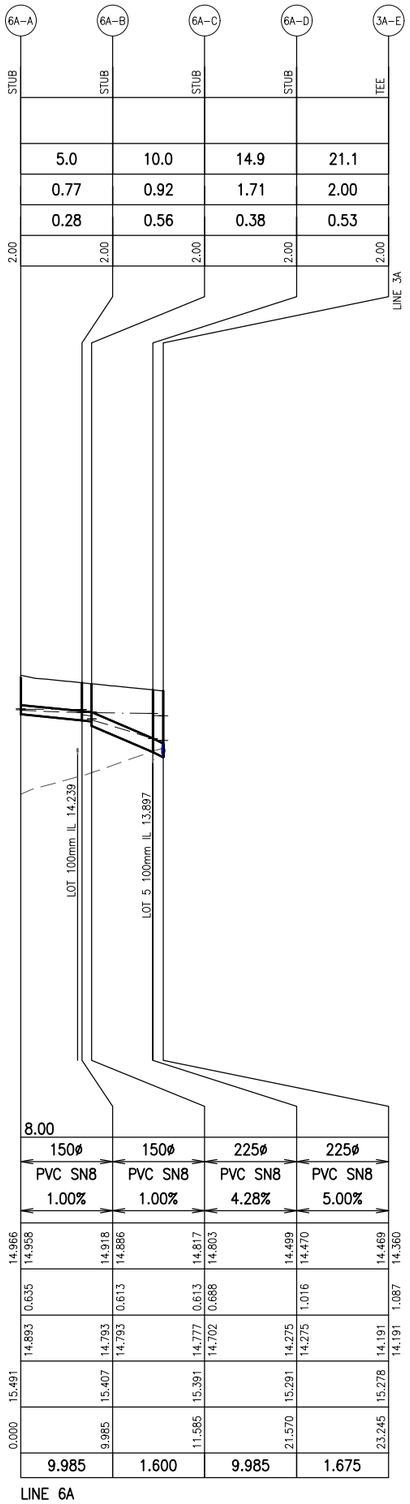
DATUM (m)	8.00				
PIPE SIZE (mm)	150ø	150ø	225ø	225ø	
PIPE CLASS	PVC SN8	PVC SN8	PVC SN8	PVC SN8	
PIPE GRADE (%)	1.00%	1.00%	4.81%	1.00%	
HYDRAULIC GRADE LINE	15.392 / 15.384	15.345 / 15.312	15.244 / 15.230	14.766 / 14.741	14.226 / 14.181
DEPTH TO INVERT	0.670	0.634	0.614 / 0.689	1.035	0.961 / 1.907
INVERT LEVEL	15.320	15.220 / 15.220	15.204 / 15.129	14.624 / 14.624	14.578 / 13.632
FINISHED SURFACE LEVEL	15.990	15.854	15.818	15.659	15.539
PIPE CHAINAGE	0.000	9.985	11.585	22.076	26.692
PIPE LENGTH	9.985	1.600	10.491	4.617	

LINE 1A



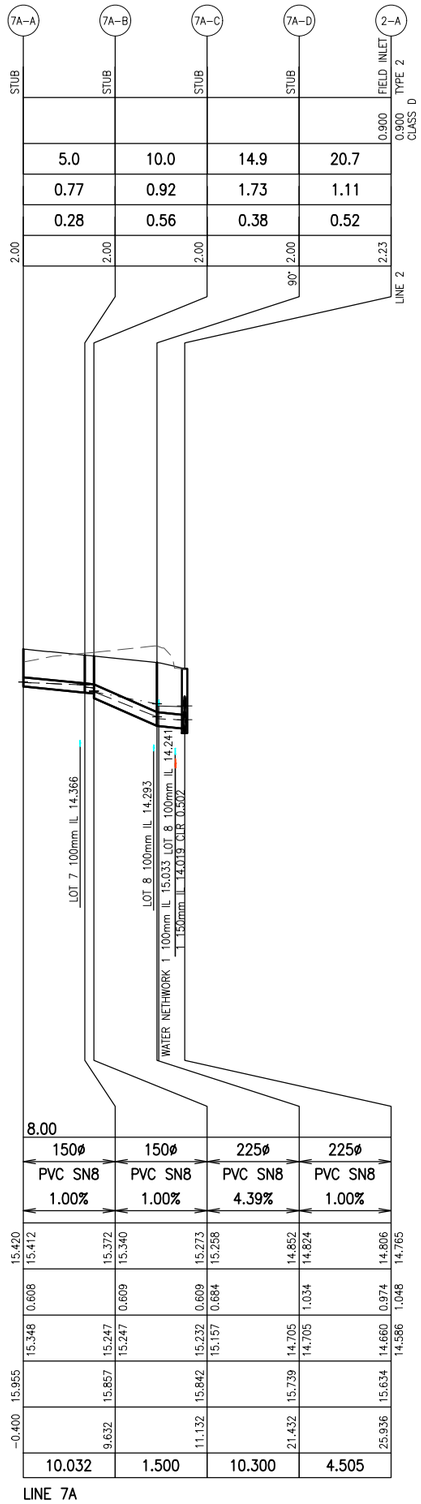
DATUM (m)	8.00					
PIPE SIZE (mm)	150ø	150ø	225ø	225ø	225ø	
PIPE CLASS	PVC SN8	PVC SN8	PVC SN8	PVC SN8	PVC SN8	
PIPE GRADE (%)	1.00%	1.00%	5.03%	5.00%	2.06%	
HYDRAULIC GRADE LINE	15.024 / 15.016	14.976 / 14.944	14.875 / 14.861	14.496 / 14.471	14.469 / 14.360	14.182 / 13.975
DEPTH TO INVERT	0.670	0.664	0.651 / 0.726	1.040	1.087	1.075 / 1.683
INVERT LEVEL	14.951	14.851 / 14.851	14.835 / 14.760	14.258 / 14.258	14.191 / 14.191	14.098 / 13.490
FINISHED SURFACE LEVEL	15.621	15.515	15.487	15.298	15.278	15.173
PIPE CHAINAGE	-0.400	9.585	11.185	21.167	22.505	27.011
PIPE LENGTH	9.985	1.600	9.982	1.339	4.506	

LINE 3A



DATUM (m)	8.00				
PIPE SIZE (mm)	150ø	150ø	225ø	225ø	
PIPE CLASS	PVC SN8	PVC SN8	PVC SN8	PVC SN8	
PIPE GRADE (%)	1.00%	1.00%	4.28%	5.00%	
HYDRAULIC GRADE LINE	14.966 / 14.958	14.918 / 14.886	14.817 / 14.803	14.499 / 14.470	14.469 / 14.360
DEPTH TO INVERT	0.635	0.613	0.613 / 0.688	1.016	1.087
INVERT LEVEL	14.893	14.793 / 14.793	14.777 / 14.702	14.275 / 14.275	14.191 / 14.191
FINISHED SURFACE LEVEL	15.491	15.407	15.391	15.291	15.278
PIPE CHAINAGE	0.000	9.985	11.585	21.570	23.245
PIPE LENGTH	9.985	1.600	9.985	1.675	

LINE 6A



DATUM (m)	8.00				
PIPE SIZE (mm)	150ø	150ø	225ø	225ø	
PIPE CLASS	PVC SN8	PVC SN8	PVC SN8	PVC SN8	
PIPE GRADE (%)	1.00%	1.00%	4.39%	1.00%	
HYDRAULIC GRADE LINE	15.420 / 15.412	15.372 / 15.340	15.273 / 15.258	14.852 / 14.824	14.806 / 14.765
DEPTH TO INVERT	0.608	0.609	0.609 / 0.684	1.034	0.974 / 1.048
INVERT LEVEL	15.348	15.247 / 15.247	15.232 / 15.157	14.705 / 14.705	14.660 / 14.586
FINISHED SURFACE LEVEL	15.955	15.857	15.842	15.739	15.634
PIPE CHAINAGE	-0.400	9.632	11.132	21.432	25.936
PIPE LENGTH	10.032	1.500	10.300	4.505	

LINE 7A

ROOF WATER LONGITUDINAL SECTIONS LINES 1A - 7A

SCALE A1 – 1:500(H) 1:50(V)
A3 – 1:1000(H) 1:100(V)

No.	DATE	REVISIONS	DES	DRN	CHK	APD
C	14.03.25	GENERAL AMENDEMENT	S.C.M	J.J.D	J.M.H	J.M.H
B	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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NORTHERN NSW T 02 6674 8047 E nsw@westerapartners.com.au
CENTRAL VICTORIA T 03 5441 0922 E centralvic@westerapartners.com.au

SURVEYOR CAPRICORN SURVEY GROUP CQ
PHONE 07 4927 5199
DATUM A.H.D. P.M. R.L.

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PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712
192 DEAN STREET, BERSERKER
TITLE STORMWATER LONGITUDINAL SECTIONS LINE 1A – 7A
CLIENT RUBY DEVELOPMENT PTY LTD

DRAWING STATUS FOR CONSTRUCTION
DRAWING NUMBER S24-018-C23
SHEET NUMBER 23 OF 37
REVISION C

S24-018-C_Stm_Lsec.dwg

PIT TYPE

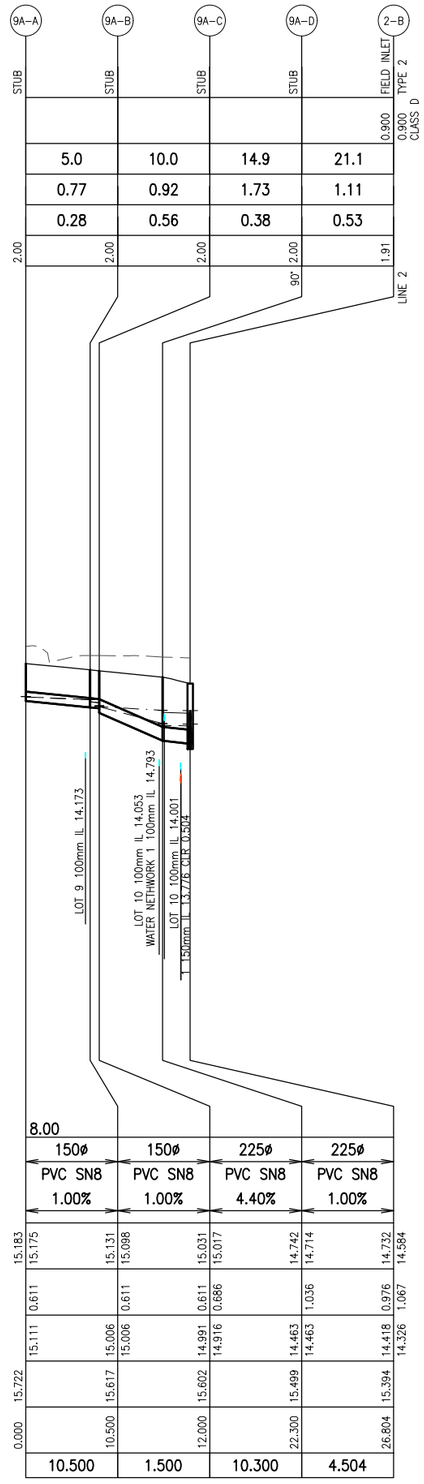
PIT SIZE					
PIPE FLOW (L/s)	5.0	10.0	14.9	21.1	
PART PIPE VELOCITY (m/s)	0.77	0.92	1.73	1.11	
FULL PIPE VELOCITY (m/s)	0.28	0.56	0.38	0.53	
PIT LOSS FACTOR					1.91

LEGEND

— — — DENOTES 5% AEP HGL

—·—·— DENOTES 1% AEP HGL

NOTE:
ALL FIELD INLETS DISCHARGING TO THE ATLAN FILTER CARTRIDGE CHAMBER ARE TO BE FITTED WITH STORMSACKS.

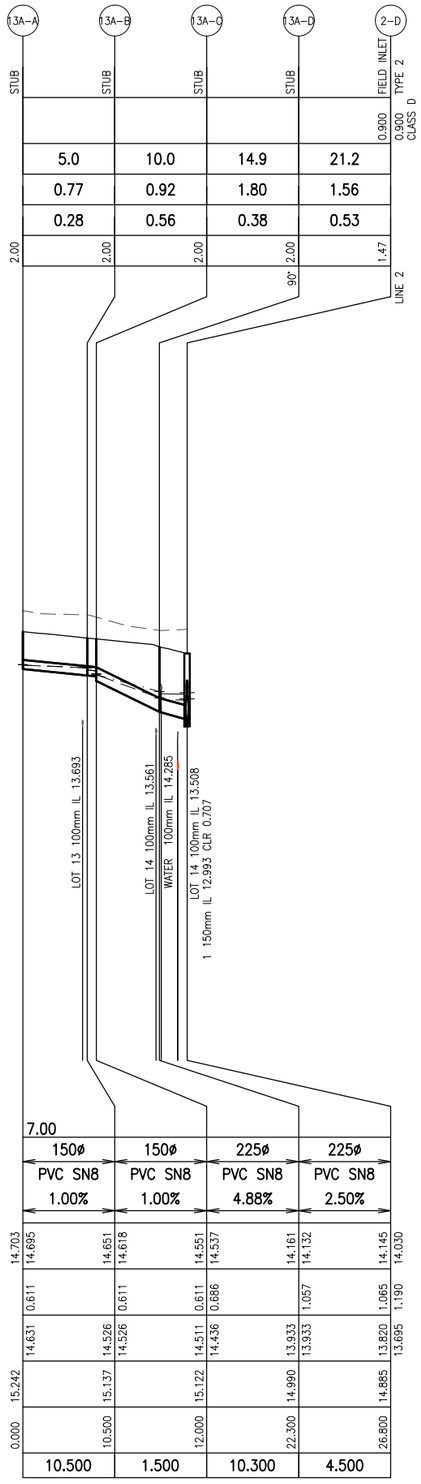


DATUM (m)	8.00				
PIPE SIZE (mm)	150ø	150ø	225ø	225ø	
PIPE CLASS	PVC SN8	PVC SN8	PVC SN8	PVC SN8	
PIPE GRADE (%)	1.00%	1.00%	4.40%	1.00%	
HYDRAULIC GRADE LINE	15.183 / 15.175	15.131 / 15.098	15.031 / 15.017	14.742 / 14.714	14.732 / 14.584
DEPTH TO INVERT	0.611	0.611	0.611 / 0.686	1.036	0.976 / 1.067
INVERT LEVEL	15.111	15.006 / 15.006	14.991 / 14.916	14.463 / 14.463	14.418 / 14.326
FINISHED SURFACE LEVEL	15.722	15.617	15.602	15.499	15.394
PIPE CHAINAGE	0.000	10.500	12.000	22.300	26.804
PIPE LENGTH	10.500	1.500	10.300	4.504	

LINE 9A

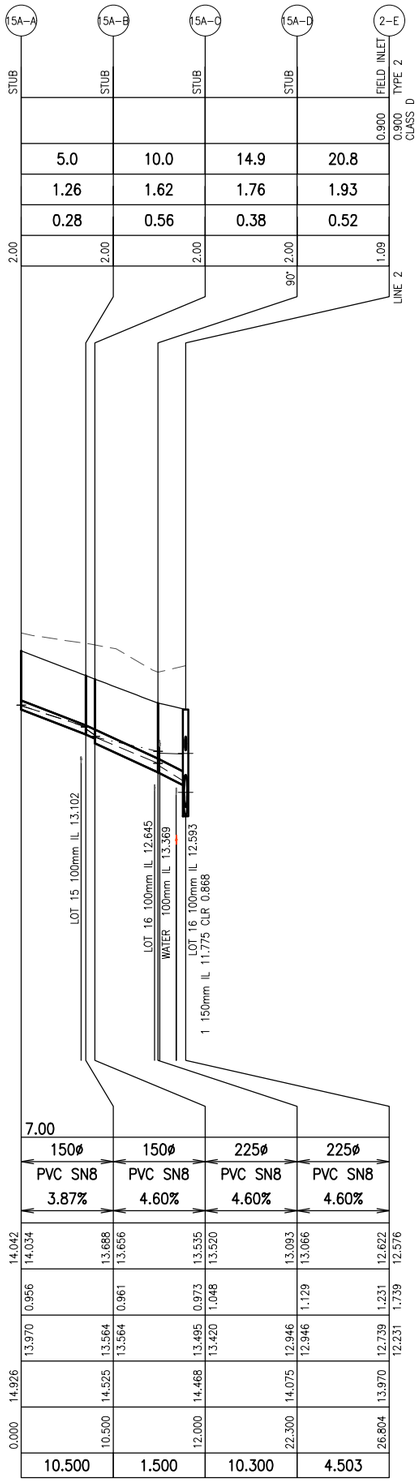
DATUM (m)	8.00				
PIPE SIZE (mm)	150ø	150ø	225ø	225ø	
PIPE CLASS	PVC SN8	PVC SN8	PVC SN8	PVC SN8	
PIPE GRADE (%)	1.00%	1.00%	4.40%	2.04%	
HYDRAULIC GRADE LINE	14.943 / 14.935	14.891 / 14.858	14.791 / 14.777	14.472 / 14.443	14.462 / 14.313
DEPTH TO INVERT	0.611	0.611	0.611 / 0.886	1.036	1.022 / 1.142
INVERT LEVEL	14.871	14.766 / 14.766	14.751 / 14.676	14.223 / 14.223	14.131 / 14.011
FINISHED SURFACE LEVEL	15.482	15.377	15.362	15.259	15.154
PIPE CHAINAGE	0.000	10.500	12.000	22.300	26.802
PIPE LENGTH	10.500	1.500	10.300	4.502	

LINE 11A



DATUM (m)	7.00				
PIPE SIZE (mm)	150ø	150ø	225ø	225ø	
PIPE CLASS	PVC SN8	PVC SN8	PVC SN8	PVC SN8	
PIPE GRADE (%)	1.00%	1.00%	4.88%	2.50%	
HYDRAULIC GRADE LINE	14.703 / 14.695	14.651 / 14.618	14.561 / 14.537	14.161 / 14.132	14.145 / 14.030
DEPTH TO INVERT	0.611	0.611	0.611 / 0.886	1.057	1.065 / 1.190
INVERT LEVEL	14.631	14.526 / 14.526	14.511 / 14.436	13.933 / 13.933	13.820 / 13.695
FINISHED SURFACE LEVEL	15.242	15.137	15.122	14.990	14.885
PIPE CHAINAGE	0.000	10.500	12.000	22.300	26.800
PIPE LENGTH	10.500	1.500	10.300	4.500	

LINE 13A



DATUM (m)	7.00				
PIPE SIZE (mm)	150ø	150ø	225ø	225ø	
PIPE CLASS	PVC SN8	PVC SN8	PVC SN8	PVC SN8	
PIPE GRADE (%)	3.87%	4.60%	4.60%	4.60%	
HYDRAULIC GRADE LINE	14.042 / 14.034	13.688 / 13.656	13.535 / 13.520	13.093 / 13.066	12.622 / 12.576
DEPTH TO INVERT	0.956	0.961	0.973 / 1.048	1.129	1.231 / 1.739
INVERT LEVEL	13.970	13.564 / 13.564	13.495 / 13.420	12.946 / 12.946	12.739 / 12.231
FINISHED SURFACE LEVEL	14.926	14.525	14.468	14.075	13.970
PIPE CHAINAGE	0.000	10.500	12.000	22.300	26.804
PIPE LENGTH	10.500	1.500	10.300	4.503	

LINE 15A

ROOF WATER LONGITUDINAL SECTIONS LINES 9A - 15A

SCALE A1 – 1:500(H) 1:50(V)
A3 – 1:1000(H) 1:100(V)

No.	DATE	REVISIONS	DES	DRN	CHK	APD
C	14.03.25	GENERAL AMENDEMENT	S.C.M	J.J.D	J.M.H	J.M.H
B	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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CENTRAL VICTORIA T 03 5441 0922 E centralvic@westerapartners.com.au

SURVEYOR
CAPRICORN SURVEY GROUP CQ
PHONE 07 4927 5199

DATUM A.H.D.
P.M.
R.L.

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PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712
192 DEAN STREET, BERSERKER
TITLE STORMWATER LONGITUDINAL SECTIONS LINES 9A – 15A
CLIENT RUBY DEVELOPMENT PTY LTD

DRAWING STATUS: FOR CONSTRUCTION
DRAWING NUMBER: S24–018–C24
SHEET NUMBER: 24 OF 37
REVISION: C

S24-018-C_Stm_Lsec.dwg

PIT TYPE	17A–A	17A–B	17A–C	2–F
	STUB	STUB	BEND	FIELD INLET TYPE 2 CLASS D
PIT SIZE				0.900 0.900
PIPE FLOW (L/s)	5.0	10.0	10.0	
PART PIPE VELOCITY (m/s)	1.48	1.91	0.92	
FULL PIPE VELOCITY (m/s)	0.28	0.56	0.56	
PIT LOSS FACTOR	2.00	2.00	2.00	1.78
			76°	LINE 2

PIT TYPE	18A–A	18A–B	18A–C	18A–D	2–A
	STUB	STUB	STUB	STUB	FIELD INLET TYPE 2 CLASS D
PIT SIZE					0.900 0.900
PIPE FLOW (L/s)	5.0	10.0	14.9	21.1	
PART PIPE VELOCITY (m/s)	0.77	0.92	1.02	1.46	
FULL PIPE VELOCITY (m/s)	0.28	0.56	0.38	0.53	
PIT LOSS FACTOR	2.00	2.00	2.00	2.00	2.23
				-90°	LINE 2

PIT TYPE	20A–A	20A–B	20A–C	20A–D	2–B
	STUB	STUB	STUB	STUB	FIELD INLET TYPE 2 CLASS D
PIT SIZE					0.900 0.900
PIPE FLOW (L/s)	5.0	10.0	14.9	21.1	
PART PIPE VELOCITY (m/s)	0.77	0.92	1.02	1.44	
FULL PIPE VELOCITY (m/s)	0.28	0.56	0.38	0.53	
PIT LOSS FACTOR	2.00	2.00	2.00	2.00	1.91
				-90°	LINE 2

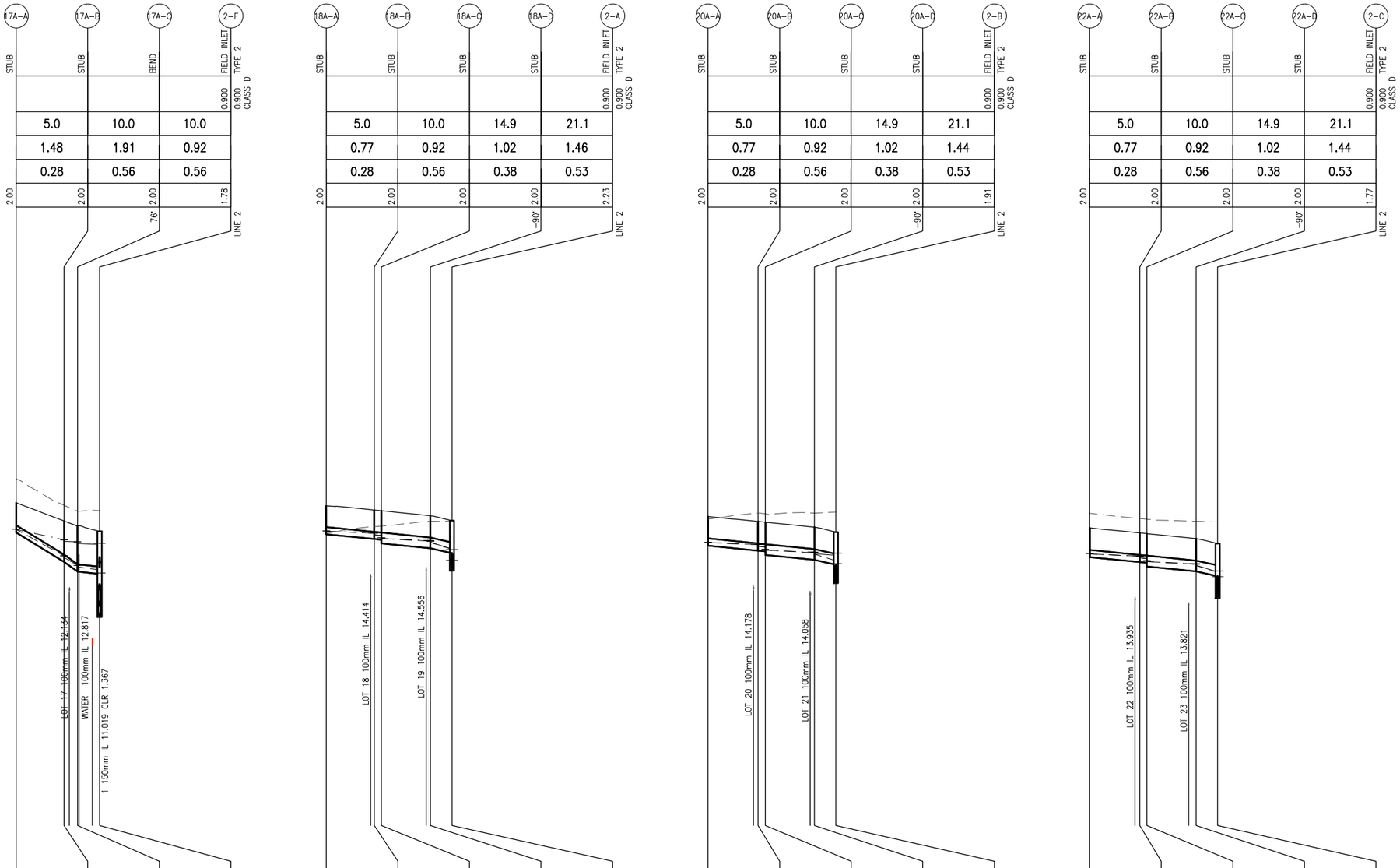
PIT TYPE	22A–A	22A–B	22A–C	22A–D	2–C
	STUB	STUB	STUB	STUB	FIELD INLET TYPE 2 CLASS D
PIT SIZE					0.900 0.900
PIPE FLOW (L/s)	5.0	10.0	14.9	21.1	
PART PIPE VELOCITY (m/s)	0.77	0.92	1.02	1.44	
FULL PIPE VELOCITY (m/s)	0.28	0.56	0.38	0.53	
PIT LOSS FACTOR	2.00	2.00	2.00	2.00	1.77
				-90°	LINE 2

LEGEND

— — — DENOTES 5% AEP HGL

—·—·— DENOTES 1% AEP HGL

NOTE:
ALL FIELD INLETS DISCHARGING TO THE ATLAN FILTER CARTRIDGE CHAMBER ARE TO BE FITTED WITH STORMSACKS.



DATUM (m)	6.00			
PIPE SIZE (mm)	150ø	150ø	150ø	
PIPE CLASS	PVC SN8	PVC SN8	PVC SN8	
PIPE GRADE (%)	6.12%	7.17%	1.00%	
HYDRAULIC GRADE LINE	13.459 / 13.450	12.897 / 12.864	12.695 / 12.662	12.539 / 12.381
DEPTH TO INVERT	0.624	0.855	0.963	0.885 / 1.793
INVERT LEVEL	13.386	12.772 / 12.772	12.570 / 12.570	12.524 / 11.616
FINISHED SURFACE LEVEL	14.010	13.627	13.533	13.409
PIPE CHAINAGE	0.000	10.038	12.857	17.485
PIPE LENGTH	10.038	2.819	4.628	

LINE 17A

DATUM (m)	8.00				
PIPE SIZE (mm)	150ø	150ø	225ø	225ø	
PIPE CLASS	PVC SN8	PVC SN8	PVC SN8	PVC SN8	
PIPE GRADE (%)	1.00%	1.00%	1.00%	2.10%	
HYDRAULIC GRADE LINE	15.421 / 15.413	15.373 / 15.341	15.274 / 15.259	15.205 / 15.176	14.806 / 14.765
DEPTH TO INVERT	0.596	0.608	0.608 / 0.683	0.683	0.672 / 1.048
INVERT LEVEL	15.349	15.249 / 15.249	15.234 / 15.159	15.056 / 15.056	14.961 / 14.586
FINISHED SURFACE LEVEL	15.945	15.857	15.842	15.739	15.634
PIPE CHAINAGE	0.000	10.036	11.536	21.835	26.341
PIPE LENGTH	10.036	1.500	10.298	4.506	

LINE 18A

DATUM (m)	8.00				
PIPE SIZE (mm)	150ø	150ø	225ø	225ø	
PIPE CLASS	PVC SN8	PVC SN8	PVC SN8	PVC SN8	
PIPE GRADE (%)	1.00%	1.00%	1.00%	2.04%	
HYDRAULIC GRADE LINE	15.183 / 15.175	15.131 / 15.098	15.031 / 15.017	14.962 / 14.933	14.732 / 14.584
DEPTH TO INVERT	0.611	0.611	0.611 / 0.686	0.686	0.672 / 1.067
INVERT LEVEL	15.111	15.006 / 15.006	14.991 / 14.916	14.813 / 14.813	14.721 / 14.326
FINISHED SURFACE LEVEL	15.722	15.617	15.602	15.499	15.394
PIPE CHAINAGE	0.000	10.500	11.993	22.299	26.804
PIPE LENGTH	10.500	1.493	10.305	4.505	

LINE 20A

DATUM (m)	8.00				
PIPE SIZE (mm)	150ø	150ø	225ø	225ø	
PIPE CLASS	PVC SN8	PVC SN8	PVC SN8	PVC SN8	
PIPE GRADE (%)	1.00%	1.00%	1.00%	2.04%	
HYDRAULIC GRADE LINE	14.943 / 14.935	14.891 / 14.858	14.791 / 14.777	14.722 / 14.693	14.462 / 14.313
DEPTH TO INVERT	0.611	0.611	0.611 / 0.686	0.686	0.672 / 1.142
INVERT LEVEL	14.871	14.766 / 14.766	14.751 / 14.676	14.573 / 14.573	14.481 / 14.011
FINISHED SURFACE LEVEL	15.482	15.377	15.362	15.259	15.154
PIPE CHAINAGE	0.000	10.500	11.993	22.299	26.804
PIPE LENGTH	10.500	1.493	10.305	4.505	

LINE 22A

ROOF WATER LONGITUDINAL SECTIONS LINES 17A - 22A

SCALE A1 – 1:500(H) 1:50(V)
A3 – 1:1000(H) 1:100(V)

No.	DATE	REVISIONS	DES	DRN	CHK	APD
C	14.03.25	GENERAL AMENDEMENT	S.C.M	J.J.D	J.M.H	J.M.H
B	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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CENTRAL VICTORIA T 03 5441 0922 E centralvic@westerapartners.com.au

SURVEYOR
CAPRICORN SURVEY GROUP CQ
PHONE 07 4927 5199

DATUM A.H.D.
P.M.
R.L.

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PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712
192 DEAN STREET, BERSERKER
TITLE STORMWATER LONGITUDINAL SECTIONS LINES 17A – 22A
CLIENT RUBY DEVELOPMENT PTY LTD

DRAWING STATUS FOR CONSTRUCTION
DRAWING NUMBER S24-018-C25
SHEET NUMBER 25 OF 37
REVISION C

S24-018-C_Stm_Lsec.dwg

PIT TYPE	24A–A	24A–B	24A–C	24A–D	2–D
	STUB	STUB	STUB	STUB	FIELD INLET TYPE 2
PIT SIZE					0.900 0.900 CLASS D
PIPE FLOW (L/s)	5.0	10.0	14.9	21.1	
PART PIPE VELOCITY (m/s)	0.77	0.92	1.02	1.56	
FULL PIPE VELOCITY (m/s)	0.28	0.56	0.38	0.53	
PIT LOSS FACTOR	2.00	2.00	2.00	2.00 –90°	1.47 LINE 2

PIT TYPE	26A–A	26A–B	26A–C	26A–D	2–E
	STUB	STUB	STUB	STUB	FIELD INLET TYPE 2
PIT SIZE					0.900 0.900 CLASS D
PIPE FLOW (L/s)	5.0	10.0	14.9	21.1	
PART PIPE VELOCITY (m/s)	0.77	0.92	1.55	1.44	
FULL PIPE VELOCITY (m/s)	0.28	0.56	0.38	0.53	
PIT LOSS FACTOR	2.00	2.00	2.00	2.00 –90°	1.09 LINE 2

PIT TYPE	28A–A	28A–B	28A–C	28A–D	2–F
	STUB	STUB	STUB	BEND	FIELD INLET TYPE 2
PIT SIZE					0.900 0.900 CLASS D
PIPE FLOW (L/s)	5.0	10.0	16.2	16.2	
PART PIPE VELOCITY (m/s)	0.77	0.92	1.54	1.54	
FULL PIPE VELOCITY (m/s)	0.28	0.56	0.41	0.41	
PIT LOSS FACTOR	2.00	2.00	2.00	2.00 –90°	1.78 LINE 2

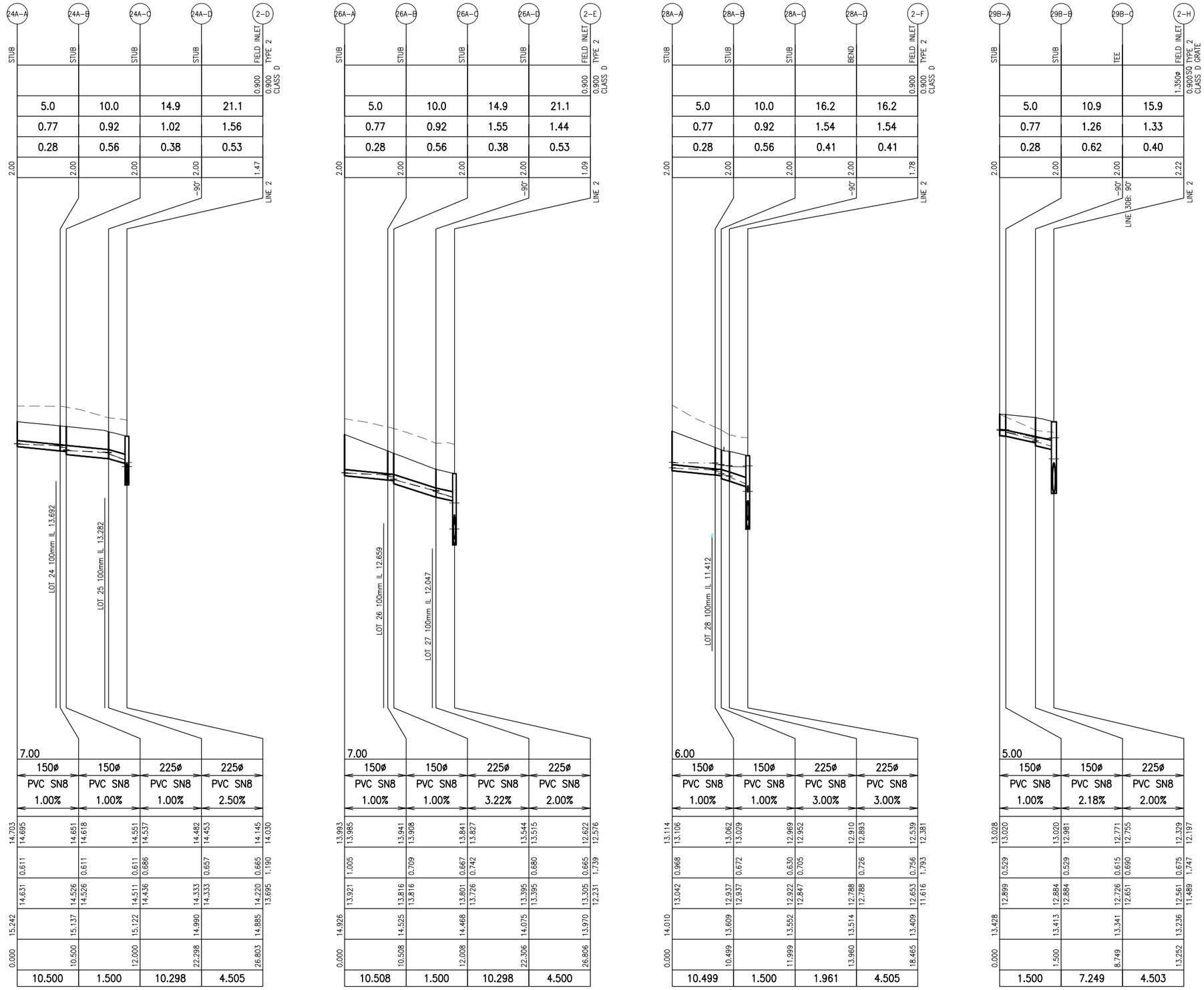
PIT TYPE	29B–A	29B–B	29B–C	2–H
	STUB	STUB	TEE	FIELD INLET
PIT SIZE				1.350ø 0.900SQ TYPE 2 CLASS D GRATE
PIPE FLOW (L/s)	5.0	10.9	15.9	
PART PIPE VELOCITY (m/s)	0.77	1.26	1.33	
FULL PIPE VELOCITY (m/s)	0.28	0.62	0.40	
PIT LOSS FACTOR	2.00	2.00	2.00 LINE 30B: 90°	2.22 LINE 2

LEGEND

— — — DENOTES 5% AEP HGL

—·—·— DENOTES 1% AEP HGL

NOTE:
ALL FIELD INLETS DISCHARGING TO THE ATLAN FILTER CARTRIDGE CHAMBER ARE TO BE FITTED WITH STORMSACKS.



DATUM (m)	7.00								7.00							
PIPE SIZE (mm)	150ø		150ø		225ø		225ø		150ø		150ø		225ø		225ø	
PIPE CLASS	PVC SN8		PVC SN8		PVC SN8		PVC SN8		PVC SN8		PVC SN8		PVC SN8		PVC SN8	
PIPE GRADE (%)	1.00%		1.00%		1.00%		2.50%		1.00%		1.00%		3.22%		2.00%	
HYDRAULIC GRADE LINE	14.703	14.695	14.651	14.618	14.551	14.537	14.482	14.453	14.145	14.030	13.993	13.985	13.941	13.908	13.841	13.827	13.544	13.515	12.622	12.576
DEPTH TO INVERT	0.611		0.611		0.611	0.686		0.657	0.665	1.190	1.005		0.709	0.667	0.742		0.680	0.665	1.739	
INVERT LEVEL	14.631		14.526	14.526	14.511	14.436	14.333	14.333	14.220	13.695	13.921		13.816	13.816	13.801	13.726	13.395	13.395	13.305	12.231
FINISHED SURFACE LEVEL	15.242		15.137		15.122		14.990		14.885		14.926		14.525		14.468		14.075		13.970	
PIPE CHAINAGE	0.000		10.500		12.000		22.298		26.803		0.000		10.508		12.008		22.306		26.806	
PIPE LENGTH	10.500		1.500		10.298		4.505				10.508		1.500		10.298		4.500			
	LINE 24A										LINE 26A									

DATUM (m)	6.00								5.00							
PIPE SIZE (mm)	150ø		150ø		225ø		225ø		150ø		150ø		225ø			
PIPE CLASS	PVC SN8		PVC SN8		PVC SN8		PVC SN8		PVC SN8		PVC SN8		PVC SN8			
PIPE GRADE (%)	1.00%		1.00%		3.00%		3.00%		1.00%		2.18%		2.00%			
HYDRAULIC GRADE LINE	13.114	13.106	13.062	13.029	12.969	12.952	12.910	12.893	12.539	12.381	13.028	13.020	13.020	12.981	12.771	12.755	12.329	12.197		
DEPTH TO INVERT	0.968		0.672	0.630	0.705		0.726	0.756	1.793		0.529		0.529	0.615	0.690	0.675	1.747			
INVERT LEVEL	13.042		12.937	12.937	12.922	12.847	12.788	12.788	12.653	11.616	12.899		12.884	12.884	12.726	12.651	12.561	11.489		
FINISHED SURFACE LEVEL	14.010		13.609		13.552		13.514		13.409		13.428		13.413		13.341		13.236			
PIPE CHAINAGE	0.000		10.499		11.999		13.960		18.465		0.000		1.500		8.749		13.252			
PIPE LENGTH	10.499		1.500		1.961		4.505				1.500		7.249		4.503					
	LINE 28A										LINE 29B									

ROOF WATER LONGITUDINAL SECTIONS LINES 24A - 29B

SCALE A1 – 1:500(H) 1:50(V)
A3 – 1:1000(H) 1:100(V)

No.	DATE	REVISIONS	DES	DRN	CHK	APD
C	14.03.25	GENERAL AMENDEMENT	S.C.M	J.J.D	J.M.H	J.M.H
B	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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SUNSHINE COAST T 07 5391 3777 E sunshinecoast@westerapartners.com.au
NORTHERN NSW T 02 6674 8047 E nsw@westerapartners.com.au
CENTRAL VICTORIA T 03 5441 0922 E centralvic@westerapartners.com.au

SURVEYOR CAPRICORN SURVEY GROUP CQ PHONE 07 4927 5199
DATUM A.H.D. P.M. R.L.

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PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE STORMWATER LONGITUDINAL SECTIONS LINES 24A – 29B
CLIENT RUBY DEVELOPMENT PTY LTD

DRAWING STATUS FOR CONSTRUCTION
DRAWING NUMBER S24–018–C26
SHEET NUMBER 26 OF 37
REVISION C

S24–018–C_Stm_Lsec.dwg

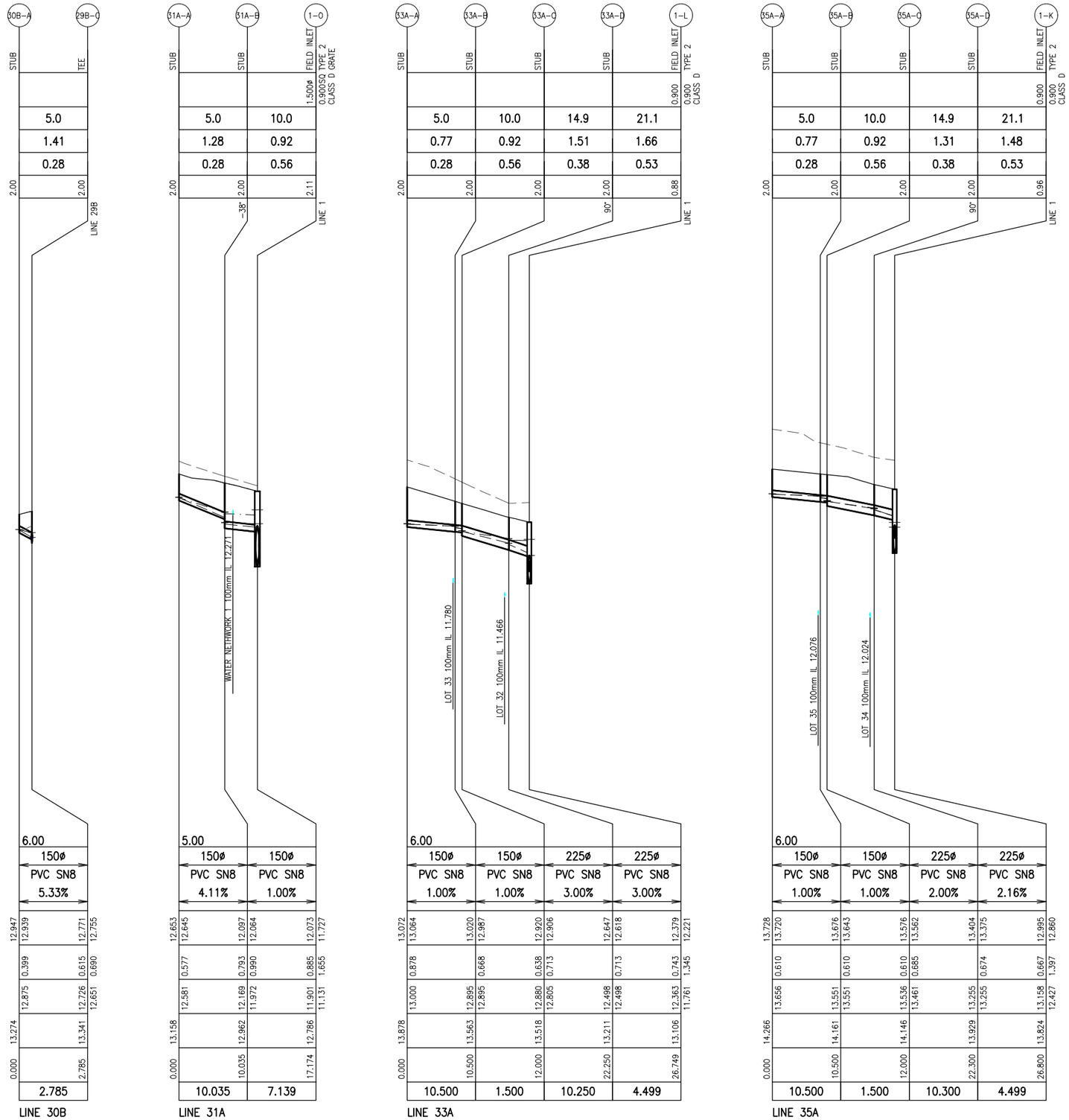
PIT TYPE																					
PIT SIZE																					
PIPE FLOW (L/s)		5.0			5.0	10.0			5.0	10.0	14.9	21.1			5.0	10.0	14.9	21.1			
PART PIPE VELOCITY (m/s)		1.41			1.28	0.92			0.77	0.92	1.51	1.66			0.77	0.92	1.31	1.48			
FULL PIPE VELOCITY (m/s)		0.28			0.28	0.56			0.28	0.56	0.38	0.53			0.28	0.56	0.38	0.53			
PIT LOSS FACTOR	2.00		2.00	2.00		2.00	2.11	2.00		2.00	2.00	2.00	0.88	2.00		2.00	2.00	2.00	0.96		
	30B–A		29B–C	31A–A		31A–B	1–O	33A–A		33A–B	33A–C	33A–D	1–L	35A–A		35A–B	35A–C	35A–D	1–K		
	STUB		TEE	STUB		STUB	FIELD INLET TYPE 2 CLASS D GRATE	STUB		STUB	STUB	STUB	FIELD INLET TYPE 2 CLASS D	STUB		STUB	STUB	STUB	FIELD INLET TYPE 2 CLASS D		
							1.500% 0.900SQ						0.900						0.900		
			LINE 29B			–38°	LINE 1				90°	LINE 1					90°	LINE 1			

LEGEND

— — — DENOTES 5% AEP HGL

— · — · — DENOTES 1% AEP HGL

NOTE:
ALL FIELD INLETS DISCHARGING TO THE ATLAN FILTER CARTRIDGE CHAMBER ARE TO BE FITTED WITH STORMSACKS.



DATUM (m)		6.00				5.00				6.00				6.00			
PIPE SIZE (mm)		150ø				150ø	150ø			150ø	150ø	225ø	225ø	150ø	150ø	225ø	225ø
PIPE CLASS		PVC SN8				PVC SN8	PVC SN8			PVC SN8	PVC SN8	PVC SN8	PVC SN8	PVC SN8	PVC SN8	PVC SN8	PVC SN8
PIPE GRADE (%)		5.33%				4.11%	1.00%			1.00%	1.00%	3.00%	3.00%	1.00%	1.00%	2.00%	2.16%
HYDRAULIC GRADE LINE	12.947	12.939		12.771	12.755	12.653	12.645	12.097	12.064	12.072	13.064	13.020	12.987	12.920	12.906	12.647	12.618	12.379	12.221	13.728	13.720	13.676	13.643	13.576	13.562	13.404	13.375	12.995	12.860
DEPTH TO INVERT	0.399		0.615	0.690		0.577	0.793	0.990		0.878		0.668		0.638	0.713	0.713		0.743	1.345	0.610		0.610		0.610	0.685		0.674	0.667	1.397
INVERT LEVEL	12.875		12.726	12.651		12.581	12.169	11.972	11.901	13.000	12.895	12.895	12.880	12.805	12.498	12.498	12.363	11.761		13.656	13.551	13.551	13.536	13.461	13.255	13.255	13.158	12.427	
FINISHED SURFACE LEVEL	13.274		13.341			13.158	12.962		12.786	13.878	13.563	13.518		13.211		13.106			14.266	14.161		14.146		13.929		13.824			
PIPE CHAINAGE	0.000		2.785			0.000	10.035		17.174	0.000	10.500	12.000		22.250		26.749			0.000	10.500		12.000		22.300		26.800			
PIPE LENGTH		2.785				10.035		7.139			10.500	1.500	10.250		4.499						10.500	1.500	10.300		4.499				
		LINE 30B				LINE 31A					LINE 33A										LINE 35A								

ROOF WATER LONGITUDINAL SECTIONS LINES 30B - 35A

SCALE A1 – 1:500(H) 1:50(V)
A3 – 1:1000(H) 1:100(V)

No.	DATE	REVISIONS	DES	DRN	CHK	APD
C	14.03.25	GENERAL AMENDEMENT	S.C.M	J.J.D	J.M.H	J.M.H
B	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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CENTRAL VICTORIA T 03 5441 0922 E centralvic@westerapartners.com.au

SURVEYOR CAPRICORN SURVEY GROUP CQ PHONE 07 4927 5199
DATUM A.H.D. P.M. R.L.

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PROJECT	PROPOSED RETIREMENT LIVING ESTATE
LOCATION	LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE	STORMWATER LONGITUDINAL SECTIONS LINES 30B – 35A
CLIENT	RUBY DEVELOPMENT PTY LTD

DRAWING STATUS	
FOR CONSTRUCTION	
DRAWING NUMBER	
S24-018-C27	
SHEET NUMBER	REVISION
27 OF 37	C

S24-018-C_Stm_Lsec.dwg

PIT TYPE

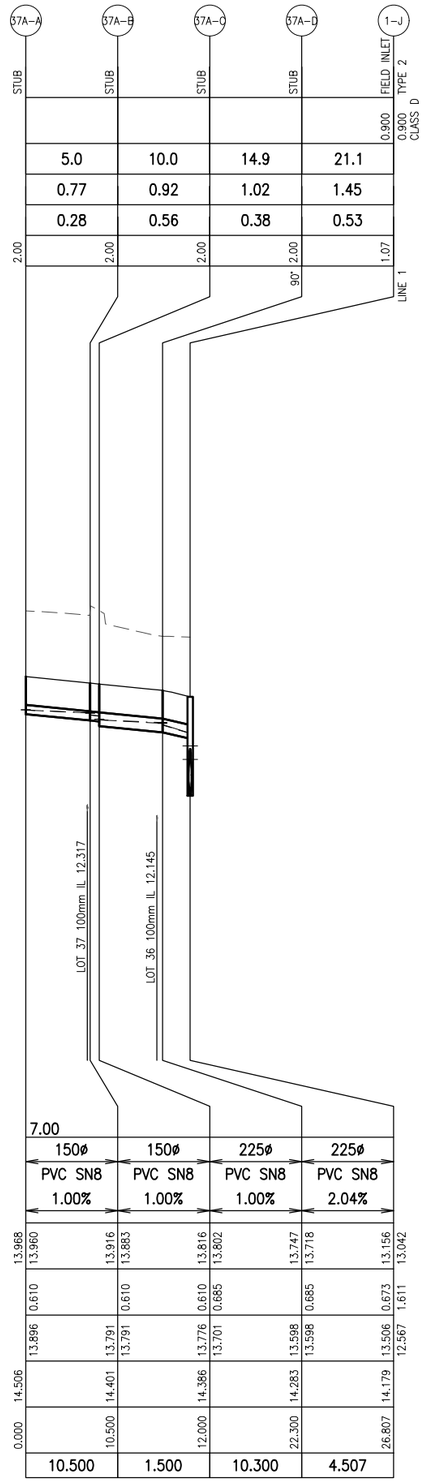
PIT SIZE				
PIPE FLOW (L/s)	5.0	10.0	14.9	21.1
PART PIPE VELOCITY (m/s)	0.77	0.92	1.02	1.45
FULL PIPE VELOCITY (m/s)	0.28	0.56	0.38	0.53
PIT LOSS FACTOR				

LEGEND

— — — DENOTES 5% AEP HGL

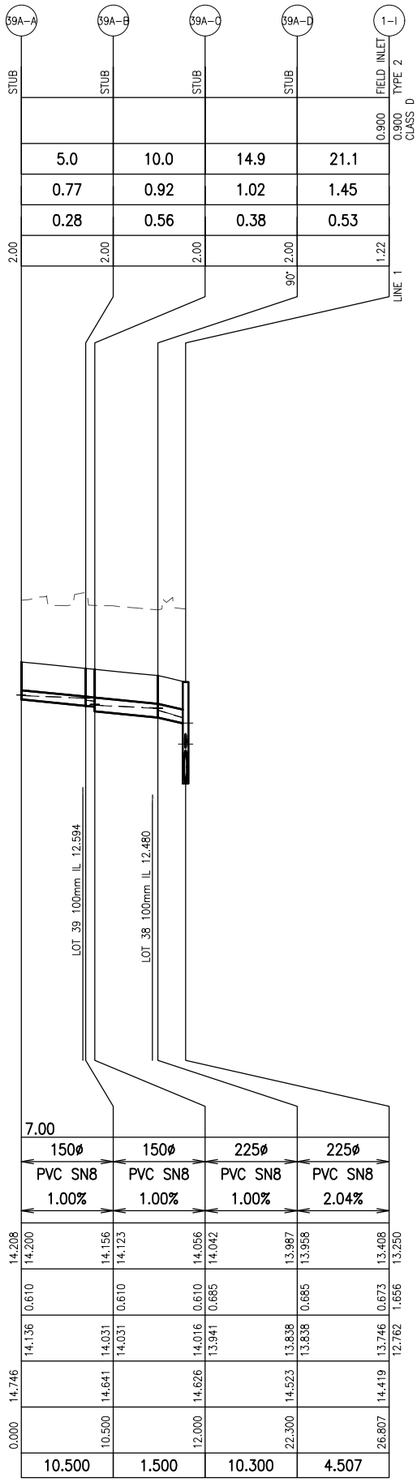
—·—·— DENOTES 1% AEP HGL

NOTE:
ALL FIELD INLETS DISCHARGING TO THE ATLAN FILTER CARTRIDGE CHAMBER ARE TO BE FITTED WITH STORMSACKS.



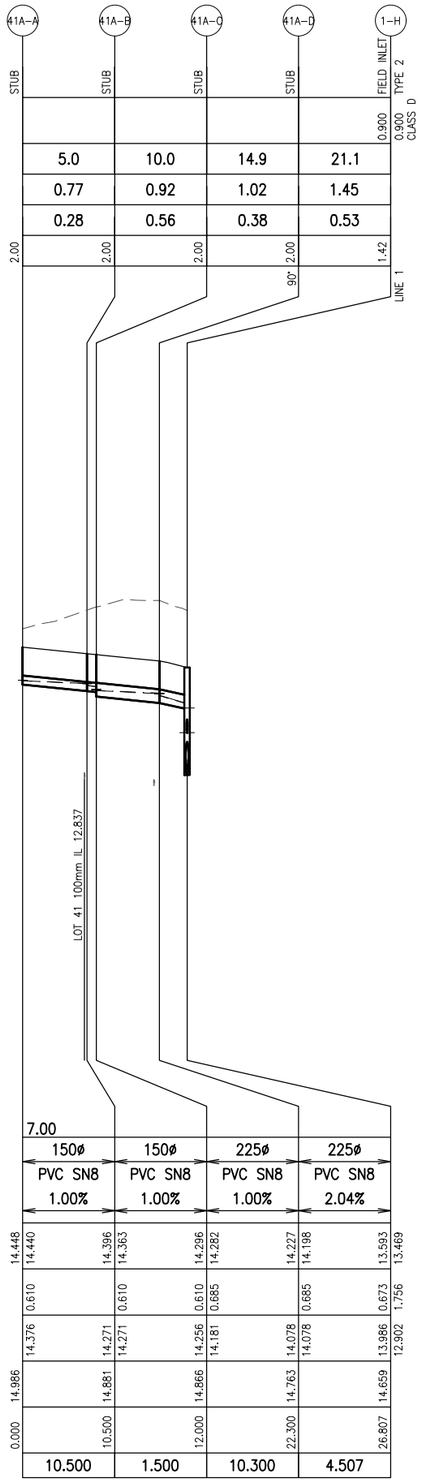
DATUM (m)				
PIPE SIZE (mm)	150ø	150ø	225ø	225ø
PIPE CLASS	PVC SN8	PVC SN8	PVC SN8	PVC SN8
PIPE GRADE (%)	1.00%	1.00%	1.00%	2.04%
HYDRAULIC GRADE LINE	13.968 / 13.960	13.916 / 13.883	13.816 / 13.802	13.747 / 13.718 / 13.156 / 13.042
DEPTH TO INVERT	0.610	0.610	0.610 / 0.685	0.685 / 0.673 / 1.611
INVERT LEVEL	13.896	13.791 / 13.791	13.776 / 13.701	13.598 / 13.598 / 13.506 / 12.567
FINISHED SURFACE LEVEL	14.506	14.401	14.386 / 14.283	14.179
PIPE CHAINAGE	0.000	10.500	12.000	22.300 / 26.807
PIPE LENGTH	10.500	1.500	10.300	4.507

LINE 37A



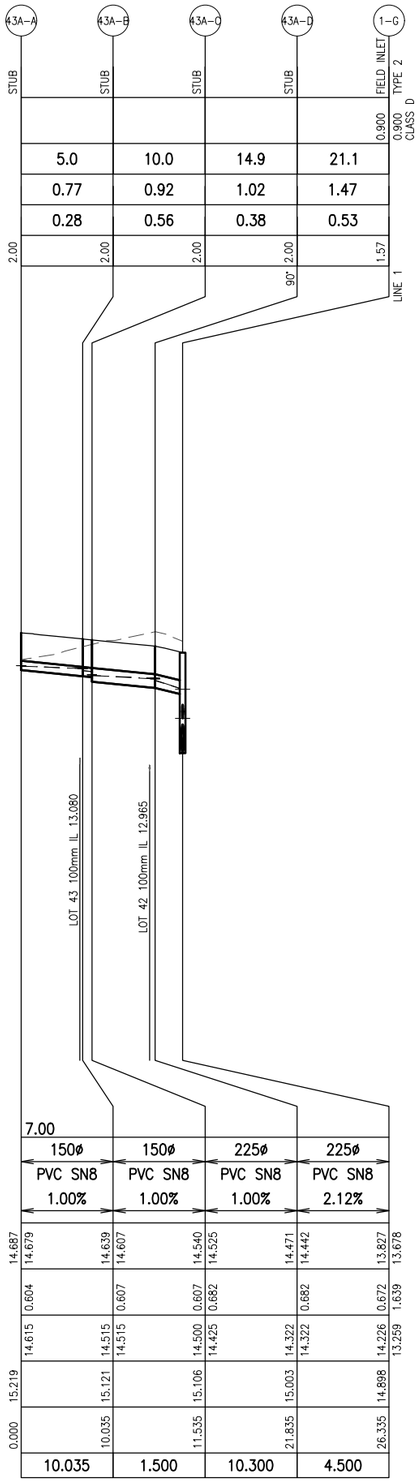
DATUM (m)				
PIPE SIZE (mm)	150ø	150ø	225ø	225ø
PIPE CLASS	PVC SN8	PVC SN8	PVC SN8	PVC SN8
PIPE GRADE (%)	1.00%	1.00%	1.00%	2.04%
HYDRAULIC GRADE LINE	14.208 / 14.200	14.156 / 14.123	14.056 / 14.042	13.987 / 13.958 / 13.408 / 13.250
DEPTH TO INVERT	0.610	0.610	0.610 / 0.685	0.685 / 0.673 / 1.656
INVERT LEVEL	14.136	14.031 / 14.031	14.016 / 13.941	13.838 / 13.838 / 13.746 / 12.762
FINISHED SURFACE LEVEL	14.746	14.641	14.626 / 14.523	14.419
PIPE CHAINAGE	0.000	10.500	12.000	22.300 / 26.807
PIPE LENGTH	10.500	1.500	10.300	4.507

LINE 39A



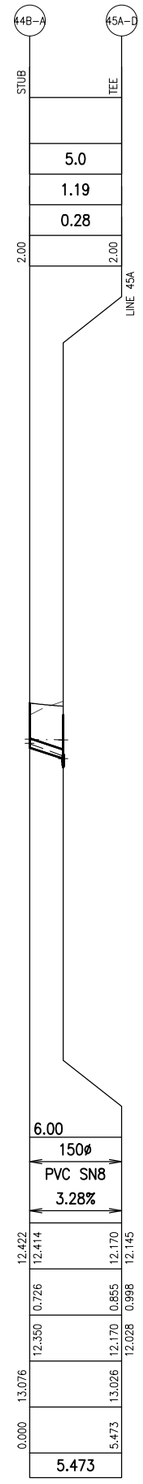
DATUM (m)				
PIPE SIZE (mm)	150ø	150ø	225ø	225ø
PIPE CLASS	PVC SN8	PVC SN8	PVC SN8	PVC SN8
PIPE GRADE (%)	1.00%	1.00%	1.00%	2.04%
HYDRAULIC GRADE LINE	14.448 / 14.440	14.396 / 14.363	14.296 / 14.282	14.227 / 14.198 / 13.593 / 13.469
DEPTH TO INVERT	0.610	0.610	0.610 / 0.685	0.685 / 0.673 / 1.756
INVERT LEVEL	14.376	14.271 / 14.271	14.256 / 14.181	14.078 / 14.078 / 13.986 / 12.902
FINISHED SURFACE LEVEL	14.986	14.881	14.866 / 14.763	14.659
PIPE CHAINAGE	0.000	10.500	12.000	22.300 / 26.807
PIPE LENGTH	10.500	1.500	10.300	4.507

LINE 41A



DATUM (m)				
PIPE SIZE (mm)	150ø	150ø	225ø	225ø
PIPE CLASS	PVC SN8	PVC SN8	PVC SN8	PVC SN8
PIPE GRADE (%)	1.00%	1.00%	1.00%	2.12%
HYDRAULIC GRADE LINE	14.687 / 14.679	14.639 / 14.607	14.540 / 14.525	14.471 / 14.442 / 13.827 / 13.678
DEPTH TO INVERT	0.604	0.607	0.607 / 0.682	0.682 / 0.672 / 1.639
INVERT LEVEL	14.615	14.515 / 14.515	14.500 / 14.425	14.322 / 14.322 / 14.226 / 13.259
FINISHED SURFACE LEVEL	15.219	15.121	15.106 / 15.003	14.898
PIPE CHAINAGE	0.000	10.035	11.535	21.835 / 26.335
PIPE LENGTH	10.035	1.500	10.300	4.500

LINE 43A



DATUM (m)		
PIPE SIZE (mm)	150ø	
PIPE CLASS	PVC SN8	
PIPE GRADE (%)	3.28%	
HYDRAULIC GRADE LINE	12.422 / 12.414	12.170 / 12.145
DEPTH TO INVERT	0.726	0.855 / 0.998
INVERT LEVEL	12.350	12.170 / 12.028
FINISHED SURFACE LEVEL	13.076	13.026
PIPE CHAINAGE	0.000	5.473
PIPE LENGTH	5.473	

LINE 44B

ROOF WATER LONGITUDINAL SECTIONS LINES 37A - 44B

SCALE A1 – 1:500(H) 1:50(V)
A3 – 1:1000(H) 1:100(V)

No.	DATE	REVISIONS	DES	DRN	CHK	APD
C	14.03.25	GENERAL AMENDEMENT	S.C.M	J.J.D	J.M.H	J.M.H
B	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
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NORTHERN NSW T 02 6674 8047 E nsw@westerapartners.com.au
CENTRAL VICTORIA T 03 5441 0922 E centralvic@westerapartners.com.au

SURVEYOR
CAPRICORN SURVEY GROUP CQ
PHONE 07 4927 5199

DATUM A.H.D.
P.M.
R.L.

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PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712
192 DEAN STREET, BERSERKER
TITLE STORMWATER LONGITUDINAL SECTIONS LINES 37A – 44B
CLIENT RUBY DEVELOPMENT PTY LTD

DRAWING STATUS: FOR CONSTRUCTION
DRAWING NUMBER: S24–018–C28
SHEET NUMBER: 28 OF 37
REVISION: C

S24–018–C_Stm_Lsec.dwg

NOTE:
ALL FIELD INLETS DISCHARGING TO THE ATLAN FILTER CARTRIDGE CHAMBER ARE TO BE FITTED WITH STORMSACKS.

ROOF WATER LONGITUDINAL SECTIONS LINES 45A - 51A

SCALE A1 – 1:500(H) 1:50(V)
A3 – 1:1000(H) 1:100(V)

No.	DATE	REVISIONS	DES	DRN	CHK	APD
C	14.03.25	GENERAL AMENDEMENT	S.C.M	J.J.D	J.M.H	J.M.H
B	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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E centralvic@westerapartners.com.au

SURVEYOR
CAPRICORN SURVEY GROUP CQ
PHONE 07 4927 5199

DATUM A.H.D.
P.M.
R.L.

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PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712
192 DEAN STREET, BERSERKER
TITLE ROOFWATER LONGITUDINAL SECTIONS LINES 45A – 51A
CLIENT RUBY DEVELOPMENT PTY LTD

DRAWING STATUS: FOR CONSTRUCTION
DRAWING NUMBER: S24-018-C29
SHEET NUMBER: 29 OF 37
REVISION: C

S24-018-C_Stm_Lsec.dwg

PIT TYPE	53A–A	53A–B	53A–C	53A–D	1–I
	STUB	STUB	STUB	STUB	FIELD INLET TYPE 2
PIT SIZE					0.900 0.900 CLASS D
PIPE FLOW (L/s)	5.0	10.0	14.9	21.3	
PART PIPE VELOCITY (m/s)	0.77	0.92	1.80	1.45	
FULL PIPE VELOCITY (m/s)	0.28	0.56	0.38	0.54	
PIT LOSS FACTOR	2.00	2.00	2.00	2.00	1.22
				–90°	LINE 1

PIT TYPE	55A–A	55A–B	55A–C	55A–D	1–H
	STUB	STUB	STUB	STUB	FIELD INLET TYPE 2
PIT SIZE					0.900 0.900 CLASS D
PIPE FLOW (L/s)	5.0	10.0	14.9	21.4	
PART PIPE VELOCITY (m/s)	0.77	0.92	1.80	1.45	
FULL PIPE VELOCITY (m/s)	0.28	0.56	0.38	0.54	
PIT LOSS FACTOR	2.00	2.00	2.00	2.00	1.42
				–90°	LINE 1

PIT TYPE	57A–A	57A–B	57A–C	57A–D	1–G
	STUB	STUB	STUB	STUB	FIELD INLET TYPE 2
PIT SIZE					0.900 0.900 CLASS D
PIPE FLOW (L/s)	5.0	10.0	14.9	14.9	
PART PIPE VELOCITY (m/s)	0.77	0.92	1.80	1.33	
FULL PIPE VELOCITY (m/s)	0.28	0.56	0.38	0.37	
PIT LOSS FACTOR	2.00	2.00	2.00	2.00	1.57
				–90°	LINE 1

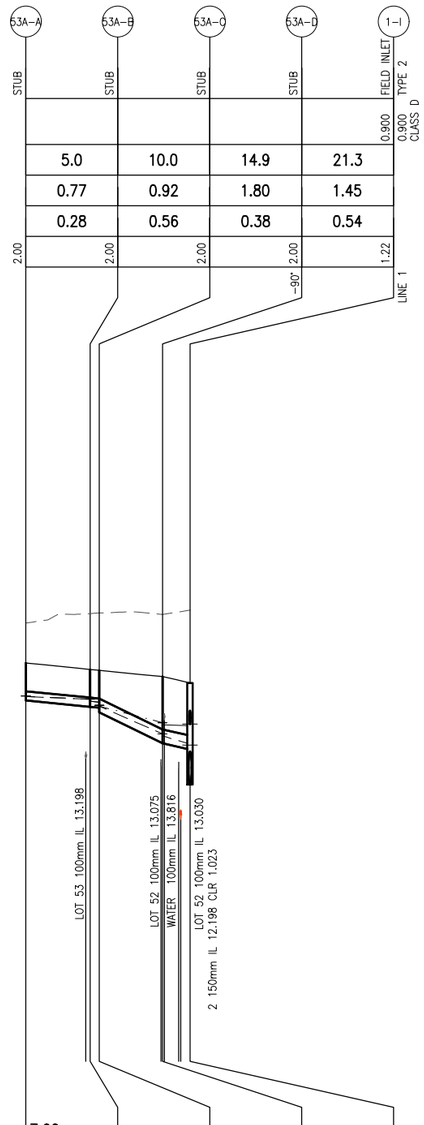
PIT TYPE	CLUB 2–A	3–A
	STUB	FIELD INLET TYPE 2
PIT SIZE		0.900 0.900 CLASS D
PIPE FLOW (L/s)	85.8	
PART PIPE VELOCITY (m/s)	2.16	
FULL PIPE VELOCITY (m/s)	2.16	
PIT LOSS FACTOR	2.00	2.09
		LINE 3

LEGEND

— — — DENOTES 5% AEP HGL

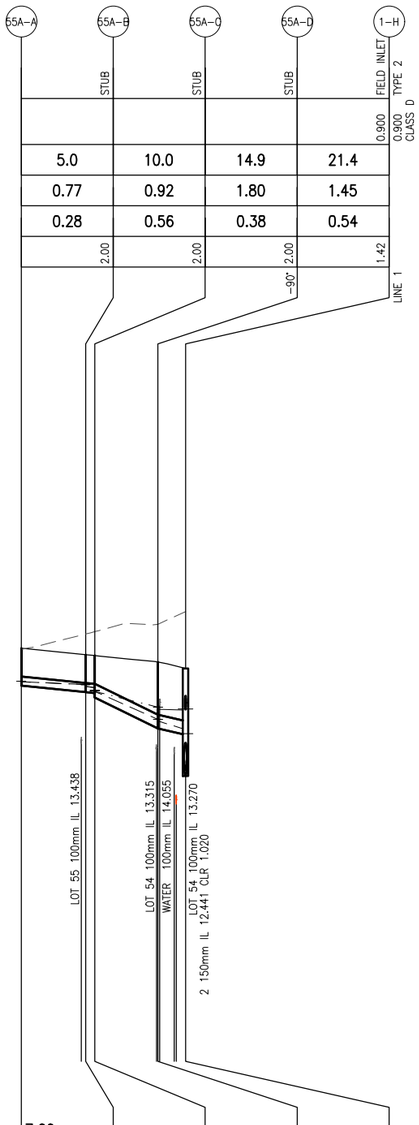
—·—·— DENOTES 1% AEP HGL

NOTE:
ALL FIELD INLETS DISCHARGING TO THE ATLAN FILTER CARTRIDGE CHAMBER ARE TO BE FITTED WITH STORMSACKS.



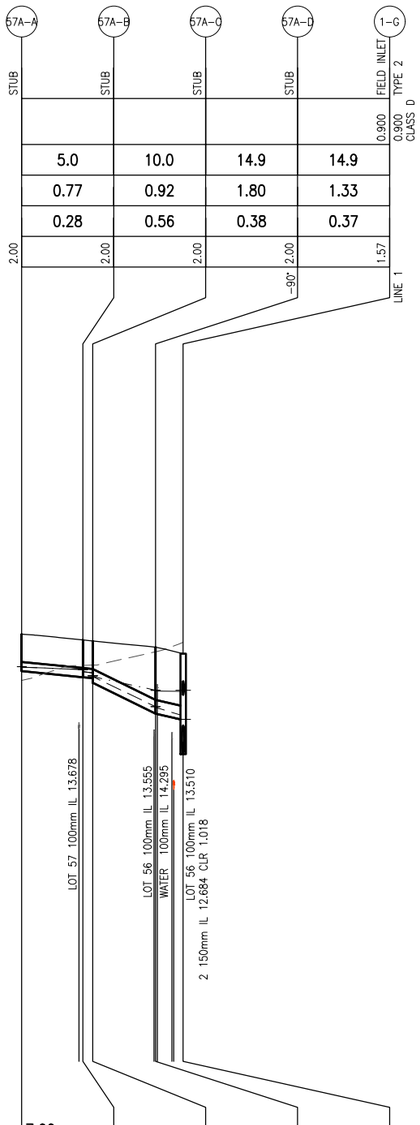
DATUM (m)	7.00				
PIPE SIZE (mm)	150ø	150ø	225ø	225ø	
PIPE CLASS	PVC SN8	PVC SN8	PVC SN8	PVC SN8	
PIPE GRADE (%)	1.00%	1.00%	4.88%	2.05%	
HYDRAULIC GRADE LINE	14.208 14.200	14.156	14.123	14.056	14.042 13.589 13.559 13.408 13.250
DEPTH TO INVERT	0.610	0.610	0.610	0.685	1.085 1.073 1.656
INVERT LEVEL	14.136	14.031	14.031	14.016	13.941 13.438 13.438 13.346 12.762
FINISHED SURFACE LEVEL	14.746	14.641	14.626	14.523	14.419
PIPE CHAINAGE	0.000	10.500	12.000	22.298	26.791
PIPE LENGTH	10.500	1.500	10.298	4.493	

LINE 53A



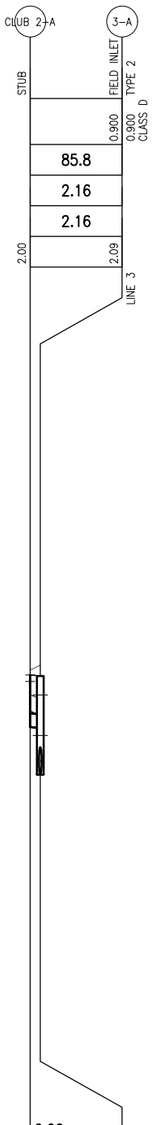
DATUM (m)	7.00				
PIPE SIZE (mm)	150ø	150ø	225ø	225ø	
PIPE CLASS	PVC SN8	PVC SN8	PVC SN8	PVC SN8	
PIPE GRADE (%)	1.00%	1.00%	4.88%	2.05%	
HYDRAULIC GRADE LINE	14.440 14.396	14.363	14.296	14.282	13.829 13.799 13.593 13.469
DEPTH TO INVERT	0.610	0.610	0.610	0.685	1.085 1.073 1.756
INVERT LEVEL	14.376	14.271	14.271	14.256	14.181 13.678 13.678 13.586 12.902
FINISHED SURFACE LEVEL	14.881	14.866	14.763	14.659	
PIPE CHAINAGE	10.499	11.999	22.298	26.791	
PIPE LENGTH	10.499	1.500	10.300	4.493	

LINE 55A



DATUM (m)	7.00				
PIPE SIZE (mm)	150ø	150ø	225ø	225ø	
PIPE CLASS	PVC SN8	PVC SN8	PVC SN8	PVC SN8	
PIPE GRADE (%)	1.00%	1.00%	4.90%	2.10%	
HYDRAULIC GRADE LINE	14.686 14.678	14.639	14.606	14.538	14.524 14.035 14.021 13.827 13.678
DEPTH TO INVERT	0.603	0.608	0.608	0.683	1.083 1.072 1.639
INVERT LEVEL	14.614	14.514	14.514	14.498	14.423 13.921 13.921 13.826 13.259
FINISHED SURFACE LEVEL	15.217	15.122	15.106	15.003	14.898
PIPE CHAINAGE	–0.400	9.587	11.185	21.435	25.935
PIPE LENGTH	9.987	1.598	10.250	4.500	

LINE 57A



DATUM (m)	6.00
PIPE SIZE (mm)	225ø
PIPE CLASS	PVC SN8
PIPE GRADE (%)	1.00%
HYDRAULIC GRADE LINE	13.444 12.970 12.565 12.518
DEPTH TO INVERT	0.848 0.849 1.610
INVERT LEVEL	12.703 12.687 11.925
FINISHED SURFACE LEVEL	13.552 13.536
PIPE CHAINAGE	0.000 1.644
PIPE LENGTH	1.644

LINE CLUB 2

ROOF WATER LONGITUDINAL SECTIONS LINES 53A - CLUB HOUSE

SCALE A1 – 1:500(H) 1:50(V)
A3 – 1:1000(H) 1:100(V)

No.	DATE	REVISIONS	DES	DRN	CHK	APD
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

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CENTRAL VICTORIA T 03 5441 0922 E centralvic@westerapartners.com.au

SURVEYOR
CAPRICORN SURVEY GROUP CQ
PHONE 07 4927 5199
DATUM A.H.D.
P.M.
R.L.

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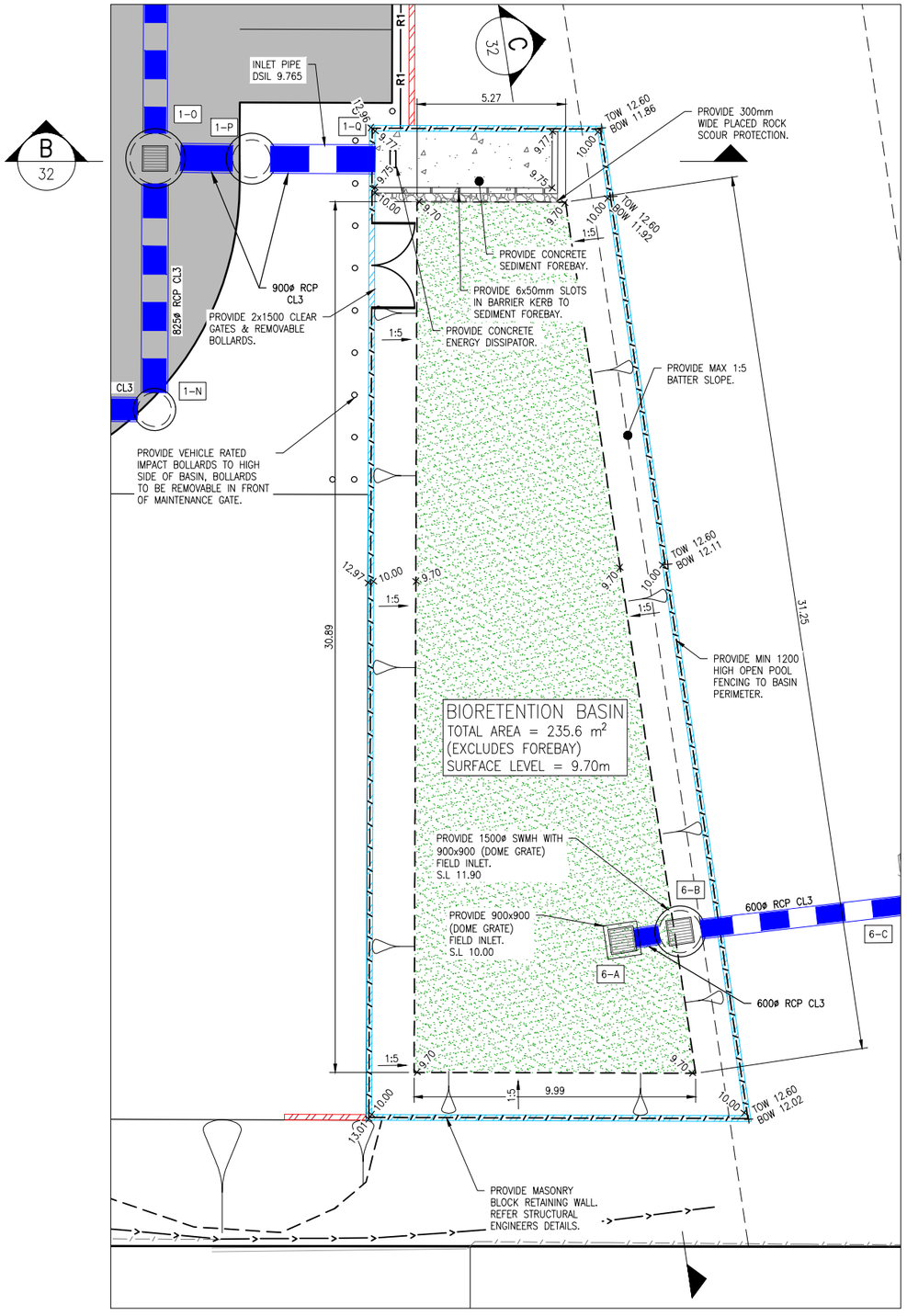
PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712
192 DEAN STREET, BERSERKER
TITLE ROOFWATER LONGITUDINAL SECTIONS LINES
53A – CLUB HOUSE
CLIENT RUBY DEVELOPMENT PTY LTD

DRAWING STATUS FOR CONSTRUCTION
DRAWING NUMBER S24–018–C30
SHEET NUMBER 30 OF 37
REVISION C

S24–018–C_Stm_Lsec.dwg



DETENTION TANK PLAN

SCALE 1:100 (A1 SIZE)

0 1 2 3 4 5

NOTE:
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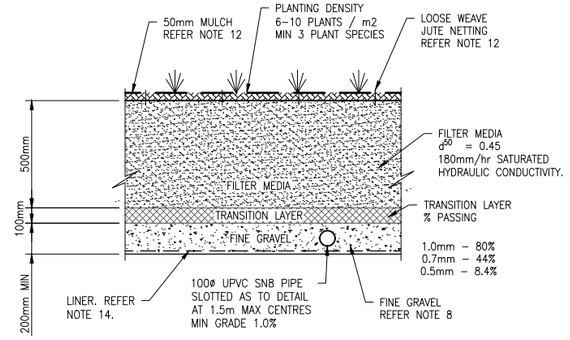
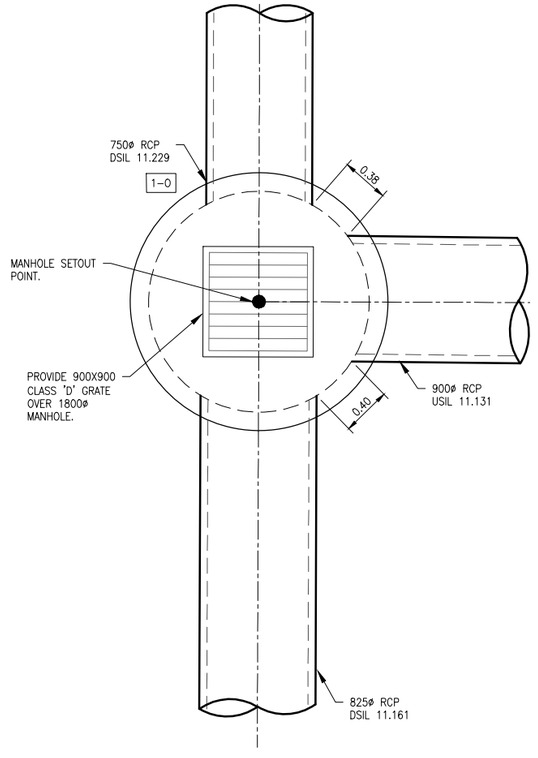


FILTER MEDIA SECTION

(NOT TO SCALE)



MANHOLE 1-O DETAIL

SCALE A1 – 1 : 25
A3 – 1 : 50

BIO–RETENTION NOTES

1. PLEASE ASK IF THERE ARE ANY DOUBTS REGARDING DETAILS SUPPLIED ON THIS DRAWING.

2. GENERAL CONSTRUCTION AND PROCUREMENT CONSIDERATIONS SHALL COMPLY WITH THE LATEST VERSION OF THE HEALTHY WATERWAYS GUIDELINE FOR CONSTRUCTION AND ESTABLISHMENT OF VEGETATED STORMWATER MANAGEMENT SYSTEMS. WHERE CONFLICT EXISTS BETWEEN THE GUIDELINE AND THE SPECIFICATIONS ON THIS DRAWING THE SPECIFICATIONS ON THIS DRAWING SHALL BE FOLLOWED.

3. THE HYDRAULIC CONDUCTIVITY OF POTENTIAL FILTER MEDIA SHOULD BE MEASURED USING THE ASTM F1815–06 METHOD. TESTING SHOULD BE UNDERTAKEN AT LEAST
   (i) ONE MONTH FOLLOWING COMMENCEMENT OF OPERATION
   (ii) IN THE SECOND YEAR OF OPERATION
   TESTING SHOULD BE CHECKED AT A MINIMUM OF THREE POINTS WITHIN THE SYSTEM.

4. THE FOLLOWING PARTICLE SIZE DISTRIBUTION FOR FILTER MEDIA IS A GUIDE FOR SELECTING AN APPROPRIATE MATERIAL

CLAY & SILT	< 3%	(<0.05mm)
VERY FINE SAND	5–30%	(<0.05 – 0.15mm)
FINE SAND	10–30%	(<0.15 – 0.25mm)
MEDIUM TO COARSE SAND	40–60%	(<0.25 – 1.0mm)
COARSE SAND	7–10%	(<1.0 – 2.0mm)
FINE GRAVEL	< 3%	(<2.0 – 3.4mm)

   THE FILTER MEDIA SHOULD BE WELL GRADED ie, IT SHOULD HAVE ALL PARTICLE SIZE RANGES PRESENT FROM THE 0.075mm TO THE 4.75mm. THERE SHOULD BE NO GAP IN THE PARTICLE SIZE GRADING, AND THE COMPOSITION SHOULD NOT BE DOMINATED BY A SMALL PARTICLE SIZE RANGE.

5. SOIL PROPERTIES AS4419–2003 (SOILS FOR LANDSCAPING & GARDEN USE) FILTER MEDIA THAT DOES NOT MEET THE FOLLOWING SPECIFICATION WILL BE REJECTED :
   i) ORGANIC MATTER CONTENT – LESS THAN 5 % (w/w)
   ii) PH – 5.5 – 7.5 iii) ELECTRICAL CONDUCTIVITY (E/C) – < 1.2dS/m
   iv) PHOSPHORUS < 100mg/kg
   v) ORTHOPHOSPHATE < 30mg/kg

6. POTENTIAL FILTER MEDIA SHOULD BE ASSESSED BY A HORTICULTURALIST TO ENSURE THAT THEY ARE CAPABLE OF SUPPORTING A HEALTHY VEGETATION COMMUNITY.

7. THE TRANSITION LAYER MATERIAL IS TO BE A CLEAN WELL GRADED SAND/COARSE SAND MATERIAL CONTAINING LITTLE OR NO FINES.

8. THE DRAINAGE LAYER IS TO BE CLEAN, FINE GRAVEL, SUCH AS 2–5mm WASHED SCREENINGS.

9. THE FILTER MATERIAL IS TO BE LIGHTLY COMPACTED DURING INSTALLATION TO PREVENT MIGRATION OF FINE PARTICLES. IN SMALL SYSTEMS, A SINGLE PASS WITH A VIBRATING PLATE, WHILE IN LARGE SYSTEMS A SINGLE PASS WITH A ROLLER MACHINERY (eg. A DRUM LAWN ROLLER) WILL BE ADEQUATE. FILTER MEDIA SHOULD BE INSTALLED IN TWO LIFTS UNLESS THE DEPTH IS LESS THAN 500mm.

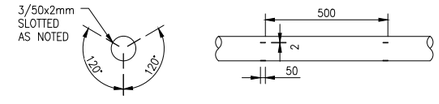
10. FILTER MEDIA SHALL COMPLY WITH THE LATEST VERSION OF THE FAWB GUIDELINES FOR SOIL FILTER MEDIA IN BIO–RETENTION SYSTEMS. WHERE CONFLICT EXISTS BETWEEN THE FAWB GUIDELINE AND THE SPECIFICATIONS ON THIS DRAWING THE SPECIFICATIONS ON THIS DRAWING SHALL BE FOLLOWED.

11. LANDSCAPING, SUCH AS PLANTING AND MULCH SHALL COMPLY WITH THE LATEST VERSION OF THE HEALTHY WATERWAYS GUIDELINE FOR CONSTRUCTION AND ESTABLISHMENT OF VEGETATED STORMWATER MANAGEMENT SYSTEMS. PLANT SPECIES AND CHARACTERISTICS MUST BE IN ACCORDANCE WITH APPENDIX A– PLANT SELECTION FRO WSUD SYSTEMS, OF THE WSUD TECHNICAL DESIGN GUIDELINES FOR SOUTH EAST QUEENSLAND VERSION 1 JUNE 2006.

12. MULCH SHALL BE ORGANIC FRIABLE MULCH THAT DEGRADES WITHIN 6 MONTHS EG. FINE SUGAR CANE OR TEA TREE MULCH. MULCH TYPE TO BE CONFIRMED WITH DESIGNER PRIOR TO PROCUREMENT OR INSTALLATION. THE MULCH SHALL BE PINNED DOWN WITH LOOSE WEAVE JUTE NETTING AND PINNED AT NOT MORE THAN 500mm CENTRES. HEAVY DUTY MATTING EG. 500gsm JUTE MAT, SHALL BE AVOIDED.

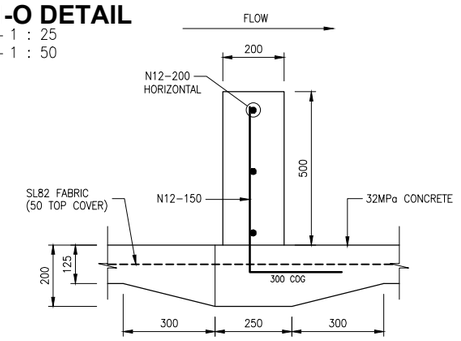
13. THE BIO–RETENTION BASIN SHALL BE PROTECTED WITH GEOTEXTILE, 75mm TOPSOIL AND TURF FOR AT LEAST 12 MONTHS AND UNTIL 80% OF HOUSES HAVE BEEN CONSTRUCTED. THE PROTECTION IS THEN TO BE REMOVED, PLANTED OUT AND MAINTAINED FOR A FURTHER 12 MONTHS.

14. THE BIO–RETENTION BASIN SHALL TYPICALLY BE LINED WITH BIDIM A34 GEOFABRIC. IMPERMEABLE PE SHEETING SHALL BE PROVIDED WHERE SITE CONDITIONS DICTATE INCLUDING STRUCTURES IN CLOSE VICINITY, PERCHED WATER TABLE OR WHERE OTHERWISE CALLED UP BY INSPECTING ENGINEER.



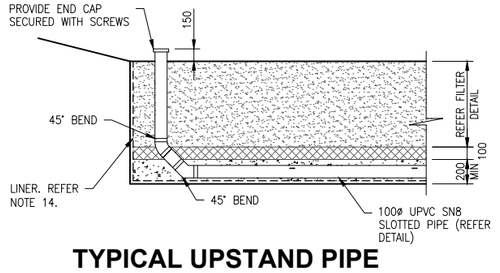
TYPICAL SLOTTED PIPE DETAILS

(NOT TO SCALE)



ENERGY DISSAPATOR DETAIL

SCALE A1 – 1 : 10
A3 – 1 : 20



TYPICAL UPSTAND PIPE DETAILS

(NOT TO SCALE)

No.	DATE	REVISIONS	DES	DRN	CHK	APD
D	14.03.25	GENERAL AMENDED	S.C.M	J.J.D	J.M.H	J.M.H
C	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
B	18.10.24	GENERAL AMENDMENT	S.C.M	J.J.D	J.M.H	J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

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NORTHERN NSW T 02 6674 8047 E nsw@westerapartners.com.au
CENTRAL VICTORIA T 03 5441 0922 E centralvic@westerapartners.com.au

SURVEYOR
CAPRICORN SURVEY GROUP CQ
PHONE 07 4927 5199

DATUM A.H.D.
P.M.
R.L.

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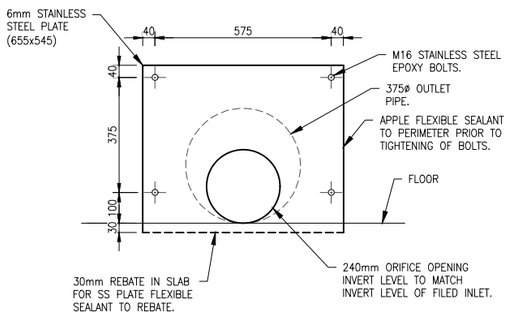
PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712
192 DEAN STREET, BERSERKER
TITLE STORMWATER DETAILS 1 of 2
CLIENT RUBY DEVELOPMENT PTY LTD

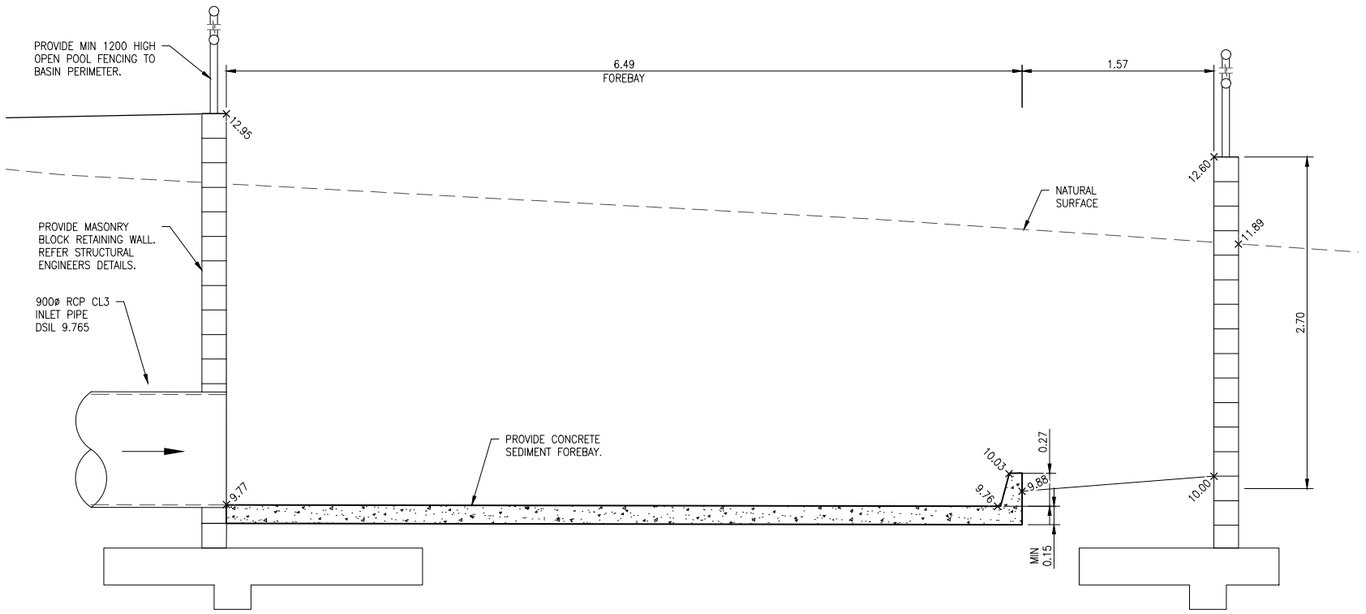
DRAWING STATUS: FOR CONSTRUCTION
DRAWING NUMBER: S24–018–C31
SHEET NUMBER: 31 OF 37
REVISION: D

S24–018–C_Stm_Det.dwg



ORIFICE PLATE DETAIL

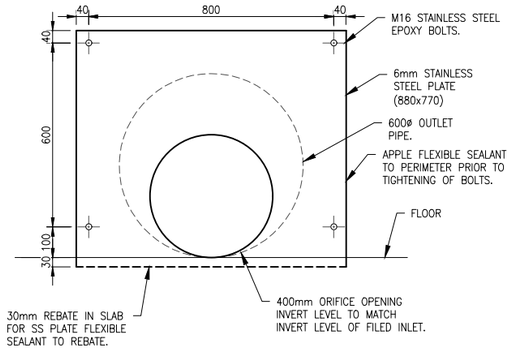
SCALE A1 – 1 : 10
A3 – 1 : 20



SECTION B

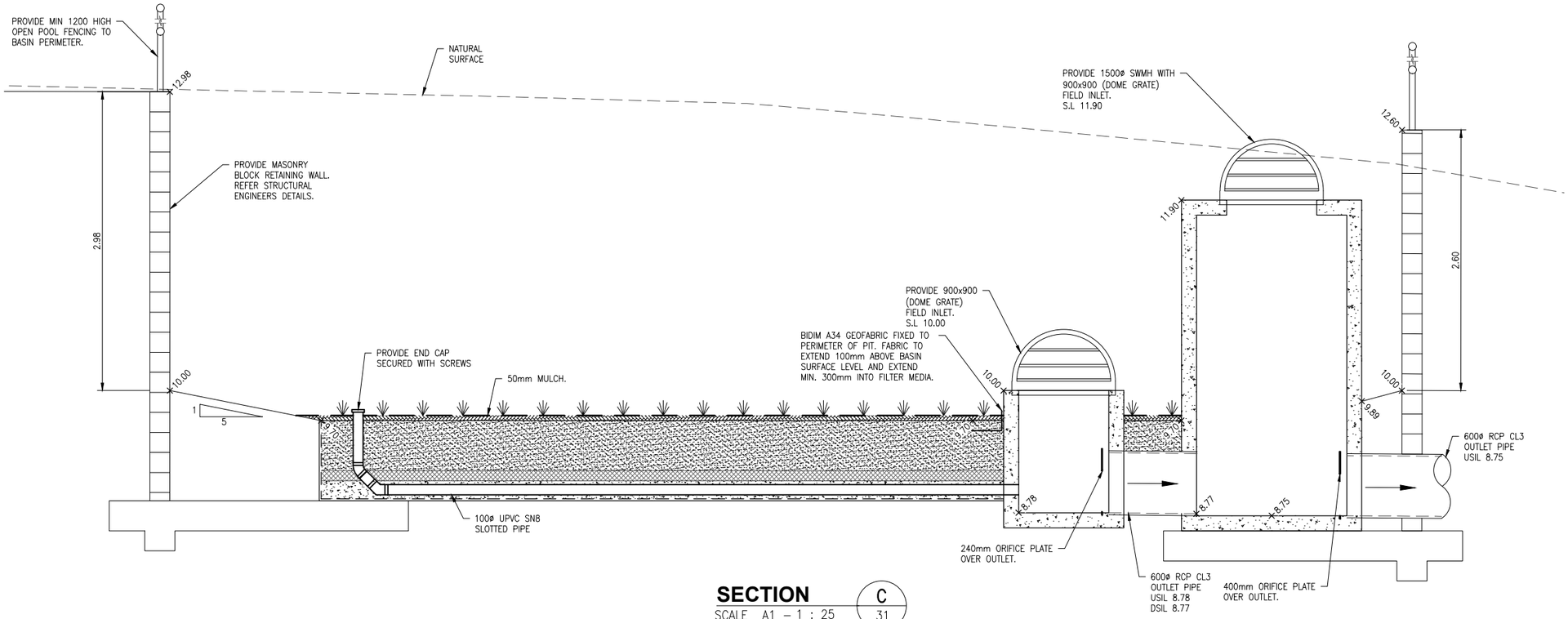
SCALE A1 – 1 : 25
A3 – 1 : 50

31



ORIFICE PLATE DETAIL

SCALE A1 – 1 : 10
A3 – 1 : 20



SECTION C

SCALE A1 – 1 : 25
A3 – 1 : 50

31

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No.	DATE	REVISIONS	DES	DRN	CHK	APD
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CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024

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APPROVED

WESTERA PARTNERS
STRUCTURAL+CIVIL+ENVIRONMENTAL ENGINEERS
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SURVEYOR
CAPRICORN SURVEY GROUP CQ
PHONE 07 4927 5199

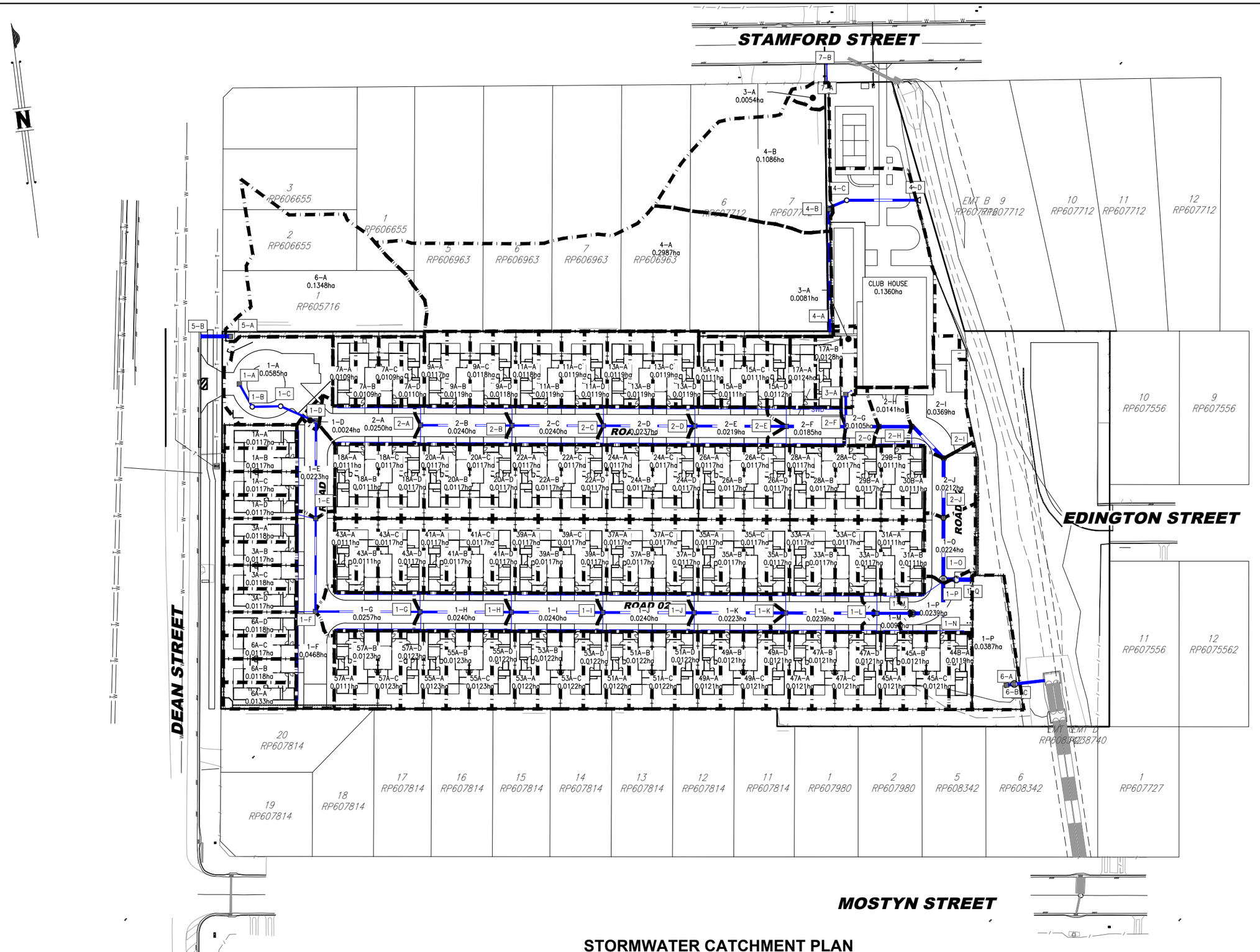
DATUM A.H.D.
P.M.
R.L.

USE FIGURED DIMENSIONS ONLY. DO NOT SCALE. IF A DISCREPANCY ARISES CHECK WITH THE PROJECT ENGINEER AND/OR SUPERVISING AUTHORITY. DO NOT WORK FROM REDUCED SCALE DRAWINGS (A1-A3 SIZE PAPER). COPYRIGHT OF ALL DRAWINGS & WORKS EXECUTED FROM THEM IS VESTED IN WESTERA PARTNERS AND USE OF THERE FORE WITHOUT PERMISSION IS STRICTLY PROHIBITED! IT IS THE BUILDERS RESPONSIBILITY TO ENSURE ALL WORKS ARE CARRIED OUT WITH DUE CARE AND DILIGENCE TO COMPLY WITH THE CONTRACT DOCUMENTS.

PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712
192 DEAN STREET, BERSERKER
TITLE STORMWATER DETAILS 2 of 2
CLIENT RUBY DEVELOPMENT PTY LTD

DRAWING STATUS: FOR CONSTRUCTION
DRAWING NUMBER: S24-018-C32
SHEET NUMBER: 32 OF 37
REVISION: D

S24-018-C_Stm_Det.dwg



STORMWATER CATCHMENT PLAN

SCALE 1:500 (A1 SIZE)

0 5 10 15 20 25

NOTE:
ALL FIELD INLETS DISCHARGING TO THE ATLAN FILTER CARTRIDGE CHAMBER ARE TO BE FITTED WITH STORMSACKS.

No.	DATE	REVISIONS	DES	DRN	CHK	APD
F	14.03.25	GENERAL AMENDED	S.C.M	J.J.D	J.M.H	J.M.H
E	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
D	08.11.24	RETAINING WALL UPDATE	S.C.M	J.J.D	J.M.H	J.M.H
C	29.10.24	GENERAL AMENDEMENT	S.C.M	J.J.D	J.M.H	J.M.H
B	18.10.24	GENERAL AMENDMENT	S.C.M	J.J.D	J.M.H	J.M.H

DOCUMENT CONTROL
DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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PROJECT: PROPOSED RETIREMENT LIVING ESTATE
LOCATION: LOT 24 ON RP607814 & LOT 8 ON RP607712
192 DEAN STREET, BERSERKER
TITLE: STORMWATER CATCHMENT PLAN
CLIENT: RUBY DEVELOPMENT PTY LTD

DRAWING STATUS: FOR CONSTRUCTION
DRAWING NUMBER: S24-018-C33
SHEET NUMBER: 33 OF 37
REVISION: F

S24-018-C_Stm_Catch.dwg

5% AEP HYDROLOGY

Node	Node	Setout	Setout	Setout	Grate	Cover	Road	Road	Road	Catch	Time	Intensity	Runoff	Area	Full	Full	Full	Partial	Partial	Partial	Catchment	Direct	Approach	Road	Flooded	Max Pond	Choke	Inlet	Inlet	Bypass	Bypass
Name	Type	Easting	Northing	RL	RL	RL	Name	Chainage	Offset	ID	Tc	I	C	A	CA	Sum CA	Qc=CIA	CA	Sum CA	Qc=CIA	Flow Qc	Flow Qdg	Flow Qa	Capacity	Depth	Depth	Factor	Curve Name	Flow Qg	Flow Qb	Node
(-)	(-)	(m)	(m)	(m)	(m)	(m)	(-)	(m)	(m)	(-)	(min)	(mm/hr)	(-)	(ha)	(ha)	(ha)	(L/s)	(ha)	(ha)	(L/s)	(L/s)	(L/s)	(L/s)	(L/s)	(m)	(m)	(-)	(-)	(L/s)	(L/s)	(-)
1-A	FIELD INLET 900x900	248036.19	7414221.23	14.99	14.99	14.99				1P	5	230	0.81	0.0322	0.026	0.048	30.7	0.026	0.048	30.7	30.7		30.7	55	0.047	0.07	0.5	SAG	30.7		-
										1I	5	230	0.83	0.0263	0.0219			0.0219													
1-B	MH1050	248038.83	7414214.83	15.25	15.25	15.25																									-
1-C	MH1050	248046.25	7414214.08	15.53	15.53	15.53																									-
1-D	FIELD INLET 900x900	248055.02	7414209.14	15.92	15.92	15.92				1P	5	230	0.92	0.0002	0.0002	0.002	1.3	0.0002	0.002	1.3	1.3		1.3	33	0.004	0.05	0.5	SAG	1.3		1-E
										1I	5	230	0.83	0.0022	0.0018			0.0018													
1-E	FIELD INLET 900x900	248051.89	7414183.71	15.54	15.54	15.54				1P	5	230	0.92	0.0022	0.0021	0.0188	12	0.0021	0.0188	12	12		17	33	0.029	0.05	0.5	SAG	17		1-F
										1I	5	230	0.83	0.0201	0.0167			0.0167													
1-F	FIELD INLET 900x900	248048.9	7414159.49	15.17	15.17	15.17	ROAD 02	371.73	0	1P	5	230	0.92	0.0047	0.0043	0.0394	25.2	0.0043	0.0394	25.2	25.2		34.7	33	0.05	0.05	0.5	SAG	33	1.7	1-G
										1I	5	230	0.83	0.0421	0.0351			0.0351													
1-G	FIELD INLET 900x900	248076.14	7414156.13	14.9	14.9	14.9	ROAD 02	344.28	0	1P	5	230	0.92	0.0026	0.0024	0.0216	13.8	0.0024	0.0216	13.8	13.8		22.2	33	0.036	0.05	0.5	SAG	22.2		1-H
										1I	5	230	0.83	0.0231	0.0192			0.0192													
1-H	FIELD INLET 900x900	248099.96	7414153.18	14.66	14.66	14.66	ROAD 02	320.28	-0.01	1P	5	230	0.92	0.0024	0.0022	0.0202	12.9	0.0022	0.0202	12.9	12.9		21.2	33	0.034	0.05	0.5	SAG	21.2		1-I
										1I	5	230	0.83	0.0216	0.018			0.018													
1-I	FIELD INLET 900x900	248123.78	7414150.24	14.42	14.42	14.42	ROAD 02	296.28	-0.01	1P	5	230	0.92	0.0024	0.0022	0.0202	12.9	0.0022	0.0202	12.9	12.9		21.1	33	0.034	0.05	0.5	SAG	21.1		1-J
										1I	5	230	0.83	0.0216	0.018			0.018													
1-J	FIELD INLET 900x900	248147.6	7414147.31	14.18	14.18	14.18	ROAD 02	272.28	-0.01	1P	5	230	0.92	0.0024	0.0022	0.0202	12.9	0.0022	0.0202	12.9	12.9		21	33	0.034	0.05	0.5	SAG	21		1-K
										1I	5	230	0.83	0.0216	0.018			0.018													
1-K	FIELD INLET 900x900	248171.42	7414144.38	13.82	13.82	13.82	ROAD 02	248.28	0	1P	5	230	0.92	0.0022	0.0021	0.0188	12	0.0021	0.0188	12	12		20.1	33	0.033	0.05	0.5	SAG	20.1		1-L
										1I	5	230	0.83	0.0201	0.0167			0.0167													
1-L	FIELD INLET 900x900	248195.19	7414141.44	13.11	13.11	13.11	ROAD 02	224.33	0	1P	5	230	0.92	0.0024	0.0022	0.0202	12.9	0.0022	0.0202	12.9	12.9		20.9	33	0.034	0.05	0.5	SAG	20.9		1-M
										1I	5	230	0.83	0.0215	0.0179			0.0179													
1-M	FIELD INLET 900x900 1350 dia	248204.45	7414140.3	12.92	12.92	12.92	ROAD 02	215	0	1P	5	230	0.92	0.001	0.0009	0.0081	5.2	0.0009	0.0081	5.2	5.2		7.5	33	0.016	0.05	0.5	SAG	7.5		LOST
										1I	5	230	0.83	0.0086	0.0072			0.0072													
1-N	MH1200	248212.46	7414139.31	12.94	12.94	12.94																									-
1-O	FIELD INLET 900x900 1800 dia	248213.55	7414148.15	12.79	12.79	12.79				1P	5	230	0.92	0.0023	0.0021	0.0192	12.2	0.0021	0.0192	12.2	12.2		12.2	33	0.022	0.05	0.5	SAG	12.2		-
										1I	5	230	0.83	0.0205	0.0171			0.0171													
1-P	MH1350	248216.95	7414147.73	12.87	12.87	12.87																									-
1-Q	HW outlet	248221.29	7414147.19	9.77	12.27	12.27																									-
1A-A	GEMLIFE ROOFWATER STUB	248050.24	7414207.17	15.99	15.99	15.99				1I	5	230	0.83	0.0117	0.0098	0.0098	6.2	0.0098	0.0098	6.2	6.2		6.2	5	-1	0	0.5	SAG	5	1.2	1-E
1A-B	GEMLIFE ROOFWATER STUB	248049.02	7414197.26	15.85	15.85	15.85				1I	5	230	0.83	0.0117	0.0098	0.0098	6.2	0.0098	0.0098	6.2	6.2		6.2	5	-1	0	0.5	SAG	5	1.2	1-E
1A-C	GEMLIFE ROOFWATER STUB	248048.82	7414195.67	15.82	15.82	15.82				1I	5	230	0.83	0.0117	0.0098	0.0098	6.2	0.0098	0.0098	6.2	6.2		6.2	5	-1	0	0.5	SAG	5	1.2	1-E
1A-D	GEMLIFE ROOFWATER STUB	248047.54	7414185.26	15.66	15.66	15.66				1I	5	230	0.83	0.0117	0.0098	0.0098	6.2	0.0098	0.0098	6.2	6.2		6.2	5	-1	0	0.5	SAG	5	1.2	1-E
2-A	FIELD INLET 900x900	248082.14	7414204.76	15.63	15.63	15.63				1P	5	230	0.92	0.0025	0.0023	0.0211	13.5	0.0023	0.0211	13.5	13.5		18.9	33	0.031	0.05	0.5	SAG	18.9		2-B
										1I	5	230	0.83	0.0225	0.0188			0.0188													
2-B	FIELD INLET 900x900	248105.96	7414201.83	15.39	15.39	15.39				1P	5	230	0.92	0.0024	0.0022	0.0202	12.9	0.0022	0.0202	12.9	12.9		20.5	33	0.033	0.05	0.5	SAG	20.5		2-C
										1I	5	230	0.83	0.0216	0.018			0.018													
2-C	FIELD INLET 900x900	248129.78	7414198.89	15.15	15.15	15.15				1P	5	230	0.92	0.0024	0.0022	0.0202	12.9	0.0022	0.0202	12.9	12.9		20.5	33	0.033	0.05	0.5	SAG	20.5		2-D
										1I	5	230	0.83	0.0216	0.018			0.018													
2-D	FIELD INLET 900x900	248153.6	7414195.95	14.89	14.89	14.89				1P	5	230	0.92	0.0024	0.0022	0.02	12.7	0.0022	0.02	12.7	12.7		20.4	33	0.033	0.05	0.5	SAG	20.4		2-E
										1I	5	230	0.83	0.0213	0.0178			0.0178													
2-E	FIELD INLET 900x900	248177.42	7414193.01	13.97	13.97	13.97	ROAD 02	123.45	0	1P	5	230	0.92	0.0022	0.002	0.0185	11.8	0.002	0.0185	11.8	11.8		18.2	33	0.03	0.05	0.5	SAG	18.2		2-F
										1I	5	230	0.83	0.0197	0.0164			0.0164													
2-F	FIELD INLET 900x900	248192.96	7414191.1	13.41	13.41	13.41	ROAD 02	139.11	-0.01	1P	5	230	0.92	0.0018	0.0017	0.0156	9.9	0.0017	0.0156	9.9	9.9		19.1	33	0.032	0.05	0.5	SAG	19.1		2-G
										1I	5	230	0.83	0.0166	0.0139			0.0139													
2-G	FIELD INLET 900x900	248201.54	7414190.04	13.32	13.32	13.32	ROAD 02	147.76	-0.01	1P	5	230	0.92	0.001	0.001	0.0088	5.6	0.001	0.0088	5.6	5.6		5.6	66	0.009	0.05	1	SAG	5.6		2-H
										1I	5	230	0.83	0.0094	0.0078			0.0078													
2-H	FIELD INLET 900x900 1350 dia	248210.12	7414188.98	13.24	13.24	13.24	ROAD 02	156.4	-0.01	1P	5	230	0.92	0.0014	0.0013	0.0119	7.6	0.0013	0.0119	7.6	7.6		8.8	33	0.018	0.05	0.5	SAG	8.8		2-I
										1I	5	230	0.83	0.0127	0.0106			0.0106													
2-I	FIELD INLET 900x900 1350 dia	248217.44	7414179.71	13.1	13.1	13.1	ROAD 02	169.67	0	1P	5	230	0.92	0.0037	0.0034	0.0311	19.8	0.0034	0.0311	19.8	19.8		20.8	33	0.034	0.05	0.5	SAG	20.8		2-J
										1I	5	230	0.83	0.0332	0.0276			0.0276													
2-J	FIELD INLET 900x900 1350 dia	248215.53	7414164.23	12.95	12.95	12.95				1P	5	230	0.92	0.0021	0.002	0.0178	11.4	0.002	0.0178	11.4	11.4		11.4	33	0.021	0.05	0.5	SAG	11.4		1-O
										1I	5	230	0.83	0.0191	0.0159			0.0159													
3-A	FIELD INLET 900x900	248193.92	7414199.43	13.54	13.54	13.54				1P	10	193	0.75	0.0065	0.0048	0.0062	3.3	0.0024	0.0038	2.4	3.3		3.3	0	0	-0.039	0.5	SAG	0	3.3	2-F
										1I	5	230	0.83	0.0016	0.0013			0.0013													
3A-A	GEMLIFE ROOFWATER STUB	248047.23	7414182.77	15.62	15.62	15.62				1I	5	230	0.83	0.0118	0.0098	0.0098	6.3	0.0098	0.0098	6.3	6.3		6.3	5	-1	0	0.5	SAG	5	1.3	1-F
3A-B	GEMLIFE ROOFWATER STUB	248045.99	7414172.86	15.51	15.51	15.51				1I	5	230	0.83	0.0117	0.0098	0.0098	6.2	0.0098	0.0098	6.2	6.2		6.2	5	-1	0	0.5	SAG	5	1.2	1-F
3A-C	GEMLIFE ROOFWATER STUB	248045.8	7414171.27	15.49	15.49	15.49				1I	5	230	0.83	0.0118	0.0098	0.0098	6.3	0.0098	0.0098	6.3	6.3		6.3	5	-1	0	0.5	SAG	5	1.3	1-F
3A-D	GEMLIFE ROOFWATER STUB	248044.59	7414161.37	15.3	15.3	15.3				1I	5	230	0.83	0.0117	0.0097	0.0097	6.2	0.0097	0.0097	6.2	6.2		6.2	5	-1	0	0.5	SAG	5	1.2	1-F
3A-E	TEE	248044.43	7414160.04	15.28	15.28	15.28																	0		0	0	0.5		0		-
4-A	FIELD INLET 900x900	248191.87	7414215.74	13.71	13.71	13.71				1P	13	176.2	0.75	0.1792	0.1336	0.2331	114.1	0.0514	0.1509	96.4	114.1		114.1	94	0.113	0.1	0.5	SAG	114.1		-
										1I	5	230	0.83	0.1195	0.0995			0.0995													
4-B	FIELD INLET 900x900	248195.39	7414248.22	13.8	13.8	13.8				1P	13	176.2	0.75	0.0652	0.0486	0.0848	41.5	0.0187	0.0549	35.1	41.5		41.5		0.058	-0.305	0.5	SAG	41.5		-
										1I	5	230	0.83	0.0434	0.0362			0.0362													
4-C	MH1050	248200.26	7414250.04	13.68	13.72	13.72																									-
4-D	HW OUT	248218.8	7414247.85	13.24	13.2	13.24																									-
5-A	FIELD INLET 900x900	248035.35	7414233.87	15.46	15.46	15.46				1P	13	176.2	0.75	0.0809	0.0603	0.1052	51.5	0.0232	0.0681	43.5	51.5		51.5	384.8	0.067	0.255	0.5	SAG	51.5		-
										1I	5	230	0.83	0.0539	0.0449			0.0449													
5-B	HW OUT	248027.59	7414234.83	15.24	15.24	15.24																									-
6-A	FIELD INLET 900x900	248226.7	7414118.64	10	10	10																	0		0		1		0		-
6-B	FIELD INLET 900x900 1500 dia	248228.77	7414118.7	9.65	11.9	11.9																									-
6-C	HW outlet	248236.77	7414118.67	8.45	10.63	0																									-
6A-A	GEMLIFE ROOFWATER STUB	248041.58	7414136.97	15.53	15.53	15.53				1I	5	230	0.83	0.0133	0.0111	0.0111	7.1	0.0111	0.0111	7.1	7.1		7.1	5	-1	0	0.5	SAG	5	2.1	1-F
6A-B	GEMLIFE ROOFWATER STUB	248042.8	7414146.88	15.41	15.41	15.41				1I	5	230	0.83	0.0118	0.0099	0.0099	6.3	0.0099	0.0099	6.3	6.3		6.3	5	-1	0	0.5	SAG	5	1.3	1-F
6A-C	GEMLIFE ROOFWATER STUB	248043	7414148.47	15.39	15.39	15.39				1I	5	230	0.83	0.0117	0.0097	0.0097	6.2	0.0097	0.0097	6.2	6.2		6.2	5	-1	0	0.5	SAG	5	1.2	1-F
6A-D	GEMLIFE ROOFWATER STUB	248044.22	7414158.38	15.29	15.29	15.29				1I	5	230	0.83	0.0118	0.0098	0.0098	6.3	0.0098	0.0098	6.3	6.3		6.3	5	-1	0	0.5	SAG	6.3		-
7-A	FIELD INLET 900x900	248198.73	7414280.31	13.92	13.92	13.92				1P	13	176.2	0.75	0.0032	0.0024	0.0042	2.1	0.0009	0.0027	1.7	2.1		2.1		0.007	-0.034	0.5	SAG	2.1		-
										1I	5	230	0.83	0.0022	0.0018			0.0018													
7-B	HW outlet	248199.38	7414286.27	13.82	13.92	13.92																									-

No.	DATE	REVISIONS	DES	DRN	CHK	APD
D	14.03.25	GENERAL AMENDED	S.C.M	J.J.D	J.M.H	J.M.H
C	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
B	18.10.24	GENERAL AMENDMENT	S.C.M	J.J.D	J.M.H	J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

WESTERA PARTNERS
STRUCTURAL+CIVIL+ENVIRONMENTAL ENGINEERS
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PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE STORMWATER CALCULATIONS 5% AEP HYDROLOGY
CLIENT RUBY DEVELOPMENT PTY LTD

DRAWING STATUS FOR CONSTRUCTION
DRAWING NUMBER S24-018-C34
SHEET NUMBER 34 OF 37
REVISION D

S24-018-C_Stm_Calc.dwg

5% AEP HYDRAULICS

Pipe ID	Pipe Type	Pipe Length	Pipe Size	Full Pipe Af	Pipe Grade	Pipe Grade	Full-area Tct	Full-area I	Full-area Sum CA	Full-area Qc=CIA	Part-area Tct	Part-area I	Part-area Sum CA	Part-area Qc=CIA	Catchment Flow Qc	Direct Node Flow Qdg	Peak Flow Qrat	Net Bypass Flow Qb	Pipe Flow Q	Excess Pipe Flow Qx	Capacity Flow Qcap	Q/Qcap Ratio	Full Pipe Vel Vf=Q/Af	Norm Depth Vel Vn=Q/An	Crit Depth Vel Vc=Q/Ac	Capacity Vel Vcap=Qcap/Af	US Node Grate RL	Pipe US IL	Pipe DS IL	DS Node Grate RL	Cover Limit	Cover Min	Pipe DS Bend	Pipe DS Drop	US Node Ku	US Node Kw	Pipe V'head	P'head Loss (Ku.V'head)	WSE Loss (Kw.V'head)	Pipe T'head Loss	US Node HGL	Pipe US HGL	Pipe DS HGL	DS Node HGL	HGL Grade	HGL Grade	F'board US
(-)	(-)	(m)	(mm)	(sq.m)	(%)	(1 in)	(min)	(mm/hr)	(ha)	(L/s)	(min)	(mm/hr)	(ha)	(L/s)	(L/s)	(L/s)	(L/s)	(L/s)	(L/s)	(L/s)	(L/s)	(-)	(m/s)	(m/s)	(m/s)	(m/s)	(m)	(m)	(m)	(m)	(m)	(m)	(deg)	(m)	(-)	(-)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(%)	(1 in)	(m)
1-A to 1-B	RCP CL3	6.91	375	0.11	0.5	200	5	230	0.048	30.7	5	230	0.048	30.7	30.7		30.7		30.7		124	0.25	0.28	0.93	0.95	1.12	14.99	14.18	14.15	15.25	0.6	0.45	-61.8	0.02	9.7		0	0.04		0.03	14.35	14.31	14.28	14.27	0.52	191	0.64
1-B to 1-C	RCP CL3	7.47	375	0.11	1	100	5.06	229.57	0.048	30.6	5.06	229.57	0.048	30.6	30.6		30.6		30.6		175.4	0.17	0.28	1.19	0.95	1.59	15.25	14.13	14.06	15.53	1.1	0.77	23.7	0.02	2.39	2.68	0	0.01	0.01	0.05	14.27	14.26	14.24	14.24	0.23	439.7	0.98
1-C to 1-D	RCP CL3	10.07	375	0.11	1	100	5.12	229.11	0.048	30.5	5.12	229.11	0.048	30.5	30.5		30.5		30.5		175.4	0.17	0.28	1.19	0.95	1.59	15.53	14.04	13.93	15.92	1.1	1.14	67.6	0.02	1.77	2.13	0	0.01	0.01	0.01	14.24	14.23	14.23	14.24	-0.03	-3375.2	1.29
1-D to 1-E	RCP CL3	25.62	375	0.11	1.02	97.7	5.2	228.49	0.05	31.7	5	230	0.0481	30.7	31.7		31.7		31.7		177.5	0.18	0.29	1.22	0.96	1.61	15.92	13.91	13.65	15.54	1.1	1.52	0	0.02	2.52	2.78	0	0.01	0.01	0.01	14.24	14.22	14.22	14.23	0.03	3869.9	1.69
1-E to 1-F	RCP CL3	24.41	375	0.11	0.5	200	5.42	226.91	0.1079	68	5.22	228.35	0.106	67.3	68		68		68		124	0.55	0.62	1.15	1.21	1.12	15.54	13.63	13.51	15.17	1.1	1.29	-90	0.02	1.85	2.31	0.02	0.04	0.04	0.04	14.23	14.18	14.14	14.18	0.15	664.9	1.31
1-F to 1-G	RCP CL3	27.44	375	0.11	0.5	202	5.62	225.41	0.2269	142.1	5.43	226.85	0.225	141.8	142.1		142.1	-1.7	140.3		123.4	1.14	1.27	1.27	1.61	1.12	15.17	13.49	13.35	14.9	1.1	1.17	0	0.095	2.06	2.51	0.08	0.17	0.21	0.18	14.18	13.98	13.8	13.83	0.64	156.2	0.99
1-G to 1-H	RCP CL3	24	450	0.159	1.09	91.5	10.12	192.31	0.3162	168.9	5.65	225.16	0.3139	196.3	196.3		196.3		196.3		298.2	0.66	1.23	2	1.67	1.87	14.9	13.26	13	14.66	1.1	1.18	0	0.095	1.57	1.92	0.08	0.12	0.15	0.11	13.83	13.68	13.57	13.59	0.44	225.9	1.07
1-H to 1-I	RCP CL3	24	525	0.216	0.5	200	10.32	191.19	0.4162	221.1	5.77	224.29	0.413	257.3	257.3		257.3		257.3		304.2	0.85	1.19	1.58	1.72	1.41	14.66	12.9	12.78	14.42	1.1	1.12	0	0.02	1.42	1.71	0.07	0.1	0.12	0.09	13.59	13.47	13.38	13.41	0.36	279.6	1.07
1-I to 1-J	RCP CL3	24	525	0.216	0.5	200	10.52	190.07	0.5161	272.5	5.87	223.56	0.5113	317.5	317.5		317.5		317.5		304.2	1.04	1.47	1.59	1.88	1.41	14.42	12.76	12.64	14.18	1.1	1.02	0	0.075	1.22	1.45	0.11	0.13	0.16	0.11	13.41	13.25	13.14	13.16	0.46	217.3	1.01
1-J to 1-K	RCP CL3	24	600	0.283	0.5	200	10.72	188.95	0.6159	323.3	6.06	222.18	0.6108	377	377		377		377		434.4	0.87	1.33	1.73	1.87	1.54	14.18	12.57	12.45	13.82	1.1	0.79	0	0.02	1.07	1.26	0.09	0.1	0.11	0.09	13.16	13.04	12.98	12.99	0.28	360.4	1.02
1-K to 1-L	RCP CL3	23.95	600	0.283	2.7	37.1	10.92	187.83	0.7141	372.6	6.23	220.88	0.7084	434.7	434.7		434.7		434.7		1009	0.43	1.54	3.43	1.99	3.57	13.82	12.43	11.78	13.11	1.1	0.74	0	0.02	0.96	1.12	0.12	0.12	0.14	0.58	12.99	12.86	12.36	12.38	2.1	47.7	0.83
1-L to 1-M	RCP CL3	9.33	600	0.283	2.51	39.9	11.12	186.71	0.8136	422	6.38	219.82	0.8065	492.5	492.5		492.5		492.5		972.7	0.51	1.74	3.45	2.12	3.44	13.11	11.76	11.53	12.92	1.1	0.72	0	0.112	0.88	1.02	0.15	0.14	0.16	0.17	12.38	12.22	12.12	12.12	1.07	93.5	0.73
1-M to 1-N	RCP CL3	8.07	750	0.442	1	100	11.2	186.28	0.8217	425.2	6.45	219.24	0.8146	496.1	496.1		496.1	2.4	498.5		1113.7	0.45	1.13	2.45	1.88	2.52	12.92	11.42	11.33	12.94	1.1	0.75	-90	0.095			0.06			0.01	12.12	12.12	12.11	12.14	0.14	718.8	0.8
1-N to 1-O	RCP CL3	8.91	825	0.535	0.88	113.5	11.27	185.9	0.8619	445.1	6.52	218.76	0.8547	519.4	519.4		519.4	-3.3	516.1		1348	0.38	0.97	2.35	1.83	2.52	12.94	11.24	11.16	12.79	1.1	0.8	90	0.03	2.15	2.69	0.05	0.1	0.13	0.01	12.14	12.01	12	12.07	0.08	1325.7	0.8
1-O to 1-P	RCP CL3	3.42	900	0.636	1	100	11.34	185.49	1.6686	859.7	6.46	219.19	1.6534	1006.7	1006.7	13.4	1020.1	-5.1	1014.9		1811.2	0.56	1.6	2.93	2.27	2.85	12.79	11.13	11.1	12.87	1.1	0.77	0	1.288	2.11	2.66	0.13	0.27	0.35	0	12.07	11.73	11.58	10.75	4.34	23	0.71
1-P to 1-Q	RCP CL3	4.38	900	0.636	1	100	11.37	185.33	1.6686	859	6.49	218.98	1.6534	1005.7	1005.7	13.4	1019.1	-5.1	1013.9		1811.1	0.56	1.59	2.93	2.27	2.85	12.87	9.81	9.77	12.27	1.1	2.17	0		2.09	2.66	0.13	0.27	0.34	0	10.75	10.4	10.25	10.25	3.61	27.7	2.12
1A-A to 1A-B	PVC SN8	9.98	150	0.018	1	100	5	230	0.0098	6.2	5	230	0.0098	6.2	6.2		6.2	-1.2	5		15.2	0.33	0.28	0.77	0.69	0.86	15.99	15.32	15.22	15.85	1.1	0.48	0	0	2		0	0.01		0.06	15.39	15.38	15.34	15.34	0.4	253	0.6
1A-B to 1A-C	PVC SN8	1.6	150	0.018	1	100	5.08	229.38	0.0195	12.5	5	230	0.0194	12.4	12.5		12.5	-2.5	10		15.2	0.65	0.56	0.92	0.87	0.86	15.85	15.22	15.2	15.82	1.1	0.46	0	0.075	2		0.02	0.03		0.02	15.34	15.31	15.29	15.24	1.23	81.1	0.51
1A-C to 1A-D	PVC SN8	10.49	225	0.04	4.81	20.8	5.1	229.29	0.0293	18.7	5.01	229.9	0.0292	18.6	18.7		18.7	-3.7	14.9		98.5	0.15	0.38	1.79	0.87	2.48	15.82	15.13	14.62	15.66	1.1	0.46	-77.5	0	2		0.01	0.01		0.01	15.24	15.23	14.77	14.77	4.42	22.6	0.57
1A-D to 1-E	PVC SN8	4.62	225	0.04	1	100	5.18	228.64	0.0391	24.8	5.1	229.25	0.0389	24.8	24.8		24.8	-5	19.9		44.9	0.44	0.5	1.09	0.95	1.13	15.66	14.62	14.58	15.54	1.1	0.75	77.5	0.946	2		0.01	0.03		0.04	14.77	14.74	14.68	14.23	1.26	79.4	0.89
2-A to 2-B	RCP CL3	24	375	0.11	1	100.1	5.22	228.38	0.0955	60.6	5.22	228.38	0.0955	60.6	60.6		60.6		60.6		175.3	0.35	0.55	1.44	1.17	1.59	15.63	14.59	14.35	15.39	1.1	0.67	0	0.02	2.23	2.69	0.02	0.03	0.04	0.11	14.81	14.76	14.7	14.73	0.26	391.7	0.83
2-B to 2-C	RCP CL3	24	375	0.11	0.92	109	5.42	226.9	0.194	122.3	5.34	227.51	0.1937	122.4	122.4		122.4		122.4		168	0.73	1.11	1.66	1.51	1.52	15.39	14.33	14.11	15.15	1.1	0.68	0	0.095	1.91	2.36	0.06	0.12	0.15	0.19	14.73	14.58	14.43	14.46	0.63	158.8	0.66
2-C to 2-D	RCP CL3	24	450	0.159	1	99.7	5.62	225.42	0.2927	183.3	5.52	226.13	0.2923	183.6	183.6		183.6		183.6		285.6	0.64	1.15	1.91	1.62	1.8	15.15	14.01	13.77	14.89	1.1	0.68	0	0.075	1.77	2.2	0.07	0.12	0.15	0.23	14.46	14.31	14.12	14.14	0.78	127.5	0.69
2-D to 2-E	RCP CL3	24	525	0.216	5.48	18.3	5.82	223.94	0.3914	243.5	5.64	225.28	0.39	244.1	244.1		244.1		244.1		1006.9	0.24	1.13	3.83	1.68	4.65	14.89	13.7	12.38	13.97	1.1	0.65	0	0.15	1.47	1.78	0.06	0.1	0.12	1.21	14.14	14.03	12.62	12.62	5.89	17	0.74
2-E to 2-F	RCP CL3	15.66	675	0.358	3.8	26.3	6.02	222.46	0.4859	300.3	5.82	223.91	0.4844	301.3	301.3		301.3		301.3		1639.3	0.18	0.84	3.49	1.64	4.58	13.97	12.23	11.64	13.41	1.1	1.05	0	0.02	1.09	1.28	0.04	0.04	0.05	0.17	12.62	12.58	12.51	12.54	0.42	237	1.35
2-F to 2-G	RCP CL3	8.64	675	0.358	0.5	200	10.07	192.61	0.6712	359.1	5.93	223.11	0.6673	413.5	413.5	13.4	426.9		426.9		594.6	0.72	1.19	1.81	1.85	1.66	13.41	11.62	11.57	13.32	1.1	1.08	0	0.02	1.78	2.17	0.07	0.13	0.16	0.02	12.54	12.38	12.36	12.36	0.26	388	0.87
2-G to 2-H	RCP CL3	8.65	675	0.358	0.5	200	10.14	192.2	0.6801	363.1	6	222.58	0.6761	418	418	13.4	431.4		431.4		594.7	0.73	1.21	1.81	1.86	1.66	13.32	11.55	11.51	13.24	1.1	1.06	44.7	0.02	0.26		0.07	0.02		0.02	12.36	12.34	12.32	12.33	0.26	380	0.96
2-H to 2-I	RCP CL3	11.81	750	0.442	0.5	200	10.21	191.8	0.7202	383.7	6.01	222.52	0.7147	441.8	441.8	13.4	455.1	-0.9	454.2		787.5	0.58	1.03	1.85	1.81	1.78	13.24	11.49	11.43	13.1	1.1	0.94	45.3	0.02	2.22	2.45	0.05	0.12	0.13	0.02	12.33	12.2	12.18	12.2	0.12	814.9	0.91
2-I to 2-J	RCP CL3	15.6	750	0.442	0.5	200	10.31	191.25	0.7512	399.1	6.11	221.79	0.7457	459.4	459.4	13.4	472.8		472.8		787.5	0.6	1.07	1.86	1.84	1.78	13.1	11.41	11.33	12.95	1.1	0.87	0	0.02	2.06	2.42	0.06	0.12	0.14	0.02	12.2	12.06	12.05	12.05	0.11	930.4	0.9
2-J to 1-O	RCP CL3	16.2	750	0.442	0.51	195.2	10.44	190.52	0.7691	407	6.24	220.83	0.7636	468.4	468.4	13.4	481.8		481.8		797.2	0.6	1.09	1.89	1.85	1.8	12.95	11.31	11.23	12.79	1.1	0.81	-90	0.098	0.32		0.06	0.02		0.03	12.05	12.03	12	12.07	0.16	632.7	0.9
3-A to 2-F	RCP CL3	8.4	450	0.159	1	100	10	193	0.1195	64	5.01	229.9	0.1171	74.8	74.8	13.4	88.1	-3.3	84.8		285.2	0.3	0.53	1.56	1.23	1.79	13.54	11.93	11.84	13.41	1.1	1.13	-89.6	0.226	2.09	3.24	0.01	0.03	0.05	0.01	12.56	12.52	12.51	12.54	0.09	1130.1	0.97
3A-A to 3A-B	PVC SN8	9.99	150	0.018	1	100	5	230	0.0098	6.3	5	230	0.0098	6.3	6.3		6.3	-1.3	5		15.2	0.33	0.28	0.77	0.69	0.86	15.62	14.95	14.85	15.51	1.1	0.48	-0.4	0	2		0	0.01		0.06	15.02	14.98	14.98	14.98	0.4	253	0.6
3A-B to 3A-C	PVC SN8	1.6	150	0.018	1	100	5.08	229.38	0.0195	12.5	5	230	0.0194	12.4	12.5		12.5	-2.5	10		15.2	0.65	0.56	0.92	0.87	0.86	15.51	14.85	14.84	15.49	1.1	0.5	0.2	0.075	2		0.02	0.03		0.02	14.98	14.94	14.92	14.88	1.23	81.1	0.54
3A-C to 3A-D	PVC SN8	9.98	225	0.04	5.03	19.9	5.1	229.29	0.0294	18.7	5.01	229.9	0.0292	18.6	18.7		18.7	-3.8	14.9		100.8	0.15	0.38	1.82	0.87	2.53	15.49	14.76	14.26	15.3	1.1	0.5	0	0	2		0.01	0.01		0.4	14.88	14.86	14.5	14.5	3.66	27.4	0.61
3A-D to 3A-E	PVC SN8	1.34	225	0.04	5	20	5.18	228.67	0.0391	24.8	5.1	229.29	0.0389	24.8	24.8		24.8	-5	19.9		100.5	0.2	0.5	1.97	0.95	2.53	15.3	14.26	14.19	15.28	1.1	0.82	-89.9	0	2		0.01	0.03		0	14.5	14.47	14.47	14.47	0.14	734.6	0.8
3A-E to 1-F	PVC SN8	4.51	225	0.04	2.06	48.5	5.19	228.57	0.0796	50.5	5.19	228.59	0.0796	50.5	50.5		50.5	-9.6	41		64.5	0.64	1.03	1.72	1.27	1.62	15.28	14.19	14.1	15.17	1.1	0.86	0	0.608	2		0.05	0.11		0.06	14.47	14.36	14.23	14.18	2.93	34.1	0.81
4-A to 4-B	RCP CL3	32.67	450	0.159	0.5	200	13	176.2	0.2331	114.1	5	230	0.1509	96.4	114.1		114.1		114.1		201.7	0.57	0.72	1.31	1.35	1.27	13.71	12.89	12.73	13.8	1.1	0.4	63.4	0.068	7		0.03	0.18		0.12	13.32	13.13	13.05	13.07	0.24	414.7	0.39
4-B to 4-C	RCP CL3	5.2	450	0.159	1.5	66.7	13.27	174.68	0.3179	154.2	13	176.2	0.3151	154.2	154.2		154.2		154.2		349.3	0.44	0.97	2.13	1.51	2.2	13.8	12.66	12.58	13.72	1.1	0.67	27.2	0.02	2.48	2.74	0.05	0.12	0.13	0.04	13.07	12.94	12.94	12.96	-0.15	-654.1	0.74
4-C to 4-D	RCP CL3	18.68	450	0.159	0.5	200	13.32	174.43	0.3179	154	13.04	175.96	0.3151	154	154		154		154		201.7	0.76	0.97	1.4	1.51	1.27	13.72	12.56	12.47	13.2	1.1	0.47	0		1.82	2.18	0.05	0.09	0.1	0.1	12.96	12.86	12.74	12.74	0.6	166	0.76
5-A to 5-B	RHS	7.81	(4x)125x75	0.037	1	100	13	176.2	0.1052	51.5	5	230	0.0681	43.5	51.5		51.5		51.5	14.1	23.6	2.18	1.37	1.37	1.37	0.63	15.46	15.16	15.08	15.24	1.1	0.23	0		2		0.05	0.1		0.2	15.46	15.35	15.16	15.16	2.51	39.9	0
6-A to 6-B	RCP CL3	2.07	600	0.283	0.5	200											0		0		434.4	0	0	0	0	1.54	10	8.78	8.77	11.9	1.1	-0.58	1.8	0.02			0			0.01	8.78	8.78	8.77	8.75	0.5	200	1.22
6-B to 6-C	RCP CL3	8	600	0.283	0.5	200											0		0		434.4	0	0	0	0	1.54	11.9	8.75	8.71	10.63	1.1	0.5	0				0			0.04	8.75	8.75	8.71	8.71	0.5	200	3.15
6A-A to 6A-B	PVC SN8	9.98	150	0.018	1	100	5	230	0.0111	7.1	5	230	0.0111	7.1	7.1		7.1	-2.1	5		15.2	0.33	0.28	0.77	0.69	0.86	15.53	14.89	14.79	15.41	1.1	0.46	0	0	2		0	0.01		0.06	14.97	14.96	14.92	14.92	0.4	252.8	0.56
6A-B to 6A-C	PVC SN8	1.6	150	0.018	1	100	5.08	229.38	0.0209	13.3	5	230	0.0208	13.3	13.3		13.3	-3.4	10		15.2	0.65	0.56	0.92	0.87	0.86	15.41	14.79	14.78	15.39	1.1	0.46	0	0.075	2		0.02	0.03		0.02	14.92	14.89	14.87	14.82	1.23	81.1	0.49
6A-C to 6A-D	PVC SN8	9.98	225	0.04	4.28	23.3	5.1	229.29	0.0307	19.5	5.01	229.9	0.0305	19.5	19.5		19.5	-4.6	14.9		93	0.16	0.38	1.71	0.87	2.34	15.39	14.7	14.27	15.29	1.1	0.46	0.1	0	2		0.01	0.01		0.34	14.82	14.8	14.5	14.5	3.05	32.8	0.57
6A-D to 3A-E	PVC SN8	1.67	225	0.04	5	20	5.18	228.67	0.0405	25.7	5.1	229.29	0.0403	25.7	25.7		25.7	-4.6	21.1		100.5	0.21	0.53	2	0.97	2.53	15.29	14.27	14.19	15.28	1.1	0.79	89.9	0	2		0.01	0.03		0	14.5	14.47	14.47	14.47	0.05	2039.6	0.79
7-A to 7-B	RHS	6	125x75	0.009	0.3	333.3	13	176.2	0.0042	2.1	5	230	0.0027	1.7	2.1		2.1		2.1		3.2	0.64	0.22	0.37	0.54	0.35	13.92	13.84	13.82	13.92	1.1	0.02	0		7		0	0.02		0.02	13.9	13.88	13.85	13.85	0.53	189.6	0.02

No.	DATE	REVISIONS	DES	DRN	CHK	APD
D	14.03.25	GENERAL AMENDED	S.C.M	J.J.D	J.M.H	J.M.H
C	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
B	18.10.24	GENERAL AMENDMENT	S.C.M	J.J.D	J.M.H	J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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SURVEYOR CAPRICORN SURVEY GROUP CQ PHONE 07 4927 5199
DATUM A.H.D. P.M. R.L.

USE FIGURED DIMENSIONS ONLY. DO NOT SCALE. IF A DISCREPANCY ARISES CHECK WITH THE PROJECT ENGINEER AND/OR SUPERVISING AUTHORITY. DO NOT WORK FROM REDUCED SCALE DRAWINGS (A1-A3 SIZE PAPER). COPYRIGHT OF ALL DRAWINGS & WORKS EXECUTED FROM THEM IS VESTED IN WESTERA PARTNERS AND USE OF THERE FORE WITHOUT PERMISSION IS STRICTLY PROHIBITED! IT IS THE BUILDERS RESPONSIBILITY TO ENSURE ALL WORKS ARE CARRIED OUT WITH DUE CARE AND DILIGENCE TO COMPLY WITH THE CONTRACT DOCUMENTS.

PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE STORMWATER CALCULATIONS 5% AEP HYDRAULICS
CLIENT RUBY DEVELOPMENT PTY LTD

DRAWING STATUS FOR CONSTRUCTION
DRAWING NUMBER S24-018-C35
SHEET NUMBER 35 OF 37
REVISION D

S24-018-C_Stm_Calc.dwg

1% AEP HYDROLOGY

Node	Node	Setout	Setout	Setout	Grate	Cover	Road	Road	Road	Catch	Time	Intensity	Runoff	Area	Full	Full	Full	Partial	Partial	Partial	Catchment	Direct	Approach	Road	Flooded	Max Pond	Choke	Inlet	Inlet	Bypass	Bypass
Name	Type	Easting	Northing	RL	RL	RL	Name	Chainage	Offset	ID	Tc	I	C	A	CA	Sum CA	Qc=CIA	CA	Sum CA	Qc=CIA	Flow Qc	Flow Qdg	Flow Qa	Capacity	Depth	Depth	Factor	Curve Name	Flow Qg	Flow Qb	Node
(-)	(-)	(m)	(m)	(m)	(m)	(m)	(-)	(m)	(m)	(-)	(min)	(mm/hr)	(-)	(ha)	(ha)	(ha)	(L/s)	(ha)	(ha)	(L/s)	(L/s)	(L/s)	(L/s)	(L/s)	(m)	(m)	(-)	(-)	(L/s)	(L/s)	(-)
1-A	FIELD INLET 900x900	248036.19	7414221.23	14.99	14.99	14.99				1P	5	302	0.92	0.0322	0.0298	0.0517	43.4	0.0298	0.0517	43.4	43.4		43.4	55	0.059	0.07	0.5	SAG	43.4		-
										1I	5	302	0.83	0.0263	0.0219			0.0219													
1-B	MH1050	248038.83	7414214.83	15.25	15.25	15.25																									-
1-C	MH1050	248046.25	7414214.08	15.53	15.53	15.53																									-
1-D	FIELD INLET 900x900	248055.02	7414209.14	15.92	15.92	15.92				1P	5	302	1	0.0002	0.0002	0.0021	1.7	0.0002	0.0021	1.7	1.7		1.7	33	0.006	0.05	0.5	SAG	1.7		1-E
										1I	5	302	0.83	0.0022	0.0018			0.0018													
1-E	FIELD INLET 900x900	248051.89	7414183.71	15.54	15.54	15.54				1P	5	302	1	0.0022	0.0022	0.019	15.9	0.0022	0.019	15.9	15.9		28.7	33	0.044	0.05	0.5	SAG	28.7		1-F
										1I	5	302	0.83	0.0201	0.0167			0.0167													
1-F	FIELD INLET 900x900	248048.9	7414159.49	15.17	15.17	15.17	ROAD 02	371.73	0	1P	5	302	1	0.0047	0.0047	0.0398	33.3	0.0047	0.0398	33.3	33.3		56.9	33	0.05	0.05	0.5	SAG	33	23.9	1-G
										1I	5	302	0.83	0.0421	0.0351			0.0351													
1-G	FIELD INLET 900x900	248076.14	7414156.13	14.9	14.9	14.9	ROAD 02	344.28	0	1P	5	302	1	0.0026	0.0026	0.0218	18.3	0.0026	0.0218	18.3	18.3		60.4	33	0.05	0.05	0.5	SAG	33	27.4	1-H
										1I	5	302	0.83	0.0231	0.0192			0.0192													
1-H	FIELD INLET 900x900	248099.96	7414153.18	14.66	14.66	14.66	ROAD 02	320.28	-0.01	1P	5	302	1	0.0024	0.0024	0.0204	17.1	0.0024	0.0204	17.1	17.1		64.7	33	0.05	0.05	0.5	SAG	33	31.7	1-I
										1I	5	302	0.83	0.0216	0.018			0.018													
1-I	FIELD INLET 900x900	248123.78	7414150.24	14.42	14.42	14.42	ROAD 02	296.28	-0.01	1P	5	302	1	0.0024	0.0024	0.0204	17.1	0.0024	0.0204	17.1	17.1		69	33	0.05	0.05	0.5	SAG	33	36	1-J
										1I	5	302	0.83	0.0216	0.018			0.018													
1-J	FIELD INLET 900x900	248147.6	7414147.31	14.18	14.18	14.18	ROAD 02	272.28	-0.01	1P	5	302	1	0.0024	0.0024	0.0204	17.1	0.0024	0.0204	17.1	17.1		73.1	33	0.05	0.05	0.5	SAG	33	40.1	1-K
										1I	5	302	0.83	0.0216	0.018			0.018													
1-K	FIELD INLET 900x900	248171.42	7414144.38	13.82	13.82	13.82	ROAD 02	248.28	0	1P	5	302	1	0.0022	0.0022	0.019	15.9	0.0022	0.019	15.9	15.9		76	33	0.05	0.05	0.5	SAG	33	43	1-L
										1I	5	302	0.83	0.0201	0.0167			0.0167													
1-L	FIELD INLET 900x900	248195.19	7414141.44	13.11	13.11	13.11	ROAD 02	224.33	0	1P	5	302	1	0.0024	0.0024	0.0203	17.1	0.0024	0.0203	17.1	17.1		80	33	0.05	0.05	0.5	SAG	33	47	1-M
										1I	5	302	0.83	0.0215	0.0179			0.0179													
1-M	FIELD INLET 900x900 1350 dia	248204.45	7414140.3	12.92	12.92	12.92	ROAD 02	215	0	1P	5	302	1	0.001	0.001	0.0082	6.8	0.001	0.0082	6.8	6.8		60.1	33	0.05	0.05	0.5	SAG	33	27.1	LOST
										1I	5	302	0.83	0.0086	0.0072			0.0072													
1-N	MH1200	248212.46	7414139.31	12.94	12.94	12.94																									-
1-O	FIELD INLET 900x900 1800 dia	248213.55	7414148.15	12.79	12.79	12.79				1P	5	302	1	0.0023	0.0023	0.0193	16.2	0.0023	0.0193	16.2	16.2		16.2	33	0.028	0.05	0.5	SAG	16.2		-
										1I	5	302	0.83	0.0205	0.0171			0.0171													
1-P	MH1350	248216.95	7414147.73	12.87	12.87	12.87																									-
1-Q	HW outlet	248221.29	7414147.19	9.77	12.27	12.27																									-
1A-A	GEMLIFE ROOFWATER STUB	248050.24	7414207.17	15.99	15.99	15.99				1I	5	302	0.83	0.0117	0.0098	0.0098	8.2	0.0098	0.0098	8.2	8.2		8.2	5	-1	0	0.5	SAG	5	3.2	1-E
1A-B	GEMLIFE ROOFWATER STUB	248049.02	7414197.26	15.85	15.85	15.85				1I	5	302	0.83	0.0117	0.0098	0.0098	8.2	0.0098	0.0098	8.2	8.2		8.2	5	-1	0	0.5	SAG	5	3.2	1-E
1A-C	GEMLIFE ROOFWATER STUB	248048.82	7414195.67	15.82	15.82	15.82				1I	5	302	0.83	0.0117	0.0098	0.0098	8.2	0.0098	0.0098	8.2	8.2		8.2	5	-1	0	0.5	SAG	5	3.2	1-E
1A-D	GEMLIFE ROOFWATER STUB	248047.54	7414185.26	15.66	15.66	15.66				1I	5	302	0.83	0.0117	0.0098	0.0098	8.2	0.0098	0.0098	8.2	8.2		8.2	5	-1	0	0.5	SAG	5	3.2	1-E
2-A	FIELD INLET 900x900	248082.14	7414204.76	15.63	15.63	15.63				1P	5	302	1	0.0025	0.0025	0.0213	17.8	0.0025	0.0213	17.8	17.8		34.4	33	0.05	0.05	0.5	SAG	33	1.4	2-B
										1I	5	302	0.83	0.0225	0.0188			0.0188													
2-B	FIELD INLET 900x900	248105.96	7414201.83	15.39	15.39	15.39				1P	5	302	1	0.0024	0.0024	0.0204	17.1	0.0024	0.0204	17.1	17.1		37.8	33	0.05	0.05	0.5	SAG	33	4.8	2-C
										1I	5	302	0.83	0.0216	0.018			0.018													
2-C	FIELD INLET 900x900	248129.78	7414198.89	15.15	15.15	15.15				1P	5	302	1	0.0024	0.0024	0.0204	17.1	0.0024	0.0204	17.1	17.1		41.3	33	0.05	0.05	0.5	SAG	33	8.3	2-D
										1I	5	302	0.83	0.0216	0.018			0.018													
2-D	FIELD INLET 900x900	248153.6	7414195.95	14.89	14.89	14.89				1P	5	302	1	0.0024	0.0024	0.0201	16.9	0.0024	0.0201	16.9	16.9		44.7	33	0.05	0.05	0.5	SAG	33	11.7	2-E
										1I	5	302	0.83	0.0213	0.0178			0.0178													
2-E	FIELD INLET 900x900	248177.42	7414193.01	13.97	13.97	13.97	ROAD 02	123.45	0	1P	5	302	1	0.0022	0.0022	0.0186	15.6	0.0022	0.0186	15.6	15.6		45.2	33	0.05	0.05	0.5	SAG	33	12.2	2-F
										1I	5	302	0.83	0.0197	0.0164			0.0164													
2-F	FIELD INLET 900x900	248192.96	7414191.1	13.41	13.41	13.41	ROAD 02	139.11	-0.01	1P	5	302	1	0.0018	0.0018	0.0157	13.2	0.0018	0.0157	13.2	13.2		44.2	33	0.05	0.05	0.5	SAG	33	11.2	2-G
										1I	5	302	0.83	0.0166	0.0139			0.0139													
2-G	FIELD INLET 900x900	248201.54	7414190.04	13.32	13.32	13.32	ROAD 02	147.76	-0.01	1P	5	302	1	0.001	0.001	0.0089	7.5	0.001	0.0089	7.5	7.5		18.6	66	0.018	0.05	1	SAG	18.6		2-H
										1I	5	302	0.83	0.0094	0.0078			0.0078													
2-H	FIELD INLET 900x900 1350 dia	248210.12	7414188.98	13.24	13.24	13.24	ROAD 02	156.4	-0.01	1P	5	302	1	0.0014	0.0014	0.012	10	0.0014	0.012	10	10		13.2	33	0.024	0.05	0.5	SAG	13.2		2-I
										1I	5	302	0.83	0.0127	0.0106			0.0106													
2-I	FIELD INLET 900x900 1350 dia	248217.44	7414179.71	13.1	13.1	13.1	ROAD 02	169.67	0	1P	5	302	1	0.0037	0.0037	0.0313	26.3	0.0037	0.0313	26.3	26.3		29.1	33	0.045	0.05	0.5	SAG	29.1		2-J
										1I	5	302	0.83	0.0332	0.0276			0.0276													
2-J	FIELD INLET 900x900 1350 dia	248215.53	7414164.23	12.95	12.95	12.95				1P	5	302	1	0.0021	0.0021	0.018	15.1	0.0021	0.018	15.1	15.1		15.1	33	0.026	0.05	0.5	SAG	15.1		1-O
										1I	5	302	0.83	0.0191	0.0159			0.0159													
3-A	FIELD INLET 900x900	248193.92	7414199.43	13.54	13.54	13.54				1P	10	254	0.85	0.0065	0.0055	0.0069	4.8	0.0028	0.0041	3.4	4.8		4.8	0	0	-0.039	0.5	SAG	0	4.8	2-F
										1I	5	302	0.83	0.0016	0.0013			0.0013													
3A-A	GEMLIFE ROOFWATER STUB	248047.23	7414182.77	15.62	15.62	15.62				1I	5	302	0.83	0.0118	0.0098	0.0098	8.2	0.0098	0.0098	8.2	8.2		8.2	5	-1	0	0.5	SAG	5	3.2	1-F
3A-B	GEMLIFE ROOFWATER STUB	248045.99	7414172.86	15.51	15.51	15.51				1I	5	302	0.83	0.0117	0.0098	0.0098	8.2	0.0098	0.0098	8.2	8.2		8.2	5	-1	0	0.5	SAG	5	3.2	1-F
3A-C	GEMLIFE ROOFWATER STUB	248045.8	7414171.27	15.49	15.49	15.49				1I	5	302	0.83	0.0118	0.0098	0.0098	8.2	0.0098	0.0098	8.2	8.2		8.2	5	-1	0	0.5	SAG	5	3.2	1-F
3A-D	GEMLIFE ROOFWATER STUB	248044.59	7414161.37	15.3	15.3	15.3				1I	5	302	0.83	0.0117	0.0097	0.0097	8.2	0.0097	0.0097	8.2	8.2		8.2	5	-1	0	0.5	SAG	5	3.2	1-F
3A-E	TEE	248044.43	7414160.04	15.28	15.28	15.28																	0		0	0	0.5		0		-
4-A	FIELD INLET 900x900	248191.87	7414215.74	13.71	13.71	13.71				1P	13	232.4	0.85	0.1792	0.1527	0.2522	162.8	0.0587	0.1582	132.7	162.8		162.8	94	0.143	0.1	0.5	SAG	162.8		-
										1I	5	302	0.83	0.1195	0.0995			0.0995													
4-B	FIELD INLET 900x900	248195.39	7414248.22	13.8	13.8	13.8				1P	13	232.4	0.82	0.0652	0.0537	0.0899	58.1	0.0207	0.0569	47.7	58.1		58.1		0.072	-0.305	0.5	SAG	58.1		-
										1I	5	302	0.83	0.0434	0.0362			0.0362													
4-C	MH1050	248200.26	7414250.04	13.68	13.72	13.72																									-
4-D	HW OUT	248218.8	7414247.85	13.24	13.2	13.24																									-
5-A	FIELD INLET 900x900	248035.35	7414233.87	15.46	15.46	15.46				1P	13	232.4	0.85	0.0809	0.0689	0.1138	73.5	0.0265	0.0714	59.9	73.5		73.5	384.8	0.084	0.255	0.5	SAG	73.5		-
										1I	5	302	0.83	0.0539	0.0449			0.0449													
5-B	HW OUT	248027.59	7414234.83	15.24	15.24	15.24																									-
6-A	FIELD INLET 900x900	248226.7	7414118.64	10	10	10																	0		0		1		0		-
6-B	FIELD INLET 900x900 1500 dia	248228.77	7414118.7	9.65	11.9	11.9																									-
6-C	HW outlet	248236.77	7414118.67	8.45	10.63	0																									-
6A-A	GEMLIFE ROOFWATER STUB	248041.58	7414136.97	15.53	15.53	15.53				1I	5	302	0.83	0.0133	0.0111	0.0111	9.3	0.0111	0.0111	9.3	9.3		9.3	5	-1	0	0.5	SAG	5	4.3	1-F
6A-B	GEMLIFE ROOFWATER STUB	248042.8	7414146.88	15.41	15.41	15.41				1I	5	302	0.83	0.0118	0.0099	0.0099	8.3	0.0099	0.0099	8.3	8.3		8.3	5	-1	0	0.5	SAG	5	3.3	1-F
6A-C	GEMLIFE ROOFWATER STUB	248043	7414148.47	15.39	15.39	15.39				1I	5	302	0.83	0.0117	0.0097	0.0097	8.2	0.0097	0.0097	8.2	8.2		8.2	5	-1	0	0.5	SAG	5	3.2	1-F
6A-D	GEMLIFE ROOFWATER STUB	248044.22	7414158.38	15.29	15.29	15.29				1I	5	302	0.83	0.0118	0.0098	0.0098	8.3	0.0098	0.0098	8.3	8.3		8.3	5	-1	0	0.5	SAG	8.3		-
7-A	FIELD INLET 900x900	248198.73	7414280.31	13.92	13.92	13.92				1P	13	232.4	0.82	0.0032	0.0027	0.0045	2.9	0.001	0.0028	2.4	2.9		2.9		0.01	-0.034	0.5	SAG	2.9		-
										1I	5	302	0.83	0.0022	0.0018			0.0018													
7-B	HW outlet	248199.38	7414286.27	13.82	13.92	13.92																									-

1% AEP HYDRAULICS

Pipe ID	Pipe Type	Pipe Length	Pipe Size	Full Pipe Area Af	Pipe Grade	Pipe Grade	Full-area Tct	Full-area I	Full-area Sum CA	Full-area Qc=CIA	Part-area Tct	Part-area I	Part-area Sum CA	Part-area Qc=CIA	Catchment Flow Qc	Direct Node Flow Qdg	Peak Flow Qrat	Net Bypass Flow Qb	Pipe Flow Q	Excess Pipe Flow Qx	Capacity Flow Qcap	Q/Qcap Ratio	Full Pipe Vel Vf=Q/Af	Norm Depth Vel Vn=Q/An	Crit Depth Vel Vc=Q/Ac	Capacity Vel Vcap=Qcap/Af	US Node Grate RL	Pipe US IL	Pipe DS IL	DS Node Grate RL	Cover Limit	Cover Min	Pipe DS Bend	Pipe DS Drop	US Node Ku	US Node Kw	Pipe V'head	P'head Loss (Ku.V'head)	WSE Loss (Kw.V'head)	Pipe T'head Loss	US Node HGL	Pipe US HGL	Pipe DS HGL	DS Node HGL	HGL Grade	HGL Grade	F'board US
(-)	(-)	(m)	(mm)	(sq.m)	(%)	(1 in)	(min)	(mm/hr)	(ha)	(L/s)	(min)	(mm/hr)	(ha)	(L/s)	(L/s)	(L/s)	(L/s)	(L/s)	(L/s)	(L/s)	(L/s)	(-)	(m/s)	(m/s)	(m/s)	(m/s)	(m)	(m)	(m)	(m)	(m)	(m)	(deg)	(m)	(-)	(-)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(%)	(1 in)	(m)
1-A to 1-B	RCP CL3	6.91	375	0.11	0.5	200	5	302	0.0517	43.4	5	302	0.0517	43.4	43.4		43.4		43.4		124	0.35	0.39	1.02	1.05	1.12	14.99	14.18	14.15	15.25	0.6	0.45	-61.8	0.02	6.76		0.01	0.05		0	14.96	14.9	14.9	14.9	0.06	1635.7	0.04
1-B to 1-C	RCP CL3	7.47	375	0.11	1	100	5.06	301.45	0.0517	43.3	5.06	301.45	0.0517	43.3	43.3		43.3		43.3		175.4	0.25	0.39	1.32	1.05	1.59	15.25	14.13	14.06	15.53	1.1	0.77	23.7	0.02	1.96	2.34	0.01	0.02	0.02	0	14.9	14.88	14.88	14.88	0.06	1641.7	0.35
1-C to 1-D	RCP CL3	10.07	375	0.11	1	100	5.12	300.85	0.0517	43.2	5.12	300.85	0.0517	43.2	43.2		43.2		43.2		175.4	0.25	0.39	1.31	1.05	1.59	15.53	14.04	13.93	15.92	1.1	1.14	67.6	0.02	1.47	1.66	0.01	0.01	0.01	0.01	14.88	14.87	14.86	14.86	0.06	1648.2	0.65
1-D to 1-E	RCP CL3	25.62	375	0.11	1.02	97.7	5.2	300.04	0.0538	44.8	5	302	0.0516	43.3	44.8		44.8		44.8		177.5	0.25	0.41	1.34	1.06	1.61	15.92	13.91	13.65	15.54	1.1	1.52	0	0.02	1.95	2.12	0.01	0.02	0.02	0.02	14.86	14.84	14.83	14.83	0.07	1532.7	1.06
1-E to 1-F	RCP CL3	24.41	375	0.11	0.5	200	5.42	297.99	0.1118	92.6	5.22	299.86	0.1098	91.5	92.6		92.6		92.6		124	0.75	0.84	1.23	1.35	1.12	15.54	13.63	13.51	15.17	1.1	1.29	-90	0.02	1.4	1.55	0.04	0.05	0.06	0.07	14.83	14.78	14.71	14.75	0.28	359.1	0.71
1-F to 1-G	RCP CL3	27.44	375	0.11	0.5	202	5.62	296.04	0.2312	190.1	5.43	297.91	0.2292	189.6	190.1		190.1	-23.9	166.2		123.4	1.35	1.51	1.51	1.76	1.12	15.17	13.49	13.35	14.9	1.1	1.17	0	0.095	1.57	1.91	0.12	0.18	0.22	0.25	14.75	14.53	14.28	14.3	0.9	111.3	0.42
1-G to 1-H	RCP CL3	24	450	0.159	1.09	91.5	10.12	253.11	0.3206	225.4	5.85	293.85	0.3202	261.4	261.4		261.4	-27.4	234		298.2	0.78	1.47	2.07	1.81	1.87	14.9	13.26	13	14.66	1.1	1.18	0	0.095	1.27	1.45	0.11	0.14	0.16	0.16	14.3	14.14	13.98	14	0.67	148.5	0.6
1-H to 1-I	RCP CL3	24	525	0.216	0.5	200	10.32	251.67	0.4209	294.2	5.77	294.6	0.4174	341.6	341.6		341.6	-31.7	309.9		304.2	1.02	1.43	1.6	1.86	1.41	14.66	12.9	12.78	14.42	1.1	1.12	0	0.02	1.25	1.4	0.1	0.13	0.15	0.12	14	13.85	13.73	13.75	0.52	192.8	0.66
1-I to 1-J	RCP CL3	24	525	0.216	0.5	200	10.52	250.23	0.521	362.1	5.87	293.64	0.5158	420.7	420.7		420.7	-36	384.8		304.2	1.26	1.78	1.78	2.08	1.41	14.42	12.76	12.64	14.18	1.1	1.02	0	0.075	1.12	1.26	0.16	0.18	0.2	0.19	13.75	13.55	13.35	13.38	0.8	125	0.67
1-J to 1-K	RCP CL3	24	600	0.283	0.5	200	10.72	248.79	0.6209	429.1	6.06	291.82	0.6156	499	499		499	-40.1	458.9		434.4	1.06	1.62	1.74	2.04	1.54	14.18	12.57	12.45	13.82	1.1	0.79	0	0.02	1.06	1.24	0.13	0.14	0.17	0.13	13.38	13.21	13.08	13.1	0.56	179.2	0.8
1-K to 1-L	RCP CL3	23.95	600	0.283	2.7	37.1	10.92	247.35	0.7193	494.2	6.23	290.17	0.7133	574.9	574.9		574.9	-43	531.9		1009	0.53	1.88	3.61	2.21	3.57	13.82	12.43	11.78	13.11	1.1	0.74	0	0.02	0.96	1.1	0.18	0.17	0.2	0.27	13.1	12.9	12.7	12.73	0.84	119.1	0.72
1-L to 1-M	RCP CL3	9.33	600	0.283	2.51	39.9	11.12	245.92	0.819	559.4	6.38	288.79	0.8115	651	651		651	-47	604		972.7	0.62	2.14	3.62	2.38	3.44	13.11	11.76	11.53	12.92	1.1	0.72	0	0.112	0.86	0.97	0.23	0.2	0.23	0.09	12.73	12.5	12.41	12.41	0.97	103.4	0.38
1-M to 1-N	RCP CL3	8.07	750	0.442	1	100	11.2	245.36	0.8271	563.7	6.45	288.04	0.8197	655.8	655.8		655.8	-20.8	635		1113.7	0.57	1.44	2.6	2.06	2.52	12.92	11.42	11.33	12.94	1.1	0.75	-90	0.095	-0.52		0.11	-0.05		0.03	12.41	12.47	12.44	12.48	0.33	307.6	0.51
1-N to 1-O	RCP CL3	8.91	825	0.535	0.88	113.5	11.27	244.87	0.8673	590	6.52	287.42	0.8598	686.5	686.5		686.5	-34.6	651.9		1348	0.48	1.22	2.5	1.99	2.52	12.94	11.24	11.16	12.79	1.1	0.8	90	0.03	2.14	2.68	0.08	0.16	0.2	0.02	12.48	12.28	12.26	12.38	0.21	485.3	0.45
1-O to 1-P	RCP CL3	3.42	900	0.636	1	100	11.34	244.34	1.6766	1137.9	6.46	287.97	1.6606	1328.4	1328.4	22.9	1351.2	-40.1	1311.1		1811.2	0.72	2.06	3.1	2.55	2.85	12.79	11.13	11.1	12.87	1.1	0.77	0	1.288	2.09	2.61	0.22	0.45	0.57	0	12.38	11.81	11.66	11.05	4.23	23.6	0.41
1-P to 1-Q	RCP CL3	4.38	900	0.636	1	100	11.37	244.13	1.6766	1137	6.49	287.7	1.6606	1327.1	1327.1	22.9	1350	-40.1	1309.9		1811.1	0.72	2.06	3.1	2.55	2.85	12.87	9.81	9.77	12.27	1.1	2.17	0		2.08	2.61	0.22	0.45	0.56	0	11.05	10.49	10.33	10.33	3.53	28.4	1.82
1A-A to 1A-B	PVC SN8	9.98	150	0.018	1	100	5	302	0.0098	8.2	5	302	0.0098	8.2	8.2		8.2	-3.2	5		15.2	0.33	0.28	0.77	0.69	0.86	15.99	15.32	15.22	15.85	1.1	0.48	0	0	2		0	0.01		0.06	15.39	15.38	15.34	15.34	0.4	252.3	0.6
1A-B to 1A-C	PVC SN8	1.6	150	0.018	1	100	5.08	301.2	0.0195	16.4	5	302	0.0194	16.3	16.4		16.4	-6.4	10		15.2	0.65	0.56	0.92	0.87	0.86	15.85	15.22	15.2	15.82	1.1	0.46	0	0.075	2		0.02	0.03		0.02	15.34	15.31	15.29	15.24	1.23	81	0.51
1A-C to 1A-D	PVC SN8	10.49	225	0.04	4.81	20.8	5.1	301.07	0.0293	24.5	5.01	301.87	0.0292	24.5	24.5		24.5	-9.6	14.9		98.5	0.15	0.38	1.79	0.87	2.48	15.82	15.13	14.62	15.66	1.1	0.46	-77.5	0	2		0.01	0.01		0.4	15.24	15.23	14.86	14.86	3.51	28.5	0.57
1A-D to 1-E	PVC SN8	4.62	225	0.04	1	100	5.18	300.23	0.0391	32.6	5.1	301.03	0.0389	32.6	32.6		32.6	-12.8	19.8		44.9	0.44	0.5	1.09	0.95	1.13	15.66	14.62	14.58	15.54	1.1	0.75	77.5	0.946	2		0.01	0.03		0.01	14.86	14.84	14.83	14.83	0.17	585.9	0.8
2-A to 2-B	RCP CL3	24	375	0.11	100.1	5.22	299.89	0.0957	79.7	5.22	299.89	0.0957	79.7	79.7		79.7	-1.4	78.3		175.3	0.45	0.71	1.54	1.27	1.59	15.63	14.59	14.35	15.39	1.1	0.67	0	0.02	2.27	2.69	0.03	0.06	0.07	0.05	15.03	14.96	14.91	14.95	0.2	505.9	0.6
2-B to 2-C	RCP CL3	24	375	0.11	0.92	109	5.42	297.97	0.1944	160.9	5.34	298.78	0.1941	161.1	161.1		161.1	-4.8	156.3		168	0.93	1.41	1.73	1.7	1.52	15.39	14.33	14.11	15.15	1.1	0.68	0	0.095	1.82	2.22	0.1	0.19	0.23	0.19	14.95	14.73	14.54	14.58	0.79	126	0.44
2-C to 2-D	RCP CL3	24	450	0.159	1	99.7	5.62	296.05	0.2933	241.2	5.52	296.98	0.2929	241.6	241.6		241.6	-8.3	233.3		285.6	0.82	1.47	2	1.81	1.8	15.15	14.01	13.77	14.89	1.1	0.68	0	0.075	1.68	2.08	0.11	0.18	0.23	0.19	14.58	14.35	14.22	14.25	0.55	180.6	0.57
2-D to 2-E	RCP CL3	24	525	0.216	5.48	18.3	5.82	294.13	0.3921	320.4	5.64	295.88	0.3908	321.2	321.2		321.2	-11.7	309.5		1006.9	0.31	1.43	4.09	1.86	4.65	14.89	13.7	12.38	13.97	1.1	0.65	0	0.15	1.4	1.68	0.1	0.15	0.18	0.91	14.25	14.07	13.23	13.24	3.51	28.5	0.64
2-E to 2-F	RCP CL3	15.66	675	0.358	3.8	26.3	6.02	292.21	0.4868	395.2	5.82	294.1	0.4853	396.4	396.4		396.4	-12.2	384.3		1639.3	0.23	1.07	3.74	1.78	4.58	13.97	12.23	11.64	13.41	1.1	1.05	0	0.02	1.04	1.22	0.06	0.06	0.07	0.03	13.24	13.17	13.14	13.16	0.21	478.9	0.73
2-F to 2-G	RCP CL3	8.64	675	0.358	0.5	200	10.07	253.5	0.673	473.9	5.93	293.07	0.6687	544.4	544.4	22.9	567.2	-11.2	556		594.6	0.94	1.55	1.89	2.07	1.66	13.41	11.62	11.57	13.32	1.1	1.08	0	0.02	1.48	1.7	0.12	0.18	0.21	0.04	13.16	12.95	12.92	12.92	0.44	228.7	0.25
2-G to 2-H	RCP CL3	8.65	675	0.358	0.5	200	10.14	252.98	0.6819	479.2	6	292.38	0.6776	550.3	550.3	22.9	573.2		573.2		594.7	0.96	1.6	1.89	2.1	1.66	13.32	11.55	11.51	13.24	1.1	1.06	44.7	0.02	0.33		0.13	0.04		0.04	12.92	12.87	12.83	12.85	0.46	215.3	0.41
2-H to 2-I	RCP CL3	11.81	750	0.442	0.5	200	10.21	252.46	0.7221	506.4	6.07	291.68	0.7178	581.6	581.6	22.9	604.5	-2.8	601.7		787.5	0.76	1.36	1.96	2.02	1.78	13.24	11.49	11.43	13.1	1.1	0.94	45.3	0.02	2.05	2.2	0.09	0.19	0.21	0.03	12.85	12.64	12.61	12.64	0.29	342.6	0.39
2-I to 2-J	RCP CL3	15.6	750	0.442	0.5	200	10.31	251.75	0.7534	526.9	6.11	291.35	0.7476	605.1	605.1	22.9	627.9		627.9		787.5	0.8	1.42	1.98	2.05	1.78	13.1	11.41	11.33	12.95	1.1	0.87	0	0.02	2.01	2.31	0.1	0.21	0.24	0.05	12.64	12.4	12.35	12.35	0.32	314.6	0.47
2-J to 1-O	RCP CL3	16.2	750	0.442	0.51	195.2	10.44	250.81	0.7714	537.5	6.24	290.11	0.7656	617	617	22.9	639.8		639.8		797.2	0.8	1.45	2.01	2.07	1.8	12.95	11.31	11.23	12.79	1.1	0.81	-90	0.098	0.32		0.11	0.03		0.05	12.35	12.31	12.26	12.38	0.33	303	0.6
3-A to 2-F	RCP CL3	8.4	450	0.159	1	100	10	254	0.1202	84.8	5.01	301.87	0.1174	98.4	98.4	22.9	121.3	-4.8	116.5		285.2	0.41	0.73	1.7	1.36	1.79	13.54	11.93	11.84	13.41	1.1	1.13	-89.6	0.226	1.15	2.75	0.03	0.03	0.08	0.01	13.23	13.15	13.14	13.16	0.17	599.6	0.31
3A-A to 3A-B	PVC SN8	9.99	150	0.018	1	100	5	302	0.0098	8.2	5	302	0.0098	8.2	8.2		8.2	-3.2	5		15.2	0.33	0.28	0.77	0.69	0.86	15.62	14.95	14.85	15.51	1.1	0.48	-0.4	0	2		0	0.01		0.06	15.02	15.02	14.98	14.98	0.4	252.3	0.6
3A-B to 3A-C	PVC SN8	1.6	150	0.018	1	100	5.08	301.2	0.0195	16.3	5	302	0.0194	16.3	16.3		16.3	-6.4	10		15.2	0.65	0.56	0.92	0.87	0.86	15.51	14.85	14.84	15.49	1.1	0.5	0.2	0.075	2		0.02	0.03		0.02	14.98	14.94	14.92	14.91	1.23	81	0.54
3A-C to 3A-D	PVC SN8	9.98	225	0.04	5.03	19.9	5.1	301.07	0.0294	24.6	5.01	301.87	0.0292	24.5	24.6		24.6	-9.6	14.9		100.8	0.15	0.38	1.82	0.87	2.53	15.49	14.76	14.26	15.3	1.1	0.5	0	0	2		0.01	0.01		0.01	14.91	14.9	14.9	14.9	0.01	10232.4	0.57
3A-D to 3A-E	PVC SN8	1.34	225	0.04	5	20	5.18	300.27	0.0391	32.6	5.1	301.07	0.0389	32.6	32.6		32.6	-12.8	19.8		100.5	0.2	0.5	1.96	0.95	2.53	15.3	14.26	14.19	15.28	1.1	0.82	-89.9	0	2		0.01	0.03		0	14.9	14.87	14.87	14.87	0.19	514	0.4
3A-E to 1-F	PVC SN8	4.51	225	0.04	2.06	48.5	5.19	300.14	0.0796	66.4	5.19	300.17	0.0796	66.4	66.4		66.4	-23.5	42.8		64.5	0.66	1.08	1.73	1.3	1.62	15.28	14.19	14.1	15.17	1.1	0.86	0	0.608	2		0.06	0.12		0.04	14.87	14.75	14.71	14.75	0.91	109.9	0.41
4-A to 4-B	RCP CL3	32.67	450	0.159	0.5	200	13	232.4	0.2522	162.8	5	302	0.1582	132.7	162.8		162.8		162.8	15.7	201.7	0.81	1.02	1.41	1.54	1.27	13.71	12.89	12.73	13.8	1.1	0.4	63.4	0.068	5.58		0.04	0.24		0.09	13.71	13.47	13.38	13.41	0.27	375.8	0
4-B to 4-C	RCP CL3	5.2	450	0.159	1.5	66.7	13.27	230.44	0.3421	219	13	232.4	0.3389	218.8	219		219		219		349.3	0.63	1.38	2.32	1.75	2.2	13.8	12.66	12.58	13.72	1.1	0.67	27.2	0.02	2.33	2.62	0.1	0.23	0.25	0.03	13.41	13.16	13.12	13.16	0.59	169.6	0.4
4-C to 4-D	RCP CL3	18.68	450	0.159	0.5	200	13.32	230.13	0.3421	218.7	13.04	232.09	0.3389	218.5	218.7		218.7		218.7		201.7	1.08	1.38	1.38	1.75	1.27	13.72	12.56	12.47	13.2	1.1	0.47	0		1.82	2.18	0.1	0.18	0.21	0.11	13.16	12.95	12.8	12.8	0.81	123.9	0.56
5-A to 5-B	RHS	7.81	(4x)125x75	0.037	1	100	13	232.4	0.1138	73.5	5	302	0.0714	59.9	73.5		73.5		73.5	36.1	23.6	3.11	1.96	1.96	1.96	0.63	15.46	15.16	15.08	15.24	1.1	0.23	0		2		0.05	0.1		0.2	15.46	15.35	15.16	15.16	2.51	39.9	0
6-A to 6-B	RCP CL3	2.07	600	0.283	0.5	200									0		0		0		434.4	0	0	0	0	1.54	10	8.78	8.77	11.9	1.1	-0.58	1.8	0.02			0			0.01	8.78	8.78	8.77	8.75	0.5	200	1.22
6-B to 6-C	RCP CL3	8	600	0.283	0.5	200									0		0		0		434.4	0	0	0	0	1.54	11.9	8.75	8.71	10.63	1.1	0.5	0				0			0.04	8.75	8.75	8.71	8.71	0.5	200	3.15
6A-A to 6A-B	PVC SN8	9.98	150	0.018	1	100	5	302	0.0111	9.3	5	302	0.0111	9.3	9.3		9.3	-4.3	5		15.2	0.33	0.28	0.77	0.69	0.86	15.53	14.89	14.79	15.41	1.1	0.46	0	0	2		0	0.01		0.01	14.98	14.98	14.97	14.97	0.04	2241.3	0.54
6A-B to 6A-C	PVC SN8	1.6	150	0.018	1	100	5.08	301.2	0.0209	17.5	5	302	0.0208	17.4	17.5		17.5	-7.6	10		15.2	0.65	0.56	0.92	0.87	0.86	15.41	14.79	14.78	15.39	1.1	0.46	0	0.075	2		0.02	0.03		0.01	14.97	14.94	14.93	14.93	0.39	254	0.43
6A-C to 6A-D	PVC SN8	9.98	225	0.04	4.28	23.3	5.1	301.07	0.0307	25.6	5.01	301.87	0.0305	25.6	25.6		25.6	-10.7	14.9		93	0.16	0.38	1.71	0.87	2.34	15.39	14.7	14.27	15.29	1.1	0.46	0.1	0	2		0.01	0.01		0.01	14.93	14.92	14.91	14.91	0.11	941.9	0.46
6A-D to 3A-E	PVC SN8	1.67	225	0.04	5	20	5.18	300.27	0.0405	33.8	5.1	301.07	0.0403	33.7	33.8		33.8	-10.7	23.1		100.5	0.23	0.58	2.05	1	2.53	15.29	14.27	14.19	15.28	1.1	0.79	89.9	0	2		0.02	0.03		0	14.91	14.87	14.87	14.87	0.26	379.3	0.38
7-A to 7-B	RHS	6	125x75	0.009	0.3	333.3	13	232.4	0.0045	2.9	5	302	0.0028	2.4	2.9		2.9		2.9		3.2	0.89	0.31	0.4	0.61	0.35	13.92	13.84	13.82	13.92	1.1	0.02	0		7		0	0.03		0.02	13.92	13.89	13.86	13.86	0.56	180.1	0

No.	DATE	REVISIONS	DES	DRN	CHK	APD
D	14.03.25	GENERAL AMENDED	S.C.M	J.J.D	J.M.H	J.M.H
C	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
B	18.10.24	GENERAL AMENDMENT	S.C.M	J.J.D	J.M.H	J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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SURVEYOR CAPRICORN SURVEY GROUP CQ PHONE 07 4927 5199
DATUM A.H.D. P.M. R.L.

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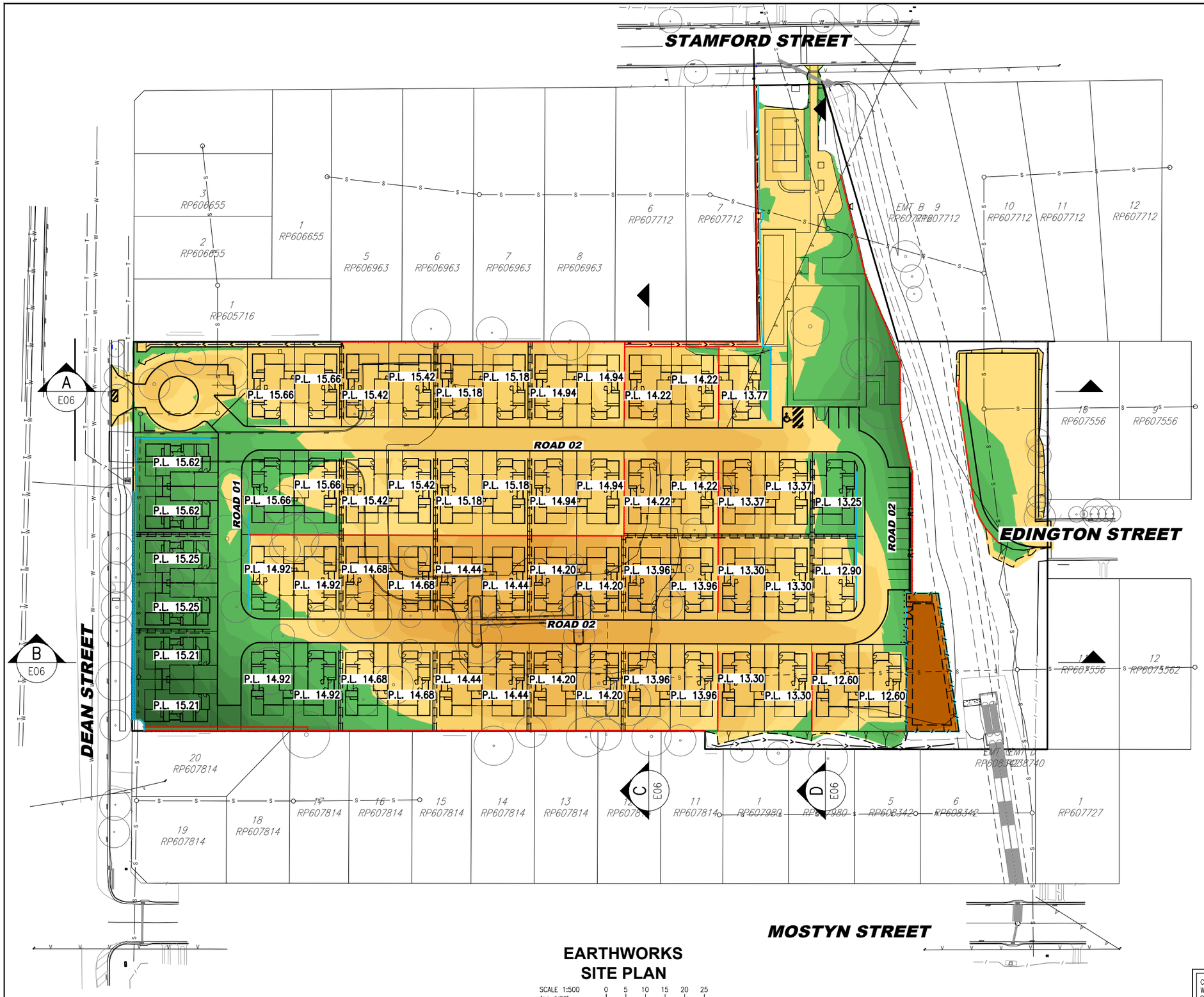
PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE STORMWATER CALCULATIONS 1% AEP HYDRAULICS
CLIENT RUBY DEVELOPMENT PTY LTD

DRAWING STATUS: FOR CONSTRUCTION
DRAWING NUMBER: S24-018-C37
SHEET NUMBER: 37 OF 37
REVISION: D



EARTHWORKS SITE PLAN

SCALE 1:500 (A1 SIZE) 0 5 10 15 20 25

EARTHWORKS LEGEND

DEPTH OF CUT TABLE	DEPTH OF FILL TABLE
0.0m – 0.25m	0.0m – 0.25m
0.25m – 0.5m	0.25m – 0.5m
0.5m – 0.75m	0.5m – 0.75m
0.75m – 1.0m	0.75m – 1.0m
1.0m – 1.25m	1.0m – 1.25m
1.25m – 1.5m	1.25m – 1.5m
1.5m – 1.75m	1.5m – 1.75m
1.75m – 2.0m	1.75m – 2.0m
2.0m – 2.25m	2.0m – 2.25m
2.25m – 2.5m	2.25m – 2.5m
> 2.5m	> 2.5m

EARTHWORKS SUMMARY

AREA OF CUT – 16,450m²
VOLUME OF CUT – 9,462m³
AREA OF FILL – 6,050m²
VOLUME OF FILL – 3,476m³

THE EARTHWORKS VOLUMES SHOWN ARE INDICATIVE NETT FIGURES ONLY BETWEEN EXISTING SURFACE LEVEL AND FINISHED EARTHWORKS LEVEL AND DO NOT ALLOW FOR DEMOLITION WORKS, STRIPPING OF TOPSOIL, UNSUITABLE MATERIAL AND VEGETATION OR COMPACTION LOSSES.

PAVEMENT LEVELS SHOWN ARE 330mm BELOW F.S.L
BUILDING PAD LEVELS SHOWN ARE 250mm BELOW F.S.L
LANDSCAPING LEVELS SHOWN ARE 100mm BELOW F.S.L

EARTHWORKS LEVELS MAY BE ADJUSTED TO SUIT FFL'S AND CONCRETE THICKNESS BASED ON STRUCTURAL DESIGN AS APPROVED BY SUPERINTENDENT.

GENERAL NOTES

1. IN CASE OF DOUBT – ASK!
2. ALL LEVELS TO AHD, DIMENSIONS IN METERS U.N.O
3. ALL LIAISON WITH LOCAL, STATE & STATUTORY AUTHORITIES IS THE CONTRACTOR'S RESPONSIBILITY.
4. THE LOCATION OF EXISTING SERVICES IS FOR CONTRACTOR'S INFORMATION ONLY, THE LOCATION OF SERVICES WILL BE CONFIRMED BY THE CONTRACTOR PRIOR TO THE COMMENCEMENT OF WORKS.
5. ANY DAMAGE CAUSED TO THE EXISTING SERVICE WILL BE MADE GOOD AT THE CONTRACTORS EXPENSE.
6. EARTHWORKS PROCEDURES ARE TO BE CARRIED OUT IN ACCORDANCE WITH AS 3798 – 2007 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS".
7. EARTHWORKS OPERATIONS ARE TO BE CARRIED OUT IN GENERAL ACCORDANCE WITH THE GEOTECHNICAL REPORT.
8. WORKS NOT SPECIFICALLY REFERRED TO, ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE GENERAL DRAWINGS AND SPECIFICATIONS OF THE LOCAL AUTHORITY.
9. THE CONTRACTOR IS TO ALLOW FOR ALL FEES AND HAULAGE COSTS ASSOCIATED WITH DISPOSAL OF MATERIAL FROM THE SITE.
10. ALL COSTS ASSOCIATED WITH NOISE AND DUST SUPPRESSION FOR SITE WORKS ARE DEEMED THE CONTRACTOR'S RESPONSIBILITY.
11. COMPACTION STANDARDS
    – 'MODIFIED' TO AS 1289 TEST 5.2.1
    – 'STANDARD TO AS 1289 TEST 5.1.1
12. PRIOR TO COMMENCEMENT OF WORKS THE CONTRACTOR WILL PROVIDE SCOUR AND EROSION PROTECTION INCLUDING PROVISION OF SILT TRAPS AND FENCES TO MINIMISE DEPOSITION OF MATERIAL DOWNSTREAM OF THE PROPERTY.
13. NO BLASTING WILL BE PERMITTED.
14. THE LOCATION OF THE SITE SHEDS, SITE OFFICE AND AMENITIES BUILDING WILL BE LOCATED TO SUIT TEMPORARY UTILITY SERVICES OR AS AGREED WITH THE MANAGER.
15. TESTING FREQUENCY AS 3798 – 2007 SECTION 8.0 OR AS APPROVED BY THE GEOTECHNICAL ENGINEER.
16. AT COMPLETION OF CONSTRUCTION THE CONTRACTOR SHALL ARRANGE FOR AN INDEPENDENT LICENSED SURVEYOR TO CARRY OUT A "WORKS AS CONSTRUCTED" SURVEY AND SUBMIT THE DETAIL PLAN TO THE MANAGER.
17. THE LOCATION OF TEMPORARY STOCKPILES DURING CONSTRUCTION IS TO BE AGREED WITH THE MANAGER.

ALL RETAINING WALLS LOCATED WITHIN THE SITE TO STABILISE CUT ARE TO BE WHOLLY WITHIN THE PROPERTY BOUNDARY INCLUDING ALL ASSOCIATED FOOTINGS AND SUB-SOIL DRAINAGE.

CONTRACTOR TO USE EXCAVATION TECHNIQUE THAT WILL PREVENT SUBSIDIANCE WITHIN NEIGHBOURING PROPERTIES IN ACCORDANCE WITH GEOTECHNICAL ENGINEERS REPORT AND ADVICE ON SITE.

NOTE: TEMPORARY EXCAVATIONS ARE TO BE SUPERVISED BY A SUITABLY QUALIFIED GEOTECHNICAL ENGINEER.

No.	DATE	REVISIONS	DES	DRN	CHK	APD
F	14.03.25	GENERAL AMENDED	S.C.M	J.J.D	J.M.H	J.M.H
E	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
D	08.11.24	RETAINING WALL UPDATE	S.C.M	J.J.D	J.M.H	J.M.H
C	29.10.24	GENERAL AMENDEMENT	S.C.M	J.J.D	J.M.H	J.M.H
B	18.10.24	GENERAL AMENDMENT	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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SURVEYOR
CAPRICORN SURVEY GROUP CQ
PHONE 07 4927 5199

DATUM A.H.D.
P.M.
R.L.

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PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712
192 DEAN STREET, BERSERKER
TITLE EARTHWORKS SITE PLAN
CLIENT RUBY DEVELOPMENT PTY LTD

DRAWING STATUS FOR CONSTRUCTION
DRAWING NUMBER S24-018-E01
SHEET NUMBER 01 OF 07
REVISION F

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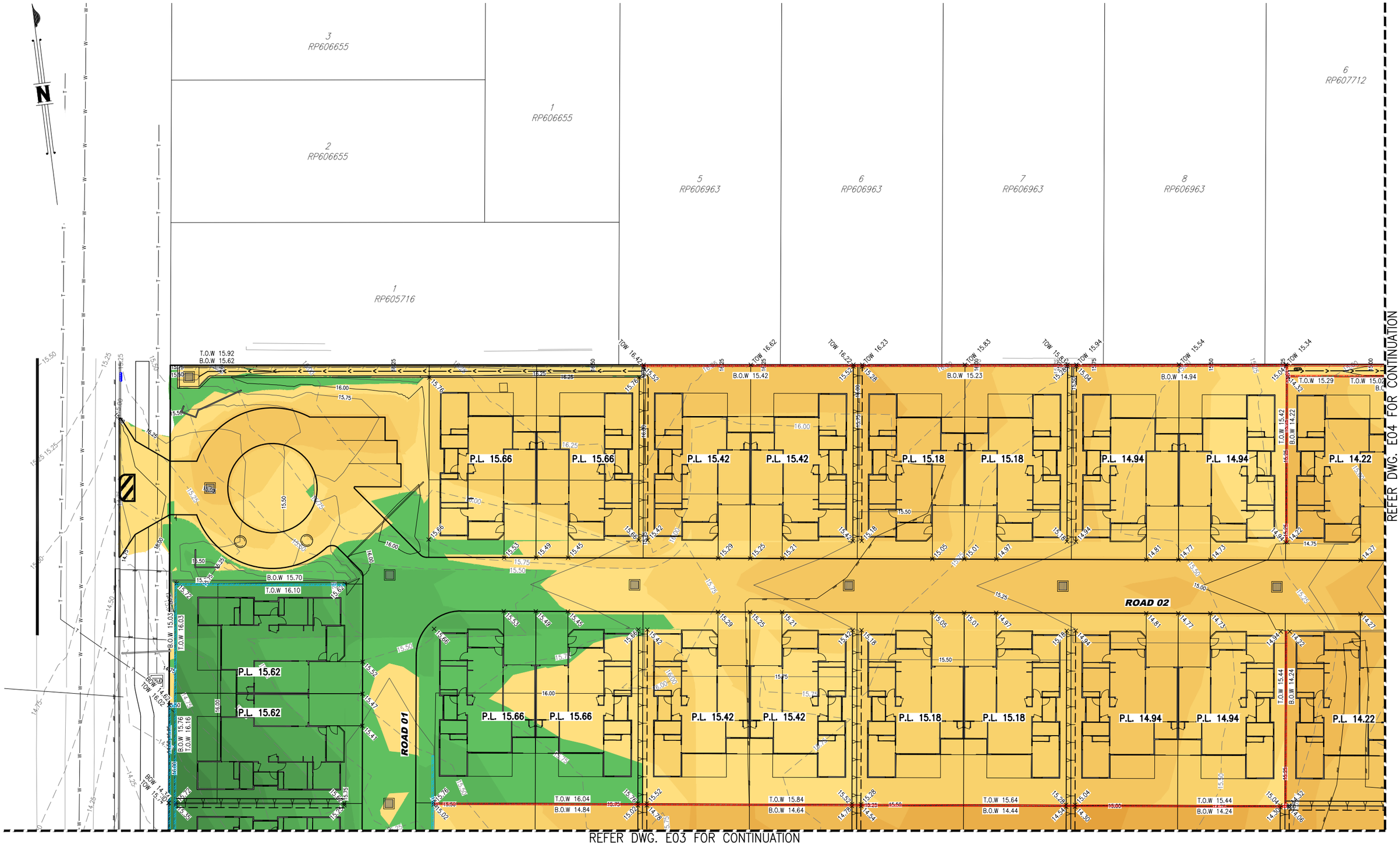

EARTHWORKS PLAN

SCALE 1:200 (A1 SIZE)

0 2 4 6 8 10

No.	DATE	REVISIONS	DES	DRN	CHK	APD
D	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
C	10.12.24	RETAINING WALL LEVELS UPDATE	S.C.M	J.J.D	J.M.H	J.M.H
B	18.10.24	GENERAL AMENDMENT	S.C.M	J.J.D	J.M.H	J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

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NORTHERN NSW T 02 6674 8047 E nsw@westerapartners.com.au
CENTRAL VICTORIA T 03 5441 0922 E centralvic@westerapartners.com.au

SURVEYOR: CAPRICORN SURVEY GROUP CQ, PHONE 07 4927 5199
DATUM A.H.D. P.M. R.L.

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PROJECT: PROPOSED RETIREMENT LIVING ESTATE
LOCATION: LOT 24 ON RP607814 & LOT 8 ON RP607712
192 DEAN STREET, BERSERKER
TITLE: EARTHWORKS PLAN 1 of 4
CLIENT: RUBY DEVELOPMENT PTY LTD

DRAWING STATUS: FOR CONSTRUCTION
DRAWING NUMBER: S24-018-E02
SHEET NUMBER: 02 OF 07
REVISION: D

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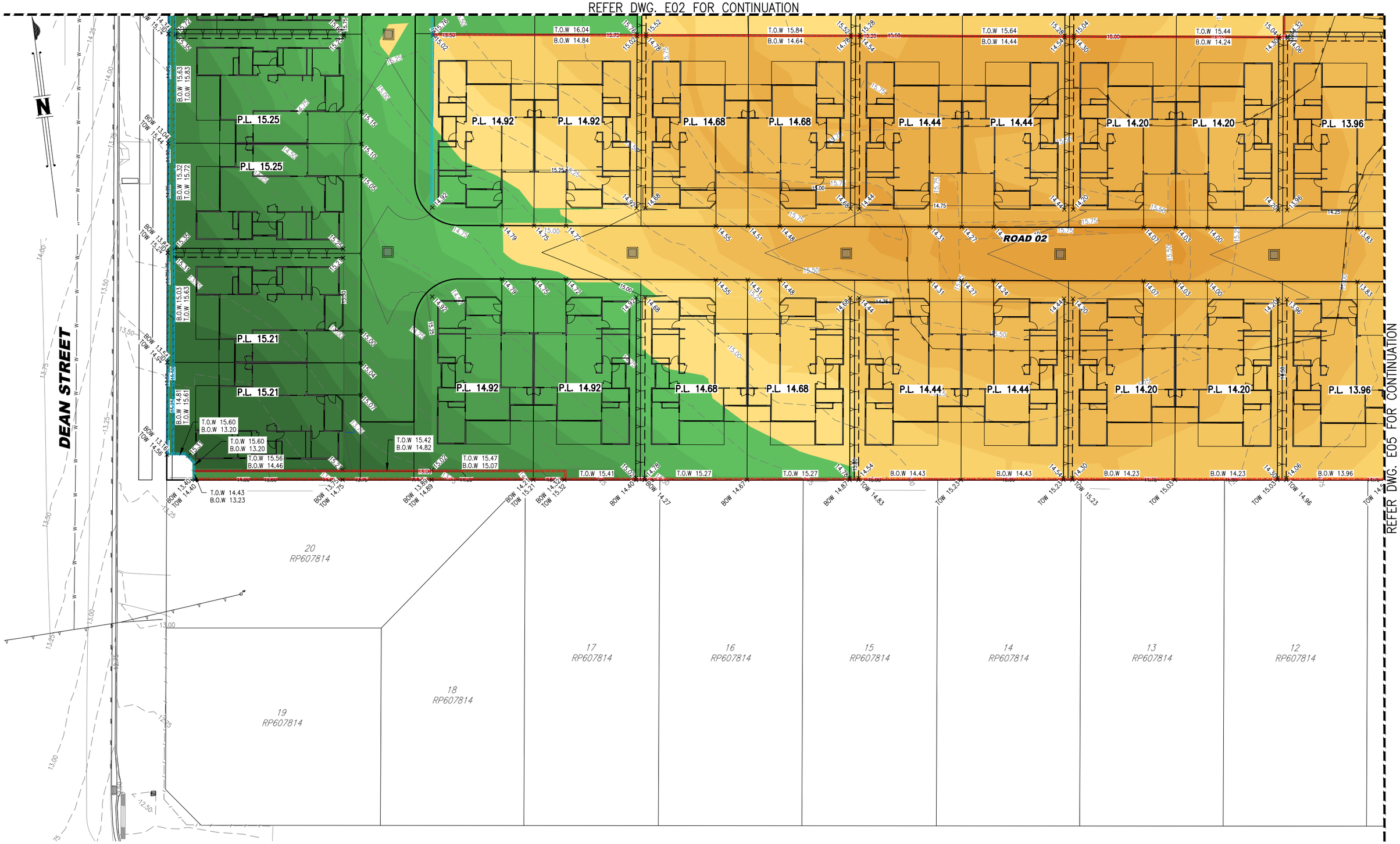
REFER DWG. E02 FOR CONTINUATION



REFER DWG. E05 FOR CONTINUATION

EARTHWORKS PLAN

SCALE 1:200 (A1 SIZE)

0 2 4 6 8 10

No.	DATE	REVISIONS	DES	DRN	CHK	APD
F	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
E	10.12.24	RETAINING WALL LEVELS UPDATE	S.C.M	J.J.D	J.M.H	J.M.H
D	08.11.24	RETAINING WALL UPDATE	S.C.M	J.J.D	J.M.H	J.M.H
C	29.10.24	GENERAL AMENDEMENT	S.C.M	J.J.D	J.M.H	J.M.H
B	18.10.24	GENERAL AMENDMENT	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
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CENTRAL VICTORIA T 03 5441 0922 E centralvic@westerapartners.com.au

SURVEYOR
CAPRICORN SURVEY GROUP CQ
PHONE 07 4927 5199

DATUM A.H.D.
P.M.
R.L.

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PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712
192 DEAN STREET, BERSERKER
TITLE EARTHWORKS PLAN 2 of 4
CLIENT RUBY DEVELOPMENT PTY LTD

DRAWING STATUS: FOR CONSTRUCTION
DRAWING NUMBER: S24-018-E03
SHEET NUMBER: 03 OF 07
REVISION: F

S24-018-E_Earthwks.dwg

REFER DWG. E02 FOR CONTINUATION

N

6 RP607712

7 RP607712

EMN B RP607712

9 RP607712

10 RP607712

11 RP607712

12 RP607712

10 RP607556

9 RP607556

REFER DWG. E05 FOR CONTINUATION

EARTHWORKS PLAN

SCALE 1:200 (A1 SIZE)

0 2 4 6 8 10

No.	DATE	REVISIONS	DES	DRN	CHK	APD	DOCUMENT CONTROL
E	14.03.25	GENERAL AMENDED	S.C.M	J.J.D	J.M.H	J.M.H	DESIGNED S.C.M
D	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H	DRAWN J.J.D
C	29.10.24	GENERAL AMENDEMENT	S.C.M	J.J.D	J.M.H	J.M.H	CHECKED J.M.H
B	18.10.24	GENERAL AMENDMENT	S.C.M	J.J.D	J.M.H	J.M.H	APPROVED J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H	DATE JULY 2024

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
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SURVEYOR
CAPRICORN SURVEY GROUP CQ
PHONE 07 4927 5199

DATUM A.H.D.
P.M.
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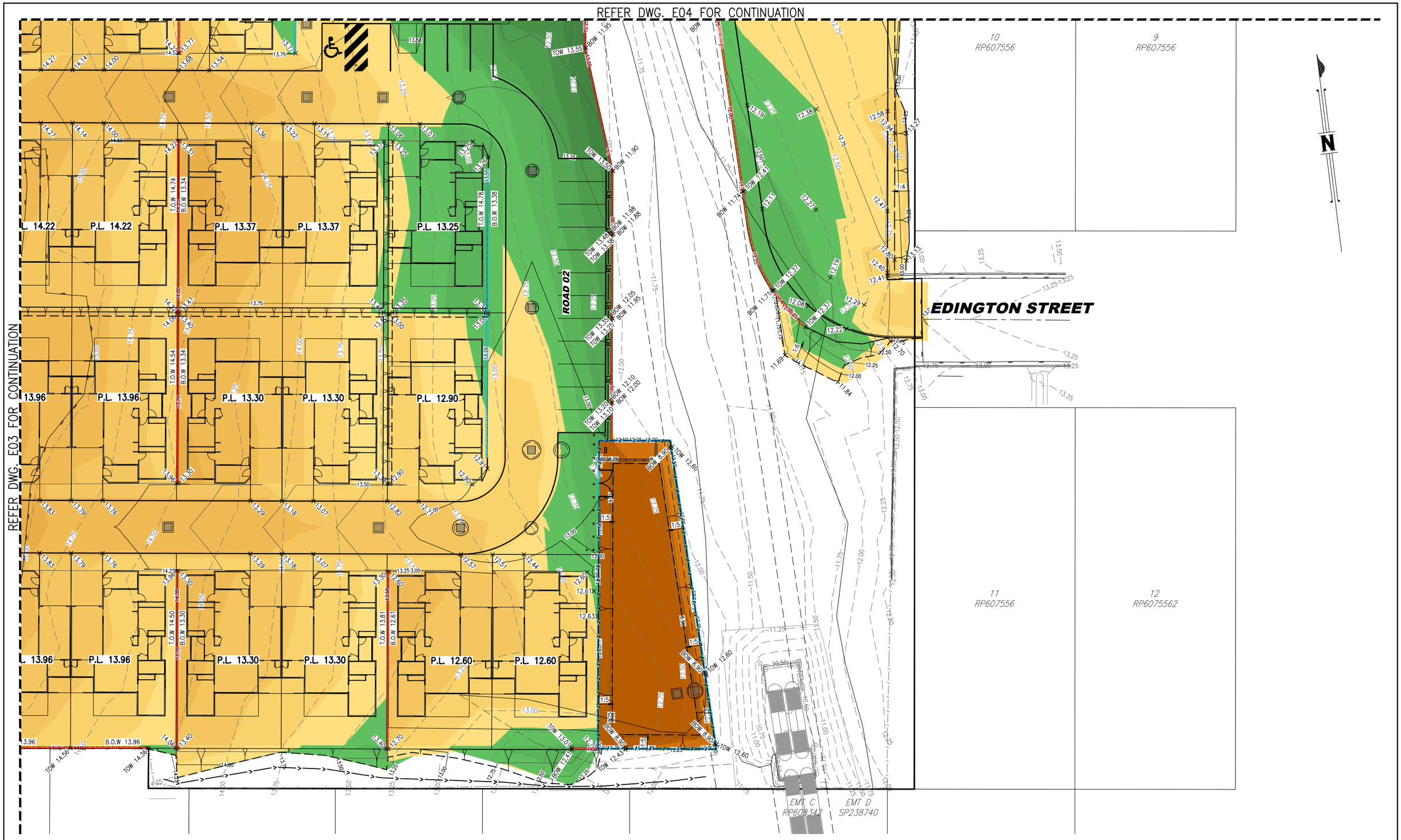
PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE EARTHWORKS PLAN 3 of 4
CLIENT RUBY DEVELOPMENT PTY LTD

DRAWING STATUS: FOR CONSTRUCTION
DRAWING NUMBER: S24-018-E04
SHEET NUMBER: 04 OF 07
REVISION: E

S24-018-E_Earthwks.dwg



EARTHWORKS PLAN

SCALE 1:200 (A1 SIZE)

0 2 4 6 8 10

No.	DATE	REVISIONS	DES	DRN	CHK	APD
E	14.03.25	GENERAL AMENDED	S.C.M	J.J.D	J.M.H	J.M.H
D	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
C	10.12.24	RETAINING WALL LEVELS UPDATE	S.C.M	J.J.D	J.M.H	J.M.H
B	18.10.24	GENERAL AMENDMENT	S.C.M	J.J.D	J.M.H	J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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CENTRAL VICTORIA T 03 5441 0922 E centralvic@westerapartners.com.au

SURVEYOR
CAPRICORN SURVEY GROUP CQ
PHONE 07 4927 5199

DATUM A.H.D.
P.M.
R.L.

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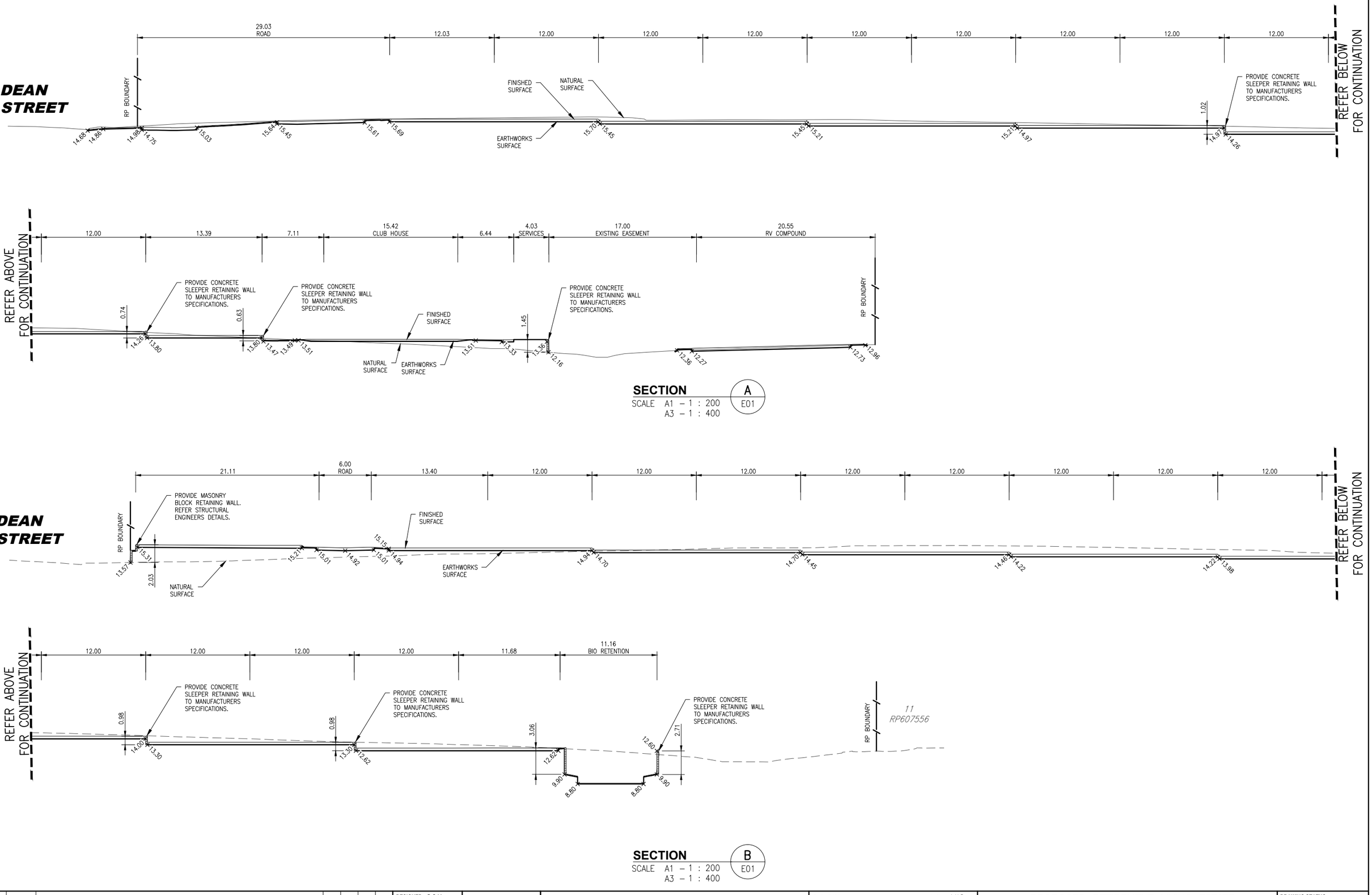
PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712
192 DEAN STREET, BERSERKER
TITLE EARTHWORKS PLAN 4 of 4
CLIENT RUBY DEVELOPMENT PTY LTD

DRAWING STATUS FOR CONSTRUCTION
DRAWING NUMBER S24-018-E05
SHEET NUMBER 05 OF 07
REVISION E

S24-018-E_Earthwks.dwg



SECTION A

SCALE A1 – 1 : 200
A3 – 1 : 400

E01

SECTION B

SCALE A1 – 1 : 200
A3 – 1 : 400

E01

No.	DATE	REVISIONS	DES	DRN	CHK	APD
D	14.03.25	GENERAL AMENDED	S.C.M	J.J.D	J.M.H	J.M.H
C	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
B	18.10.24	GENERAL AMENDMENT	S.C.M	J.J.D	J.M.H	J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024

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For and on behalf of WESTERA PARTNERS PTY. LTD.
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CENTRAL VICTORIA T 03 5441 0922 E centralvic@westerapartners.com.au

SURVEYOR CAPRICORN SURVEY GROUP CQ
PHONE 07 4927 5199
DATUM A.H.D.
P.M.
R.L.

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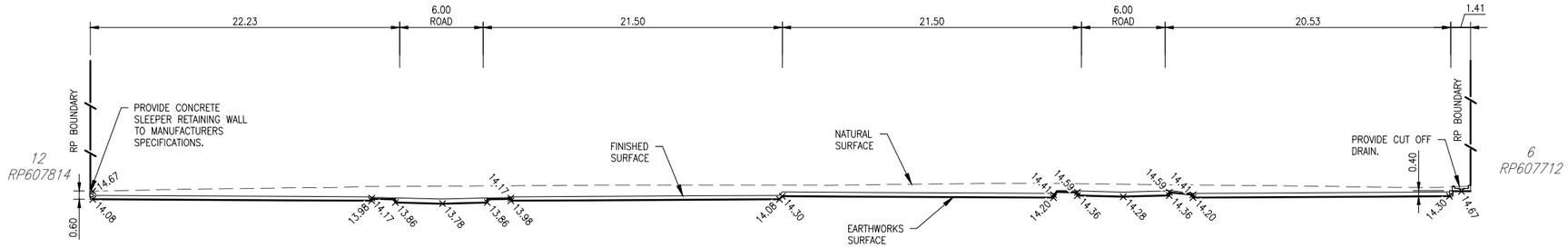
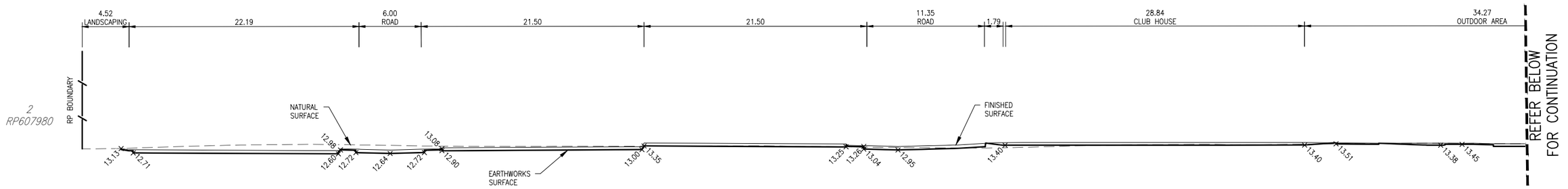
PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712
192 DEAN STREET, BERSERKER
TITLE EARTHWORKS SECTIONS 1 of 2
CLIENT RUBY DEVELOPMENT PTY LTD

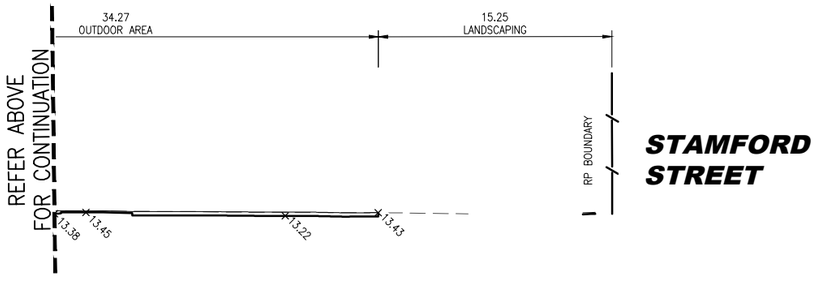
DRAWING STATUS FOR CONSTRUCTION
DRAWING NUMBER S24-018-E06
SHEET NUMBER 06 OF 07
REVISION D

S24-018-E_Earthwks.dwg



SECTION C
SCALE A1 – 1 : 200 E01
A3 – 1 : 400





SECTION D
SCALE A1 – 1 : 200 E01
A3 – 1 : 400

No.	DATE	REVISIONS	DES	DRN	CHK	APD
D	14.03.25	GENERAL AMENDED	S.C.M	J.J.D	J.M.H	J.M.H
C	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
B	18.10.24	GENERAL AMENDMENT	S.C.M	J.J.D	J.M.H	J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
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PHONE 07 4927 5199

DATUM A.H.D.
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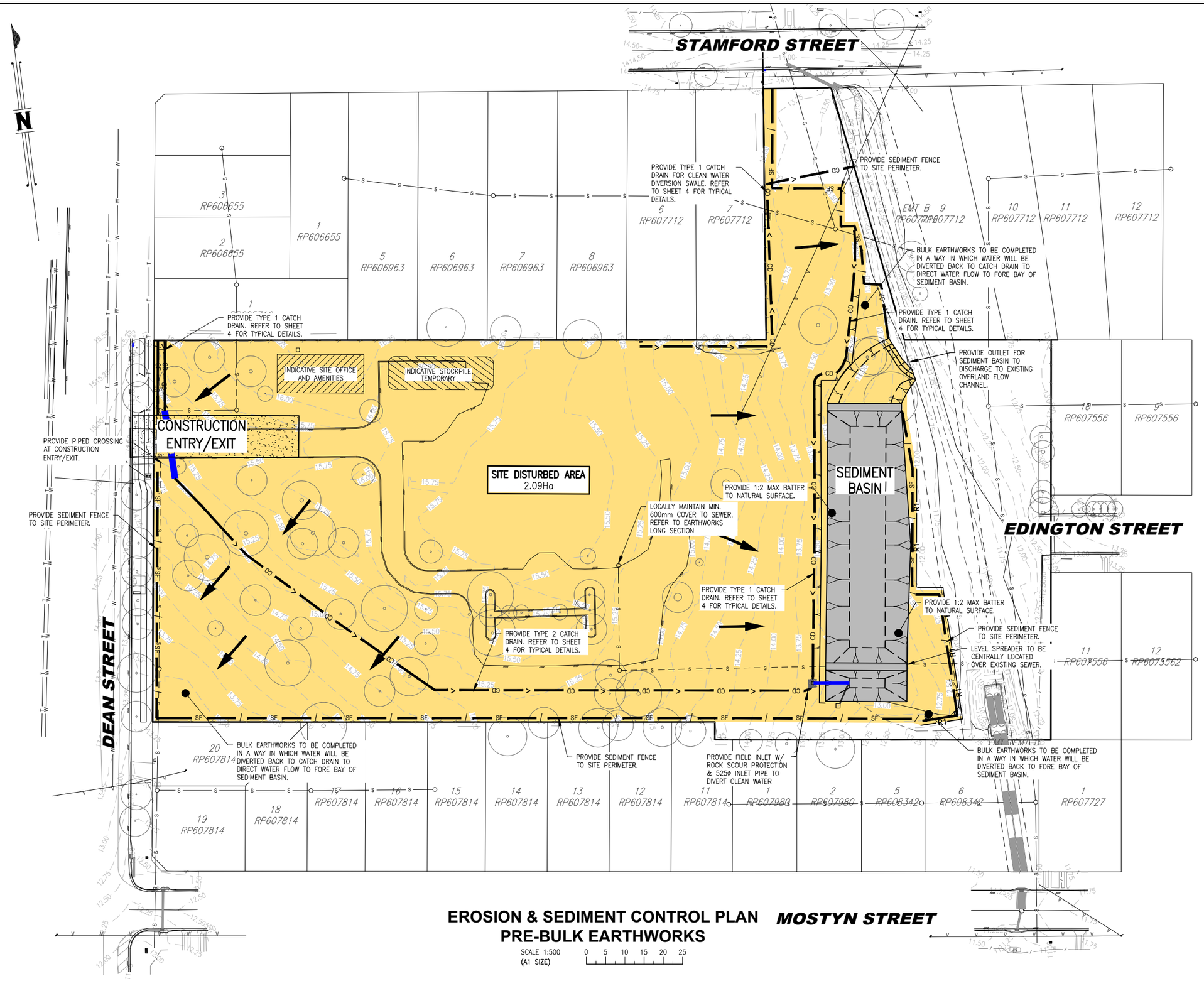
PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712
192 DEAN STREET, BERSERKER
TITLE EARTHWORKS SECTIONS 2 of 2
CLIENT RUBY DEVELOPMENT PTY LTD

DRAWING STATUS FOR CONSTRUCTION
DRAWING NUMBER S24-018-E07
SHEET NUMBER 07 OF 07
REVISION D

S24-018-E_Earthwks.dwg



LEGEND

	EXTENT OF DISTURBED AREA
	INLET PROTECTION
-SDB-->-	STRAW BALE FLOW DIVERSION BANK
-DB-->-	DIVERSION BANK
-DC-->-	DIVERSION CHANNEL
-- CB --	COMPOST BERM
-- SF --	SEDIMENT FENCE
	ROCK CHECK DAM
-CD-->-	CATCH DRAIN
	SURFACE FLOW ARROW
-CH-->-	CHUTE
LS	LEVEL SPREADER
-SD-->-	SLOPE DRAIN
OS	OUTLET STRUCTURE
	ON GRADE GULLY PIT
	SAG GULLY PIT
	600 x 600 FIELD INLET
	900 x 600 FIELD INLET
	1050 DIA FIELD INLET
	STORMWATER LINE
	STORMWATER HEADWALL
2C	STORMWATER NUMBER

SEDIMENT CONTROL INSTALLATION SEQUENCE

1. INSTALL SEDIMENT FENCES AND CONSTRUCTION ENTRY/EXIT, PRIOR TO SITE STRIPPING
2. INSTALL CATCH DRAINS AND CHUTE WITH ROCK CHECK DAM
3. ON-SITE EROSION AND SEDIMENT CONTROL PROTECTION MEASURES TO BE REMOVED FOLLOWING SUCCESSFUL SITE STABILISATION
4. ACCESS CHAMBER/INLET PROTECTION TO BE INSTALLED CONCURRENTLY WITH STORMWATER PIPEWORK
5. REFER TO SHEET 3 FOR ACCESS CHAMBER/INLET PROTECTION INSTALLATION PROCESS AND DETAILS
7. EARTHWORKS STAGE B TO COMMENCE UPON COMPLETION OF ALL STAGE A EARTHWORKS AND CIVIL WORKS
8. ON-SITE EROSION AND SEDIMENT CONTROL PROTECTION MEASURES TO BE REMOVED UPON COMPLETION OF CONSTRUCTION WORKS AND AS APPROVED BY THE SUPERINTENDENT

DIVERT ANY UPSLOPE "CLEAN WATER" AROUND DISTURBANCE AREA WHERE POSSIBLE AND AS DIRECTED ON SITE BY SUPERVISING ENGINEER.

LOCATION OF TEMPORARY STOCKPILES AND SITE SHEDS TO BE CONFIRMED ONSITE PRIOR TO COMMENCEMENT OF SITE WORKS.

DEWATERING NOTE:
DEWATERING DURING EXCAVATION MUST BE CARRIED OUT IN ACCORDANCE WITH **RRC** & I.E.C.A STANDARD DRAWINGS & SPECIFICATIONS. ALL RELEASED STORMWATER MUST NOT EXCEED THE FOLLOWING LIMITS:
- 50mg/L OF TSS
- TURBIDITY LESS THAN 10% BACKGROUND
- pH VALUE OF 6.5-8.5

NOTE:
SITE FOREMAN TO REVIEW SITE TOPOGRAPHY PRIOR TO SITE WORKS, MONITOR STORMWATER RUNOFF FROM ADJOINING PROPERTIES AND INSTALL CATCH DRAIN AND LEVEL SPREADER AT DISCHARGE LOCATION IF REQUIRED. REFER DETAILS ON SHEET S24-018-ESC04&05.

EROSION & SEDIMENT CONTROL PLAN
PRE-BULK EARTHWORKS

SCALE 1:500 (A1 SIZE) 0 5 10 15 20 25

No.	DATE	REVISIONS	DES	DRN	CHK	APD
B	02.12.24	AMENDED SEDIMENT BASIN LOCATION	P.B	P.B	J.M.H	J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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CENTRAL VICTORIA T 03 5441 0922 E centralvic@westerapartners.com.au

SURVEYOR CAPRICORN SURVEY GROUP CQ PHONE 07 4927 5199
DATUM A.H.D. P.M. R.L.

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PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE EROSION & SEDIMENT CONTROL PLAN PRE-BULK EARTHWORKS
CLIENT RUBY DEVELOPMENT PTY LTD

DRAWING STATUS: FOR APPROVAL
DRAWING NUMBER: S24-018-ESC01
SHEET NUMBER: 01 OF 06
REVISION: B

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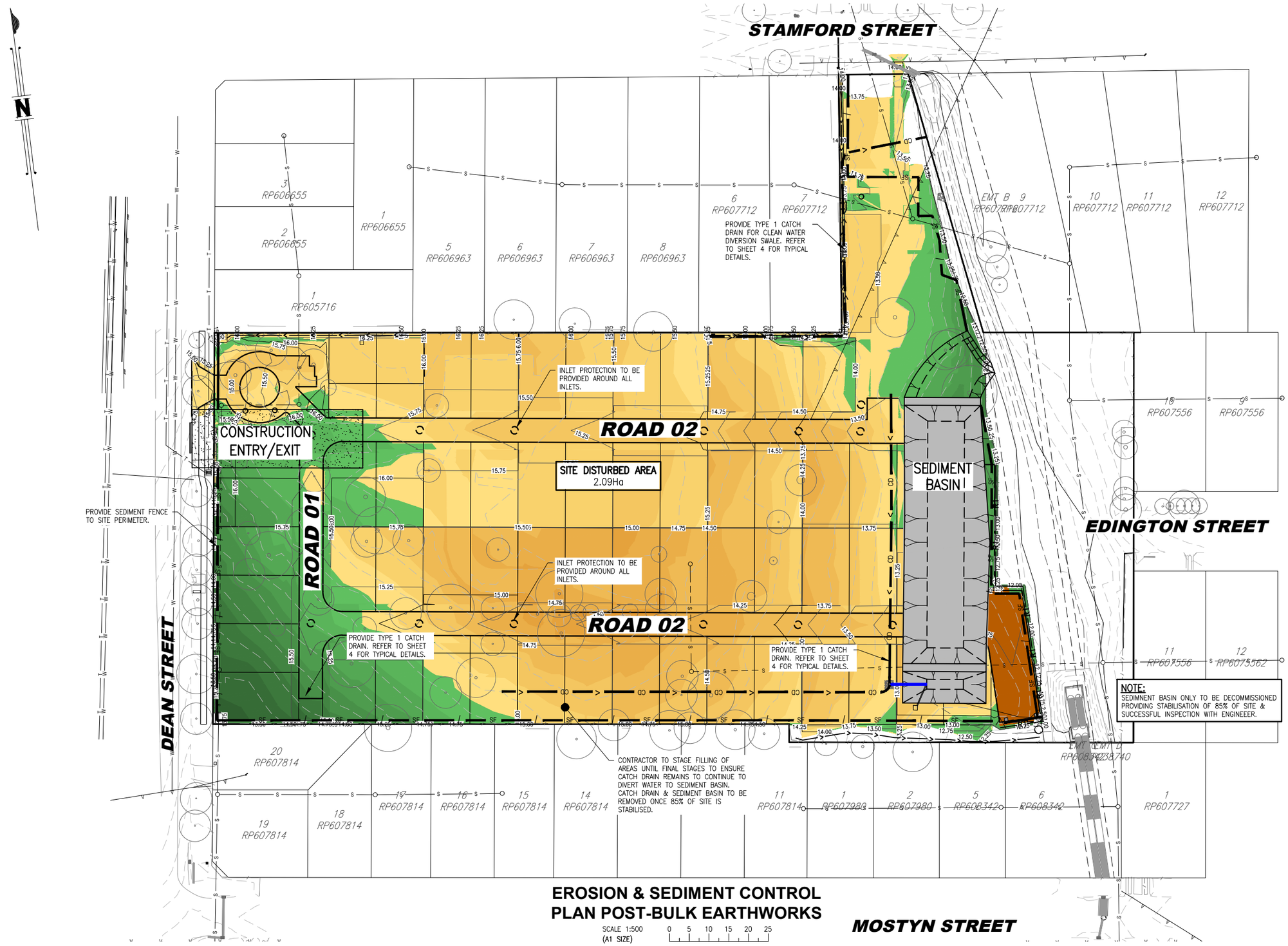

EROSION & SEDIMENT CONTROL PLAN POST-BULK EARTHWORKS

SCALE 1:500 (A1 SIZE) 0 5 10 15 20 25

LEGEND

	EXTENT OF DISTURBED AREA
	INLET PROTECTION
-SDB-->-	STRAW BALE FLOW DIVERSION BANK
-DB-->-	DIVERSION BANK
-DC-->-	DIVERSION CHANNEL
-CB-	COMPOST BERM
-SF-	SEDIMENT FENCE
	ROCK CHECK DAM
-CD-->-	CATCH DRAIN
	SURFACE FLOW ARROW
-CH-->-	CHUTE
LS	LEVEL SPREADER
-SD-->-	SLOPE DRAIN
OS	OUTLET STRUCTURE
	ON GRADE GULLY PIT
	SAG GULLY PIT
	600 x 600 FIELD INLET
	900 x 600 FIELD INLET
	1050 DIA FIELD INLET
	STORMWATER LINE
	STORMWATER HEADWALL
2C	STORMWATER NUMBER

SEDIMENT CONTROL INSTALLATION SEQUENCE

1. INSTALL SEDIMENT FENCES AND CONSTRUCTION ENTRY/EXIT, PRIOR TO SITE STRIPPING
2. INSTALL CATCH DRAINS AND CHUTE WITH ROCK CHECK DAM
3. ON-SITE EROSION AND SEDIMENT CONTROL PROTECTION MEASURES TO BE REMOVED FOLLOWING SUCCESSFUL SITE STABILISATION
4. ACCESS CHAMBER/INLET PROTECTION TO BE INSTALLED CONCURRENTLY WITH STORMWATER PIPEWORK
5. REFER TO SHEET 3 FOR ACCESS CHAMBER/INLET PROTECTION INSTALLATION PROCESS AND DETAILS
7. EARTHWORKS STAGE B TO COMMENCE UPON COMPLETION OF ALL STAGE A EARTHWORKS AND CIVIL WORKS
8. ON-SITE EROSION AND SEDIMENT CONTROL PROTECTION MEASURES TO BE REMOVED UPON COMPLETION OF CONSTRUCTION WORKS AND AS APPROVED BY THE SUPERINTENDENT

DIVERT ANY UPSLOPE "CLEAN WATER" AROUND DISTURBANCE AREA WHERE POSSIBLE AND AS DIRECTED ON SITE BY SUPERVISING ENGINEER.

LOCATION OF TEMPORARY STOCKPILES AND SITE SHEDS TO BE CONFIRMED ONSITE PRIOR TO COMMENCEMENT OF SITE WORKS.

NOTE:
SEDIMNENT BASIN ONLY TO BE DECOMMISSIONED PROVIDING STABILISATION OF 85% OF SITE & SUCCESSFUL INSPECTION WITH ENGINEEER.

DEWATERING NOTE:
DEWATERING DURING EXCAVATION MUST BE CARRIED OUT IN ACCORDANCE WITH **RRC** & I.E.C.A STANDARD DRAWINGS & SPECIFICATIONS. ALL RELEASED STORMWATER MUST NOT EXCEED THE FOLLOWING LIMITS:
- 50mg/L OF TSS
- TURBIDITY LESS THAN 10% BACKGROUND
- pH VALUE OF 6.5-8.5

NOTE:
SITE FOREMAN TO REVIEW SITE TOPOGRAPHY PRIOR TO SITE WORKS, MONITOR STORMWATER RUNOFF FROM ADJOINING PROPERTIES AND INSTALL CATCH DRAIN AND LEVEL SPREADER AT DISCHARGE LOCATION IF REQUIRED. REFER DETAILS ON SHEET S24-018-ESC04&05.

No.	DATE	REVISIONS	DES	DRN	CHK	APD
C	02.12.24	AMENDED SEDIMENT BASIN LOCATION	P.B	P.B	J.M.H	J.M.H
B	18.10.24	GENERAL AMENDMENT	S.C.M	J.J.D	J.M.H	J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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SURVEYOR
CAPRICORN SURVEY GROUP CQ
PHONE 07 4927 5199

DATUM A.H.D.
P.M.
R.L.

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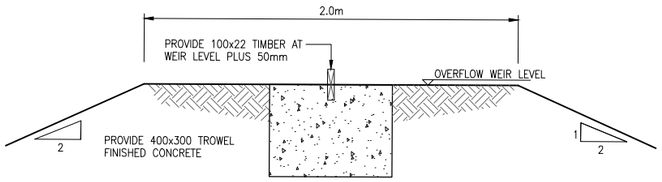
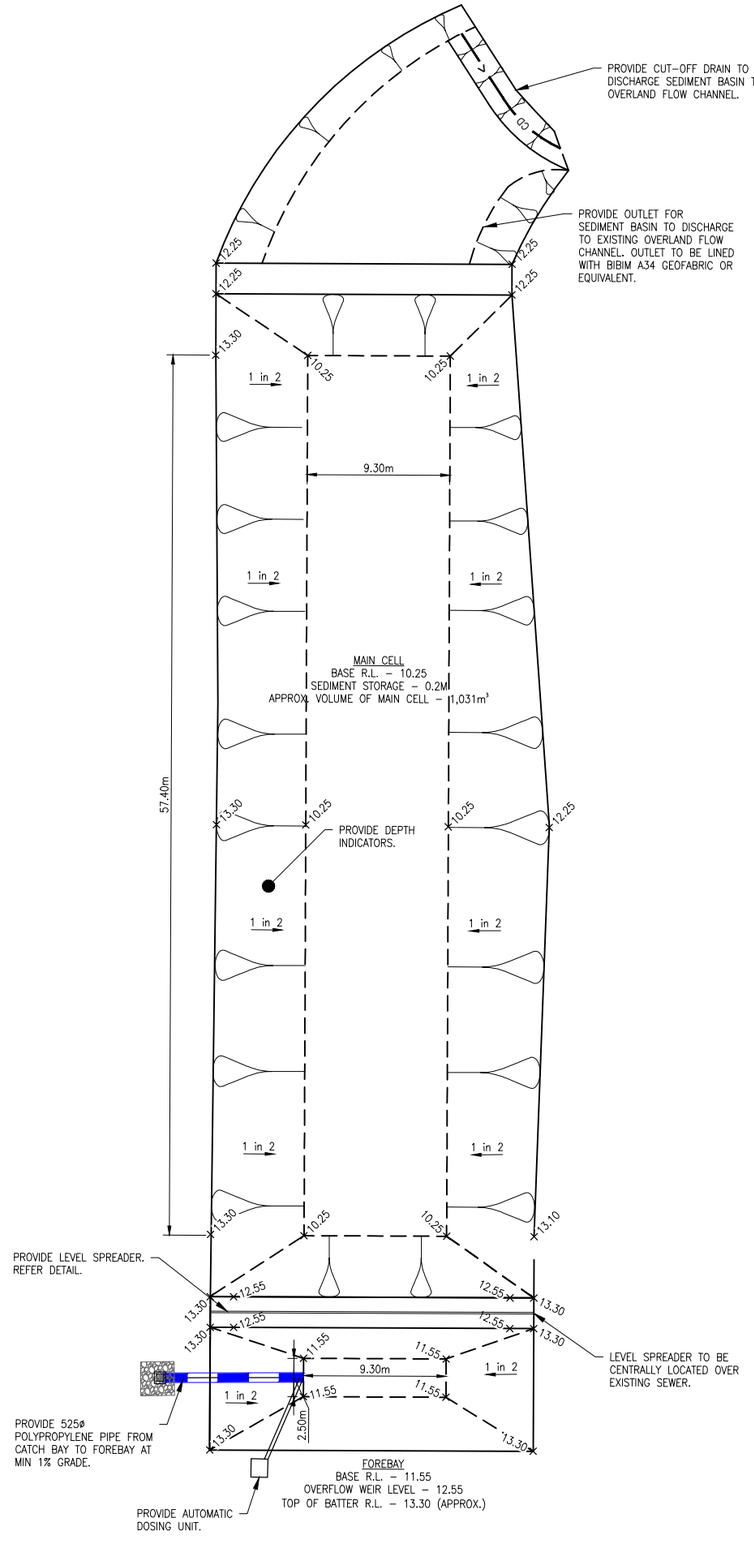
PROJECT: PROPOSED RETIREMENT LIVING ESTATE
LOCATION: LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE: EROSION & SEDIMENT CONTROL PLAN POST-BULK EARTHWORKS
CLIENT: RUBY DEVELOPMENT PTY LTD

DRAWING STATUS: FOR APPROVAL
DRAWING NUMBER: S24-018-ESC02
SHEET NUMBER: 02 OF 06
REVISION: C

S24-018-ESC_Erosion_Post.dwg



LEVEL SPREADER DETAILS



SEDIMENT BASIN PLAN & DETAILS

SCALE 1:200 (A1 SIZE) 0 2 4 6 8 10

LEGEND

	EXTENT OF DISTURBED AREA
	INLET PROTECTION
-SDB-->-	STRAW BALE FLOW DIVERSION BANK
-DB-->-	DIVERSION BANK
-DC-->-	DIVERSION CHANNEL
--CB--	COMPOST BERM
--SF--	SEDIMENT FENCE
	ROCK CHECK DAM
-CD-->-	CATCH DRAIN
	SURFACE FLOW ARROW
-CH-->-	CHUTE
LS	LEVEL SPREADER
-SD-->-	SLOPE DRAIN
OS	OUTLET STRUCTURE
	ON GRADE GULLY PIT
	SAG GULLY PIT
	600 x 600 FIELD INLET
	900 x 600 FIELD INLET
	1050 DIA FIELD INLET
	STORMWATER LINE
	STORMWATER HEADWALL
2C	STORMWATER NUMBER

SEDIMENT CONTROL INSTALLATION SEQUENCE

1. INSTALL SEDIMENT FENCES AND CONSTRUCTION ENTRY/EXIT, PRIOR TO SITE STRIPPING
2. INSTALL CATCH DRAINS AND CHUTE WITH ROCK CHECK DAM
3. ON-SITE EROSION AND SEDIMENT CONTROL PROTECTION MEASURES TO BE REMOVED FOLLOWING SUCCESSFUL SITE STABILISATION
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8. ON-SITE EROSION AND SEDIMENT CONTROL PROTECTION MEASURES TO BE REMOVED UPON COMPLETION OF CONSTRUCTION WORKS AND AS APPROVED BY THE SUPERINTENDENT

DIVERT ANY UPSLOPE "CLEAN WATER" AROUND DISTURBANCE AREA WHERE POSSIBLE AND AS DIRECTED ON SITE BY SUPERVISING ENGINEER.

LOCATION OF TEMPORARY STOCKPILES AND SITE SHEDS TO BE CONFIRMED ONSITE PRIOR TO COMMENCEMENT OF SITE WORKS.

DEWATERING NOTE:
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- 50mg/L OF TSS
- TURBIDITY LESS THAN 10% BACKGROUND
- pH VALUE OF 6.5-8.5

NOTE:
SITE FOREMAN TO REVIEW SITE TOPOGRAPHY PRIOR TO SITE WORKS, MONITOR STORMWATER RUNOFF FROM ADJOINING PROPERTIES AND INSTALL CATCH DRAIN AND LEVEL SPREADER AT DISCHARGE LOCATION IF REQUIRED. REFER DETAILS ON SHEET S24-018-ESC04&05.

No.	DATE	REVISIONS	DES	DRN	CHK	APD
B	02.12.24	AMENDED SEDIMENT BASIN LOCATION	P.B	P.B	J.M.H	J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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CENTRAL VICTORIA T 03 5441 0922 E centralvic@westerapartners.com.au

SURVEYOR CAPRICORN SURVEY GROUP CQ PHONE 07 4927 5199
DATUM A.H.D. P.M. R.L.

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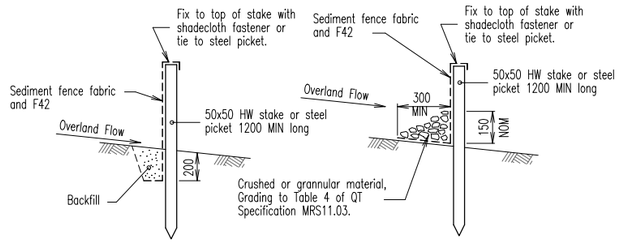
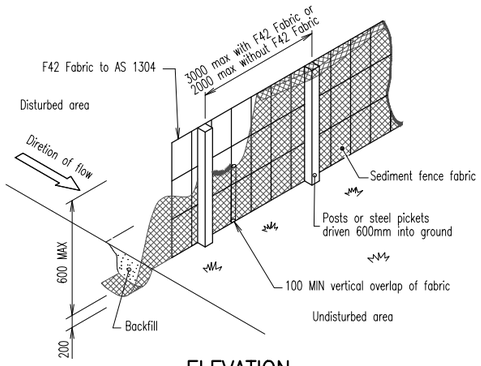
PROJECT: PROPOSED RETIREMENT LIVING ESTATE
LOCATION: LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE: SEDIMENT BASIN PLAN & DETAILS
CLIENT: RUBY DEVELOPMENT PTY LTD

DRAWING STATUS: FOR APPROVAL
DRAWING NUMBER: S24-018-ESC03
SHEET NUMBER: 03 OF 06
REVISION: B

S24-018-ESC_Sediment_Basin.dwg



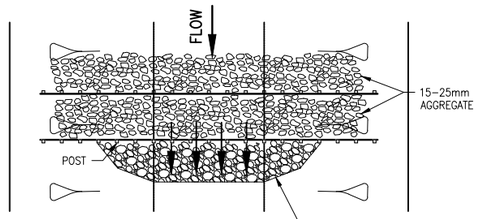
ALTERNATIVE 1 ALTERNATIVE 2



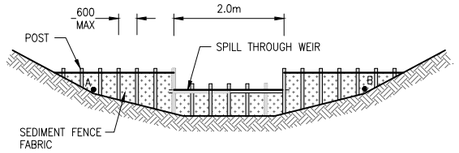
ELEVATION

SEDIMENT FENCE DETAILS

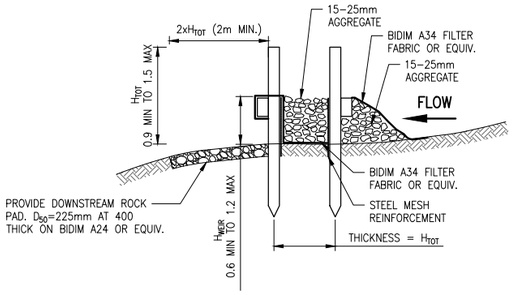
NOTE:
PROVIDE 1.5m RETURNS IN FENCE AT 20m MAX SPACING IF FENCE IS LOCATED ALONG THE CONTOUR, OTHERWISE 10m MAX SPACING.



TOP VIEW



FRONT VIEW



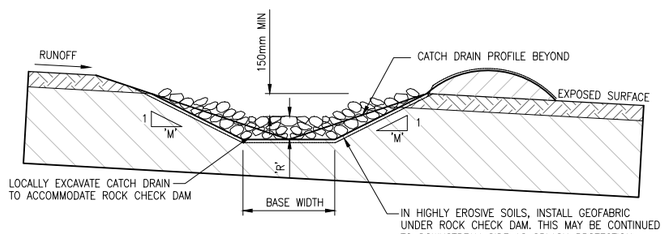
SECTION VIEW

FABRIC
HEAVY DUTY NON–WOVEN NEEDLE–PUNCHED FILTER FABRIC BIDIM A34 OR EQUIVALENT.

FABRIC REINFORCEMENT
WIRE OR STEEL MESH MINIMUM 14–GAUGE WITH A MAXIMUM MESH SPACING OF 200mm.

SUPPORT POSTS/STAKES
1.5kg/m (MINIMUM) STEEL STAR PICKETS SUITABLE FOR ATTACHING FABRIC.

SEDIMENT WEIR

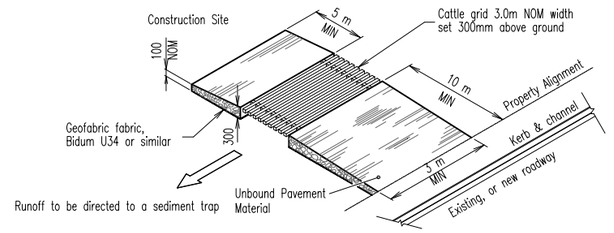


CHECK DAM

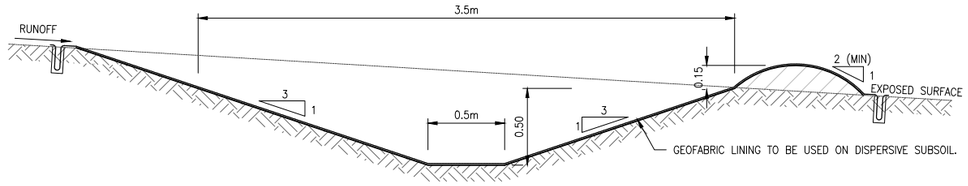
NOT TO SCALE

NOTE:
COIR LOGS MAY BE USED FOR MINOR CATCH DRAINS ON MILD SLOPE WHERE APPROVED BY THE INSPECTING ENGINEER.

REFER EROSION AND SEDIMENT CONTROL PROGRAM PREPARED BY WESTERA PARTNERS DATED JULY 2024 FOR INSTALLATION, MAINTENANCE AND REMOVAL INFORMATION

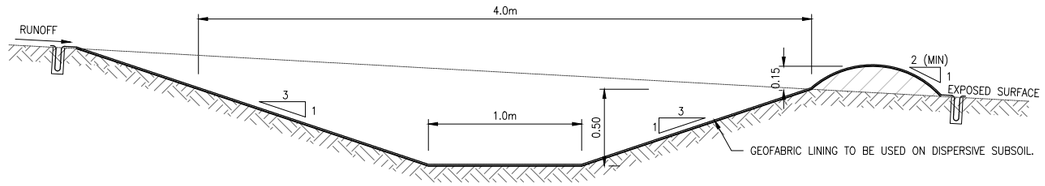


CONSTRUCTION ENTRY/EXIT SEDIMENT TRAP



CATCH DRAIN TYPE '1' TYPICAL SECTION

NOT TO SCALE



CATCH DRAIN TYPE '2' TYPICAL SECTION

NOT TO SCALE

NOTES:
1. MAXIMUM LONGITUDINAL GRADE MAY BE INCREASED WITH THE USE OF ROCK CHECK DAMS OR OTHER VELOCITY RETARDING MECHANISMS
2. CATCH DRAIN TO BE LINED WITH APPROVED GEOFABRIC MATERIAL IF SUBSOIL IS DISPERSIVE. PRIOR TO PLACEMENT OF GEOFABRIC THE DISPERSIVE SUBSOIL MUST BE TREATED WITH GYPSUM. THE APPLCIATION RATE OF GYPSUM SHALL BE DETERMINED ONCE THE SOIL TESTING RESULTS OF THE SUBSOIL ARE OBTAINED.

No.	DATE	REVISIONS	DES	DRN	CHK	APD	DOCUMENT CONTROL
							DESIGNED S.C.M
							DRAWN J.J.D
							CHECKED J.M.H
							APPROVED J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H	DATE JULY 2024

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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SURVEYOR
CAPRICORN SURVEY GROUP CQ
PHONE 07 4927 5199
DATUM A.H.D. P.M. R.L.

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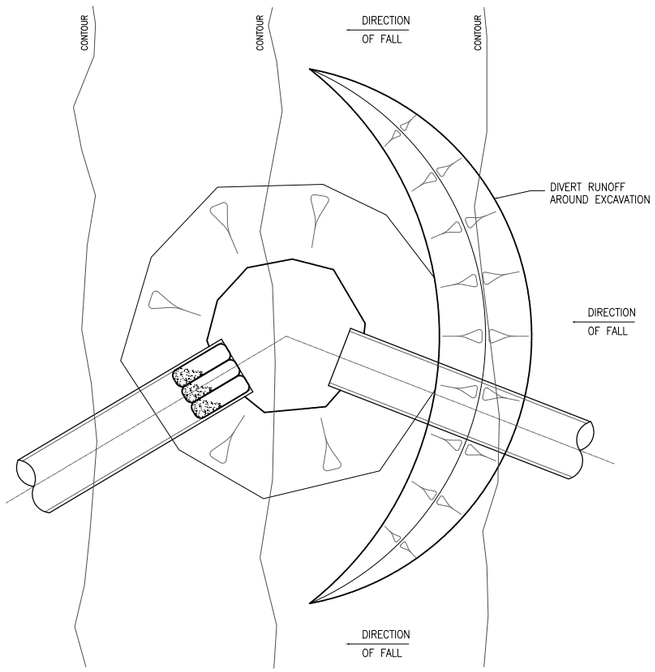
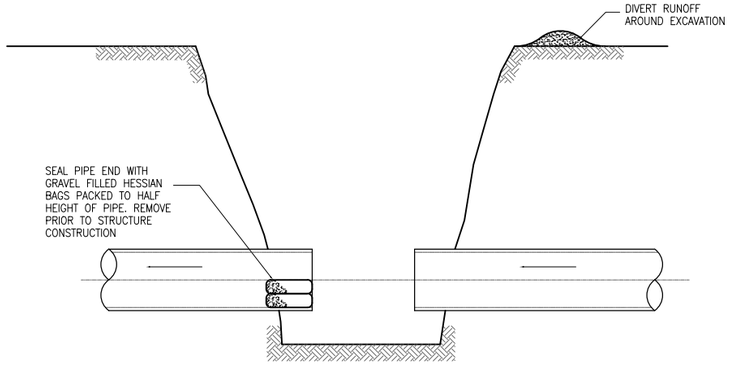
PROJECT: PROPOSED RETIREMENT LIVING ESTATE
LOCATION: LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE: EROSION & SEDIMENT CONTROL DETAIL 1 OF 2
CLIENT: RUBY DEVELOPMENT PTY LTD

DRAWING STATUS: FOR APPROVAL
DRAWING NUMBER: S24-018-ESC04
SHEET NUMBER: 04 OF 06
REVISION: A

S24-018-ESC_Erosion_Notes.dwg



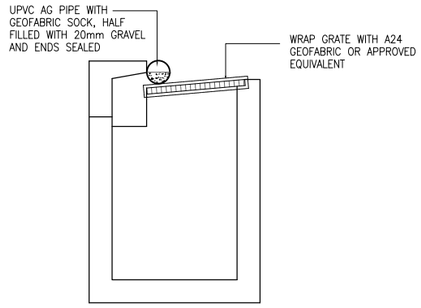
PLAN



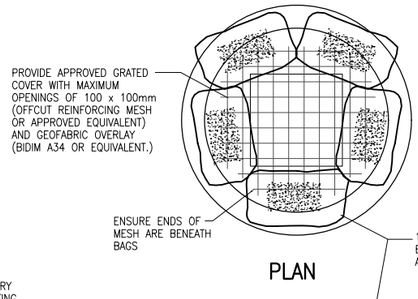
SECTION

STAGE 1

EXCAVATION AND PIPE INSTALLATION



DRAINAGE STRUCTURE PROTECTION



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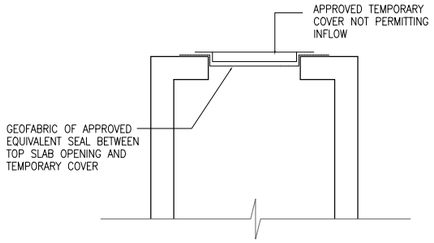
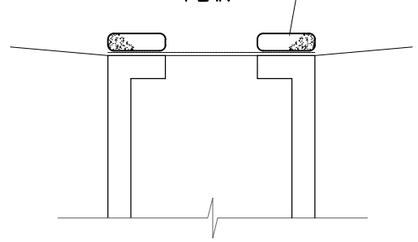


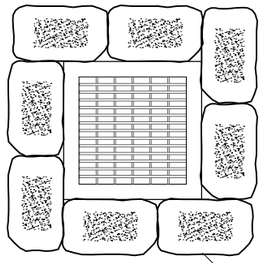
ACCESS CHAMBER
SECTION



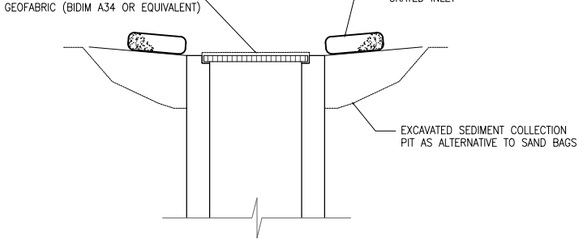
INLET STRUCTURE
SECTION

STAGE 2

STRUCTURE COMPLETE UP TO TOP SLAB



PLAN



INLET STRUCTURE
SECTION

STAGE 3

STRUCTURE COMPLETE

ACCESS CHAMBER / INLET STRUCTURE PROTECTION

No.	DATE	REVISIONS	DES	DRN	CHK	APD	DOCUMENT CONTROL
							DESIGNED S.C.M
							DRAWN J.J.D
							CHECKED J.M.H
							APPROVED J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H	DATE JULY 2024

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SURVEYOR
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PHONE 07 4927 5199

DATUM A.H.D.
P.M.
R.L.

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PROJECT	PROPOSED RETIREMENT LIVING ESTATE
LOCATION	LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE	EROSION & SEDIMENT CONTROL DETAIL 2 OF 2
CLIENT	RUBY DEVELOPMENT PTY LTD

DRAWING STATUS	FOR APPROVAL
DRAWING NUMBER	S24-018-ESC05
SHEET NUMBER	05 OF 06
REVISION	A

S24-018-ESC_Erosion_Notes.dwg

GENERAL NOTES

1. THE CONSULTING ENGINEER AND/OR COUNCIL INSPECTOR MAY ISSUE INSTRUCTIONS TO THE CONTRACTOR REGARDING EROSION AND SEDIMENT CONTROL THAT MAY VARY TO THE MEASURES SHOWN ON THIS DRAWING DUE TO CONSTRUCTION METHODOLOGIES AND VARYING SITE CONDITIONS.

2. A SITE SPECIFIC GEOTECHNICAL INVESTIGATION SHALL BE CARRIED OUT PRIOR TO COMMENCEMENT OF CONSTRUCTION. THE GEOTECHNICAL INVESTIGATION SHALL BE COMPLETED IN ACCORDANCE WITH **ROCKHAMPTON REGIONAL COUNCILS** SOIL SAMPLING AND TESTING GUIDELINE FOR EROSION POTENTIAL. THE EROSION AND SEDIMENT CONTROL MEASURES ON THIS DRAWING MAY BE ALTERED TO SUIT THE RESULTS OF THE GEOTECHNICAL INVESTIGATION AS DIRECTED BY THE CONSULTING ENGINEER.

3. THIS ESCP DOES NOT OUTLINE ACID SULPHATE SOIL (ASS) MANAGEMENT REQUIREMENTS. IF ENCOUNTERED, ASS SHALL BE MANAGED IN ACCORDANCE WITH AN APPROVED ASS MANAGEMENT PLAN.

4. SEDIMENT BASIN OPERATION AND MAINTENANCE SHALL BE IN ACCORDANCE WITH **ROCKHAMPTON REGIONAL COUNCIL'S** SEDIMENT BASIN DESIGN GUIDELINES.

5. TREATMENT AND DOSING RATES FOR APPROVED FLOCCULATING AGENTS TO BE DETERMINED FOLLOWING GEOTECHNICAL INVESTIGATION OF ON SITE SOILS.

6. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL SEDIMENT CONTROL DEVICES IN A FUNCTIONAL ORDER.

7. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES MUST BE IMPLEMENTED AND A REVISED EROSION AND SEDIMENT CONTROL PROGRAM (ESCP) MUST BE SUBMITTED FOR APPROVAL BY THE SUPERINTENDENT AND INSPECTING ENGINEER IF CONSTRUCTION METHODOLOGIES OR SITE CONDITIONS VARY FROM THOSE CONSIDERED WITHIN THE ESCP. A REVISED ESCP IS ALSO REQUIRED IN THE EVENT THAT THE IMPLEMENTED WORKS FAIL TO ACHIEVE THE STATED "OBJECTIVE" OF THE ESCP, THE LOCAL GOVERNMENT ESC STANDARD, OR THE STATE'S ENVIRONMENTAL PROTECTION REQUIREMENTS.

8. IN CIRCUMSTANCES WHERE IT IS CONSIDERED NECESSARY TO PREPARE AN AMENDED ESCP, AND WHERE THE DELIVERY OF SUCH AN AMENDED ESCP IS NOT IMMINENT, THEN ALL NECESSARY NEW OR MODIFIED EROSION AND SEDIMENT CONTROL WORKS MUST BE IN ACCORDANCE WITH THE I.E.C.A. TECHNICAL NOTES AND DRAWINGS AS DIRECTED BY THE SUPERINTENDENT AND INSPECTING ENGINEER. UPON APPROVAL OF THE AMENDED ESCP, ALL WORKS MUST BE IMPLEMENTED IN ACCORDANCE WITH THE AMENDED PLAN.

9. ALL CONSTRUCTION AND MAINTENANCE IS TO BE CARRIED OUT IN ACCORDANCE WITH THE LOCAL AUTHORITIES SPECIFICATIONS AND THE I.E.C.A. TECHNICAL NOTES AND DRAWINGS TO THE SATISFACTION OF THE SUPERINTENDENT AND LOCAL AUTHORITY. THIS ESCP IS BASED ON THE WORKS OUTLINED IN THE CIVIL ENGINEERING DRAWINGS BY WESTERA PARTNERS **DATED JULY 2024, PROJECT No. S24-018.**

LAND CLEARING

1. ANY BULK CLEARING AND GRUBBING OF THE SITE MUST BE IMMEDIATELY FOLLOWED BY SPECIFIED STABILISATION MEASURES (e.g. TEMPORARY GRASSING OR MULCHING) PRIOR TO COMMENCEMENT OF EACH STAGE OF CONSTRUCTION WORKS.

2. DISTURBANCE TO NATURAL WATERCOURSES (INCLUDING BED AND BANKS) AND THEIR ASSOCIATED RIPARIAN ZONES MUST BE LIMITED TO THE MINIMUM PRACTICABLE.

3. NO LAND CLEARING SHALL BE UNDERTAKEN UNLESS PRECEDED BY THE INSTALLATION OF ADEQUATE DRAINAGE AND SEDIMENT CONTROL MEASURES.

4. LAND CLEARING MUST BE LIMITED TO 5M FROM THE EDGE OF PROPOSED CONSTRUCTED WORKS, 2M OF ESSENTIAL CONSTRUCTION TRAFFIC ROUTES, AND A TOTAL OF 10M WIDTH FOR CONSTRUCTION ACCESS, UNLESS OTHERWISE APPROVED BY THE SUPERINTENDENT.

5. PRIOR TO LAND CLEARING, AREAS OF PROTECTED VEGETATION MUST BE CLEARLY IDENTIFIED AND PROTECTED FROM CONSTRUCTION ACTIVITY FOR THE PURPOSE OF MINIMISING THE RISK OF UNNECESSARY LAND CLEARING.

6. LAND CLEARING SHALL BE LIMITED TO THE MINIMUM PRACTICABLE DURING PERIODS WHEN SOIL EROSION DUE TO WIND, RAIN OR SURFACE WATER IS POSSIBLE.

SITE ACCESS

1. PRIOR TO THE COMMENCEMENT OF SITE WORKS, THE LOCATION OF THE SITE ACCESS POINT MUST BE VERIFIED WITH THE SUPERINTENDENT.

2. SITE EXIT POINTS MUST BE APPROPRIATELY MANAGED TO MINIMISE THE RISK OF SEDIMENT BEING TRACKED ONTO SEALED, PUBLIC ROADWAYS.

3. THE PUBLIC ROAD AT THE SITE ENTRY/EXIT POINT MUST BE KEPT CLEAN OF SEDIMENT. DIRTY ROADS MUST BE BROOMED IMMEDIATELY, NOT WASHED OFF INTO COUNCILS STORMWATER SYSTEM.

4. STORMWATER RUNOFF FROM ACCESS ROADS AND STABILISED ENTRY/EXIT POINTS MUST DRAIN TO AN APPROPRIATE SEDIMENT CONTROL DEVICE.

5. WHEEL – WASH OR SPRAY UNIT MAY BE REQUIRED DURING WET WEATHER.

SOIL AND STOCKPILE MANAGEMENT

1. STOCKPILES OF ERODIBLE MATERIAL THAT HAS THE POTENTIAL TO CAUSE ENVIRONMENTAL HARM IF DISPLACED, MUST BE:
   (a) APPROPRIATELY PROTECTED FROM WIND, RAIN, CONCENTRATED SURFACE FLOW AND EXCESSIVE UP-SLOPE STORMWATER SURFACE FLOWS.
   (b) LOCATED AT LEAST 2M FROM ANY HAZARDOUS AREA, RETAINED VEGETATION, OR CONCENTRATED DRAINAGE LINE.
   (c) LOCATED UP-SLOPE OF AN APPROPRIATE SEDIMENT CONTROL SYSTEM.
   (d) PROVIDED WITH AN APPROPRIATE PROTECTIVE COVER (SYNTHETIC, MULCH OR VEGETATIVE) IF THE MATERIALS ARE LIKELY TO BE STOCKPILED FOR MORE THAN 28 DAYS.
   (e) PROVIDED WITH AN APPROPRIATE PROTECTIVE COVER (SYNTHETIC, MULCH OR VEGETATIVE) IF THE MATERIALS ARE LIKELY TO BE STOCKPILED FOR MORE THAN 10 DAYS DURING THOSE MONTHS THAT HAVE A HIGH EROSION RISK.
   (f) PROVIDED WITH AN APPROPRIATE PROTECTIVE COVER (SYNTHETIC, MULCH OR VEGETATIVE) IF THE MATERIALS ARE LIKELY TO BE STOCKPILED FOR MORE THAN 5 DAYS DURING THOSE MONTHS THAT HAVE A EXTREME EROSION RISK.

2. A SUITABLE FLOW DIVERSION SYSTEM MUST BE ESTABLISHED IMMEDIATELY UP-SLOPE OF A STOCKPILE OF ERODIBLE MATERIAL THAT HAS THE POTENTIAL TO CAUSE ENVIRONMENTAL HARM IF DISPLACED, IF THE UP-SLOPE CATCHMENT AREA DRAINING TO THE STOCKPILE EXCEEDS 1500M2.

SITE MANAGEMENT

1. SEDIMENT (INCLUDING CLAY, SILT, SAND, GRAVEL, SOIL, MUD, CEMENT AND CERAMIC WASTE) DEPOSITED OFF THE SITE AS A DIRECT RESULT OF AN ON-SITE ACTIVITY, MUST BE COLLECTED AND THE AREA APPROPRIATELY CLEANED/REHABILITATED AS SOON AS REASONABLE AND PRACTICABLE, AND IN A MANNER THAT GIVES APPROPRIATE CONSIDERATION TO THE SAFETY AND ENVIRONMENTAL RISKS ASSOCIATED WITH THE SEDIMENT DEPOSITION.

2. ADEQUATE WASTE COLLECTION BINS MUST BE PROVIDED ON-SITE AND MAINTAINED SUCH THAT POTENTIAL AND ACTUAL ENVIRONMENTAL HARM RESULTING FROM SUCH MATERIAL WASTE IS MINIMISED.

3. CONCRETE WASTE AND CHEMICAL PRODUCTS, INCLUDING PETROLEUM AND OIL-BASED PRODUCTS, MUST BE PREVENTED FROM ENTERING AN INTERNAL WATER BODY, OR AN EXTERNAL DRAIN, STORMWATER SYSTEM, OR WATER BODY.

4. ALL FLAMMABLE AND COMBUSTIBLE LIQUIDS, INCLUDING ALL LIQUID CHEMICALS IF SUCH CHEMICALS COULD POTENTIALLY BE WASHED OR DISCHARGED FROM THE SITE, ARE STORED AND HANDLED ON-SITE IN ACCORDANCE WITH RELEVANT STANDARDS SUCH AS AS1940 THE STORAGE AND HANDLING OF FLAMMABLE AND COMBUSTIBLE LIQUIDS.

5. TRENCHES NOT LOCATED WITHIN ROADWAYS MUST BE BACKFILLED, CAPPED WITH TOPSOIL, AND COMPACTED TO A LEVEL AT LEAST 75MM ABOVE ADJOINING GROUND LEVEL AND APPROPRIATELY STABILISED.

6. ALL STORMWATER, SEWER LINE AND OTHER SERVICE TRENCHES, NOT LOCATED WITHIN ROADWAYS, MUST BE MULCHED AND SEEDED, OTHER OTHERWISE APPROPRIATELY STABILISED WITHIN 7 DAYS AFTER BACKFILL.

7. NO MORE THAN 150M OF A STORMWATER, SEWER LINE OR OTHER SERVICE TRENCH MUST TO BE OPEN AT ANY ONE TIME.

8. SITE SPOIL MUST BE LAWFULLY DISPOSED OF IN A MANNER THAT DOES NOT RESULT IN ONGOING SOIL EROSION OR ENVIRONMENTAL HARM.

DRAINAGE CONTROL

1. ALL DRAINAGE CONTROL MEASURES MUST BE APPLIED AND MAINTAINED IN ACCORDANCE WITH THE APPROVED ESCP.

2. WHEREVER REASONABLE AND PRACTICABLE, STORMWATER RUNOFF ENTERING THE SITE FROM EXTERNAL AREAS, AND NON-SEDIMENT LADEN (CLEAN) STORMWATER RUNOFF ENTERING A WORK AREA OR AREA OF SOIL DISTURBANCE, MUST BE DIVERTED AROUND OR THROUGH THAT AREA IN A MANNER THAT MINIMISES SOIL EROSION AND THE CONTAMINATION OF THAT WATER FOR ALL DISCHARGES UP TO THE SPECIFIED DESIGN STORM DISCHARGE.

3. DURING THE CONSTRUCTION PERIOD, ALL REASONABLE AND PRACTICABLE MEASURES MUST BE IMPLEMENTED TO CONTROL FLOW VELOCITIES IN SUCH A MANNER THAN PREVENTS SOIL EROSION ALONG DRAINAGE PATHS AND AT THE ENTRANCE AND EXIT OF ALL DRAINS AND DRAINAGE PIPES DURING ALL STORMS UP TO THE RELEVANT DESIGN STORM DISCHARGE.

4. TO THE MAXIMUM DEGREE REASONABLE AND PRACTICABLE, ALL WATERS DISCHARGED DURING THE CONSTRUCTION PHASE MUST DISCHARGE ONTO STABLE LAND, IN A NON-EROSIVE MANNER, AND AT A LEGAL POINT OF DISCHARGE.

5. WHEREVER REASONABLE AND PRACTICABLE, "CLEAN" SURFACE WATERS MUST BE DIVERTED AWAY FROM SEDIMENT CONTROL DEVICES AND ANY UNTREATED, SEDIMENT-LADEN WATERS.

6. DURING THE CONSTRUCTION PERIOD, ROOF WATER MUST BE MANAGED IN A MANNER THAT MINIMISES SOIL EROSION THROUGHOUT THE SITE, AND SITE WETNESS WITHIN ACTIVE WORK AREAS.

7. DEWATERING DURING EXCAVATION MUST BE CARRIED OUT IN ACCORDANCE WITH **RRC** AND I.E.C.A. STANDARD DRAWINGS AND SPECIFICATIONS. ALL WATER DISCHARGED FROM SITE MUST BE TREATED FOR SEDIMENT AND BE APPROPRIATELY MANAGED IN A MANNER THAT DOES NOT CAUSE ENVIRONMENTAL HARM, FLOODING, DAMAGE OR NUISANCE TO NEIGHBOURING PROPERTIES.

SEDIMENT CONTROL

1. ALL SEDIMENT CONTROL MEASURES MUST BE APPLIED AND MAINTAINED IN ACCORDANCE WITH THE APPROVED ESCP.

2. OPTIMUM BENEFIT MUST BE MADE OF EVERY OPPORTUNITY TO TRAP SEDIMENT WITHIN THE WORK SITE, AND AS CLOSE AS PRACTICABLE TO ITS SOURCE.

3. SEDIMENT TRAPS MUST BE INSTALLED AND OPERATED TO BOTH COLLECT AND RETAIN SEDIMENT.

4. THE POTENTIAL SAFETY RISK OF A PROPOSED SEDIMENT TRAP TO SITE WORKERS AND THE PUBLIC MUST BE GIVEN APPROPRIATE CONSIDERATION, ESPECIALLY THOSE DEVICES LOCATED WITHIN PUBLICLY ACCESSIBLE AREAS.

5. ALL REASONABLE AND PRACTICABLE MEASURES MUST BE TAKEN TO PREVENT, OR AT LEAST MINIMISE, THE RELEASE OF SEDIMENT FROM THE SITE.

6. SUITABLE ALL-WEATHER MAINTENANCE ACCESS MUST BE PROVIDED TO ALL SEDIMENT CONTROL DEVICES.

7. SEDIMENT CONTROL DEVICES MUST BE DE-SILTED AND MADE FULLY OPERATIONAL AS SOON AS REASONABLE AND PRACTICABLE AFTER A SEDIMENT-PRODUCING EVENT, WHETHER NATURAL OR ARTIFICIAL, IF THE DEVICE'S SEDIMENT RETENTION CAPACITY FALLS BELOW 75% OF ITS DESIGN RETENTION CAPACITY.

8. MATERIALS, WHETHER LIQUID OR SOLID, REMOVED FROM SEDIMENT CONTROL DEVICES DURING MAINTENANCE OR DECOMMISSIONING, MUST BE DISPOSED OF IN A MANNER THAT DOES NOT CAUSE ONGOING SOIL EROSION OR ENVIRONMENTAL HARM.

9. AS-CONSTRUCTED PLANS MUST BE PREPARED FOR ALL FOR CONSTRUCTED SEDIMENT BASINS AND ASSOCIATED EMERGENCY SPILLWAYS. SUCH PLANS MUST APPROPRIATELY VERIFY THE BASIN'S DIMENSIONS, LEVELS AND VOLUMES, AND MUST BE SUBMITTED TO THE SUPERINTENDENT WITHIN 14 CALENDER DAYS OF THE CONSTRUCTION OF EACH BASIN.

10. SEDIMENT BASINS AND CONTROL DEVICES MUST BE MAINTAINED AND FULLY OPERATIONAL THROUGHOUT THE CONSTRUCTION PERIOD AND UNTIL EACH DEVICE'S CATCHMENT AREA ACHIEVES 70% GROUND COVER ON ALL SOIL SURFACES.

11. SETTLED SEDIMENT MUST BE REMOVED FROM SEDIMENT BASINS WHEN THE VOLUME OF THE SEDIMENT EXCEEDS THE DESIGNATED SEDIMENT STORAGE VOLUME, OR THE DESIGN MAXIMUM SEDIMENT STORAGE ELEVATION.

12. IN AREAS WHERE RUNOFF TURBIDITY IS TO BE CONTROLLED, EXPOSED SURFACES TO BE EITHER MULCHED, COVERED WITH EROSION CONTROL BLANKETS OR TURFED IF EARTHWORKS ARE EXPECTED TO BE DELAYED FOR MORE THAN 14 DAYS.

13. STRAW BALE SEDIMENT TRAPS ARE A SECONDARY OPTION WHICH GENERALLY SHOULD NOT BE USED IF OTHER OPTIONS ARE AVAILABLE.

14. SEDIMENT FENCE
   (a) NOT TO BE LOCATED IN AREAS OF CONCENTRATED FLOW.
   (b) NORMALLY LOCATED ALONG THE CONTOUR WITH A MAXIMUM CATCHMENT AREA 0.6 HA PER 100M LENGTH OF FENCE.
   (c) ONLY WOVEN FABRICS ARE TO BE USED, NON-WOVEN FABRICS ARE TO BE AVOIDED UNLESS OTHERWISE DIRCTED BY THE SUPERVISING ENGINEER.
   (d) WHERE FENCES NEED TO BE LOCATED ACROSS THE CONTOUR THE LAYOUT SHALL BE AS DIRECTED BY THE MANAGER.
   (e) FENCES ARE REQUIRED 2M MIN FROM THE TOE OF CUT AND FILL BATTERS, WHERE NOT PRACTICAL ONE FENCE CAN BE AT THE TOE WITH A SECOND FENCE 1M MIN AWAY. FENCE SHOULD NOT BE LOCATED PARALLEL WITH TOE IF CONCENTRATION OF FLOW WILL OCCUR BEHIND THE FENCE.

15. ALL STORMWATER INLET STRUCTURES IN THE IMMEDIATE DOWNSTREAM VICINITY OF THE WORK AREA SHALL HAVE APPROVED INLET PROTECTION TO PREVENT INGRESS OF WATER BORNE SEDIMENTS.

16. SANDBAGS TO BE INSTALLED AT REGULAR INTERVALS ON ROAD PROFILE TO REDUCE EROSION & STEM FLOWS BY ACTING AS SMALL CHECK DAMS.

17. EXTRA CATCH DRAINS MAY BE CONSTRUCTED BY CONTRACTOR IN ACCORDANCE WITH THESE DRAWINGS & I.E.C.A. TECHNICAL NOTES & DRAWINGS.

SITE MONITORING AND MAINTENANCE

1. ALL WATER QUALITY DATA, INCLUDING DATES OF RAINFALL, DATES OF TESTING, TESTING RESULTS AND DATES OF WATER RELEASE, MUST BE KEPT IN AN
2. ON-SITE REGISTER. THE REGISTER IS TO BE MAINTAINED UP TO DATE FOR THE DURATION OF THE APPROVED WORKS AND BE AVAILABLE ON-SITE FOR INSPECTION BY THE LOCAL AUTHORITY ON REQUEST.

3. AT NOMINATED INSTREAM WATER MONITORING SITES, A MINIMUM OF 3 WATER SAMPLES MUST BE TAKEN AND ANALYSED, AND THE AVERAGE RESULT USED TO DETERMINE QUALITY.

4. SEDIMENT BASIN WATER QUALITY SAMPLES MUST BE TAKEN AT A DEPTH NO GREATER THAN 200MM ABOVE THE LEVEL OF SETTLED SEDIMENT.

5. ALL ENVIRONMENTALLY RELEVANT INCIDENTS MUST BE RECORDED IN A FIELD LOG THAT MUST REMAIN ACCESSIBLE TO ALL RELEVANT REGULATORY AUTHORITIES.

6. ALL EROSION AND SEDIMENT CONTROL MEASURES, INCLUDING DRAINAGE CONTROL MEASURES, MUST BE MAINTAINED IN PROPER WORKING ORDER AT ALL TIMES DURING THEIR OPERATIONAL LIVES.

7. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES, INCLUDING DRAINAGE CONTROL MEASURES, MUST BE FULLY OPERATIONAL AND MAINTAINED IN PROPER WORKING ORDER AT ALL TIMES DURING THE MAINTENANCE PERIOD AS SPECIFIED BY THE LOCAL AUTHORITY.

8. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES, INCLUDING DRAINAGE CONTROL MEASURES, MUST REMOVED AFTER ACHIEVING A SATISFACTORY "OFF-MAINTENANCE INSPECTION" BY THE LOCAL AUTHORITY.

9. ALL DRAINAGE, EROSION AND SEDIMENT CONTROL MEASURES MUST BE INSPECTED:
   (a) AT LEAST DAILY (WHEN WORK IS OCCURRING ON-SITE);
   (b) AT LEAST WEEKLY (WHEN WORK IS NOT OCCURRING ON-SITE);
   (c) WITHIN 24 HOURS OF EXPECTED RAINFALL; AND
   (d) WITHIN 18 HOURS OF A RAINFALL EVENT OF SUFFICIENT INTENSITY AND DURATION TO CAUSE RUNOFF ON-SITE).

10. WASHING/FLUSHING OF SEALED ROADWAYS MUST ONLY OCCUR WHERE SWEEPING HAS FAILED TO REMOVE SUFFICIENT SEDIMENT AND THERE IS A COMPELLING NEED TO REMOVE THE REMAINING SEDIMENT (E.G. FOR SAFETY REASONS). IN SUCH CIRCUMSTANCES, ALL REASONABLE AND PRACTICABLE SEDIMENT CONTROL MEASURES MUST BE USED TO PREVENT, OR AT LEAST MINIMISE, THE RELEASE OF SEDIMENT INTO RECEIVING WATERS. ONLY THOSE MEASURES THAT WILL NOT CAUSE SAFETY AND PROPERTY FLOODING ISSUES SHALL BE EMPLOYED. SEDIMENT REMOVED FROM ROADWAYS MUST BE DISPOSED OF IN A LAWFUL MANNER THAT DOES NOT CAUSE ONGOING SOIL EROSION OR ENVIRONMENTAL HARM.

11. SEDIMENT REMOVED FROM SEDIMENT TRAPS AND PLACES OF SEDIMENT DEPOSITION MUST BE DISPOSED OF IN A LAWFUL MANNER THAT DOES NOT CAUSE ONGOING SOIL EROSION OR ENVIRONMENTAL HARM.

12. MAINTENANCE MOWING OF ALL ROAD SHOULDERS, TABLE DRAINS, BATTERS AND OTHER SURFACES LIKELY TO EXPERIENCE ACCELERATED SOIL EROSION MUST AIM TO LEAVE THE GRASS LENGTH NO SHORTER THAN 50MM WHERE REASONABLE AND PRACTICABLE.

13. MAINTENANCE MOWING MUST BE DONE IN A MANNER THAT WILL NOT DAMAGE THE PROFILE OF FORMED, SOFT EDGES, SUCH AS THE CREST OF EARTH EMBANKMENTS.

EROSION CONTROL

1. ALL EROSION CONTROL MEASURES MUST BE APPLIED AND MAINTAINED IN ACCORDANCE WITH THE APPROVED ESCP.

2. THE APPLICATION OF LIQUID-BASED DUST SUPPRESSION MEASURES MUST ENSURE THAT SEDIMENT-LADEN RUNOFF RESULTING FROM SUCH MEASURES DOES NOT CREATE A TRAFFIC OR ENVIRONMENTAL HAZARD.

3. ALL TEMPORARY EARTH BANKS, FLOW DIVERSION SYSTEMS, AND EMBANKMENTS ASSOCIATED WITH CONSTRUCTED SEDIMENT BASINS MUST BE MACHINE-COMPACTED, SEEDED AND MULCHED FOR THE PURPOSE OF ESTABLISHING A TEMPORARY VEGETATIVE COVER WITHIN 10 DAYS AFTER GRADING.

4. THE CONSTRUCTION AND STABILISATION OF EARTH BATTERS STEEPER THAN 6:1 (H:V) MUST BE STAGED SUCH THAT NO MORE THAN 3 VERTICAL-METRES OF ANY BATTER IS EXPOSED TO RAINFALL AT ANY INSTANT.

5. SYNTHETIC REINFORCED EROSION CONTROL MATS AND BLANKETS MUST NOT BE PLACED WITHIN, OR ADJACENT TO, RIPARIAN ZONES AND WATERCOURSES IF SUCH MATERIALS ARE LIKELY TO CAUSE ENVIRONMENTAL HARM TO WILDLIFE OR WILDLIFE HABITATS.

SITE REHABILITATION

1. ALL DISTURBED AREAS IDENTIFIED AS VERY LOW, LOW, MEDIUM, HIGH OR EXTREME RISK MUST BE SUITABLE WITHIN 30, 30, 20, 10 OR 5 DAYS RESPECTIVELY, OR PRIOR TO ANTICIPATED RAINFALL, WHICHEVER IS THE GREATER, FROM THE DAY THAT SOIL DISTURBANCES ON THE AREA HAVE BEEN FINALISED.

2. A MINIMUM 60% GROUND COVER MUST BE ACHIEVED ON ALL COMPLETED EARTHWORKS EXPOSED TO ACCELERATED SOIL EROSION WITHIN 30 DAYS DURING THOSE MONTHS WHEN THE EXPECTED RAINFALL IS LESS THAN 30mm; MINIMUM 70% COVER WITHIN 30 DAYS IF BETWEEN 30 AND 45mm; MINIMUM 70% COVER WITHIN 20 DAYS IF BETWEEN 45 AND 100mm; MINIMUM 75% COVER WITHIN 10 DAYS IF BETWEEN 100 AND 225mm; AND MINIMUM 80% COVER WITHIN 5 DAYS IF GREATER THAN 225mm.

3. DURING TIMES OF DECLARED WATER RESTRICTIONS, REFER TO **ROCKHAMPTON REGIONAL COUNCIL'S** 'DROUGHT CONDITIONS SPECIFICATION V2' FOR A DEEMED TO COMPLY SOLUTION TO ACHIEVING 70% GROUND COVERAGE.

4. THE TYPE OF GROUND COVER APPLIED TO COMPLETED EARTHWORKS IS COMPATIBLE WITH THE ANTICIPATED LONG-TERM LAND USE, ENVIRONMENTAL RISK, AND SITE REHABILITATION MEASURES.

5. UNLESS OTHERWISE DIRECTED BY THE SUPERINTENDENT OR WHERE DIRECTED BY THE APPROVED REVEGETATION PLAN, TOPSOIL MUST BE PLACED AT A MINIMUM DEPTH OF 75mm ON SLOPES 4:1 (H:V) OR FLATTER, AND 50mm ON SLOPES STEEPER THAN 4:1.

6. TEMPORARY SITE STABILISATION PROCEDURES MUST COMMENCE AT LEAST 30 DAYS PRIOR TO THE NOMINATED SITE SHUTDOWN DATE. AT LEAST 70% STABLE COVER OF ALL UNSTABLE AND/OR DISTURBED SOIL SURFACES MUST BE ACHIEVED PRIOR TO COMPLETION OF WORKS. THE STABILISATION WORKS MUST NOT RELY UPON THE LONGEVITY OF NON-VEGETATES EROSION CONTROL BLANKETS, OR TEMPORARY SOIL BINDERS.

7. ALL UNSTABLE OR DISTURBED SOIL SURFACES MUST BE ADEQUATELY STABLISED AGAINST EROSION (MINIMUM 70%) PRIOR TO COMMENCEMENT OF USE, OR SURVEY PLAN ENDORSEMENT.

EROSION & SEDIMENT CONTROL INSTALLATION SEQUENCE TABLE

REFER EROSION AND SEDIMENT CONTROL PROGRAM BY WESTERA PARTNERS DATED SEPTEMBER 2020

ITEM	DWG	INSTALLED	REMOVED
INSTALL ENTRY/EXIT & PERIMETER SEDIMENT FENCES	ESC01 ESC04	PRIOR TO SITE DISTURBANCE	ON COMPLETION OF WORKS
INSTALL UPSLOPE CATCHMENT DIVERSION CATCH DRAINS INCLUDING VEHICLE CROSSING	ESC01 ESC05	PRIOR TO SITE DISTURBANCE	WHEN FINAL UPSTREAM CUT OFF DRAINS ARE INSTALLED
STRIP AREA OF BULK EARTHWORKS	ESC01	PRIOR TO COMMENCEMENT OF BULK EARTHWORKS	N/A
CUT BASINS AND CATCH DRAINS	ESC01 ESC03	AS DIRECTED	AS DIRECTED FOR EACH STAGE OR WHEN NO LONGER REQUIRED
COMPLETE EARTHWORKS	ESC02	AS DIRECTED	PERMANENT WORKS
STABILISE BUILDING PADS	ESC02	ASAP	FUTURE BUILDING WORKS

GENERAL NOTES

1. DURING SITE CLEARING, MAINTAIN AS MUCH GROUND COVER AS POSSIBLE.
2. KEEP CHANNEL CLEARING TO A MINIMUM, ONLY CLEAR WITHIN CHANNEL WHEN ABSOLUTELY NECESSARY.
3. DOWNSTREAM TREATMENT DEVICES TO BE INSTALLED PRIOR TO UPSTREAM CLEARING IE: SEDIMENT BASINS, ROCK FILTER DAMS AND SEDIMENT FENCES. CONSTRUCTION SEQUENCE FROM DOWNSTREAM TO UPSTREAM.
4. AREAS WHERE NO CUT OR FILL IS PROPOSED DURING BULK EARTHWORKS TO BE HYDRO-MULCHED/REVEGETATED/REHABILITATED AS SOON AS PRACTICABLE AFTER CLEARING.

No.	DATE	REVISIONS	DES	DRN	CHK	APD	DOCUMENT CONTROL
							DESIGNED S.C.M
							DRAWN J.J.D
							CHECKED J.M.H
							APPROVED J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H	DATE JULY 2024

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

WESTERA PARTNERS
STRUCTURAL+CIVIL+ENVIRONMENTAL ENGINEERS
www.westerapartners.com.au | ABN 52 097 417 975

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NORTHERN NSW T 02 6674 8047 E nsw@westerapartners.com.au
CENTRAL VICTORIA T 03 5441 0922 E centralvic@westerapartners.com.au

SURVEYOR CAPRICORN SURVEY GROUP CQ PHONE 07 4927 5199
DATUM A.H.D. P.M. R.L.

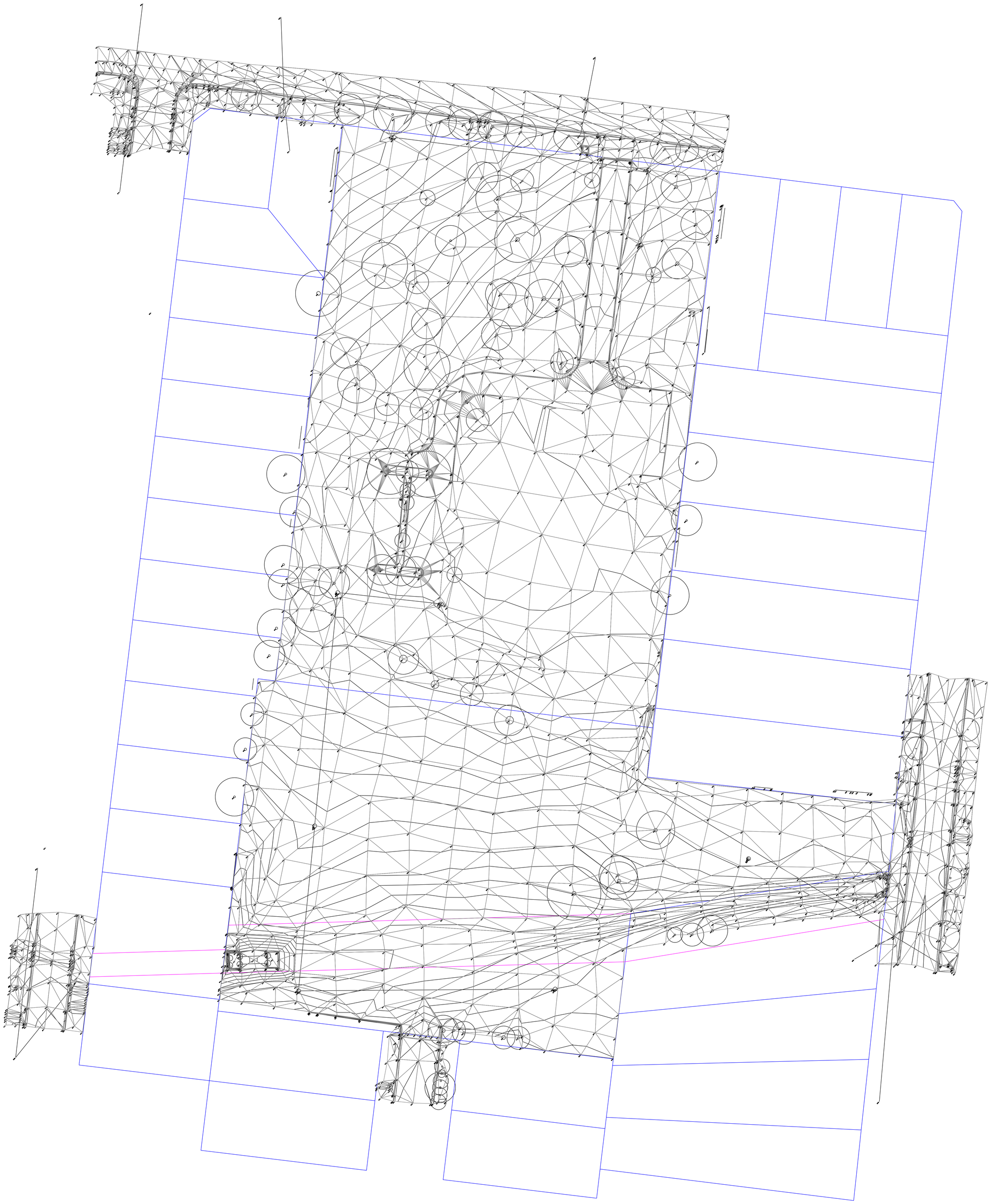
USE FIGURED DIMENSIONS ONLY. DO NOT SCALE. IF A DISCREPANCY ARISES CHECK WITH THE PROJECT ENGINEER AND/OR SUPERVISING AUTHORITY. DO NOT WORK FROM REDUCED SCALE DRAWINGS (A1-A3 SIZE PAPER). COPYRIGHT OF ALL DRAWINGS & WORKS EXECUTED FROM THEM IS VESTED IN WESTERA PARTNERS AND USE OF THERE FORE WITHOUT PERMISSION IS STRICTLY PROHIBITED! IT IS THE BUILDERS RESPONSIBILITY TO ENSURE ALL WORKS ARE CARRIED OUT WITH DUE CARE AND DILIGENCE TO COMPLY WITH THE CONTRACT DOCUMENTS.

PROJECT: PROPOSED RETIREMENT LIVING ESTATE
LOCATION: LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE: EROSION & SEDIMENT CONTROL NOTES
CLIENT: RUBY DEVELOPMENT PTY LTD

DRAWING STATUS: FOR APPROVAL
DRAWING NUMBER: S24-018-ESC06
SHEET NUMBER: 06 OF 06
REVISION: A

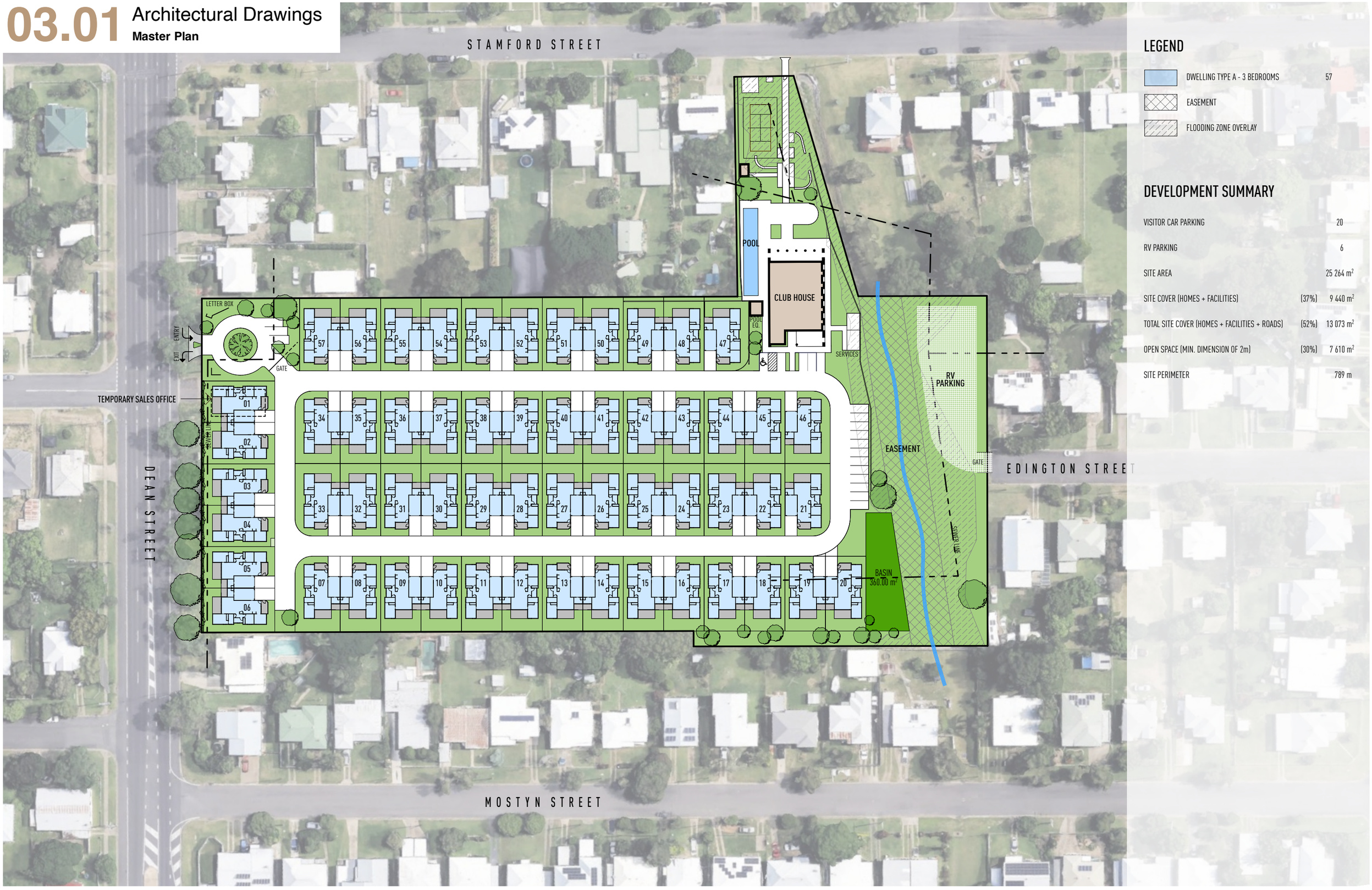
S24-018-ESC_Erosion_Notes.dwg

Appendix D – Site Survey & Architectural Drawings



03.01 Architectural Drawings

Master Plan



LEGEND

DWELLING TYPE A - 3 BEDROOMS		57
EASEMENT		
FLOODING ZONE OVERLAY		

DEVELOPMENT SUMMARY

VISITOR CAR PARKING		20
RV PARKING		6
SITE AREA		25 264 m²
SITE COVER (HOMES + FACILITIES)	(37%)	9 440 m²
TOTAL SITE COVER (HOMES + FACILITIES + ROADS)	(52%)	13 073 m²
OPEN SPACE (MIN. DIMENSION OF 2m)	(30%)	7 610 m²
SITE PERIMETER		789 m

JAREDPOOLEDESIGN
LEVEL 1 33 ELKHORN AVENUE
SURFERS PARADISE, QLD. 4217 AUSTRALIA
PO BOX 42. ISLE OF CAPRI, QLD. 4217
TEL 07 5527 5300
EMAIL INFO@JPD.COM.AU
WEB WWW.JPD.COM.AU

Allira

ISSUE	DATE	DESCRIPTION
Z	27.02.25	UPDATED RV AREA
Y	18.02.25	UPDATED CLUBHOUSE
X	10.02.25	UPDATED RV SPACES
W	07.02.25	BASIN + RV SPACES UPDATED
V	25.11.24	UPDATED LAYOUT
U	20.11.24	UPDATED LAYOUT
T	17.09.24	UPDATED LAYOUT

PROJECT PROPOSED NEW RESIDENCE

Lot 24RP607814 + 8RP607712, Dean Street, Rockhampton QLD 4701

CLIENT Allira

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DRAWING TITLE BP1485/03.01

NORTH

5m 25m 50m

SCALE 1:1000 @ A3

Master Plan

POOLE

MCE
McMurtrie Consulting Engineers

Engineering reimagined.

Technical Memorandum

To:	From
Ruby Development Pty Ltd C/- Westera Partners	Chris Hewitt RPEQ Engineer McMurtrie Consulting Engineers chris@mcmengineers.com

1 Introduction

McMurtrie Consulting Engineers (MCE) has been engaged by Ruby Development Pty Ltd to undertake an investigation of traffic impacts related to a proposed caravan and RV storage located at 192 Dean Street, Berserker.

2 Locality

The site is accessed off Edington Street on its eastern boundary and is formally described as Lot 8 on SP348722. The property is currently vacant land approved for a Retirement facility (D/170-2022, D/60-2024). Edington Street is under the control of Rockhampton Regional Council (RRC).

On authority of RRCs interactive Mapping, Edington Street at the location of the proposed development is a Class 9B Local Government Road ('LGR) also referred to as an Urban Access Place. The closest intersection is that of Edington and Craig Streets, which is under the jurisdiction of RRC. Craig Street is also a class 9B LGR.

Figure 1 shows the development site location.

ROCKHAMPTON REGIONAL COUNCIL
AMENDED PLANS APPROVED
12 January 2026
DATE
These plans are approved subject to the current conditions of approval associated with
Development Permit No.: D/170-2022
Dated: 12 June 2023

Figure 1 - Development Site Location

3 SITE OPERATION AND EXISTING SITUATION

The site is currently vacant land, as depicted in Figure 1. Presently, only informal access is available via Edington Street, while formal vehicular access is provided through an alternative frontage on Dean Street. Edington Street is formalised with asphalt surfacing and barrier kerb and channel, ending at the point where it connects to the property boundary.

Figure 2 – Existing Site.

The site layout shown in Figure 3 proposes access from Edington Street for RVs and car and caravan combinations. It is proposed that RVs manoeuvre unassisted to parking spaces while caravans are un-hitched on site and manoeuvred into storage areas using an electric caravan mover enabling on the spot turning driven from the jockey wheel position.

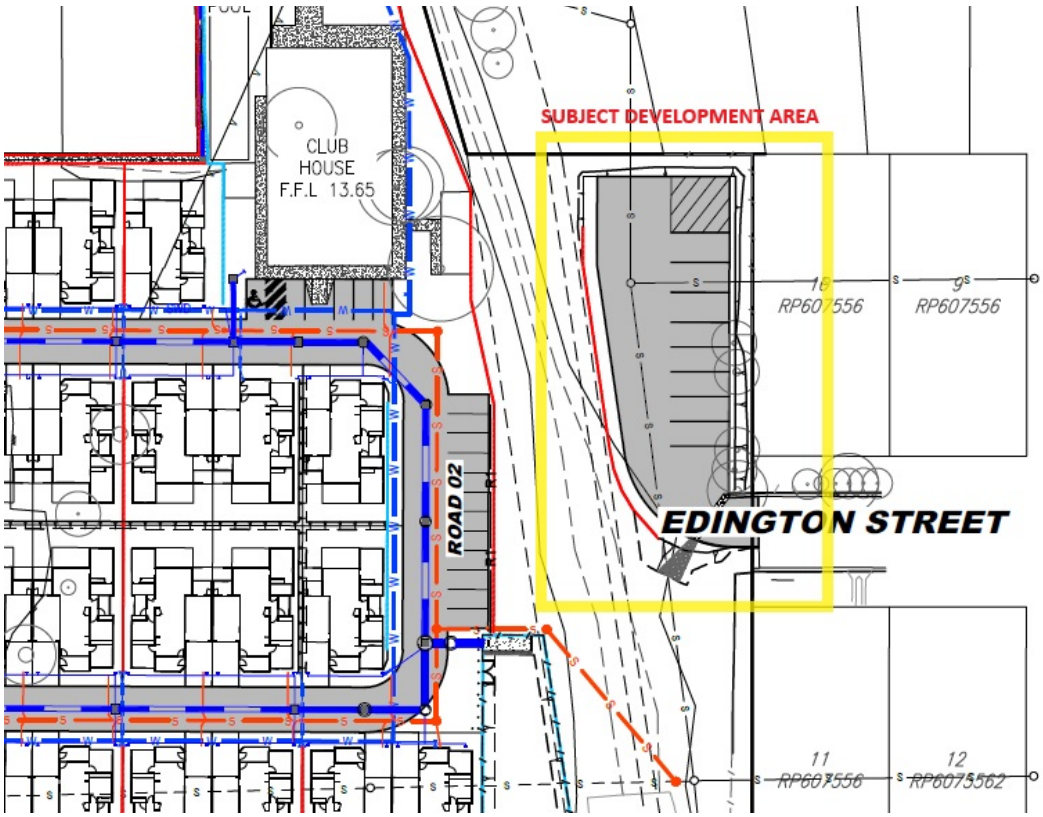

Figure 3 - Proposed Development Carpark Layout

Existing traffic volumes:

Existing traffic counts were not available on Edington Street however as the street is an isolated, built out residential access, existing volumes can be estimated with reasonable accuracy. In accordance with Road and Transport Authority (RTA) Guide to Traffic Generating Developments (GTGD), daily vehicle trips can be estimated at 9 per dwelling . As shown in Figure 4, there are 11 existing dwellings in Edington Street which equates to a daily generation of 99 trips.

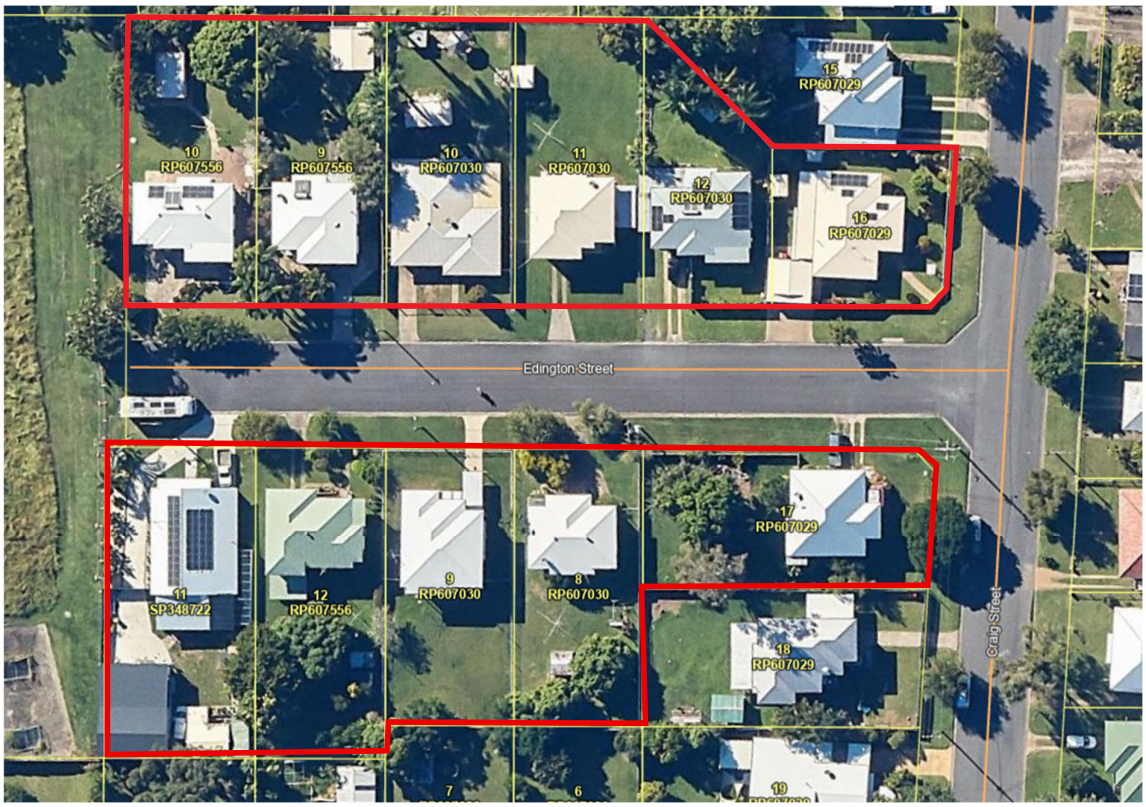

Figure 4 – 11 existing lots each generating 0.85 VPH peak.

4 DEVELOPMENT VOLUMES AND NETWORK ASSIGNMENT

The proposed development involves the provision of caravan and RV storage to support the adjacent retirement facility. Due to the unique characteristics of this facility, there is no directly applicable published data on trip generation rates for similar developments. Consequently, the most accurate method to estimate the traffic impact is through a first-principles approach.

As depicted in Figure 3, eight RV storage spaces are proposed. Ruby Development Pty Ltd estimates approximately 30 vehicle movements per year associated with the facility. This equates to roughly one movement every two weeks, representing approximately 0.08% of the existing background traffic, and is therefore considered negligible.

5 ACCESS ASSESSMENT

To ensure the proposed access is suitable for infrequent use by RV and car and caravan combinations, a swept path assessment has been conducted. A copy of this assessment is included in Attachment A

Kind regards,

Chris Hewitt
Principal Civil Engineer RPEQ 5141

ATTACHMENTS:

Attachment A – Swept Path Plans

ISO A1 594mm x 841mm

Engineering
Reimagined.

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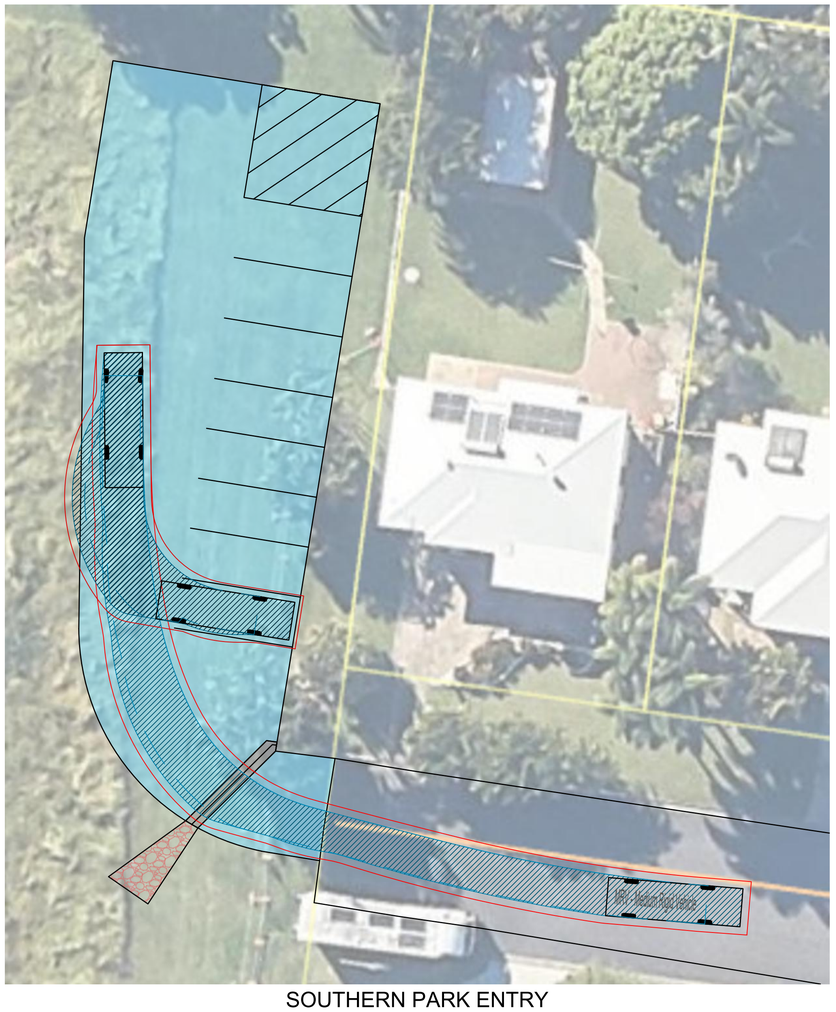

SOUTHERN PARK ENTRY

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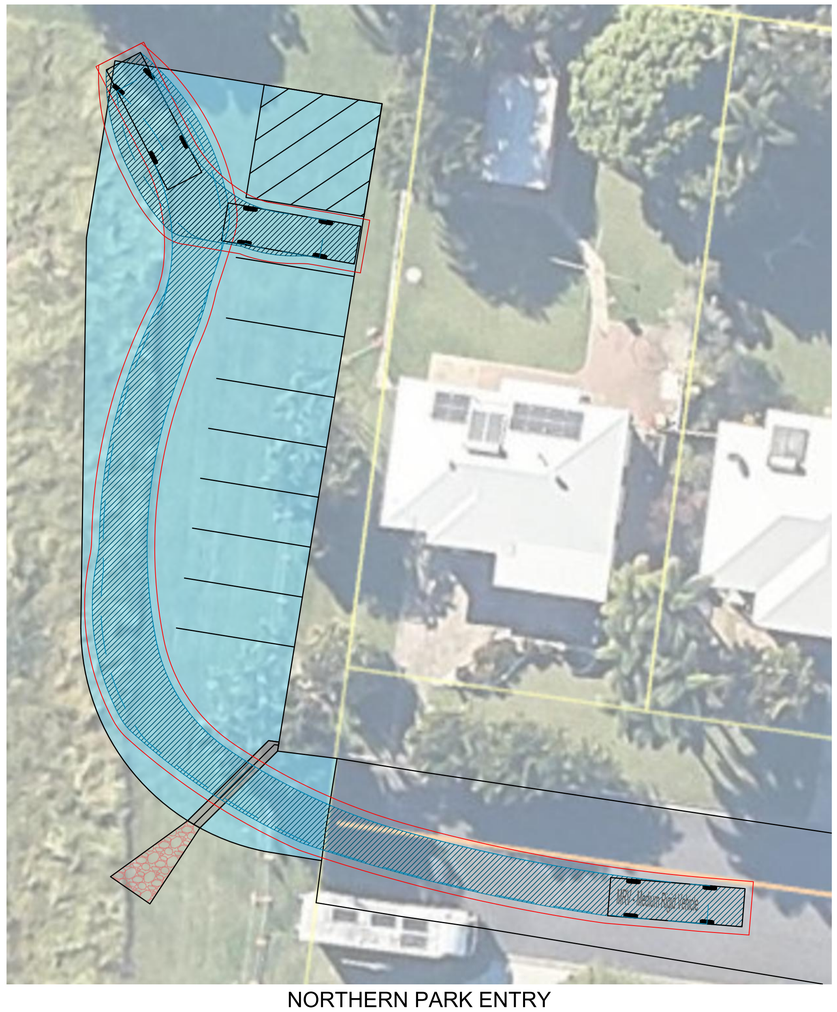
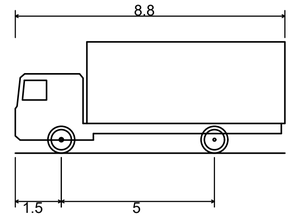


NORTHERN PARK ENTRY

SCALE 1:100(A1) 1:200(A3)



MRV - Medium Rigid Vehicle	
Overall Length	8.800m
Overall Width	2.500m
Overall Body Height	3.633m
Min Body Ground Clearance	0.428m
Track Width	2.500m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	10.000m

MRV PROFILE

SCALE 1:50(A1) 1:100(A3)

PLOT DATE: 15/07/2025 3:17:01 PM FILENAME: R:\24-25\R031-24-25 - Ruby Dean Street Berserker\Design\DWG\250709 - Swept Paths\250709 - Swept Paths.dwg

PROJECT STAMP

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DRAWING SCALE

0 1 2 3 4m
SCALE 1:50 @ A1 1:100 @ A3
0 2 4 6 8m
SCALE 1:100 @ A1 1:200 @ A3

ISSUE.REVISION

ISSUE	REV	DATE	DES	DESCRIPTION
INFO	A	09.07.2025	N.H	ISSUED FOR INFORMATION

PROJECT MANAGEMENT

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RPEQ CERTIFICATION		
N.H	K.S	
DESIGNER	CHECKED	APPROVED
INTERNAL PROJECT NO.	R063-21-22	
DATUM	SURVEY	

MCE
McMurtrie Consulting Engineers
ROCKHAMPTON | BUNDABERG
PH (07) 4921 1780 | mail@mcmengineers.com | MCMENGINEERS.COM

PROJECT IDENTIFIER

CLIENT KPG
PROJECT 192 DEAN SREET
TITLE
EDINGTON STREET ACCESS - MRV ENTRY
SHEET 1 OF 3

DRAWING NUMBER R0632122-SK001

REVISION A

ISO A1 594mm x 841mm

Engineering
Reimagined.

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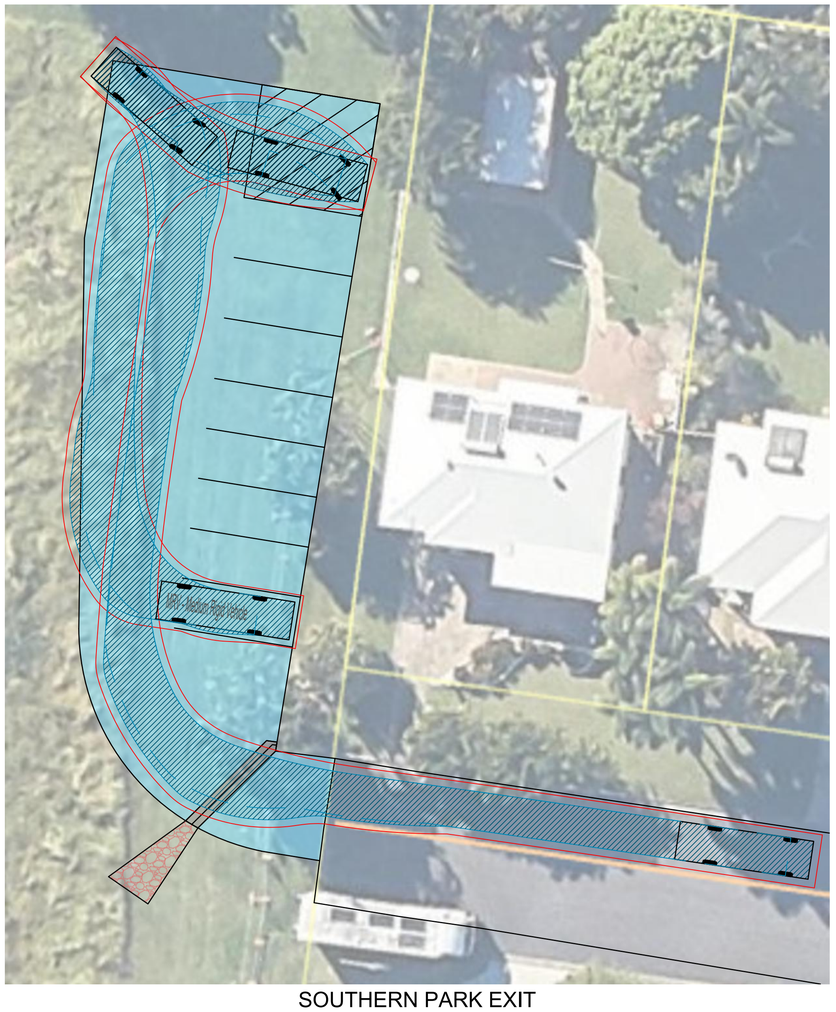

SOUTHERN PARK EXIT

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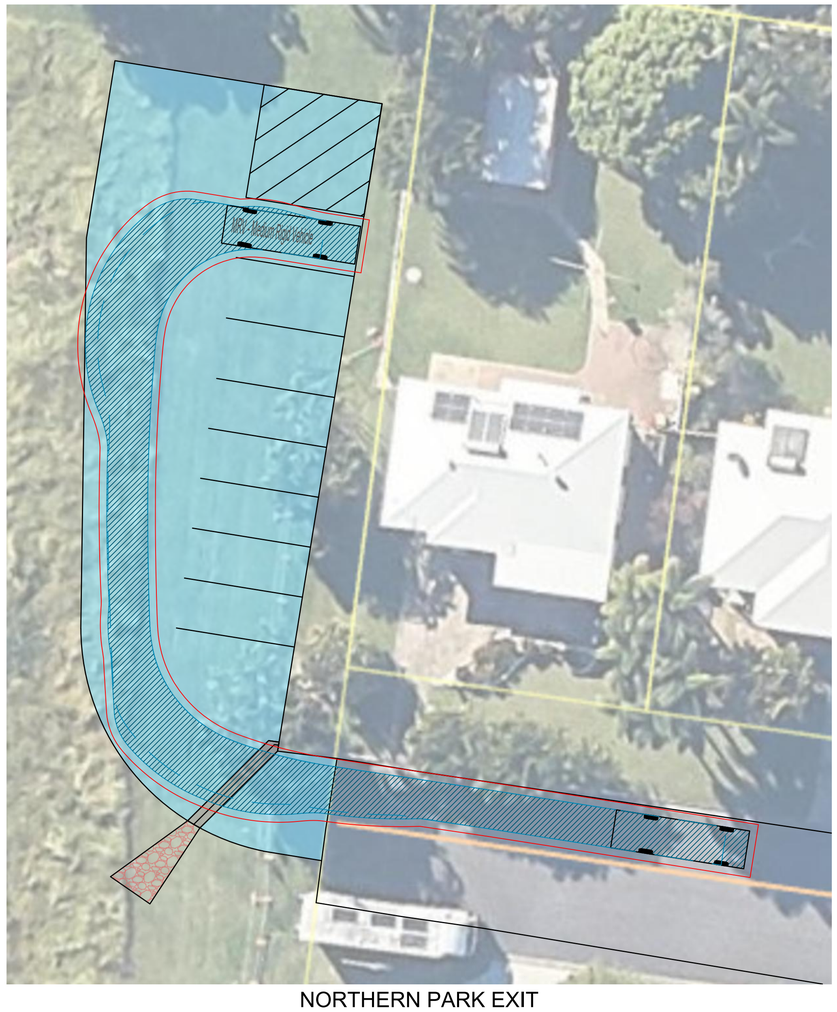
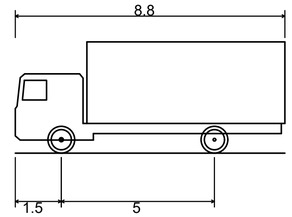


NORTHERN PARK EXIT

SCALE 1:100(A1) 1:200(A3)



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MRV PROFILE

SCALE 1:50(A1) 1:100(A3)

PLOT DATE: 15/07/2025 3:17:05 PM FILENAME: R:\24-25\R031-24-25 - Ruby Dean Street Berserker\Design\DWG\250709 - Swept Paths\250709 - Swept Paths.dwg

PROJECT STAMP

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DRAWING SCALE

0 1 2 3 4m
SCALE 1:50 @ A1 1:100 @ A3
0 2 4 6 8m
SCALE 1:100 @ A1 1:200 @ A3

ISSUE.REVISION

ISSUE	REV	DATE	DES	DESCRIPTION
INFO	A	09.07.2025	N.H	ISSUED FOR INFORMATION

PROJECT MANAGEMENT

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RPEQ CERTIFICATION		
N.H	K.S	
DESIGNER	CHECKED	APPROVED
INTERNAL PROJECT NO.	R063-21-22	
DATUM	SURVEY	

MCE
McMurtrie Consulting Engineers
ROCKHAMPTON | BUNDABERG
PH (07) 4921 1780 | mail@mcmengineers.com | MCMENGINEERS.COM

PROJECT IDENTIFIER

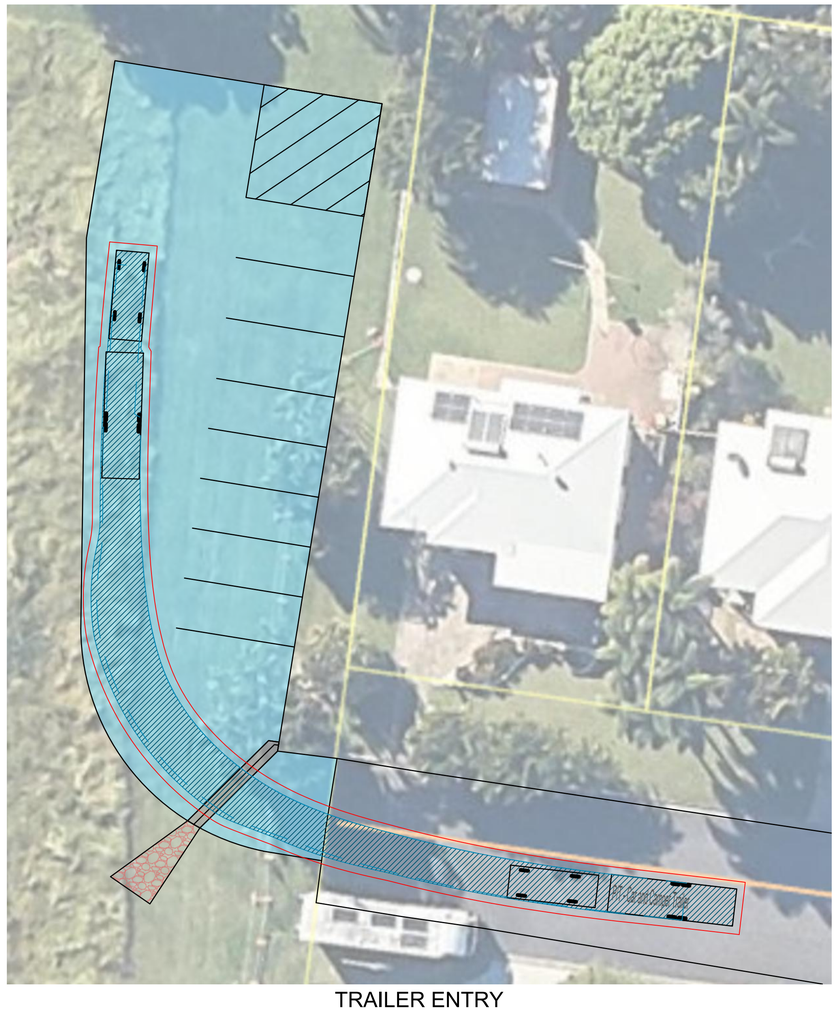
CLIENT KPG
PROJECT 192 DEAN SREET
TITLE
EDINGTON STREET ACCESS - MRV EXIT
SHEET 2 OF 3

DRAWING NUMBER R0632122-SK001

REVISION A

ISO A1 594mm x 841mm

Engineering
Reimagined.



TRAILER ENTRY

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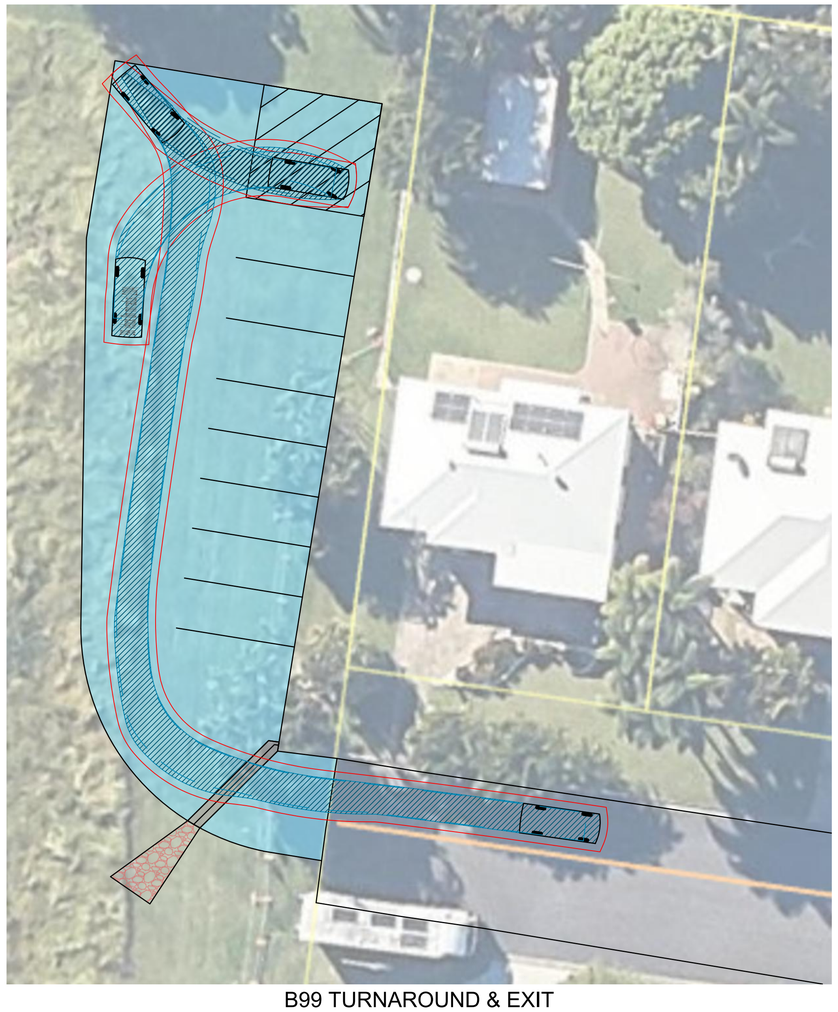
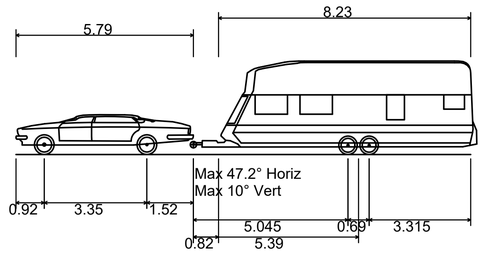


B99 TURNAROUND & EXIT

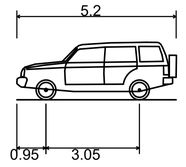
SCALE 1:100(A1) 1:200(A3)



P/T - Car and Camper Trailer	
Overall Length	14.840m
Overall Width	2.440m
Overall Body Height	3.052m
Min Body Ground Clearance	0.243m
Max Track Width	2.440m
Lock-to-lock time	4.00s
Max Steering Angle (Virtual)	21.50°

TRAILER PROFILE

SCALE 1:50(A1) 1:100(A3)



B99 Vehicle (8m min radius) (2004)	
Overall Length	5.200m
Overall Width	1.940m
Overall Body Height	1.878m
Min Body Ground Clearance	0.272m
Track Width	1.840m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	8.000m

B99 PROFILE

SCALE 1:50(A1) 1:100(A3)

PLOT DATE: 15/07/2025 3:17:09 PM FILENAME: R:\24-25\R031-24-25 - Ruby Dean Street Berserker\Design\DWG\250709 - Swept Paths\250709 - Swept Paths.dwg

PROJECT STAMP

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DRAWING SCALE

0 1 2 3 4m
SCALE 1:50 @ A1 1:100 @ A3
0 2 4 6 8m
SCALE 1:100 @ A1 1:200 @ A3

ISSUE.REVISION

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PROJECT MANAGEMENT

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DATUM	SURVEY	

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PROJECT IDENTIFIER

CLIENT KPG
PROJECT 192 DEAN SREET
TITLE
EDINGTON STREET ACCESS - TRAILER
SHEET 3 OF 3

DRAWING NUMBER R0632122-SK002

REVISION A

Our Ref: S24-018

17 September 2025

Rockhampton Regional Council
PO Box 1860
Rockhampton 4700

Council Ref: D/ 170-2022

ROCKHAMPTON REGIONAL COUNCIL
AMENDED PLANS APPROVED
12 January 2026
DATE
These plans are approved subject to the current conditions of approval associated with
Development Permit No.: D/170-2022
Dated: 12 June 2023

Western Partners Pty Ltd

Sunshine Coast Office
P 0437 335 403

RE: TECHNICAL FLOOD MEMORANDUM FOR LOCALISED CHANNEL RESHAPING.

The purpose of this memorandum is to assess the flooding impact of the localised reshaping of existing channel within the proposed for the development at 192 Dean Street, Berserker. (Original DA D/ 170-2022)

For context, advice is below to be read in conjunction with Stormwater management report prepared by Western Partners on the 22nd of March 2025 (Revision A) for the Proposed Retirement Living Estate at 192 Dean Street, Berserker.

Introduction

Western Partners have prepared a Technical Flood Memorandum to review the flooding impact of the localised reshaping of existing channel within the proposed for the development at 192 Dean Street, Berserker.

The eastern portion of the site is encumbered by Local Catchment DFE, Planning area 1 and Planning area 2 overlays according to the Rockhampton Region Planning Scheme 2015 mapping (Rock *e* Plan).

Flood Modelling

The hydrograph from the defined flood event was extracted from the council owned flood model and provided to Western Partners for use in the hydraulic modelling. The hydraulic modelling software package InfoWorks Integrated Catchment Modelling (ICM) was used to model the pre-developed and post-developed flow conditions for the site. ICM provides a simulation of the hydraulic performance of stormwater infrastructure and accurately represents site-specific topography, defining flow paths, discharge, storage, and variation in flow direction in addition to modelling flood hazard. An integrated 1D/2D hydraulic model was developed using ICM to ensure there is no worsening in terms of flood level and flood velocity to properties downstream, upstream, or adjoining the site as a result of the development. Model hydrologic and hydraulic parameters are described below.

Hydrology

The hydrograph from the defined flood event was extracted from the council owned flood model and provided to Western Partners for use in the hydraulic modelling. This hydrograph was conservatively estimated and inserted into ICM utilising the inflow function. Figures 1 and 2 below show the council provided hydrograph, and the hydrograph inserted to ICM.

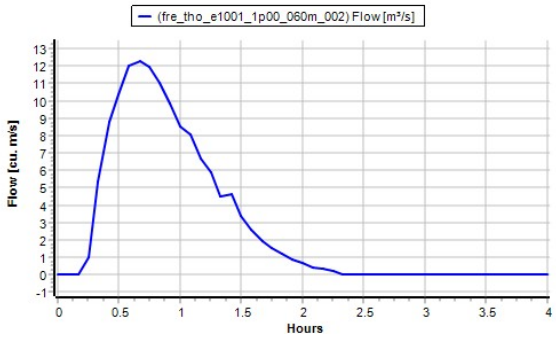


Figure 1 - RRC Provided hydrograph

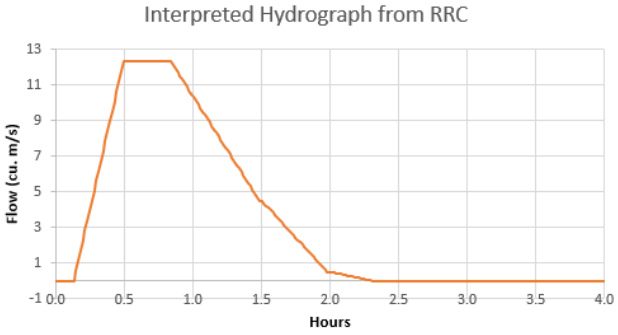


Figure 2 – Hydrograph read into ICM

Hydraulics

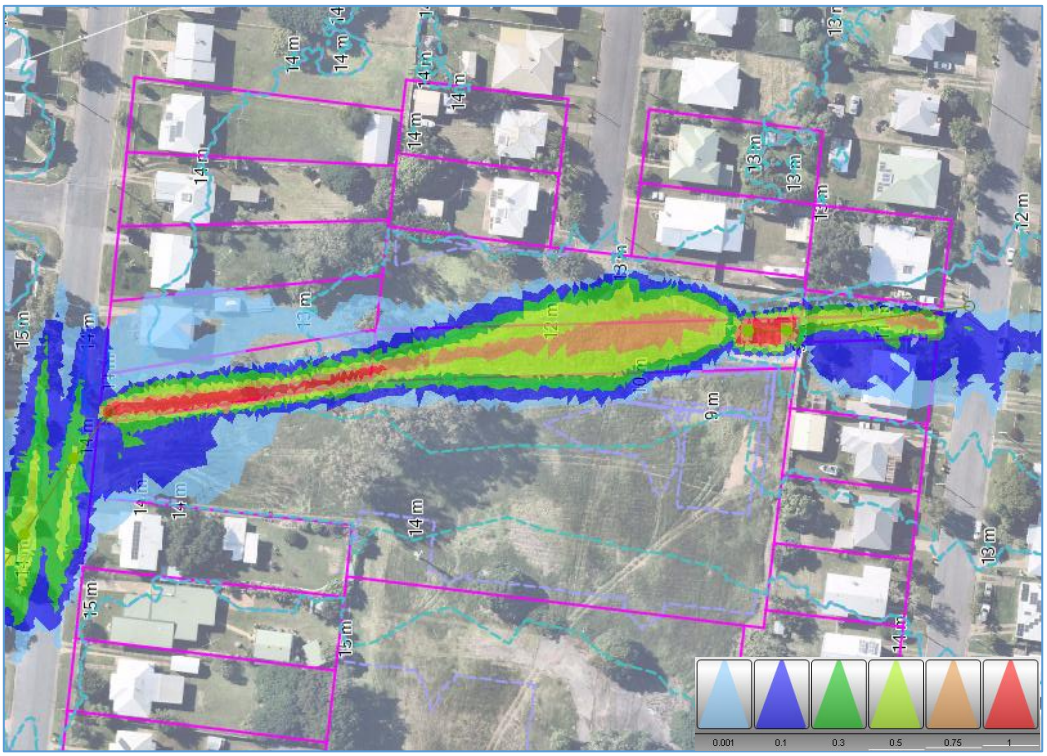
A 1D/2D model was developed to simulate the hydraulics of the overland flow running through the proposed development. The following parameters were utilised in developing the 1D/2D network:

- The Existing and developed Digital Terrain Models (DTM) were derived from LIDAR, detailed site survey and the post developed design surface.
- A 2D zone comprising 0.5m2 minimum element area and 100m2 maximum triangle area (indicates mesh resolution) was modelled to encapsulate the point of outlet to 2D, the development site, and the surrounding properties.
- Manning's roughness was modelled as a 2D roughness zone with values as described below.
    - 0.035 for the existing maintained grass areas
    - 0.015 for concrete aprons around the existing field inlets
    - 0.06 for the existing unmaintained channel
    - 0.05 for the developed maintained channel
- Flows from the council provided hydrograph outlet to the 2D surface via and Outfall 2D nodes inside mesh zones to spread flow evenly to be representative of the existing conditions.
- 2D Gully nodes and links were used to model the existing infrastructure under Samford St and at the downstream end of the site.
- A mesh level zone has been applied to model with the assumption that the bioretention basin is full.

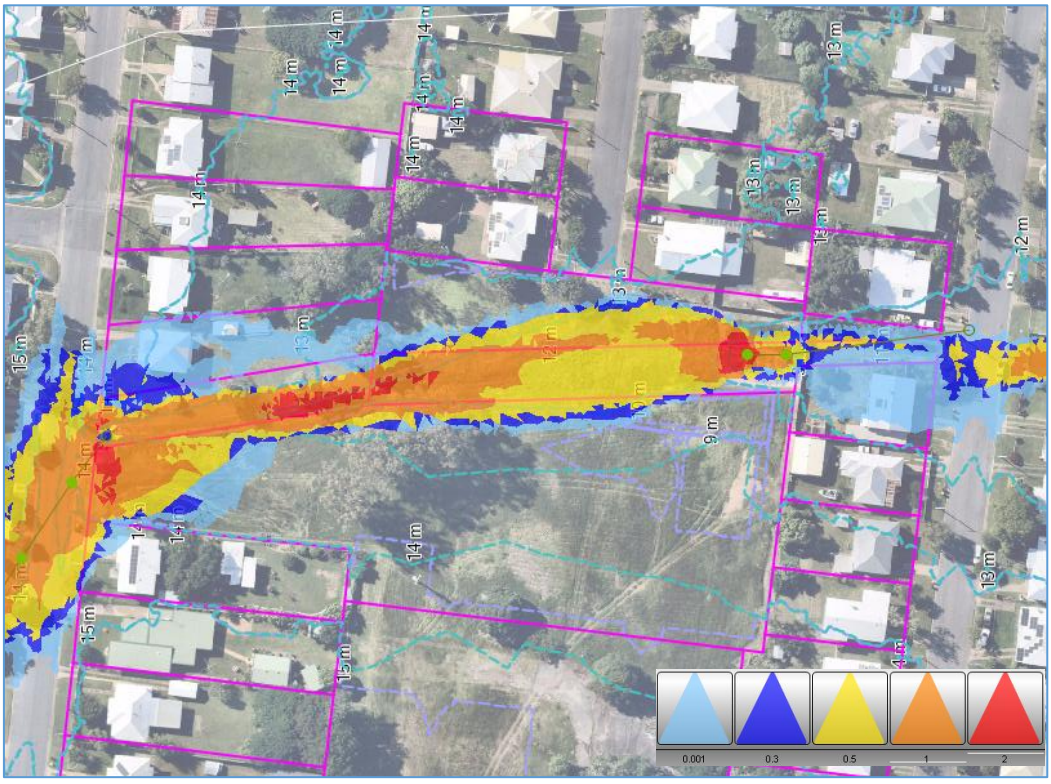
Modelling results are displayed below prior to discussion.

Modelling Results

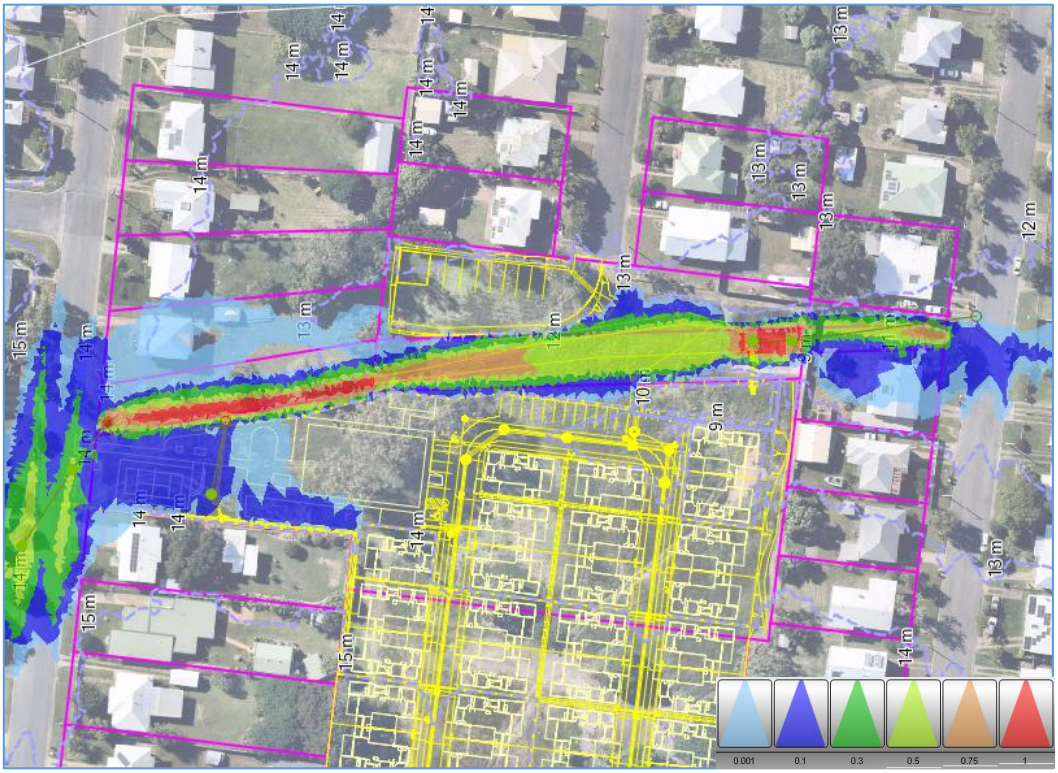
- Simulation Results for Pre-Developed Scenario; Flood Depth (m)



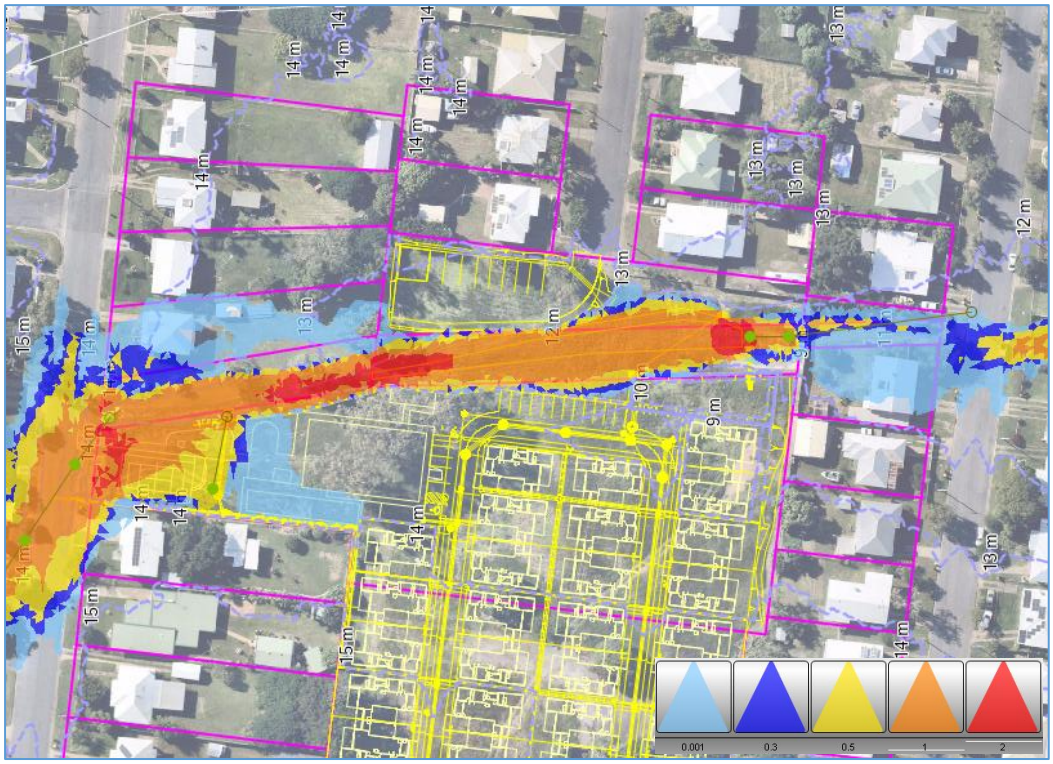
- Simulation Results for Pre-Developed Scenario; Flood Velocity (m^2/s)



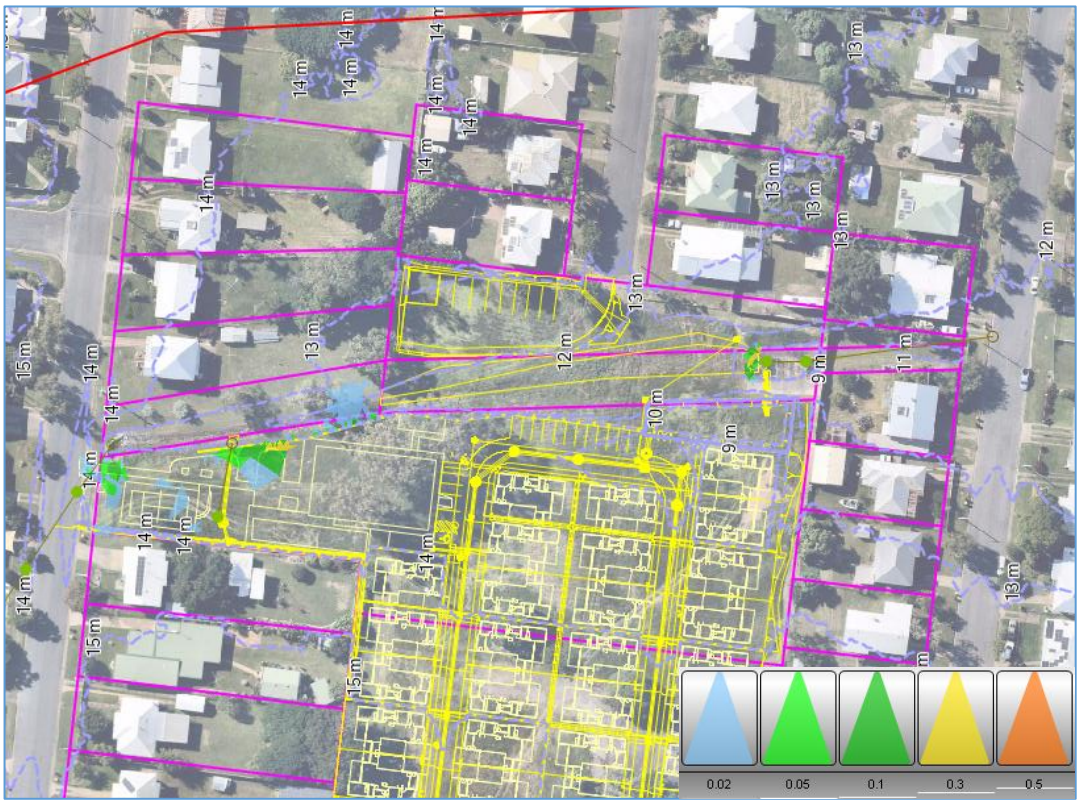
- Simulation Results for Post-Developed Scenario; Flood Depth (m)



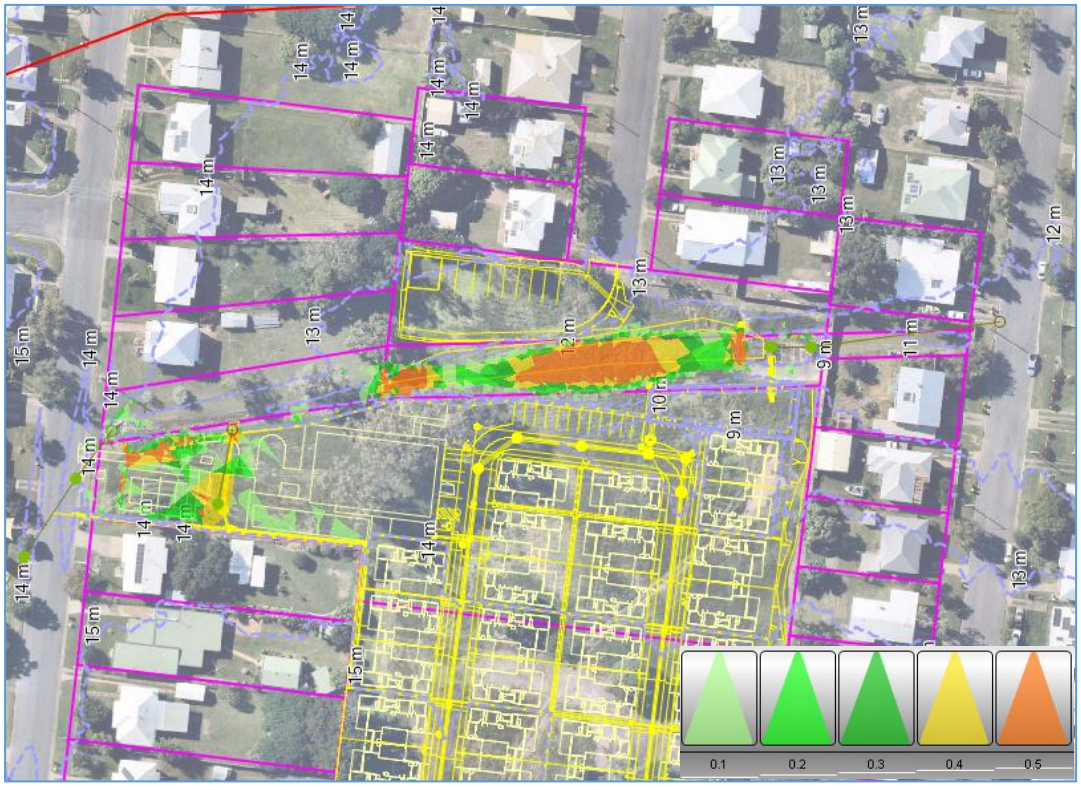
- Simulation Results for Post-Developed Scenario; Flood Velocity (m^2/s)



- Simulation Results; Level Afflux (m)



- Simulation Results; Velocity Afflux (m^2/s)



Results Discussion

The above images display the flood depth and velocity mapping results for the pre and post development models. Further to this, flood level and velocity afflux mapping has been produced.

The results of the investigation demonstrate that there is no actionable worsening to flood level or flood velocity in adjoining properties in the defined flood event provided by Rockhampton Reginal Council. Overland flow runoff approaching the site from the upstream catchment is conveyed via the internal channel to the downstream existing overland flow path and underground network per-existing conditions. The proposed development and slight modifications to the channel resulted in some level and velocity afflux, This is wholly contained to the existing/proposed drainage channel and does not affect any private property, or pedestrian areas.

Conclusion

Westera Partners have prepared a Technical Flood Memorandum to review the flooding impact of the localised reshaping of existing channel within the proposed for the development at 192 Dean Street, Berserker.

The major source of flooding impacting the development is overland flow flooding from a council defined upstream catchment. This is currently conveyed through an existing channel inside the proposed development site. Rockhampton Regional Council have provided the defined flood event for modeling in the form of a hydrograph export from their model.

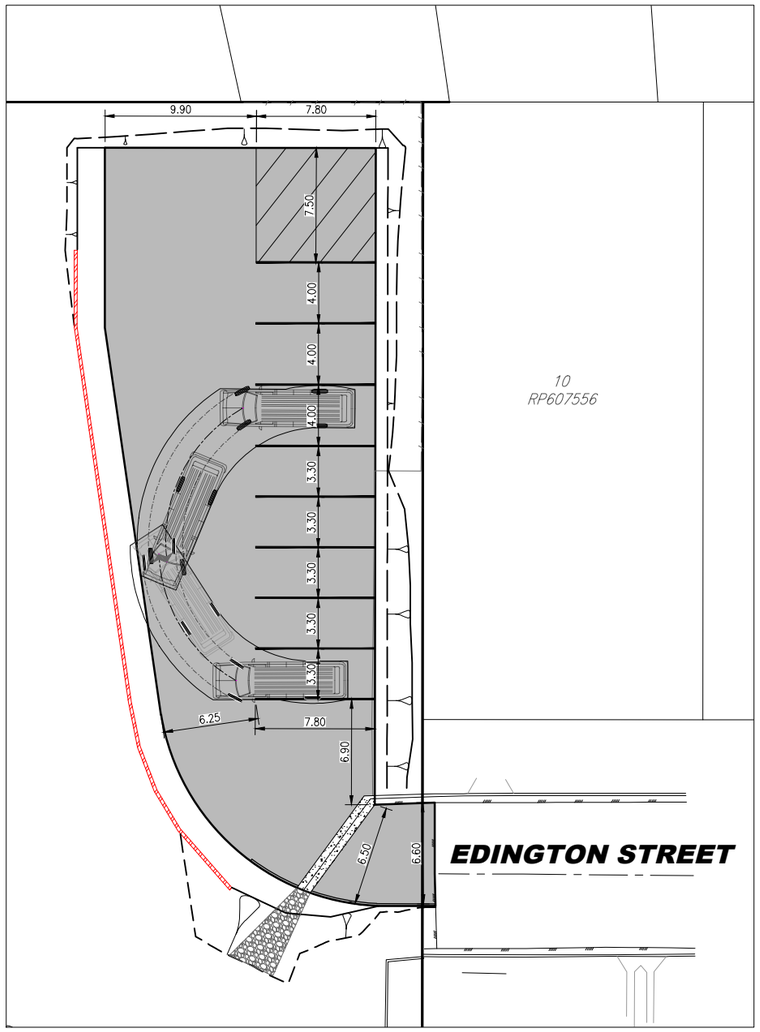
Overland flow runoff is proposed to be routed through the proposed development generally per existing conditions. 1D/2D flood modelling has demonstrated the development achieves no adverse impact to flood levels or velocities to upstream, downstream or adjoining the development site.

Please don't hesitate to contact Jared Hill should there be any queries regarding this memorandum and the civil engineering constraints outlined for the proposed development.

Yours faithfully,

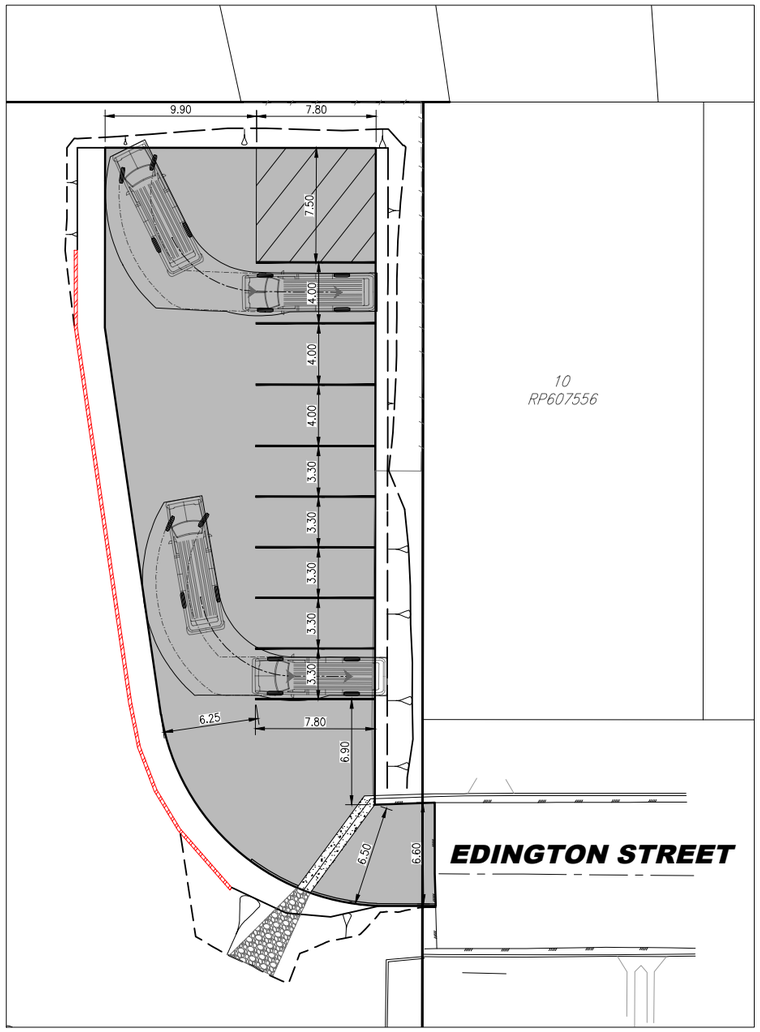
Jared Hill CPEng | RPEQ 19891

Partner | Sunshine Coast Civil Manager
Westera Partners Pty Ltd



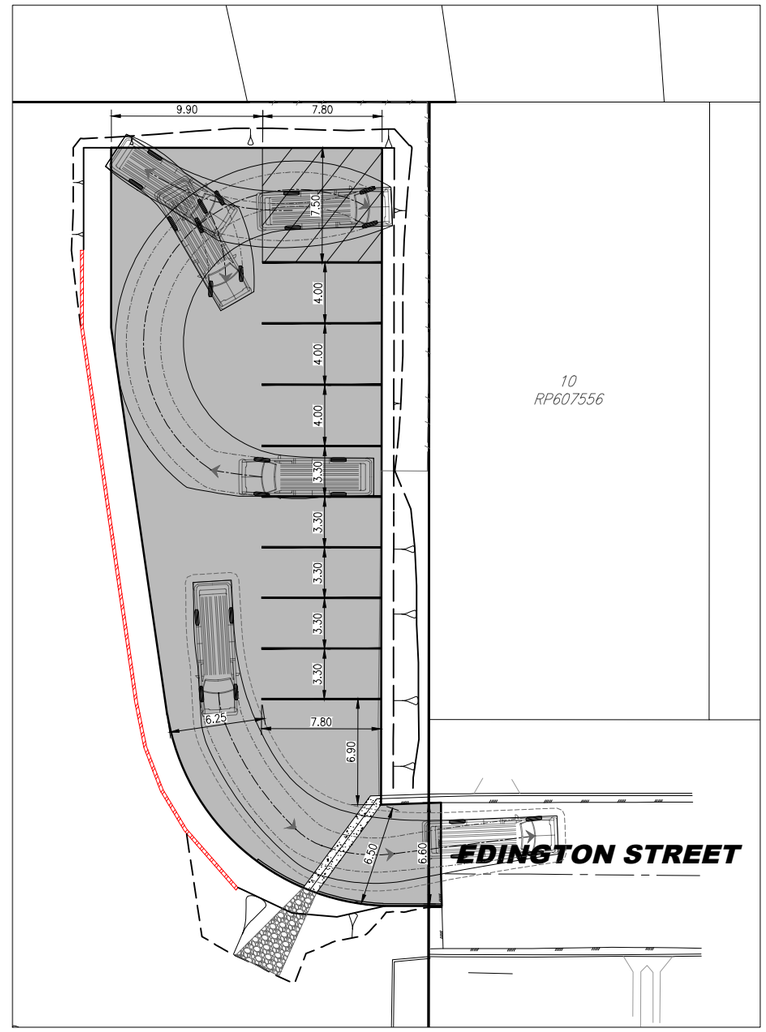
8.8m SERVICE TRUCK/RV
EXIT FROM REVERSE PARKING

SCALE 1:200 (A1 SIZE) 0 2 4 6 8 10



8.8m SERVICE TRUCK/RV
REVERSE PARKING ONLY

SCALE 1:200 (A1 SIZE) 0 2 4 6 8 10



8.8m SERVICE TRUCK/RV
TURNAROUND AREA & SITE EXIT

SCALE 1:200 (A1 SIZE) 0 2 4 6 8 10

ROCKHAMPTON REGIONAL COUNCIL

AMENDED PLANS APPROVED

12 January 2026

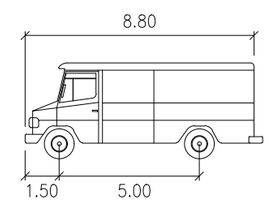
DATE

These plans are approved subject to the current conditions of approval associated with

Development Permit No.: D/170-2022

Dated: 12 June 2023

N



SERVICE VEHICLE

	meters
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 38.7

No.	DATE	REVISIONS	DES	DRN	CHK	APD
A	29.05.25	FOR APPROVAL	W.I	J.J.D	J.M.H	J.M.H

DESIGNED W.I
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE MAY 2025
DOCUMENT CONTROL

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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SURVEYOR
CAPRICORN SURVEY GROUP CQ
PHONE 07 4927 5199

DATUM A.H.D.
P.M.
R.L.

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PROJECT	PROPOSED RETIREMENT LIVING ESTATE
LOCATION	LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE	VEHICLE TURN PATHS
CLIENT	RUBY DEVELOPMENT PTY LTD

DRAWING STATUS	FOR APPROVAL
DRAWING NUMBER	S24-018-VP01
SHEET NUMBER	01 OF 01
REVISION	A

S24-018-VP_Vehicle_Paths.dwg

MCE
McMurtrie Consulting Engineers

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192 Dean Street, Berserker 4701 (Lot 24 on RP607814 & Lot 8 on RP607712

Traffic Impact Assessment

ROCKHAMPTON REGIONAL COUNCIL

AMENDED PLANS APPROVED

3 September 2024

DATE

These plans are approved subject to the current conditions of approval associated with

Development Permit No.: D/170-2022

Dated: 12 June 2023

DATE
23 May 2024

REF
063-21-22

CLIENT
Ruby Developments Pty Ltd

COMMERCIAL IN CONFIDENCE

Document Set ID: 40824045
Version: 1, Version Date: 30/05/2024

Engineering reimagined.

Contact Information

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Document Information

Prepared for	Ruby Developments Pty Ltd
Document Name	Traffic Impact Assessment
Job Reference	063-21-22
Revision	A

Document History

Revision	Date	Description of Revision	Prepared by	Approved by		
				Name	Signature	RPEQ No
A	23/05/2024	Original Issue	R. Crouch	Chris Hewitt		05141

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Document Set ID: 40824045
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1.2 Scope and Study Area 4
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Appendices

Appendix A: Vehicle Swept Paths
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Appendix C: Traffic Survey Data
Appendix D: RPEQ Certification

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Version: 1, Version Date: 30/05/2024

1 Introduction

1.1 Project Background

Ruby Developments Pty Ltd are proposing to establish a Staged Retirement Facility (SRF) at 192 Dean Street, Berserker 4701, on land described as Lot 24 on RP607814 & Lot 8 on RP607712. The SRF is expected to be accessed left in/left out only by Southbound traffic on the adjacent section of Dean Street, with a site access also provided along the same section.

1.2 Scope and Study Area

McMurtrie Consulting Engineers (MCE) have been commissioned by Ruby Developments Pty Ltd to undertake a Traffic Impact Assessment (TIA) for the proposed Staged Retirement Facility.

This Traffic Impact Assessment (TIA) was carried out to determine the level of potential impacts of the project on the operation of the surrounding road network. The outcomes of the TIA will be used in support of the Development Application which will be assessed by Rockhampton Regional Council (RRC) and the Department of Transport and Main Roads (TMR) and will form part of a Development Application to be lodged with RRC.

The assessment methodology adopted for this TIA is summarised in the key tasks listed below.

- Broadly identify the existing transport infrastructure which is of relevance to the project.
- Estimate traffic generation associated with the project and the distribution of this development traffic on the identified road network.
- Assess the potential impact of the project on the surrounding transport infrastructure.
- Identify potential mitigation and management strategies to be implemented to offset the impact of the proposed project (if required).

The process allows for the assessment of the traffic impacts of the project in terms of road safety, access requirements, road link capacity and other transport infrastructure. Following this, if required, potential mitigation and/or management measures would be formulated to address the potential traffic impacts caused by the proposed Project.

The proposal triggers Schedule 20 of the Planning Regulation 2017, therefore the Department of Transport and Main Roads (DTMR) will act as a referral agency for the application. Response to State Code 6 is provided in the Appendices.

1.2.1 Study Area

As previously identified, the proposed Staged Retirement Facility is proposed to be located at 192 Dean Street, Berserker 4701, on land described as Lot 24 on RP607814 & Lot 8 on RP607712. The site is located along Dean Street near the intersection with Elphinstone Street.

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2 Existing Conditions

2.1 Surrounding Road Network Links

Dean Street

Within the proximity of the proposed development Dean Street is a two-way, four-lane road with a posted speed limit of 60km/h. The Northbound and Southbound lanes along the route are mostly undivided, with a single solid centreline which restricts movements across the opposing lane. Dean Street links the intersection of Lakes Creek Road with Norman Road and Frenchville Road in Rockhampton, Queensland.

Adjacent to the proposed development, the road is currently classified as an Urban Arterial Road. Access to Dean Street for the proposed development will be via one (1) entrance from the Southbound direction as indicated in Figure 1. With the site access being restricted to left in/out due to the current four-lane design of Dean Street. Refer to Figure 7 for the development layout plan. As shown in Figure 2, the site is located within the Low-Medium Density Residential Zone within the Rockhampton Region Planning Scheme.

Figure 1 - Study area – Lot 24 on RP607814 & Lot 8 on RP607712 (Source: QLD Globe)

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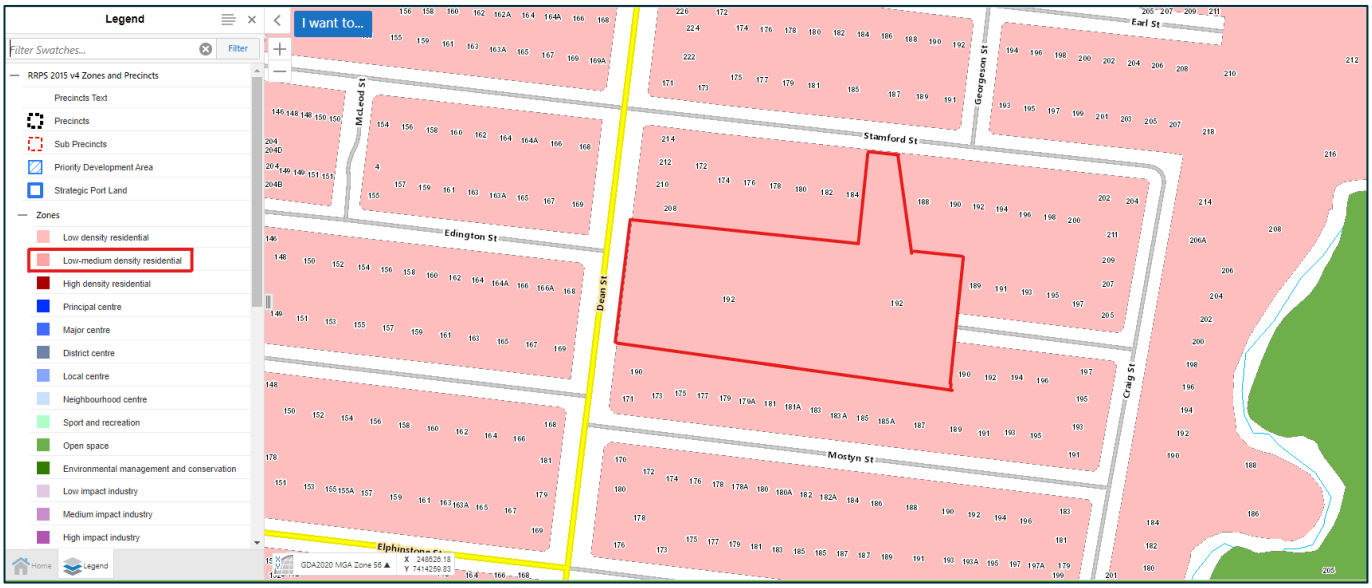

Figure 2: Development Planning Overlays (Source: Rockhampton Region Planning Scheme)

2.2 Integrated Transport Infrastructure

2.2.1 Public Transport

As shown in Figure 3, there is an established public transport network surrounding the subject site (red box outline). Bus Route 404, 406 and 411 currently operate close to the site frontage, with one bus stop within approximately 180m South of the site (Figure 4). These services all operate on Weekdays, with Route 404 also operating on Saturdays, generally every hour between 7am – 12:30pm.

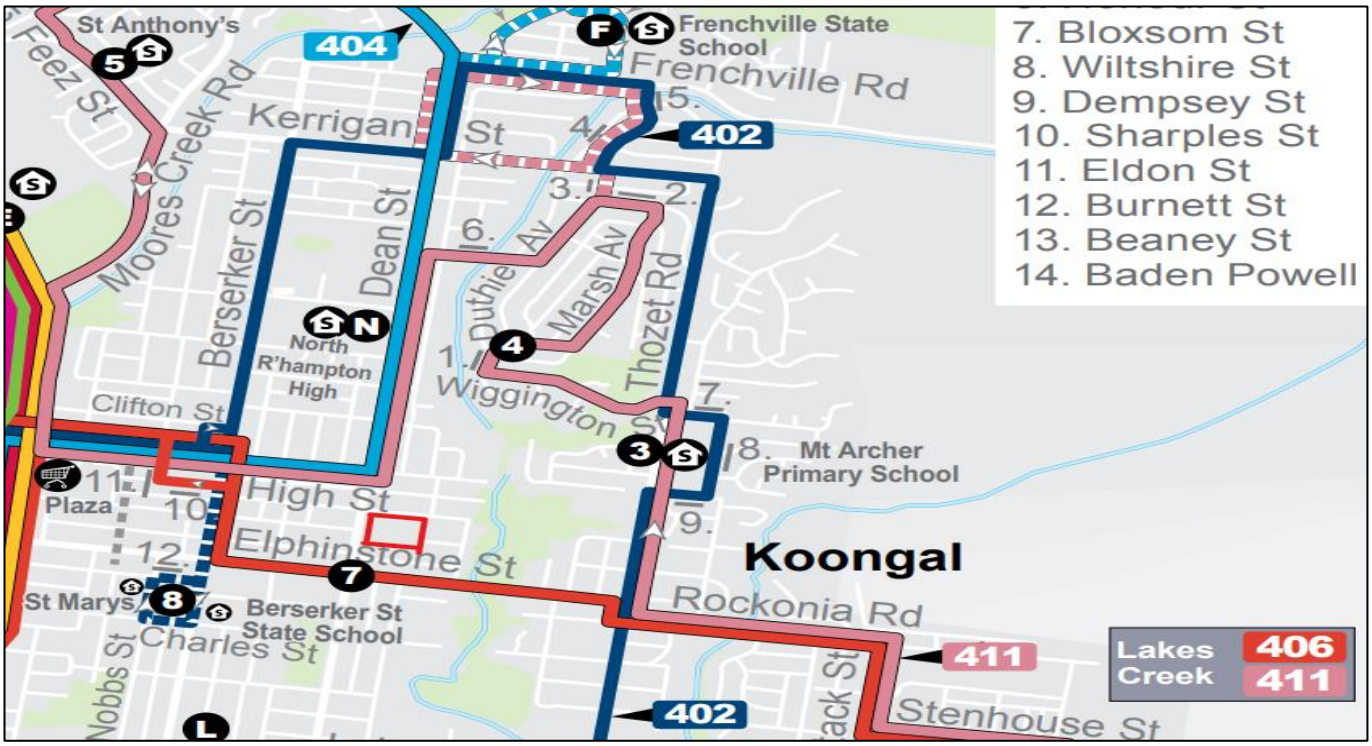

Figure 3 – Public Transport Network in the local area (Source: TransLink)

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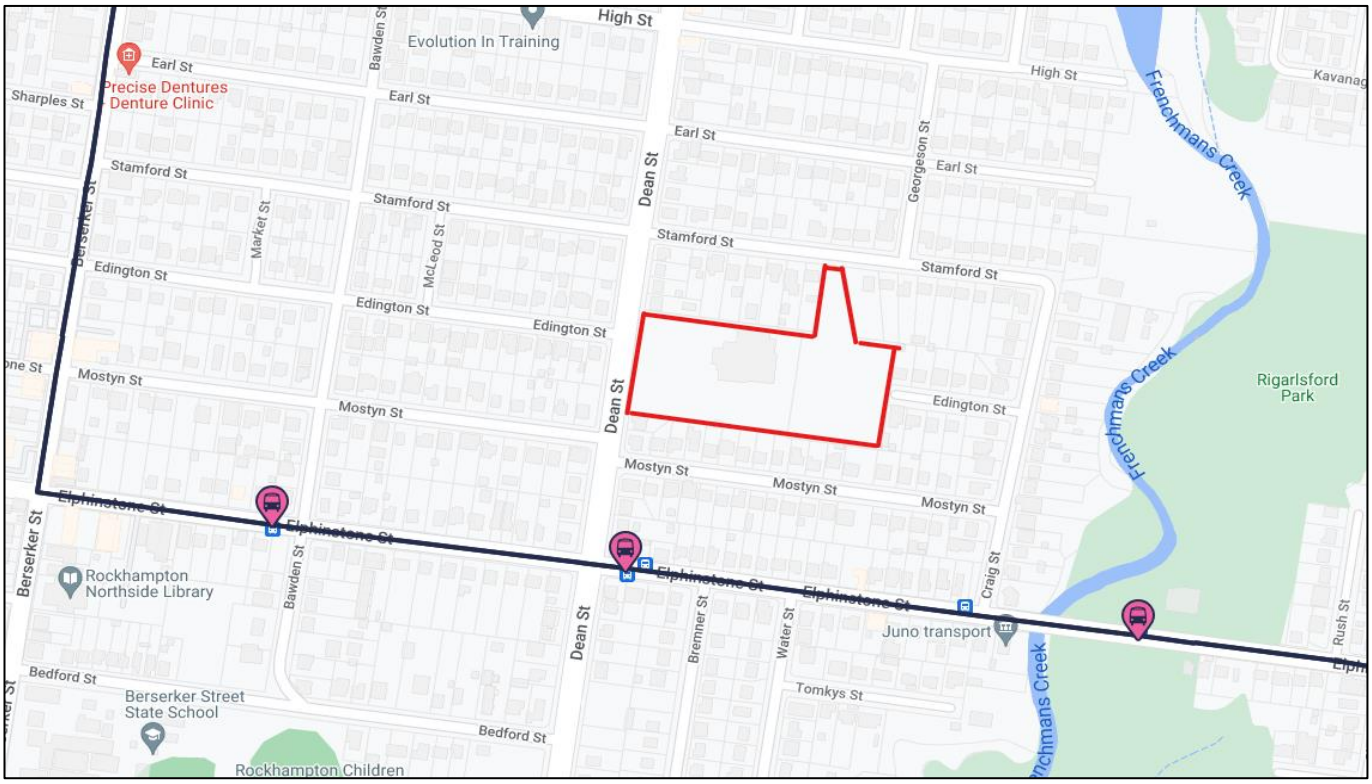

Figure 4 – Route 406 map and nearby bus stops (Source: TransLink)

2.2.2 Cyclist and Pedestrian Infrastructure

As shown in Figure 5, an established pedestrian and bicycle network is currently provided in the vicinity of the site, with sealed pedestrian paths along one side of Dean Street and bicycle lanes on both sides of the road.

Figure 5 – Pedestrian and bicycle lane infrastructure in the vicinity of the site

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2.3 Traffic Volumes

2.3.1 Surveyed Traffic Volumes

Data from a recent traffic count has been provided by Rockhampton Regional Council. The traffic count was completed in 2020 and located on Dean Street opposite number 222, which is just north of the development site. The ADDT for this section of Dean Street was estimated at 8634. A summary of count data on this four-lane section of Dean Street is shown in Table 1.

Table 1 - Dean Street AM and PM Peak Hour Traffic Count (2020)

Peak hour traffic volume	AM Peak (8:00 - 9:00)		PM Peak (15:00 – 16:00)	
	1-7 Day Average	1-5 Day Average	1-7 Day Average	1-5 Day Average
Northbound	386.5	459.4	395.9	446.4
Southbound	405.1	469.1	368.7	396.3
Total	791.6	928.5	764.6	842.7

2.3.2 Future Background Estimates

The development is intended to be completed by 2025, therefore this will be the background year for analysis. The 10-year growth rate in Average Annual Daily Traffic (ADDT) as reported by TMR for nearby roads is approximately 1%. Therefore, a conservative approach has been adopted and future traffic volumes along Dean Street have been estimated with application of a 3% growth rate per annum for the surveyed year (2020). The background traffic volumes (2025) are present in Table 2 below.

Table 2 – Dean Street AM and PM Future Peak Hour Estimates (2025)

Peak hour traffic volume	AM Peak (8:00 - 9:00)		PM Peak (15:00 – 16:00)	
	1-7 Day Average	1-5 Day Average	1-7 Day Average	1-5 Day Average
Northbound	448	533	459	517
Southbound	470	544	427	459
Total	918	1077	886	976

Previously, the site was used in a commercial capacity and comprised the WIN TV building (Figure 6). The gross floor area of the WIN TV building was approximately 2000m^2. Based on 2 peak hour vehicle trips per 100m^2 gross area (taken from The Guide to Traffic Generating Developments version 2.2), the peak is estimated to have been 40 vehicles per hour. This figure will be compared to the estimated peak vehicles per hour of the proposed development.

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Figure 6 – Estimated floor area of previous commercial development

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3 Development Proposal

3.1 Land Uses and Staging

The proposed Staged Retirement Facility will comprise of a total of 57 dwellings and will be developed in one stage concluding in 2025. The proposal also provides community facilities and common RV parking which will be available to the residents of the development. These facilities include:

1. Clubhouse
2. Hobby Shed
3. Pickleball Court
4. BBQ Area

The overall layout of the proposed plan of development is shown in Figure 7. It is noted that the layout shown is indicative only and is subject to a detailed review of internal elements.

Figure 7 – Proposed Plan of Development

3.2 Vehicle Access and Circulation

Access to the site will be gained along the Dean Street frontage, via the main entrance. It is proposed that the access will be restricted to a Left in / Left out movements due to the current four-lane design of Dean Street. The internal vehicular network of the proposed development will comprise of private roads, for which maintenance will be the responsibility of the operator.

The internal road network will be subject to low travel speed and will be signed as a shared zone, providing a minimum pavement width of six (6) metres within a minimum eight (8) metre wide reserve. The system is designed to allow vehicles up to a waste collection vehicle to circulate throughout the proposed development. Kerbside parking will generally be restricted, with visitor parking provided via designated areas and within the driveways of individual dwellings. The detailed design of the internal arrangements will be addressed during operational works.

3.3 Car Parking

It is proposed that each lot will provide a single car garage, with the potential for an additional space for a secondary vehicle or visitor on the driveway. In addition to the parking provisions provided for each dwelling, additional parking for visitors has been provided within the development.

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The proposed car parking breakdown for the development is as follows:

Resident Parking: 57 Spaces

Visitor Parking: 20 Spaces

RV Parking: 6 Spaces

TOTAL PARKING: 83 Spaces

The proposal also provides onsite visitor parking external to the entry gate at the Dean Street access to facilitate guests or deliveries where access arrangements have not been made prior to their arrival.

3.4 Pedestrian and Cyclist Facilities

Internal footpath network has been provided to facilitate pedestrian and cyclist movement throughout the site. Circulation aisles and driveways within the site will generally be subject to low speeds and will function as shared zone throughout. The planned design and landscape intent of the internal pedestrian network, specifically at the access and communal open space allows for safe pedestrian environment through casual surveillance.

3.5 Recreational Vehicles

The proposed plan of development provides a small storage area for recreational vehicles, at the South-Eastern end of the development site. This area is intended to provide storage for caravans / motorhomes, with its use and access to the facility being managed by on-site management.

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4 Traffic Impact

4.1 Traffic Generation

For the purposes of the assessment the trip generation rate for housing for seniors has been adopted from the technical direction document TDT2013/04a (2013), published by the Transport Roads and Maritime Services NSW.

Based on the above, the following trip generation rate is considered appropriate for the proposed development:

Housing for Seniors

Peak Hour: 0.4 Trips Per Dwelling

Daily Trips: 2.1 Trips Per Dwelling

Application of the above rate to the proposed development results in 23 total peak hour trips as shown in Table 3.

Table 3 - Estimated traffic generation for proposed development

Component	Morning Peak Hour			Afternoon Peak Hour		
	In	**Out**	**Total**	**In**	**Out**	**Total**
Housing for Seniors	7	16	23	14	9	23

Peak Hour distribution: AM: 30/70 PM: 60/40

The total peak hour traffic (23) is less than 5% of the recorded peak traffic in this section of Dean Street. Additionally, when analysing the potential impacts of the proposed development on the main intersections along Dean Street (Elphinstone Street and Lake Creeks Road intersections). It is observed that the development will create 17 vehicles per hour less than the estimated 40 vehicles per hour generated by the previous commercial use of the site. The expected distribution of the development traffic within the Elphinstone Street and Lakes Creek Road intersections can be seen in Figure 9 and 10. Based on this, the potential impact of the proposed development to the surrounding traffic network and downstream intersections is considered entirely negligible and as such there is no requirement further analysis to be made beyond the site access.

4.2 Development Traffic Volumes on the Network

Based on the information outlined and the conservative assumptions applied, an estimate of the additional development traffic volumes at the site access have been established, with a summary of the resultant AM and PM peak hour development traffic volumes provided in Figure 8 below.

The development year has been assumed as 2025 thus resulting in a 10-year design period of 2035.

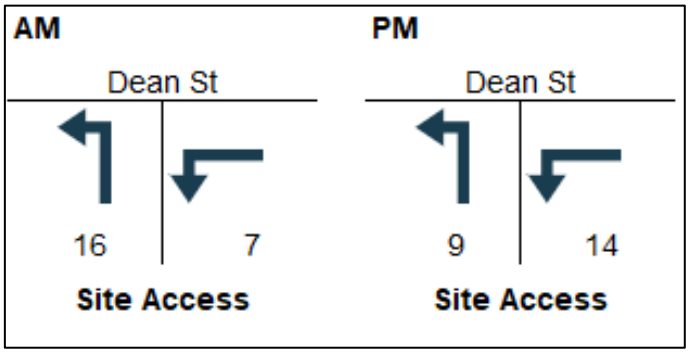

Figure 8 – Peak AM and PM Development Volumes (2025)

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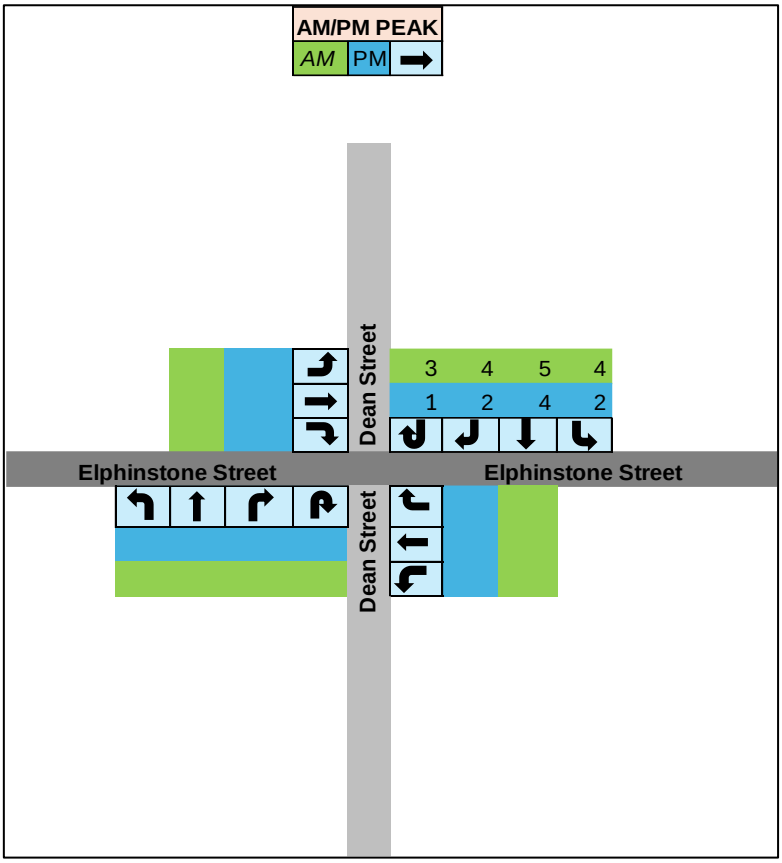

Figure 9 – Development Traffic Distribution (Dean Street - Elphinstone Street Intersection)

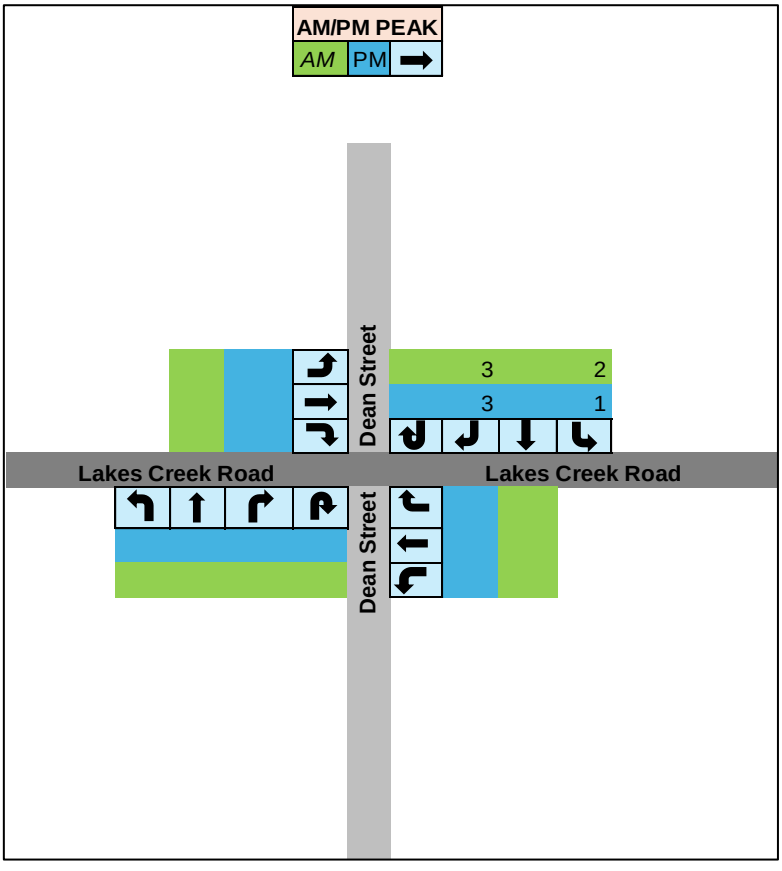

Figure 10 – Development Traffic Distribution (Dean Street – Lakes Creek Road Intersection)

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5 Access and Internal Network

5.1 Proposed Access

The proposal provides access to the Dean Street frontage, via one main access entrance. This access achieves approximately 80m and 135m of separation from Stamford Street and Mostyn Street respectively. The proposal provides an internal road network to facilitate access to the individual dwellings. It is proposed that the Dean Street access will be controlled by security gates, thus restricting the potential of unwarranted access into the proposed development.

Forecast through road and access volumes based on Table 2 and Figure 8, hourly volumes as estimated above, and a compound growth rate of 3% are shown in Figure 11 and 12 below for the opening year of 2025 and the 10-year design horizon of 2035. The through volumes shown in Table 1 were taken from traffic counts off two lanes in each direction along Dean Street, therefore due to this design the though traffic volumes for individual lanes are assumed to be half the recorded value.

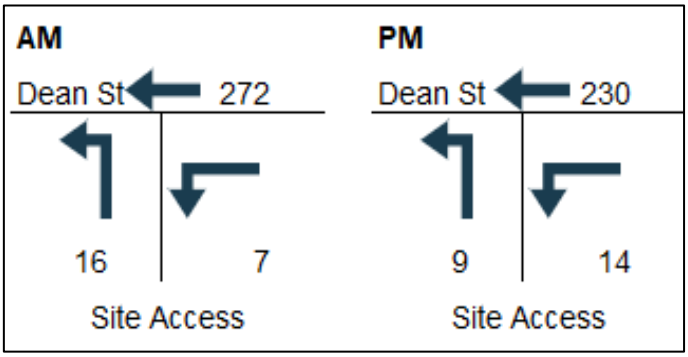

Figure 11 – Development Volumes 2025

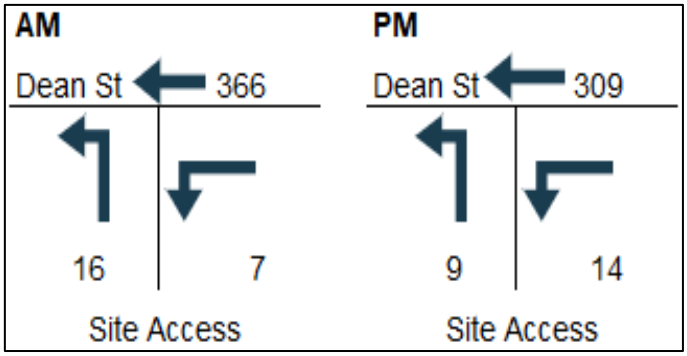

Figure 12 - Development Volumes 2035

5.2 Access Design Considerations

5.2.1 Dean Street Access

A turn warrants analysis at Dean Street Access has been carried out in accordance with the Austroads Guide to Traffic Management Part 6 for a posted speed limit of 60km/h and the design traffic volumes based on future traffic considerations in 2035.

As shown in Figure 11, the following turn treatments are warranted at the prosed access intersection:

2035 Design Traffic Conditions:

Left Turn: Basic Left Turn (BAL)

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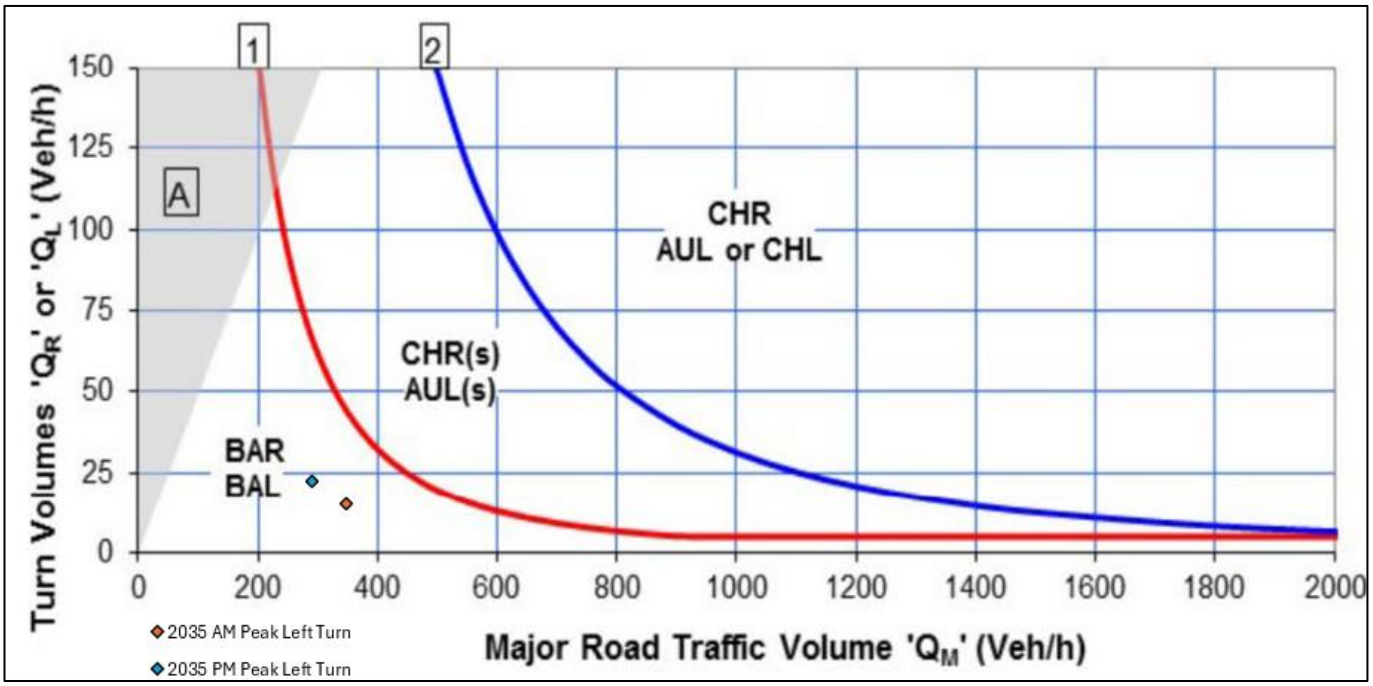

Figure 13 – Turn Warrants Assessment at Dean Street Access

Figure 11 displays the need for the access treatment to be an Urban BAL treatment within the 10-year design horizon. The proposed access is located over 40m from the start of the merge in the southbound direction. All exiting vehicles will be required to give way to traffic on Dean Street; therefore, it is considered that exiting vehicles will not have a detrimental effect on road safety or traffic flow on Dean Street.

Vehicles exiting the development who wish to travel north along Dean Street can detour through adjacent streets such as Mostyn Street, Craig Street and Stamford Street. Similarly, vehicles approaching from the south can use those same streets or one of the many alternative routes that are available to make a southbound approach to the site along Dean Street.

Double barrier lines will be installed in the centre of Dean Street to make the right turn movement into the site an illegal manoeuvre in accordance with the Queensland Road Rules. To prevent right turns out of the development a small traffic island with a “No Right Turn” R2-6 sign will be installed in the access road/driveway to make the right turn an illegal manoeuvre.

Car parking will still be available for a single vehicle on the frontage of 208 Dean Street.

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6 On Site Considerations

6.1 Car Parking

6.1.1 Statutory Requirement

The car parking rates for various development types are set out in Table 9.3.1.3.2 - Parking Requirements of the Rockhampton Region Planning Scheme Development Code. The following car parking rates are applicable for the proposed use:

> Retirement Facility:
>
> One (1) space per two (2) dwellings for the first twenty-five (25) dwellings and one (1) space per four (4) dwellings thereafter
>
> One (1) space for a bus or taxi where the building contains more than thirty (30) dwellings; and
>
> One (1) space per four (4) dwellings for visitors.

A detailed breakdown of the parking requirements for the proposed development is provided in Table 4 below.

Table 4 – Acceptable Outcome of Car Parking (Rockhampton Region Planning Scheme)

Description	Use/Scale	Statutory Parking Rate	Acceptable Outcome
Completion (2025)	Residents (57)	1 Space / 2 Dwelling for first 25 Dwellings, 1 Space / 4 Dwellings thereafter	21 Spaces
	Visitors (57)	1 Space / 4 Dwellings	15 Spaces
TOTAL			36 Spaces

As shown in Table 4, the Acceptable Outcome for car parking is in the order of 36 Spaces. From Section 3.3, the proposal provides a total of 83 parking spaces, including 20 spaces for visitors and 6 recreational vehicle spaces, and therefore satisfies the above acceptable outcome. Furthermore, it is noted that the proposal provides adequate visitor parking in common areas of the development, satisfying both visitor and resident parking requirements without the need for the second (uncovered) parking provided at each dwelling.

6.1.2 Car Parking Layout and Design

The geometric layout of the proposed car parking will comply with the minimum design requirements specified in AS2890.1:2004, in respect to parking bay dimensions and aisle widths. The proposed car parking and on-site characteristics will be designed with the following dimensions (Table 5). Detailed design of the internal parking configuration will be provided in due course as part of detailed design.

Table 5 – Parking Layout and Geometry

Design Element	Required
General Parking (User Class 2)	2.5m Wide x 5.4m Long
Disabled Parking	2.4m Wide x 5.4m Long, Plus Shared Zone
Aisle Width Circulation Width	5.8 Metres 5.5 Metres
Aisle Extension	1 Metre Beyond Last Parking / 8 Metre Aisle
Internal Driveway Grades	1:20 maximum for the first 6 metres into the site
Internal Car Parking Grades (Car Parking Module)	1:20 measured parallel to the angle of the parking space or 1:16 in all other directions

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6.1.3 Access Roundabout

The site plans include a roundabout which is located near the Dean Street access, which will facilitate entry/exit from the proposed development. From the conducted swept paths per Appendix A, the current design cannot sufficiently accommodate the largest design vehicle (MRV). Therefore, during operational works the centre island, entry/exit curve designs and lane widths will need to be adjusted to accommodate the requirements of the largest design vehicle.

6.2 Provision for Heavy Vehicles

6.2.1 Medium Vehicle Access Manoeuvring

It is proposed that servicing will generally be carried out by up to a Medium Rigid Vehicle (MRV). MRV manoeuvring paths at all accesses and internal manoeuvring are shown in Appendix A.

6.2.2 Waste Management

Waste is proposed to be collected from the development using a side loading waste collection vehicle. Provision has been made for such to circulate throughout the development and service each dwelling individually. As shown in Appendix A, the proposal allows for servicing to be carried out whilst always maintaining appropriate clearance to obstructions.

6.3 Active Transport

6.3.1 Pedestrian and Cyclists

Pedestrian and cyclist access to the development is proposed to be from the Dean Street frontage, clear of vehicular crossover. Whilst the circulation driveways provided internally will generally function as a shared zone for pedestrian and cyclist use

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7 Safety

7.1 Road Safety Issues

7.1.1 Existing Site Conditions

A desktop review of the existing traffic conditions on the relevant road network was undertaken by Lachlan McMurtrie (RPEQ/Road Safety Auditor) on Monday, 20 May 2024. No obvious safety issues were identified.

7.2 Crash Data

7.2.1 Crash Data Summary

Crash data evaluation has been carried out approximately 200m from the site access along Dean Street using the road crash data available from Queensland Globe Database, with the assessment completed from data from the past five years (January 2019 – May 2024).

The results of this assessment identified two crashes within the proximity of the access intersection, within the selected timeframe.

Table 6: Summary of Road Crash History (2019-2024)

Crash Ref. No.	Crash Year	Crash Severity	Crash Type	DCA Code	Crash Description
Dean Street (200m Proximity of Site Access)					
357441	2020	Medical Treatment	Multi-Vehicle	301	Veh'S Same Direction: Rear End
357431	2020	Hospitalisation	Single Vehicle	704	Off Path-Straight: Right Off Cway Hit Obj

The results above indicate that the increased traffic generated by the proposed development, can't be considered a specific safety risk with only two crashes recorded in the vicinity of the proposed site in the past five years (2019 – 2024).

7.3 Intersection Sight Distance

7.3.1 Dean Street Access

At the proposed location of the Dean Street access, Dean Street provides a straight geometry with relatively level gradients in the direction of incoming traffic. As such, the existing roadway provides an unobstructed view line between the driver exiting the site and vehicles approaching the development from the North along Dean Street. As such, this site access exceeds the SISD requirement of 83m in accordance with AS2980.1 for a posted speed of 60km/h.

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8 Conclusions and Recommendations

The subject site is located on the Eastern side of Dean Street, located between Stamford and Mostyn Streets. The site is formally identified as Lot 24 on RP607814 & Lot 8 on RP607712. The site is located within the Low-Medium Density Residential Zone and is adjacent to an Urban Arterial Road along the Western Frontage.

The proposed Staged Retirement Facility will comprise of a total of 57 dwellings and will be completed by 2025. Access to the site will be gained through the Dean Street frontage, via one proposed entrance. It is proposed that the access to the site will be restricted to left in / left out movements with Basic Left Turn treatments (BAL) provided for ingress. With the Dean Street access point being located approximately 80m and 130m from Stamford and Mostyn Streets respectively.

The design of the development encourages walking and cycling through the low grades and casual surveillance. The internal street system provides a low-speed environment allowing for a safe shared area for pedestrians / cyclists and motor vehicles. All internal roads are proposed to be privately operated and the responsibility of the site operator.

The traffic generated by the development during the peak hour is expected to be less than 5% of the peak traffic on the adjacent section of Dean Street. Also, the proposed development generates less than the estimated 40 vehicles per hour from the previous commercial use of the site. Based on this, the potential impact of the proposed development to the surrounding traffic network is considered negligible.

As discussed in Section 6, the proposal meets the Councils Acceptable Outcome for car parking throughout the proposed development. The proposed car parking facilities are proposed to be constructed in accordance with the relevant requirements prescribed in AS2890.1:2004. The design of the proposed facilities ensures that all vehicles enter and exit the development in forward gear.

Safety analysis on the proposed access intersection indicate that there are adequate view lines between the driver exiting the site and southbound vehicles approaching from Dean Street. Crash data has been evaluated from the information available from the TMR and Queensland Globe Database, which indicates accident rates in proximity to the site are relatively low, with only one serious incident in the past five (5) years (2019 – 2024).

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Appendix A: Vehicle Swept Paths

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MEDIUM RIGID VEHICLE ENTRANCE ROUNDABOUT

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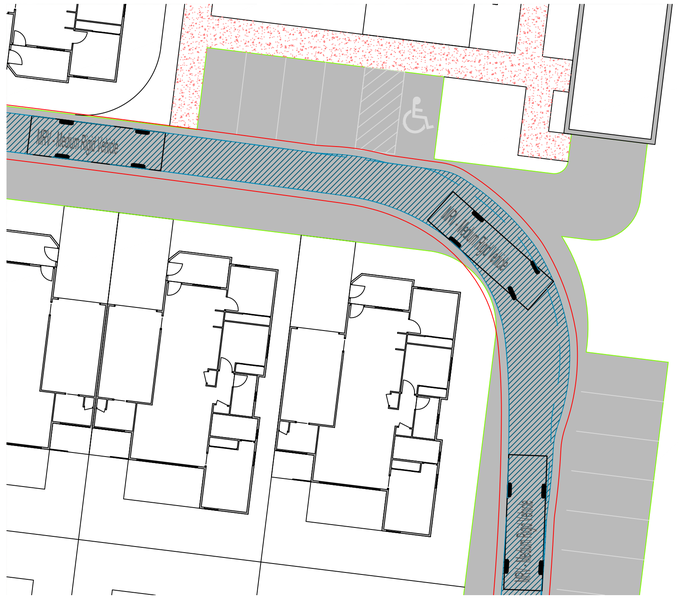

MEDIUM RIGID VEHICLE RIGHT TURN

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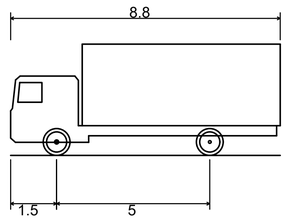

MRV - Medium Rigid Vehicle	
Overall Length	8.800m
Overall Width	2.500m
Overall Body Height	3.633m
Min Body Ground Clearance	0.428m
Track Width	2.500m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	10.000m

Engineering Reimagined.

N

MEDIUM RIGID VEHICLE RIGHT TURN

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MEDIUM RIGID VEHICLE RIGHT TURN

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PROJECT IDENTIFIER

CLIENT KPG
PROJECT 192 DEAN STREET
TITLE
MEDIUM RIGID VEHICLE
SHEET 1 OF 3

DRAWING NUMBER 0632122-001

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MEDIUM RIGID VEHICLE PARK 1 ENTRY

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MEDIUM RIGID VEHICLE PARK 1 EXIT

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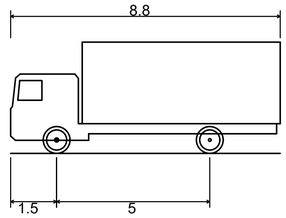

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Lock-to-lock time	4.00s
Curb to Curb Turning Radius	10.000m

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MEDIUM RIGID VEHICLE PARK 2 ENTRY

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MEDIUM RIGID VEHICLE PARK 2 EXIT

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MEDIUM RIGID VEHICLE PARK 3 ENTRY

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MEDIUM RIGID VEHICLE PARK 3 EXIT

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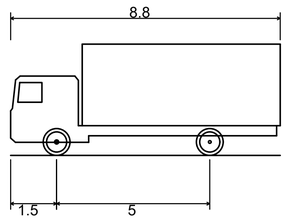

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MEDIUM RIGID VEHICLE EXIT ROUNDABOUT

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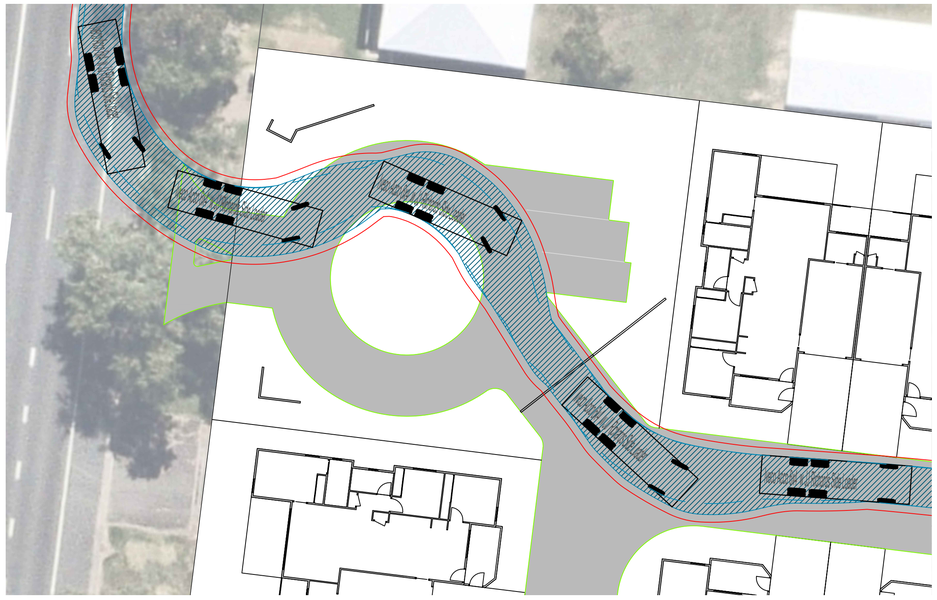

JJ RICHARDS GARBAGE TRUCK ENTRANCE ROUNDABOUT

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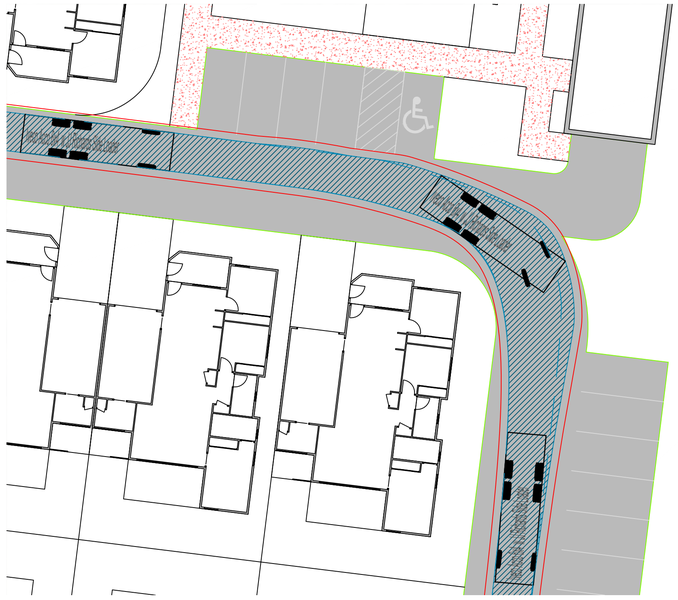
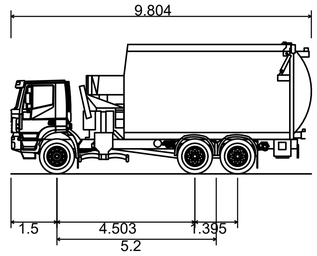


JJ RICHARDS GARBAGE TRUCK RIGHT TURN

SCALE 1:200(A1) 1:400(A3)

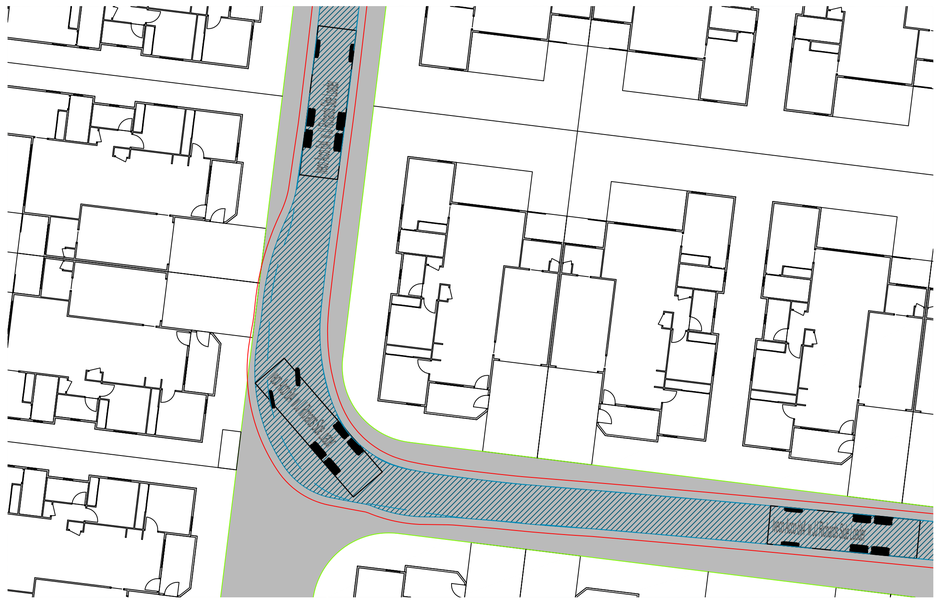


Iveco Acco 6x4 w JJ Richards Side Loader

Overall Length	9.804m
Overall Width	2.500m
Overall Body Height	4.300m
Min Body Ground Clearance	0.191m
Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	9.410m

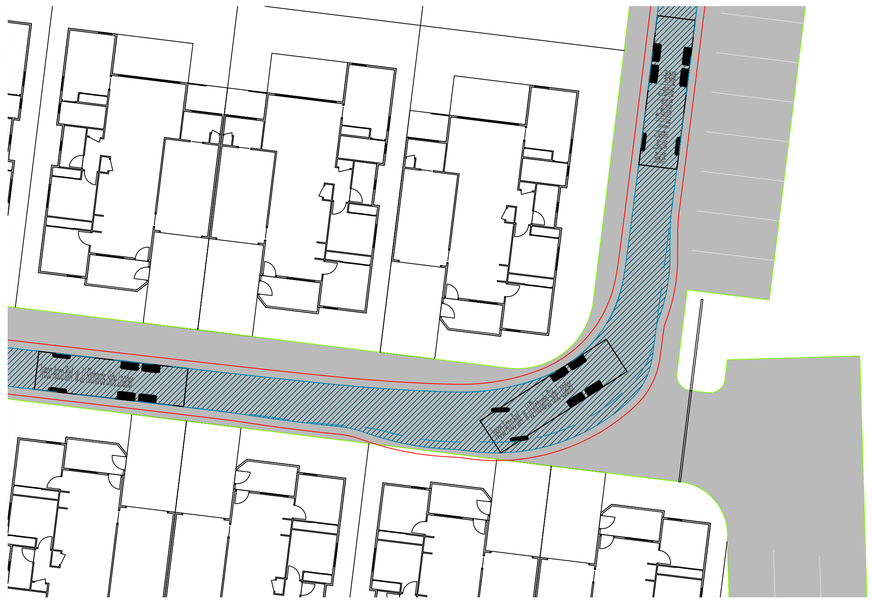
Engineering Reimagined.

N



JJ RICHARDS GARBAGE TRUCK RIGHT TURN

SCALE 1:200(A1) 1:400(A3)



JJ RICHARDS GARBAGE TRUCK RIGHT TURN

SCALE 1:200(A1) 1:400(A3)

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PLOT DATE: 21/05/2024 8:13:46 AM

PROJECT STAMP

FOR INFORMATION

DRAWING SCALE

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SCALE 1:200 @ A1 1:400 @ A3

ISSUE.REVISION

ISSUE	REV	DATE	DES	DESCRIPTION
INFO	A	21/05/24	NM	ISSUE FOR INFORMATION

PROJECT MANAGEMENT

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RPEQ CERTIFICATION		
NM	RC	
DESIGNER	CHECKED	APPROVED
INTERNAL PROJECT NO.	061-21-22	
DATUM	SURVEY	

MCE
McMurtrie Consulting Engineers
ROCKHAMPTON | BUNDABERG
PH (07) 4921 1780 | mail@mcmengineers.com | MCMENGINEERS.COM

PROJECT IDENTIFIER

CLIENT KPG
PROJECT TITLE CLERMONT POLICE STATION

JJ RICHARDS SIDE LOADER

SHEET 1 OF 2

DRAWING NUMBER 0632122-004

REVISION A

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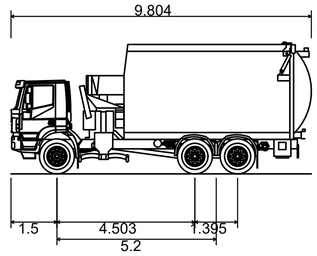
ISO A1 594mm x 841mm

JJ RICHARDS GARBAGE TRUCK LEFT TURN

SCALE 1:200(A1) 1:400(A3)



Iveco Acco 6x4 w JJ Richards Side Loader	
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Track Width	2.500m
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	9.410m

Engineering Reimagined.

N

JJ RICHARDS GARBAGE TRUCK TRUCK EXIT ROUNDABOUT

SCALE 1:200(A1) 1:400(A3)

PLOT DATE: 21/05/2024 8:13:53 AM FILENAME: R:\21-22\063-21-22 - 192 Dean Street\Design\DWG\Swept Paths\192 Dean Street Swept Paths.dwg

PROJECT STAMP

FOR INFORMATION

DRAWING SCALE

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SCALE 1:200 @ A1 1:400 @ A3

ISSUE.REVISION

ISSUE	REV	DATE	DES	DESCRIPTION
INFO	A	21/05/24	NM	ISSUE FOR INFORMATION

PROJECT MANAGEMENT

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RPEQ CERTIFICATION		
NM	RC	
DESIGNER	CHECKED	APPROVED
INTERNAL PROJECT NO.	061-21-22	
DATUM	SURVEY	

MCE
McMurtrie Consulting Engineers
ROCKHAMPTON | BUNDABERG
PH (07) 4921 1780 | mail@mcmengineers.com | MCMENGINEERS.COM

PROJECT IDENTIFIER

CLIENT KPG
PROJECT CLERMONT POLICE STATION
TITLE

EARTHWORKS LAYOUT PLAN
SHEET 2 OF 2

DRAWING NUMBER 0632122-005

REVISION A

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Appendix B: Response to State Code 6

Table 6.2 Development in general

Performance outcomes	Acceptable outcomes	Response
Network impacts		
PO1 Development does not compromise the safety of users of the **state-controlled road** network.	No acceptable outcome is prescribed.	COMPLIES WITH PO
PO2 Development does not adversely impact the structural integrity or physical condition of a **state-controlled road** or **road transport infrastructure**.	No acceptable outcome is prescribed.	COMPLIES WITH PO
PO3 Development ensures **no net worsening** of the operating performance the **state-controlled road** network.	No acceptable outcome is prescribed.	COMPLIES WITH PO
PO4 Traffic movements are not directed onto a **state-controlled road** where they can be accommodated on the **local road** network.	No acceptable outcome is prescribed.	COMPLIES WITH PO
PO5 Development involving haulage exceeding 10,000 tonnes per year does not damage the pavement of a **state-controlled road**.	No acceptable outcome is prescribed.	NOT APPLICABLE TO TRAFFIC IMPACT ASSESSMENT
PO6 Development does not require a new **railway** level crossing.	No acceptable outcome is prescribed.	NOT APPLICABLE, THE DEVELOPMENT IS NOT WITHIN ACCESSIBLE PROXIMITY OF A RAILWAY
PO7 Development does not adversely impact the operating performance of an existing **railway crossing**.	No acceptable outcome is prescribed.	NOT APPLICABLE, THE DEVELOPMENT IS NOT WITHIN ACCESSIBLE PROXIMITY OF A RAILWAY
PO8 Development does not adversely impact on the safety of an existing **railway crossing**.	No acceptable outcome is prescribed.	NOT APPLICABLE, THE DEVELOPMENT IS NOT WITHIN ACCESSIBLE PROXIMITY OF A RAILWAY
PO9 Development is designed and constructed to allow for on-site circulation to ensure vehicles do not queue in a **railway crossing**.	No acceptable outcome is prescribed.	NOT APPLICABLE, THE DEVELOPMENT IS NOT WITHIN ACCESSIBLE PROXIMITY OF A RAILWAY
PO10 Development does not create a safety hazard within the **railway corridor**.	No acceptable outcome is prescribed.	NOT APPLICABLE, THE DEVELOPMENT IS NOT WITHIN ACCESSIBLE PROXIMITY OF A RAILWAY
PO11 Development does not adversely impact the operating performance of the **railway corridor**.	No acceptable outcome is prescribed.	NOT APPLICABLE, THE DEVELOPMENT IS NOT WITHIN ACCESSIBLE PROXIMITY OF A RAILWAY

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Performance outcomes	Acceptable outcomes	Response
PO12 Development does not interfere with or obstruct the **railway transport infrastructure** or **other rail infrastructure**.	No acceptable outcome is prescribed.	NOT APPLICABLE, THE DEVELOPMENT IS NOT WITHIN ACCESSIBLE PROXIMITY OF A RAILWAY
PO13 Development does not adversely impact the structural integrity or physical condition of a **railway corridor** or **rail transport infrastructure**.	No acceptable outcome is prescribed.	NOT APPLICABLE, THE DEVELOPMENT IS NOT WITHIN ACCESSIBLE PROXIMITY OF A RAILWAY
Stormwater and overland flow		
PO14 Stormwater run-off or overland flow from the development site does not create or exacerbate a safety hazard for users of a **state transport corridor** or **state transport infrastructure**.	No acceptable outcome is prescribed.	NOT APPLICABLE TO A TRAFFIC IMPACT ASSESSMENT
PO15 Stormwater run-off or overland flow from the development site does not result in a material worsening of operating performance of a **state transport corridor** or **state transport infrastructure**.	No acceptable outcome is prescribed.	NOT APPLICABLE TO A TRAFFIC IMPACT ASSESSMENT
PO16 Stormwater run-off or overland flow from the development site does not interfere with the structural integrity or physical condition of the **state transport corridor** or **state transport infrastructure**.	No acceptable outcome is prescribed.	NOT APPLICABLE FOR A TRAFFIC IMPACT ASSESSMENT
PO17 Development associated with a **state-controlled road** or **road transport infrastructure** ensures that stormwater is lawfully discharged.	**AO17.1** Development does not create any new points of discharge to a **state transport corridor** or **state transport infrastructure**. AND **AO17.2** Development does not concentrate flows to a **state transport corridor**. AND	NOT APPLICABLE FOR A TRAFFIC IMPACT ASSESSMENT

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Performance outcomes	Acceptable outcomes	Response
	AO17.3 Stormwater run-off is discharged to a **lawful point of discharge**. AND **AO17.4** Development does not worsen the condition of an existing **lawful point of discharge** to a **state transport corridor** or **state transport infrastructure**.	
Flooding		
PO18 Development does not result in a material worsening of flooding impacts within a **state transport corridor** or **state transport infrastructure**	*For a **state-controlled road** or **road transport infrastructure**, all of the following apply:* **AO18.1** For all flood events up to 1% **annual exceedance probability**, development ensures there are negligible impacts (within +/- 10mm) to existing flood levels within a **state transport corridor**. AND **AO18.2** For all flood events up to 1% **annual exceedance probability**, development ensures there are negligible impacts (up to a 10% increase) to existing peak velocities within a **state transport corridor**. AND **AO18.3** For all flood events up to 1% annual exceedance probability, development ensures there	NOT APPLICABLE TO A TRAFFIC IMPACT ASSESSMENT

Document Set ID: 40824045
Version: 1, Version Date: 30/05/2024

PROPOSED RETIREMENT LIVING ESTATE

192 DEAN STREET, BERSERKER

RUBY DEVELOVMENT PTY LTD

Project Number: S24-018

ROCKHAMPTON REGIONAL COUNCIL

AMENDED PLANS APPROVED

12 January 2026

DATE

These plans are approved subject to the current conditions of approval associated with

Development Permit No.: D/170-2022

Dated: 12 June 2023

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GENERAL DRAWINGS

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S24-018-G02 SAFETY IN DESIGN
S24-018-G03 CIVIL SERVICES LAYOUT PLAN

CIVIL DRAWINGS

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S24-018-C02 SITE PLAN
S24-018-C03 EXISTING FEATURES & DEMOLITION PLAN
S24-018-C04 CIVIL WORKS PLAN 1 of 4
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S24-018-C07 CIVIL WORKS PLAN 4 of 4
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S24-018-C36 STORMWATER CALCULATIONS 1% AEP HYDROLOGY
S24-018-C37 STORMWATER CALCULATIONS 1% AEP HYDRAULICS

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S24-018-ESC02 EROSION & SEDIMENT CONTROL POST BULK EARTHWORKS
S24-018-ESC03 SEDIMENT BASIN DETAILS
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S24-018-PS04 PRIVATE SEWER WORKS PLAN 2 of 4
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S24-018-PS06 PRIVATE SEWER WORKS PLAN 4 of 4
S24-018-PS07 PRIVATE SEWER LONGITUDINAL SECTION LINE 1
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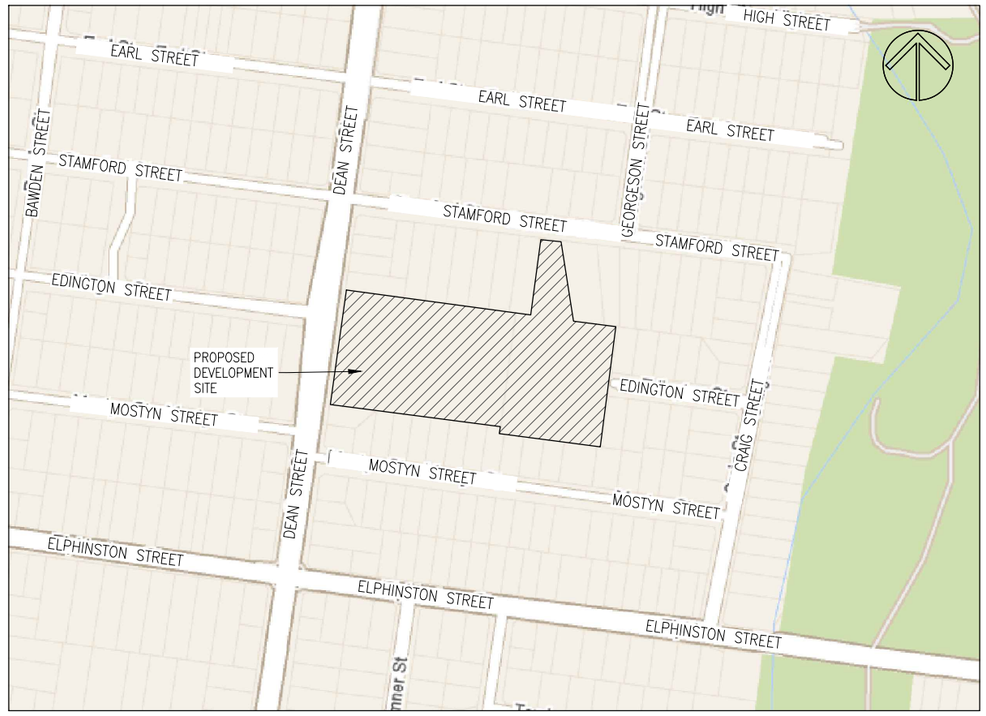
S24-018-W04 PRIVATE WATER WORKS PLAN 2 of 4
S24-018-W05 PRIVATE WATER WORKS PLAN 3 of 4
S24-018-W06 PRIVATE WATER WORKS PLAN 4 of 4



LOCALITY PLAN

NOT TO SCALE

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A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

WESTERA PARTNERS
STRUCTURAL+CIVIL+ENVIRONMENTAL ENGINEERS
www.westerapartners.com.au | ABN 52 097 417 975

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GOLD COAST T 07 5571 1599 E goldcoast@westerapartners.com.au
SUNSHINE COAST T 07 5391 3777 E sunshinecoast@westerapartners.com.au
NORTHERN NSW T 02 6674 8047 E nsw@westerapartners.com.au
CENTRAL VICTORIA T 03 5441 0922 E centralvic@westerapartners.com.au

SURVEYOR
CAPRICORN SURVEY GROUP CQ
PHONE 07 4927 5199

DATUM A.H.D.
P.M.
R.L.

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PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE COVER SHEET
CLIENT RUBY DEVELOPMENT PTY LTD

DRAWING STATUS: FOR CONSTRUCTION
DRAWING NUMBER: S24-018-G01
SHEET NUMBER: 01 OF 03
REVISION: B

S24-018-G_Coversheet.dwg

STANDARD SAFE DESIGN REPORT (STD SDR REPORT)

IN ACCORDANCE WITH THE WORK HEALTH AND SAFETY ACT AND REGULATIONS 2011 THE FOLLOWING CHECKED ☑ TASKS AND HAZARDS HAVE BEEN IDENTIFIED AS POTENTIAL CONSTRUCTION RELATED HAZARDS ASSOCIATED WITH IMPLEMENTING THE DESIGN AS DOCUMENTED.

- ☑ (CCD) CONSTRUCTION CONFORMANCE TO DESIGN - SDR1,2,3,4,5,6,7,11,12,13,16,18,26,28 RISK LEVEL = 3
- ☐ (SA&SWP) SITE ACCESS CONTROL AND FENCING INCLUDING STAIRS, SCAFFOLD, LADDERS, RAILINGS, SAFE WORK PLATFORMS FREE FROM FALLING DEBRIS AND ADEQUATE WORKSPACE - SDR8,14,21,23,28 RISK LEVEL = 6
- ☑ (GSW) GENERAL SITE WORKS - SDR2,6,9,10,11,12,14,15,17,19,25,26,28 RISK LEVEL = 6
- ☑ (CE) USE OF CONSTRUCTION EQUIPMENT - SDR18,24,28 RISK LEVEL = 6
- ☑ (SWD&E) STORMWATER, DRAINAGE AND ELECTRICAL SERVICES WORK - SDR9,10,14,19,28 RISK LEVEL = 6
- ☐ (W@H) WORKING AT HEIGHTS - SDR21,22,23,28 RISK LEVEL = 7
- ☐ (DEM) DEMOLITION - SDR10,15,18,20,26,28 RISK LEVEL = 7
- ☑ (EA) ENVIRONMENTAL GROUND VIBRATIONS, NOISE AND DUST - SDR7,9,28 RISK LEVEL = 6
- ☑ (SP&IT) SURROUNDING PROPERTY AND INFRASTRUCTURE INCLUDING TREES - SDR9,10,28 RISK LEVEL = 5
- ☑ (EX) TRENCHING AND EXCAVATIONS >1m - SDR10,14,28 RISK LEVEL = 7
- ☑ (CS) CONFINED SPACES - SDR10,14,16,27,28 RISK LEVEL = 7
- ☑ (U/AGS) - WORK AROUND UNDERGROUND AND ABOVE GROUND SERVICES AND OBSTRUCTIONS - SDR9,10,28 RISK LEVEL = 7
- ☐ (HM) EXPOSING AND HANDLING HAZARDOUS MATERIALS - SDR16,25,28 RISK LEVEL = 4
- ☑ (FC) FORMWORK CONSTRUCTION - SDR21,22,23,28 RISK LEVEL = 6
- ☑ (LSC) LIFTING AND POSITIONING OF STRUCTURAL COMPONENTS - SDR15,18,28 RISK LEVEL = 6
- ☐ (SIC) STRUCTURE/MEMBER INSTABILITY DURING CONSTRUCTION - SDR7,8,12,14,20,28 RISK LEVEL = 6
- ☑ (OL) OVER LOADING DUE TO CONSTRUCTION & MAINTENANCE LOADS - SDR7,8,15,28 RISK LEVEL = 5
- ☐ (AMH) ADDITIONAL MATERIAL HAZARDS EXIST. REFER TO PROJECT SID HAZARD CHECKLIST (FORM WHS 006 a & b)

THE ABOVE LISTED TASKS AND HAZARDS HAVE BEEN ASSESSED AND ARE TO BE FURTHER MITIGATED BY
1) FOLLOWING RISK REDUCTION MEASURES AS INDICATED ABOVE.
2) COMPLY WITH RISK TABLE '2' SUGGESTED ACTIONS.
3) IMPLEMENTING AND COMPLY WITH RISK REDUCTION MEASURES INDICATED IN THE PROJECT SID-ARAM (FORM WHS-006b) IF ABOVE (AMH) - ADDITIONAL MATERIAL HAZARD BOX IS CHECKED.

SDR1 IT IS THE CLIENT'S RESPONSIBILITY TO PROVIDE THIS 'SAFE DESIGN REPORT' TO THE BUILDER, PROJECT MANAGER AND/OR PRINCIPAL CONTRACTOR AND THEIR MUTUAL RESPONSIBILITY TO HAVE A SAFETY MANAGEMENT PLAN ("SMP") FOR SITE ACCESS AND SAFE WORKING. (CCD) (SA&SWP)

SDR2 IT IS THE BUILDER, PROJECT MANAGER OR PRINCIPAL CONTRACTOR'S RESPONSIBILITY TO BUILD THE WORKS STRICTLY IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND NOT TO MAKE ANY VARIATIONS TO THE CONSTRUCTION WITHOUT THE SPECIFIC WRITTEN APPROVAL OF THE DESIGNER. (CCD) (GSW)

SDR3 IT IS THE CLIENT'S RESPONSIBILITY, THROUGH CONSULTATION AND ENGAGEMENT OF SUITABLY QUALIFIED PROFESSIONALS, TO MAKE THE DESIGNER AWARE OF ANY INFORMATION RELATING TO HAZARDS AND RISKS WHERE CONSTRUCTION WORK IS TO BE CARRIED OUT, INCLUDING BUT NOT LIMITED TO: THE LOCATION OF UNDER GROUND AND ABOVE GROUND SERVICES, IDENTIFICATION OF CONTAMINATED SOILS OR UNEXPECTED SOILS AND OTHER MATERIALS OR THE PRESENCE OF DANGEROUS MATERIALS INCLUDING ASBESTOS. (CCD)

SDR4 THIS DESIGN HAS BEEN DOCUMENTED IN ACCORDANCE WITH RELEVANT AUSTRALIAN STANDARDS, LOCAL AUTHORITY REGULATIONS AND STANDARD BUILDING CODES OF PRACTICE UNLESS NOTED OTHERWISE. EACH LEVEL OF CONSTRUCTION IS TO BE STRUCTURALLY COMPLETED AND INSPECTED TO ENSURE DESIGN COMPLIANCE BY THE CERTIFYING AUTHORITY PRIOR TO ADVANCING TO THE NEXT STAGE OF WORK. IT IS THE BUILDER, PROJECT MANAGER OR PRINCIPAL CONTRACTOR'S RESPONSIBILITY TO PROGRAM THE WORKS IN A SAFE MANNER AND TO HIGHLIGHT TO THE DESIGNER ANY ASPECTS OF THE WORK THAT MAY REQUIRE FURTHER CLARIFICATION OR ADVICE WITH REGARD TO THE HEALTH AND SAFETY OF THE PROJECT. (CCD)

SDR5 ALL ASPECTS DETAILED OR NOTED IN THE WESTERA CIVIL/ENVIRONMENTAL/STRUCTURAL DOCUMENTS ARE THOSE REQUIRED FOR THE COMPLETED PROJECT OR DEVELOPMENT ONLY. THE BUILDER, PROJECT MANAGER OR PRINCIPAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ANY NECESSARY TEMPORARY CONNECTIONS AS WELL AS SUPPORTS AND BRACING TO MAINTAIN THE STABILITY AND SAFETY OF THE RELEVANT STRUCTURES THROUGHOUT THE CONSTRUCTION PERIOD. THIS INCLUDES ELEMENTS SUCH AS PREFABRICATED TIMBER AND STEEL ELEMENTS, UNRESTRAINED WALLS, CONCRETE COLUMNS, BEAMS AND SLABS, PRECAST PANELS, ETC WHICH REQUIRE TEMPORARY SUPPORT OR PROPPING TO PREVENT OVER STRESS, EXCESSIVE DEFORMATION OR INSTABILITY UNTIL THE FINAL STRUCTURAL SYSTEM IS COMPLETED. THE DESIGNER IS TO BE CONTACTED FOR FURTHER ADVICE IF REQUIRED. (CCD)

SDR6 WHERE THESE DESIGN DRAWINGS ONLY DOCUMENT PART OF A PROJECT OR DEVELOPMENT, IT IS THE BUILDER, PROJECT MANAGER OR PRINCIPAL CONTRACTOR'S RESPONSIBILITY TO ENSURE ALL DESIGN DRAWINGS ARE COORDINATED BETWEEN CONSULTANTS. FOR EXAMPLE, CO-ORDINATION TO ENSURE APPROPRIATE SLAB THICKENINGS AND DETAILING FOR SEWAGE/STORMWATER CONNECTIONS, LOAD-BEARING AND BRACING WALL ELEMENTS, CAST IN FIXINGS, ETC. (CCD) (GSW)

SDR7 NO ALLOWANCE HAS BEEN MADE FOR CONSTRUCTION LOADS INCLUDING STACKING OF MATERIALS ON DECKS, FLOORS OR ROOF PLATFORMS, LOADS IMPOSED DUE TO PLANT, MACHINERY, LIFTING DEVICES, IMPACT/VIBRATION/CYCLIC LOADS, ETC. IT IS THE BUILDER, PROJECT MANAGER OR PRINCIPAL CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE DESIGNER OF ANY LOADS, THAT ARE NOT DOCUMENTED, THAT THE STRUCTURE MAY BE SUBJECTED TO DURING CONSTRUCTION. (SIC) (OL) (EA) (CCD)

SDR8 UNLESS NOTED ON THE DRAWINGS NO ADDITIONAL ALLOWANCE HAS BEEN MADE FOR SPECIFIC LOADS ASSOCIATED WITH THE MAINTENANCE OF THE STRUCTURE OR DEVLEOPMENT.
THE DESIGNER IS TO BE INFORMED OF ANY REQUIREMENTS NECESSARY TO EXTERNALLY SUPPORT PLATFORMS, CRANES, SCAFFOLDS ETC AS REQUIRED. (SIC) (SA&SWP) (CCD) (OL)

SDR9 DURING CONSTRUCTION, THE BUILDER, PROJECT MANAGER OR PRINCIPAL CONTRACTOR SHALL PROTECT NEIGHBOURING PROPERTIES FROM NOISE AND DUST IN ACCORDANCE WITH LOCAL AUTHORITY REQUIREMENTS, RADIATION, GROUND VIBRATIONS, STORMWATER FLOWS AND OTHER CONSTRUCTION HAZARDS. CONDITION REPORTS ON NEIGHBOURING PROPERTIES AND STRUCTURES ARE RECOMMENDED PRIOR TO CONSTRUCTION. (EA) (SWD&E) (U/AGS) (P&IT) (GSW)

SDR10 THE BUILDER, PROJECT MANAGER OR PRINCIPAL CONTRACTOR IS REQUIRED TO VERIFY AND IF NECESSARY CONDUCT FURTHER SEARCHES TO ACCURATELY LOCATE EASEMENTS, UNDER GROUND AND ABOVE GROUND SERVICES, PROPERTY BOUNDARIES, TREES, EXISTING STRUCTURES AND OTHER OBSTRUCTIONS PRIOR TO DEMOLITION AND OR CONSTRUCTION. THE DESIGNER IS TO BE IMMEDIATELY NOTIFIED OF ANY ELEMENTS NOT SHOWN ON THE APPROVED DRAWINGS AS THE DESIGN AND SAFETY DESIGN REPORT MAY REQUIRE AMENDING. (DEM) (SP&IT) (U/AGS) (GSW) (SWD&E)

SDR11 THE BUILDER, PROJECT MANAGER OR PRINCIPAL CONTRACTOR MUST OBTAIN DESIGN AND INSPECTION CERTIFICATES ON ALL SUNDRY ELEMENTS OF THE STRUCTURE AND DEVELOPMENT INCLUDING BUT NOT LIMITED TO COMPACTION TESTING, PIPELINE TESTING, CLADDING DESIGN AND FIXINGS, WINDOWS, BALUSTRADES, STAIRS, SUSPENDED CEILINGS, INTERNAL FIT-OUT ITEMS AND ALL OTHER ELEMENTS NOT DETAILED IN THE DESIGN DOCUMENTS. (GSW) (CCD)

SDR12 THE CONSTRUCTION IS TO BE FULLY CARRIED OUT IN ACCORDANCE WITH ALL DESIGN DRAWINGS AND NOTES AS DOCUMENTED. IF CONSTRUCTION CEASES AT ANY STAGE, THE DESIGNER IS TO BE NOTIFIED TO PROVIDE ADVICE ON THE SAFETY OF COMPLETED CONSTRUCTION WORK AT THAT TIME. (SIC) (GSW) (CCD)

SDR13 IT IS THE BUILDER, PROJECT MANAGER OR PRINCIPAL CONTRACTOR'S RESPONSIBILITY TO INFORM THE DESIGNER OF ANY CHANGE TO CONTRACTUAL ARRANGEMENTS BETWEEN THE CLIENT AND THEMSELVES WHICH MAY IMPACT ON THE DESIGN AND SAFETY OF THE DESIGN. (CCD)

SDR14 THE BUILDER, PROJECT MANAGER OR PRINCIPAL CONTRACTOR SHALL PROVIDE SUITABLE WARNING SIGNS, BARRIERS AND ACCESS CONTROLS TO CONFINED SPACES AND FENCING AROUND ALL EXCAVATIONS. AT NO STAGE SHOULD AN EXCAVATION BE APPROACHED OR ENTERED INTO UNLESS AN APPROVED AND CERTIFIED SHORING SYSTEM HAS BEEN INSTALLED OR THE BANKS HAVE BEEN BATTERED AND/OR BENCHED IN ACCORDANCE WITH THE PROJECTS GEOTECHNICAL ENGINEERING SPECIFICATION AND/OR WRITTEN INSTRUCTIONS BY THE INSPECTING GEOTECHNICAL ENGINEER. (SA&SWP) (EX) (GSW) (SIC) (SWD&E)

SDR15 AT NO STAGE SHALL SITE PERSONNEL PASS UNDER MATERIALS BEING LIFTED AND MOVED AROUND ON SITE. IT IS THE BUILDER, PROJECT MANAGER OR PRINCIPAL CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT SITE MATERIALS ARE DELIVERED, TRANSPORTED, STORED AND POSITIONED IN A SAFE MANNER AND IN ACCORDANCE WITH THE PRODUCT SPECIFICATION, THE SITE SPECIFIC SAFETY PLAN AND GENERAL SAFETY INDUCTION REGULATIONS. (LSC) (GSW) (OL) (DEM)

SDR16 BUILDERS AND CONTRACTORS ARE REQUIRED TO OBTAIN AND COMPLY WITH MATERIAL PRODUCT SPECIFICATIONS AND RECOMMENDATIONS WHEN USING MATERIALS AND ELEMENTS SPECIFIED IN THE DESIGN DOCUMENTS. (HM) (CCD)

SDR17 THE BUILDER, PROJECT MANAGER OR PRINCIPAL CONTRACTOR MUST ELIMINATE OR LIMIT (SO FAR AS REASONABLE PRACTICABLE) SLIP HAZARDS AND PROTRUDING, SHARP OR ABRASIVE ELEMENTS ON SITE. HAZARDOUS ELEMENTS MUST BE CAPPED, ADEQUATELY SCREENED OR CLEARLY MARKED TO ENSURE SITE SAFETY. (GSW)

SDR18 IT IS THE BUILDER, PROJECT MANAGER OR PRINCIPAL CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT SITE WORKERS ARE SUITABLY QUALIFIED, TRAINED AND INSURED FOR THE TASKS BEING UNDERTAKEN ON SITE. (CCD) (CE)

SDR19 IT IS THE BUILDER, PROJECT MANAGER OR PRINCIPAL CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ALL SITE PERSONNEL ARE PROVIDED ADEQUATE SPACE, VENTILATION AND APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT TO UNDERTAKE THE WORKS REQUIRED. ALL CONSTRUCTION EQUIPMENT IS TO BE USED IN ACCORDANCE WITH BEST INDUSTRY SAFETY PRACTICES AND REGULATIONS. (GSW) (SWD&E)

SDR20 DEMOLITION WORKS ARE REQUIRED TO BE CARRIED OUT IN A SAFE, SYSTEMATIC AND ORDERLY MANNER IN ACCORDANCE WITH THE SITE SPECIFIC SAFETY PLAN AND ALL GENERAL SAFETY INDUCTION REGULATIONS. TEMPORARY PROPPING OF MEMBERS MAYBE REQUIRED IN ACCORDANCE WITH THE DIRECTION OF A SUITABLY QUALIFIED PROFESSIONAL IN ACCORDANCE WITH RELEVANT SAFETY PRACTICES AND REGULATIONS. (DEM) (SIC)

SDR21 AT ALL TIMES THE BUILDER, PROJECT MANAGER, OR PRINCIPAL CONTRACTOR IS TO PROVIDE LOCAL TRAFFIC AND PEDESTRIAN MANAGEMENT PLANS AS NEEDED TO ENSURE SAFE ACCESS AROUND AND ONTO THE BUILDING SITE. CONSIDERATION MUST ALSO BE GIVEN TO SAFE WORKER ACCESS TO ALL WORK AREA INCLUDING ADEQUATE WALKWAYS AND STAIRS, SCAFFOLDING, SECURE LADDER ACCESS, SAFE WORKING PLATFORMS, ACCESS PATHS FREE FROM FALLING OBJECTS, ADEQUATE RAILINGS, FALL ARREST SYSTEMS, ETC. ALL PITS, FLOOR CAVITIES AND RELATED COVERS AND GRATES MUST BE MADE SAFE. (SA&SWP) (W@H) (FC)

SDR22 ALL FORMWORK AND SCAFFOLDING SYSTEMS ARE TO BE DESIGNED AND CERTIFIED BY A LICENSED CONTRACTOR TO COMPLY WITH RELEVANT AUSTRALIAN STANDARDS AND KEPT AND MAINTAINED IN A GOOD WORKING ORDER. REGULAR CHECKS ON ERECTED MEMBERS AND FIXINGS MUST BE CARRIED OUT BY A QUALIFIED PROFESSIONAL TO ENSURE COMPLIANCE WITH THE DESIGN. (FC) (W@H)

SDR23 CLIMBING ON SCAFFOLDING OR FORMWORK AND WORKING AT HEIGHTS WITHOUT SUITABLY APPROVED RAILINGS, BARRIERS AND RESTRAINTS FIXED OFF TO CERTIFIED ANCHOR POINTS IS STRICTLY PROHIBITED. (FC) (W@H) (SA&SWP)

SDR24 ALL SITE MACHINERY AND ELECTRICAL EQUIPMENT IS TO BE KEPT IN GOOD WORKING ORDER WITH CURRENT SAFETY TAGGING AND SERVICING WHERE APPLICABLE. (CE) (SWD&E)

SDR25 THE BUILDER, PROJECT MANAGER OR PRINCIPAL CONTRACTOR IS TO ADEQUATELY TREAT AND DISPOSE OF DANGEROUS SITE MATERIALS INCLUDING CONTAMINATED SOILS AND ASBESTOS IN ACCORDANCE WITH AUTHORITY REGULATIONS, INDUSTRY STANDARDS AND PRACTICES. (HM) (GSW)

SDR26 THE BUILDER, PROJECT MANAGER OR PRINCIPAL CONTRACTOR IS TO ENSURE THAT THE SITE IS MAINTAINED IN A SAFE WORKING MANNER AND THAT ALL SITE PRACTICES ARE IN ACCORDANCE WITH CURRENT WORK PLACE HEALTH AND SAFETY LAWS AND REGULATIONS. (CCD) (GSW)

SDR27 IDENTIFIED CONFINED SPACES COMPLY WITH RELEVANT STANDARDS FOR REASONABLY SAFE ACCESS AND MINIMIZED FOR ENTRY. THE BUILDER, PROJECT MANAGER AND/OR THE PRINCIPAL CONTRACTOR HAS RESPONSIBILITY TO CONTROL ACCESS AND MANAGE ASSOCIATED HAZARDS AND RESIDUAL RISKS WHICH MAY INCLUDE INUNDATION, BIOLOGICAL, ENGULFMENT, ASPHYXIATION, ETC. THROUGH ACCESS CONTROL, PERMITS, AND MONITORING PROCESSES. (CS)

SDR28 REFER DRAWING SHEETS FOR ANY SPECIFIC ADDITIONAL REQUIREMENTS.

RISK TABLE '2' MITIGATED HAZARD RISK ASSESSMENT TOOL WITH RECOMMENDED ACTIONS BY PCBU REPRESENTATIVE

RISK LEVEL = CONSEQUENCE x PROBABILITY	CONSEQUENCE IF IT DID OCCUR				
PROBABILITY OF EVENT OCCURRING	1 - INSIGNIFICANT. (NO DAMAGE).	2 - MINOR. (SOME DAMAGE AND/OR FIRST AID TREATMENT).	3 - CONSIDERABLE. (REPAIRABLE DAMAGE AND/OR INJURIES CAUSING LOST TIME).	4 - EXTREME. (SERIOUS DAMAGE AND/OR FATALITY OR PERMANENT DISABILITY).	5 - CATASTROPHIC. (MAJOR DAMAGE AND/OR MULTIPLE FATALITIES).
1 - WILL ONLY OCCUR IN EXCEPTIONAL CIRCUMSTANCES	1	2	3	4	5
2 - COULD OCCUR AT SOMETIME	2	4	6	8	10
3 - LIKELY TO OCCUR SOMETIME	3	6	9	12	15
4 - WILL PROBABLY OCCUR	4	8	12	16	20
5 - EXPECTED TO OCCUR	5	10	15	20	25

RISK LEVEL	1 TO 3 = MINOR	4 TO 6 = LOW	7 TO 8 = MODERATE	9 TO 10 = SIGNIFICANT	11 TO 18 = MAJOR	19 TO 25 = EXTREME
SUGGESTED ACTIONS BY PRINCIPAL BUILDER AND/OR PROJECT MANAGER	BE AWARE OF THE RISK AND CONSEQUENCES. TAKE ADEQUATE PRECAUTIONS.	ENSURE ADEQUATE CONTROL MEASURES. ENSURE ALL CONTRACTORS HAVE ADEQUATE TRAINING.	PREPARE WORK METHOD STATEMENTS, ENSURE ADEQUATE MONITORING OF THE WORKS. ADHERE CLOSELY TO THE ASSOCIATED NOTES ON THE DESIGN DOCUMENTS.	BEFORE CARRYING OUT WORKS NECESSITATING THIS RISK, MEET WITH THE DESIGNER TO DISCUSS ALL MEASURES OUTLINED IN THE DESIGN DOCUMENTS SO THAT NO MITIGATION MEASURES ARE MISSED. PREPARE DETAILED WORK PLANS, SAFE WORK METHOD STATEMENTS (SWMS), PERMIT TO START, MONITORING, TRAINING, ETC.	UNACCEPTABLE RISK FURTHER MITIGATIONS ARE REQUIRED. ALTERNATIVELY, CHANGED TO THE DESIGN CONCEPT MAY BE REQUIRED TO MEET WESTERA'S SAFE DESIGN REQUIREMENTS.	UNACCEPTABLE RISK. THE HAZARD HAS NOT BEEN MITIGATED TO THE "REASONABLE PRACTICABLE "RISK REDUCTION STANDARD. THE DESIGN AD HAZARD REDUCTION APPROACH IS INADEQUATE.

ROCKHAMPTON REGIONAL COUNCIL
AMENDED PLANS APPROVED
12 January 2026
DATE
These plans are approved subject to the current conditions of approval associated with
Development Permit No.: D/170-2022
Dated: 12 June 2023

No.	DATE	REVISIONS	DES	DRN	CHK	APD
B	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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CAPRICORN SURVEY GROUP CQ
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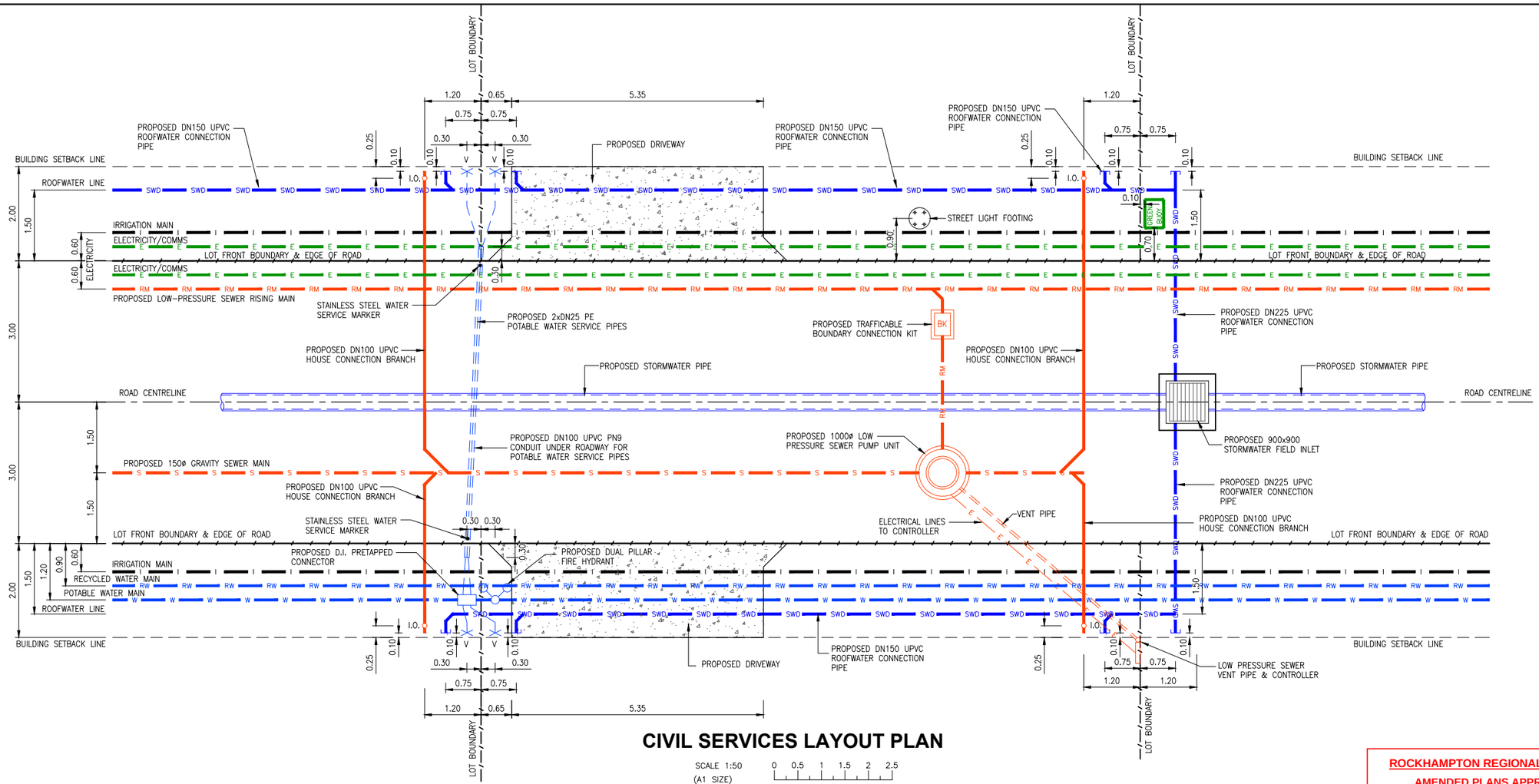
DATUM A.H.D. P.M. R.L.

USE FIGURED DIMENSIONS ONLY. DO NOT SCALE, IF A DISCREPANCY ARISES CHECK WITH THE PROJECT ENGINEER AND/OR SUPERVISING AUTHORITY. DO NOT WORK FROM REDUCED SCALE DRAWINGS (A1-A3 SIZE PAPER). COPYRIGHT OF ALL DRAWINGS & WORKS EXECUTED FROM THEM IS VESTED IN WESTERA PARTNERS AND USE OF THERE FORE WITHOUT PERMISSION IS STRICTLY PROHIBITED! IT IS THE BUILDERS RESPONSIBILITY TO ENSURE ALL WORKS ARE CARRIED OUT WITH DUE CARE AND DILIGENCE TO COMPLY WITH THE CONTRACT DOCUMENTS.

PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE SAFETY IN DESIGN
CLIENT RUBY DEVELOPMENT PTY LTD

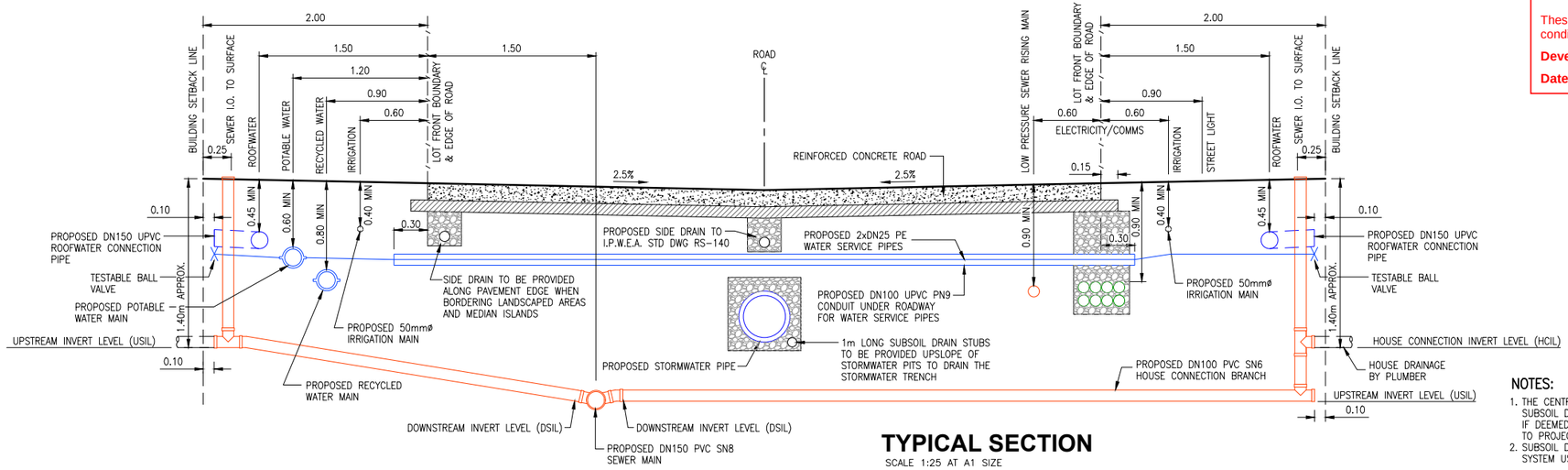
DRAWING STATUS FOR CONSTRUCTION
DRAWING NUMBER S24-018-G02
SHEET NUMBER 02 OF 03
REVISION B

S24-018-G_SID.dwg



CIVIL SERVICES LAYOUT PLAN

SCALE 1:50 (A1 SIZE)



TYPICAL SECTION

SCALE 1:25 AT A1 SIZE

ROCKHAMPTON REGIONAL COUNCIL
AMENDED PLANS APPROVED
12 January 2026
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NOTES:

1. THE CENTRAL SUBSOIL DRAIN MAY BE REPLACED WITH SUBSOIL DRAINS ON BOTH SIDES OF THE ROAD PAVEMENT IF DEEMED NECESSARY BY THE ENGINEER ON A PROJECT TO PROJECT BASIS.
2. SUBSOIL DRAINS ARE TO CONNECT TO THE MAIN STORMWATER SYSTEM USING NON-SLOTTED PVC PIPE.

No.	DATE	REVISIONS	DES	DRN	CHK	APD
B	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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DATUM A.H.D.
P.M.
R.L.

USE FIGURED DIMENSIONS ONLY. DO NOT SCALE. IF A DISCREPANCY ARISES CHECK WITH THE PROJECT ENGINEER AND/OR SUPERVISING AUTHORITY. DO NOT WORK FROM REDUCED SCALE DRAWINGS (A1-A3 SIZE PAPER). COPYRIGHT OF ALL DRAWINGS & WORKS EXECUTED FROM THEM IS VESTED IN WESTERA PARTNERS AND USE OF THERE FORE WITHOUT PERMISSION IS STRICTLY PROHIBITED! IT IS THE BUILDERS RESPONSIBILITY TO ENSURE ALL WORKS ARE CARRIED OUT WITH DUE CARE AND DILIGENCE TO COMPLY WITH THE CONTRACT DOCUMENTS.

PROJECT: PROPOSED RETIREMENT LIVING ESTATE
LOCATION: LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE: CIVIL SERVICES LAYOUT PLAN
CLIENT: RUBY DEVELOPMENT PTY LTD

DRAWING STATUS: FOR CONSTRUCTION
DRAWING NUMBER: S24-018-G03
SHEET NUMBER: 03 OF 03
REVISION: B

S24-018-G_Civil_Services.dwg

GENERAL NOTES

G1 WESTERA PARTNERS HAS LIMITED CONTROL OR INPUT TO LOCAL GOVERNMENT OR OTHER LEGISLATED APPROVALS UNLESS SPECIFICALLY ENGAGED BY IT'S CLIENT. ANY CHANGES TO APPROVAL REQUIREMENTS (INCLUDING ORDERS FOR SUSPENSION OF WORKS ETC) SHOULD BE COMMUNICATED TO WESTERA PARTNERS AND ALL OTHER RELEVANT DESIGNERS TO ALLOW ASSESSMENT OF POTENTIAL RISKS AND ENSURE DESIGN AND SAFETY COMPLIANCE.

G2 ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE LOCAL AUTHORITIES STANDARD DRAWINGS & SPECIFICATIONS AND COMPLETED TO THE SATISFACTION OF THE SUPERINTENDENT AND LOCAL AUTHORITY.

G3 UNLESS SPECIFIED OTHERWISE ALL MATERIALS AND WORK SHALL COMPLY WITH THE RELEVANT AUSTRALIAN STANDARDS.

G4 PRIOR TO THE COMMENCEMENT OF CONSTRUCTION THE CONTRACTOR MUST LOCATE ALL EXISTING SERVICES AND PROMPTLY PROVIDE THE LOCATION DATA TO THE DESIGN ENGINEER TO ASSESS IMPACTS ON THE DESIGN.

G5 ALL CONNECTIONS TO EXISTING SEWERS AND WATER MAINS ARE TO BE CONSTRUCTED BY THE LOCAL AUTHORITY OR AN APPROVED CONTRACTOR. THE CONTRACTOR IS TO ALLOW IN HIS CONTRACT SUM FOR THE COST OF ANY PROPOSED CONNECTIONS.

G6 ALL SEWERS ARE TO BE 150MM DIA. U.P.V.C. CLASS SN8 RUBBER RING JOINTED AND PROPERTY CONNECTIONS ARE TO BE 100MM DIA. U.P.V.C CLASS SN6 UNLESS NOTED OTHERWISE

G7 THE PAVEMENT DEPTHS SHOWN ARE PRELIMINARY ONLY AND ARE TO BE VERIFIED FOLLOWING SUB-SOIL TESTS OF THE SUB-GRADE MATERIAL.

G8 ALL ROOFWATER CONNECTIONS FROM KERB ADAPTERS ARE TO BE 100MM DIA CLASS SN10 AT A MIN GRADE OF 1.0% UNLESS SHOWN OTHERWISE. ROOFWATER CONNECTIONS FROM FIELD INLETS OR GULLY PITS ARE TO BE 150MM DIA CLASS SN8 AT A MIN GRADE OF 1.0% UNLESS NOTED OTHERWISE.

G9 ALL U.P.V.C. STORMWATER DRAINAGE PIPES ARE TO BE CLASS SN8 (U.N.O.)

ALL R.C. PIPES ARE TO BE CLASS 3 (U.N.O.)
< 900ø = USE SPIGOT AND SOCKET PIPES WITH RUBBER RING JOINTS
900ø < PIPES < 1050ø = USE FLUSH JOINTED PIPES WITH EXTERNAL ELASTOMERIC BAND
1050ø < PIPES = USE FLUSH JOINTED PIPES WITH EXTERNAL ELASTOMERIC BAND AND INTERNAL CEMENT MORTAR JOINT

ALL F.R.C. PIPES ARE TO BE FRCPIPE+ CLASS 4 (U.N.O.) AND SHALL BE DUAL RUBBER RING JOINT WITH COLLAR. PIPES SHALL BE FROM 225ø TO 600ø ONLY.

POLYPROPYLENE/POLYETHYLENE STORMWATER PIPE MINIMUM CLASS SN8 (U.N.O.) SUBJECT TO ACCEPTANCE BY CERTIFYING ENGINEER AND LOCAL AUTHORITY. CONSTRUCTION AND EMBEDMENT TO BE IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.

G10 WATER PIPES SHALL BE;
- P.V.C.-M WATER PIPES ARE TO BE SERIES 2 PN16 SN10 R.R.J.
- D.I.C.L. WATER PIPES ARE TO BE PN35 WITH ALL FITTINGS TO BE FUSION BONDED POLYMERIC COATED.
- PE WATER PIPES ARE TO BE PN16 SDR11 PE100. DN25 AND DN32 WATER SERVICES SHALL BE PE80B.

G11 ALL "AS CONSTRUCTED" INFORMATION IS TO BE RECORDED AS REQUIRED BY THE LOCAL AUTHORITY AND SUBMITTED TO THE SUPERINTENDENT IMMEDIATELY AFTER COMPLETION OF THE WORKS.

G12 ALL ALLOTMENTS ARE TO BE GRADED AT A MINIMUM GRADE OF 1 IN 200.

CONCRETE NOTES

C1 ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS3600 CONCRETE STRUCTURES CODE AND THE REFERENCED STANDARDS THEREIN.

C2 THE CONCRETE STRENGTH GRADE AND THE COVER TO REINFORCEMENT FOR THE VARIOUS CONCRETE ELEMENTS SHALL BE AS LISTED BELOW:
- CLIMATE ZONE: TROPICAL / TEMPERATE / ARID
- LOCATION: COASTAL / NEAR COASTAL / INLAND

ELEMENT	EXPOSURE CLASSIFICATION	STRENGTH GRADE	MINIMUM COVER
MANHOLES	B1	N32	40
	C2	S50	65
FIELD INLET PITS	B1	N32	40
	C2	S50	65
HEADWALLS	B1	N32	40
	C2	S50	65
INTERNAL ROADS	B1	N40	40
KERB/CHANNEL	B1	N32	–
FOOTPATHS	B1	N32	40
RETAINING WALL PANELS	B1	N32	30*
	C2	S50	60*
BORED PIERS	B1	N32	40
	C2	S50	65

*RIGID FORMWORK & INTENSE COMPACTION

C3 CONCRETE TO HAVE A MAXIMUM AGGREGATE SIZE OF 20mm WITH 80mm MAXIMUM SLUMP, A WATER/CEMENT RATIO OF NOT GREATER THAN 0.65 AND A MAXIMUM FINAL BASIC DRYING SHRINKAGE STRAIN OF 800 x 10^{-6} UNLESS APPROVED OTHERWISE.

C4 NO ADDITIVES SHALL BE ADDED OF APPLIED TO THE CONCRETE MIX WITHOUT THE APPROVAL OF THE ENGINEER.

C5 THE MAXIMUM PERMISSIBLE TRANSPORT TIME FOR CONCRETE BETWEEN BATCHING AND PLACEMENT ON SITE SHALL BE IN ACCORDANCE WITH THE FOLLOWING TABLE.

AMBIENT AIR TEMPERATURE	MAX. BATCHING TO PLACEMENT TIME
10° – 24°C	120 MINUTES
25° – 27°C	90 MINUTES
28° – 30°C	60 MINUTES
31° – 33°C	45 MINUTES
34° – 36°C	30 MINUTES
37°C+	NO PLACEMENT OF CONCRETE UNLESS CHILLED WATER OR ICE IN MIX

C6 ALL CONCRETE SHALL BE MECHANICALLY VIBRATED. VIBRATORS SHALL NOT BE USED TO SPREAD CONCRETE.

C7 ALL CONCRETE SHALL BE SAMPLED AND TESTED IN ACCORDANCE WITH AS1379 ADOPTING THE PROJECT ASSESSMENT METHOD FOR COMPRESSIVE STRENGTH AND SLUMP COMPLIANCE. THE RESULTS OF ALL TESTS SHALL BE PROMPTLY SUBMITTED TO THE ENGINEER FOR REVIEW.

C8 WHEN THE AIR TEMPERATURE EXCEEDS 30°C, ALIPHATIC ALCOHOL SHALL BE APPLIED TO THE CONCRETE SURFACE OF SLABS IMMEDIATELY AFTER THE INITIAL SCREED AND AGAIN AFTER BULL FLOATING.

C9 CURING OF ALL CONCRETE SURFACES SHALL COMMENCE IMMEDIATELY AFTER COMPLETING CONCRETE FINISHING AND SHALL CONTINUE FOR 7 DAYS. CONTRACTOR TO CONFIRM METHOD OF CURING WITH ENGINEER PRIOR TO USE.

C10 SIZES OF CONCRETE ELEMENTS DO NOT INCLUDE THICKNESS OF APPLIED FINISHES.

C11 BEAM DEPTHS ARE WRITTEN FIRST AND INCLUDE SLAB THICKNESS, IF ANY.

C12 NO HOLES, CHASES OR EMBEDDED ITEMS OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE MADE IN CONCRETE MEMBERS WITHOUT PRIOR APPROVAL OF THE ENGINEER. CONDUITS, PIPES ETC. SHALL NOT BE PLACED IN THE COVER THICKNESS OF THE CONCRETE.

C13 WHERE SERVICE PIPES PENETRATE CONCRETE ELEMENTS, PROVISION SHOULD BE MADE TO ALLOW FOR MOVEMENT OF THE ELEMENT.

C14 FORMWORK SHALL BE DESIGNED, CONSTRUCTED AND STRIPPED IN ACCORDANCE WITH AS3610 FORMWORK CODE, UNLESS NOTED OTHERWISE ON THE DRAWINGS.

C15 REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY AND NOT NECESSARILY SHOWN IN TRUE PROJECTION OR SCALE.

C16 ALL REINFORCEMENT SHALL BE SECURELY SUPPORTED IN ITS CORRECT POSITION ON PLASTIC BAR CHAIRS, GENERALLY AT NOT GREATER THAN 800mm CENTRES IN BOTH DIRECTIONS.

C17 WELDING AND HEATING OF REINFORCEMENT SHALL NOT BE PERMITTED WITHOUT APPROVAL OF THE ENGINEER.

C18 ALL STEEL REINFORCEMENT IN CONCRETE ELEMENTS SHALL BE INSPECTED BY THE ENGINEER AND PASSED PRIOR TO POURING OF ANY CONCRETE.

C19 LAP REINFORCEMENT ONLY AT LOCATIONS SHOWN ON THE DRAWINGS OR AS APPROVED BY THE ENGINEER.

C20 SLAB FABRIC SHALL BE LAPPED ONE FULL PANEL OF FABRIC PLUS 50mm SO THAT THE TWO OUTERMOST TRANSVERSE WIRES OF ONE SHEET OVERLAP THE TWO OUTERMOST TRANSVERSE WIRES OF THE SHEET BEING LAPPED BY 50mm.

C21 BAR REINFORCEMENT SHALL BE LAPPED IN ACCORDANCE WITH THE FOLLOWING TABLE.

TYPICAL BAR REINFORCEMENT LAP LENGTHS		
BAR	LAP LENGTH UNO	HORIZONTAL BARS WITH GREATER THAN 300mm OF CONCRETE CAST BELOW THEM
N12	550	750
N16	800	1100
N20	1100	1400
N24	1250	1600
N28	1400	1800
N32	1600	2100
N36	2000	2500

WHERE LAPS ARE SHOWN ON THE DRAWINGS THE ABOVE LAP LENGTHS SHALL BE ADOPTED UNLESS NOTED OTHERWISE. WHERE BARS OF DIFFERENT DIAMETER ARE SHOWN LAPPED, ADOPT THE LAP LENGTH APPROPRIATE TO THE SMALLER DIAMETER BAR.

C22 A VAPOUR BARRIER OF 0.2mm (200um) MINIMUM THICK POLYTHENE SHEETING SHALL BE PLACED BENEATH SLABS ON GROUND UNLESS NOTED OTHERWISE.

LEGEND

GENERAL

- ASPHALTIC CONCRETE PAVEMENT
- REINFORCED CONCRETE PAVEMENT
- REINFORCED CONCRETE PATHWAY/CROSSOVER
- TURF
- STONE PITCHING
- CEMENT GROUTED STONE PITCHING
- T — TELECOMMUNICATION
- G — GAS MAIN
- V — ELECTRICITY OVERHEAD
- E — ELECTRICITY UNDERGROUND
- LP — LIGHT POLE
- PP — POWER POLE
- PIT (TELSTRA/ELEC)
- EDGE OF BITUMEN
- FENCE
- ×2.53 — EXISTING SURFACE LEVEL
- × 2.53 — FINISHED SURFACE LEVEL
- RETAINING WALL CONCRETE SLEEPER
- RETAINING WALL MASONRY BLOCK
- SWALE

STORMWATER DRAINAGE

NEW / EXISTING

- STORMWATER PIPE
- SAG GULLY PIT
- ON GRADE GULLY PIT
- MANHOLE
- 600 x 600 FIELD INLET
- 900 x 600 FIELD INLET
- 1050 DIA FIELD INLET
- HEADWALL
- SWD — KERB ADAPTER WITH ROOFWATER PIPE
- 2A — STORMWATER STRUCTURE LABEL

WATER

EXISTING	DISUSED	NEW	
W	W	W	WATER MAIN
FH	FH	FH	FIRE HYDRANT
DFH	DFH	DFH	DUAL OUTLET FIRE HYDRANT
SFH	SFH	SFH	SWABBING FIRE HYDRANT
V	V	V	ISOLATION VALVE
			SCOUR VALVE
AV	AV	AV	AIR VALVE
			DEAD END
			TEST/CHLORINATION POINT
150 100	150 100	150 100	REDUCER
PVC DICL	PVC DICL	PVC DICL	PIPE MATERIAL CHANGE
			WATER SERVICE PRE-TAPPED TEE
		DN25ø	WATER SERVICE PIPE & CONDUIT
		WM	FLOW METER
		F	FLUSHING POINT

SEWERAGE

EXISTING	DISUSED	NEW	
S	S	S	GRAVITY SEWER MAIN
SRM	SRM	SRM	SEWER RISING MAIN
VW	VW	VW	SEWER VACUUM MAIN
1/1	1/1	1/1	MAINTENANCE HOLE & END OF LINE
1/1 E 1	1/1 E 1	1/1 E 1	END OF LINE
1/1	1/1	1/1	MAINTENANCE SHAFT
VB1 1 HB1 1	VB1 1 HB1 1	VB1 1 HB1 1	HORIZONTAL/VERTICAL BEND
CB1 1	CB1 1	CB1 1	COMPOUND BEND
			STUB / TEMPORARY END
		RE 1	RODDING END
			PROPERTY CONNECTION
		OFMH	OVERFLOW MAINTENANCE HOLE
			ISOLATION VALVE
			SCOUR VALVE AND CHAMBER
		GRV	GAS RELEASE VALVE
		F	FLUSHING POINT
		DMH	DISCHARGE MAINTENANCE HOLE
			NON-RETURN/REFLUX VALVE
			VENT POLE / ODOUR CONTROL UNIT

ROCKHAMPTON REGIONAL COUNCIL
AMENDED PLANS APPROVED
12 January 2026
DATE
These plans are approved subject to the current conditions of approval associated with
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Dated: 12 June 2023

No.	DATE	REVISIONS	DES	DRN	CHK	APD
B	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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SURVEYOR
CAPRICORN SURVEY GROUP CQ
PHONE 07 4927 5199
DATUM A.H.D. P.M. R.L.

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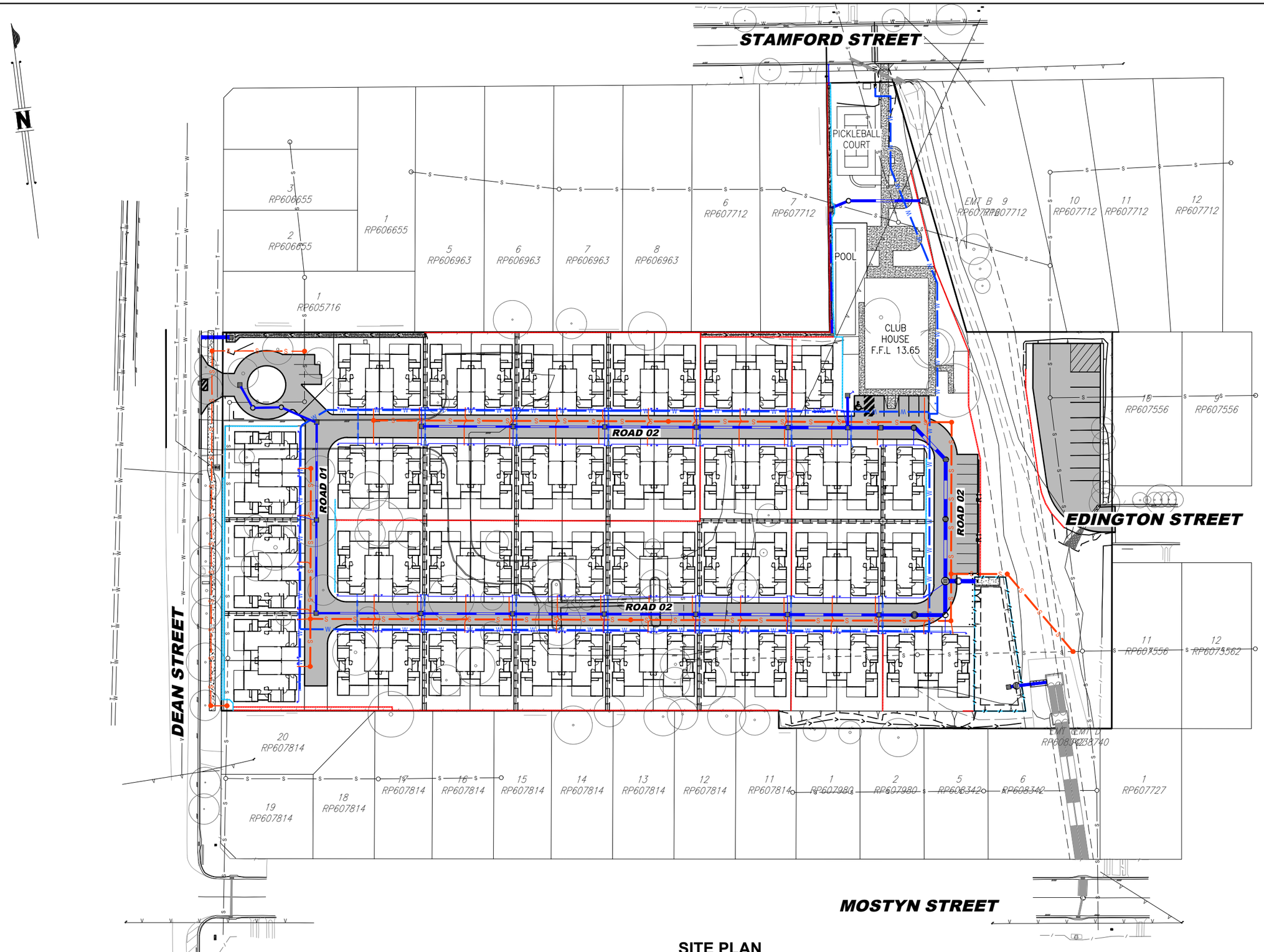
PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE CIVIL NOTES & LEGEND
CLIENT RUBY DEVELOPMENT PTY LTD

DRAWING STATUS FOR CONSTRUCTION
DRAWING NUMBER S24-018-C01
SHEET NUMBER 01 OF 37
REVISION B

S24-018-C_Civil_Notes.dwg



SITE PLAN

SCALE 1:500 (A1 SIZE)

0 5 10 15 20 25

ROCKHAMPTON REGIONAL COUNCIL

AMENDED PLANS APPROVED

12 January 2026

DATE

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Development Permit No.: D/170-2022

Dated: 12 June 2023

NOTE:
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CONSTRUCTION NOTE:
CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE LOCAL AUTHORITIES STANDARD DRAWINGS AND SPECIFICATIONS. WORKS MUST BE COMPLETED TO THE SATISFACTION OF THE SUPERINTENDENT AND LOCAL AUTHORITY. REFER TO SHEET C01 FOR CONSTRUCTION NOTES AND DETAILED DRAWING LEGEND.

No.	DATE	REVISIONS	DES	DRN	CHK	APD
H	29.05.25	GENERAL AMENDED	S.C.M	J.J.D	J.M.H	J.M.H
G	14.03.25	GENERAL AMENDED	S.C.M	J.J.D	J.M.H	J.M.H
F	16.12.24	WATER AMENDED	S.C.M	J.J.D	J.M.H	J.M.H
E	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
D	08.11.24	RETAINING WALL UPDATE	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024

DOCUMENT CONTROL

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.

APPROVED

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PHONE 07 4927 5199

DATUM A.H.D.
P.M.
R.L.

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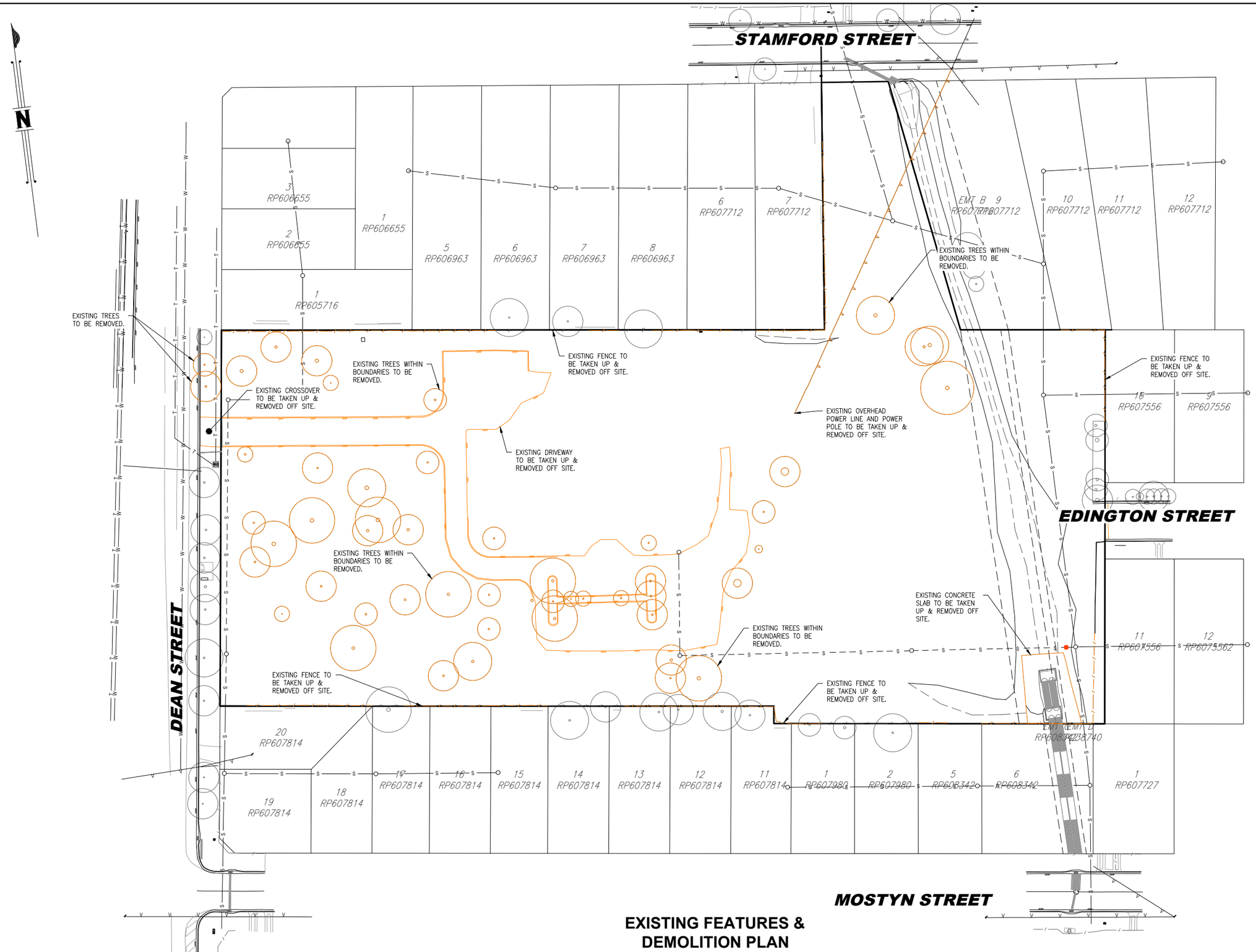
PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712
192 DEAN STREET, BERSERKER
TITLE SITE PLAN
CLIENT RUBY DEVELOPMENT PTY LTD

DRAWING STATUS FOR CONSTRUCTION
DRAWING NUMBER S24-018-C02
SHEET NUMBER 02 OF 37
REVISION H

S24-018-C_Civil_Site.dwg



EXISTING FEATURES & DEMOLITION PLAN

SCALE 1:500 (A1 SIZE) 0 5 10 15 20 25

ROCKHAMPTON REGIONAL COUNCIL
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DATE
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NOTE:
THE ITEMS SHOWN FOR REMOVAL ON THIS DRAWING ARE INDICATIVE ONLY AND ARE NOT TO BE TAKEN AS AN EXHAUSTIVE LIST. THE CONTRACTOR IS TO MAKE THEMSELVES FAMILIAR WITH THE SITE AND ALLOW FOR REMOVAL OF ALL ITEMS REQUIRED FOR CONSTRUCTION OF THE DOCUMENTED CIVIL WORKS.

NOTE:
ALL CLEARING & GRUBBING TO BE COMPLETED IN ACCORDANCE WITH MBRC STANDARDS & SPECIFICATIONS. GRUBBING IS TO BE COMPLETED TO A DEPTH OF 0.5m BELOW THE NATURAL SURFACE OR TO A DEPTH OF 1.50m BELOW FINISHED SURFACE, WHICH EVER IS THE LOWER.

No.	DATE	REVISIONS	DES	DRN	CHK	APD
B	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL
APPROVED

J. HILL RPEQ 19891
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SURVEYOR
CAPRICORN SURVEY GROUP CQ
PHONE 07 4927 5199
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PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE EXISTING FEATURES & DEMOLITION PLAN
CLIENT RUBY DEVELOPMENT PTY LTD

DRAWING STATUS FOR CONSTRUCTION
DRAWING NUMBER S24-018-C03
SHEET NUMBER 03 OF 37
REVISION B

S24-018-C_Exist_Features.dwg

ROCKHAMPTON REGIONAL COUNCIL

AMENDED PLANS APPROVED

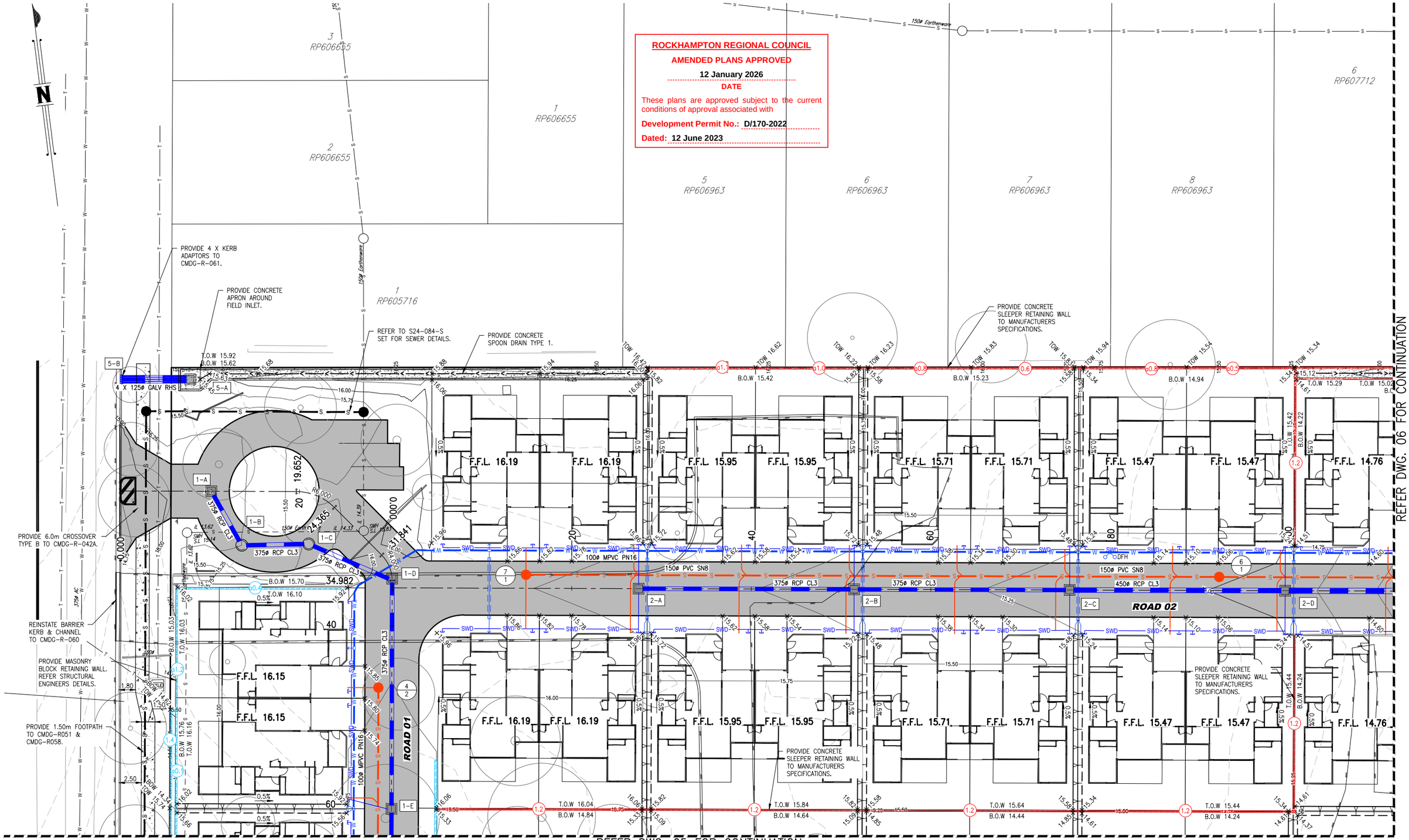
12 January 2026

DATE

These plans are approved subject to the current conditions of approval associated with

Development Permit No.: D/170-2022

Dated: 12 June 2023



NOTE:
ALL FIELD INLETS DISCHARGING TO THE ATLAN FILTER CARTRIDGE CHAMBER ARE TO BE FITTED WITH STORMSACKS.

CIVIL WORKS PLAN

SCALE 1:200 (A1 SIZE)

0 2 4 6 8 10

RETAINING WALL VEHICLE BARRIERS:
VEHICLE BARRIERS ARE REQUIRED WHERE THE DROP FROM PAVEMENT TO A LOWER LEVEL EXCEEDS 600mm. REFER STRUCTURAL ENGINEERS DRAWINGS FOR DETAILS

NOTE:
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No.	DATE	REVISIONS	DES	DRN	CHK	APD
F	16.12.24	WATER AMENDED	S.C.M	J.J.D	J.M.H	J.M.H
E	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
D	10.12.24	RETAINING WALL LEVELS UPDATE	S.C.M	J.J.D	J.M.H	J.M.H
C	29.10.24	GENERAL AMENDEMENT	S.C.M	J.J.D	J.M.H	J.M.H
B	18.10.24	GENERAL AMENDMENT	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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CENTRAL VICTORIA T 03 5441 0922 E centralvic@westerapartners.com.au

SURVEYOR
CAPRICORN SURVEY GROUP CQ
PHONE 07 4927 5199

DATUM A.H.D.
P.M.
R.L.

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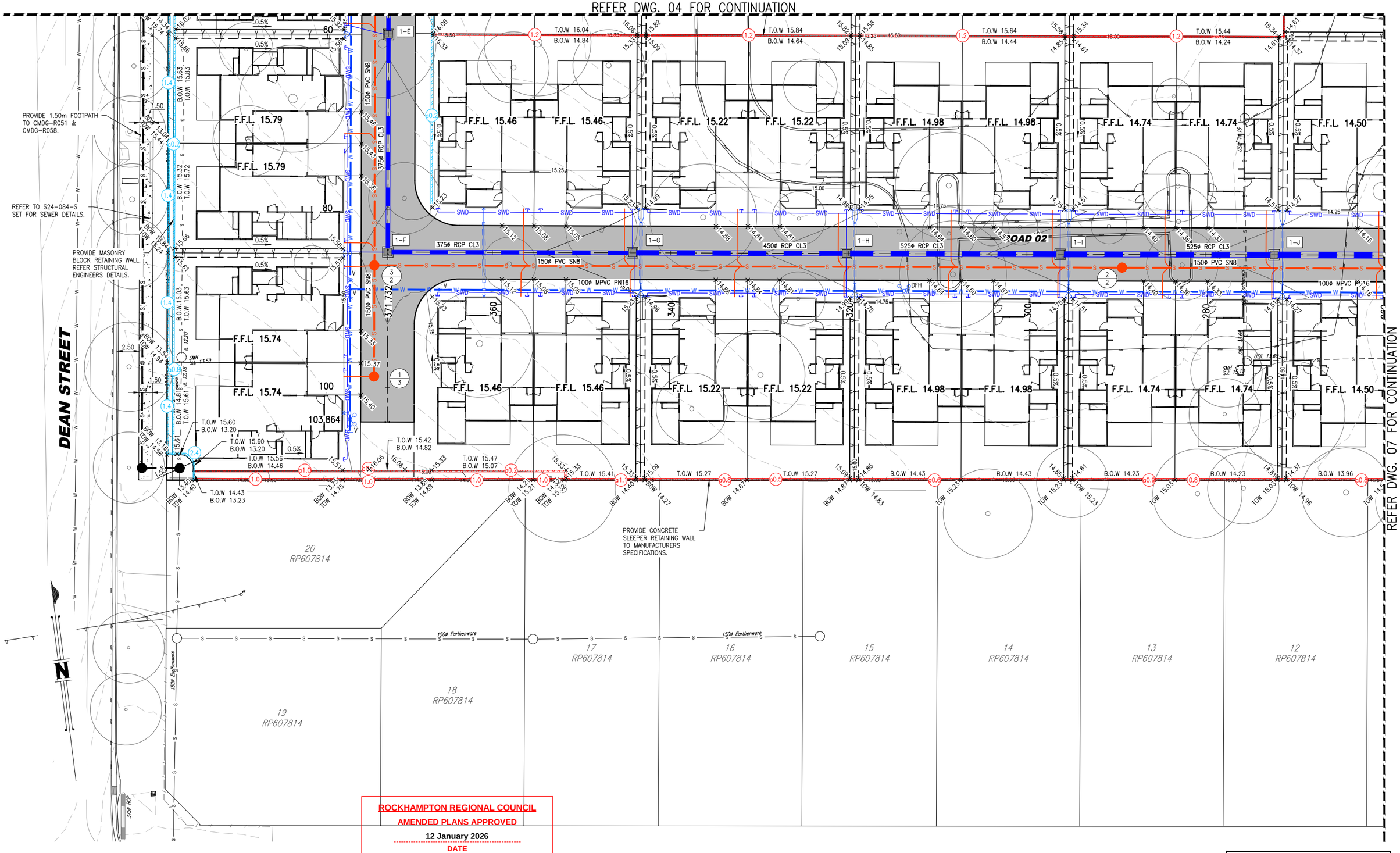
PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712
192 DEAN STREET, BERSERKER
TITLE CIVIL WORKS PLAN 1 of 4
CLIENT RUBY DEVELOPMENT PTY LTD

DRAWING STATUS FOR CONSTRUCTION
DRAWING NUMBER S24-018-C04
SHEET NUMBER 04 OF 37
REVISION F

S24-018-C_Civilwks.dwg

REFER DWG. 04 FOR CONTINUATION



REFER DWG. 07 FOR CONTINUATION

ROCKHAMPTON REGIONAL COUNCIL
AMENDED PLANS APPROVED
12 January 2026
DATE
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Dated: 12 June 2023

NOTE:
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CIVIL WORKS PLAN

SCALE 1:200 (A1 SIZE) 0 2 4 6 8 10

RETAINING WALL VEHICLE BARRIERS:
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NOTE:
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No.	DATE	REVISIONS	DES	DRN	CHK	APD
G	16.12.24	WATER AMENDED	S.C.M	J.J.D	J.M.H	J.M.H
F	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
E	10.12.24	RETAINING WALL LEVELS UPDATE	S.C.M	J.J.D	J.M.H	J.M.H
D	08.11.24	RETAINING WALL UPDATE	S.C.M	J.J.D	J.M.H	J.M.H
C	29.10.24	GENERAL AMENDEMENT	S.C.M	J.J.D	J.M.H	J.M.H

DOCUMENT CONTROL
DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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DATUM A.H.D. P.M. R.L.

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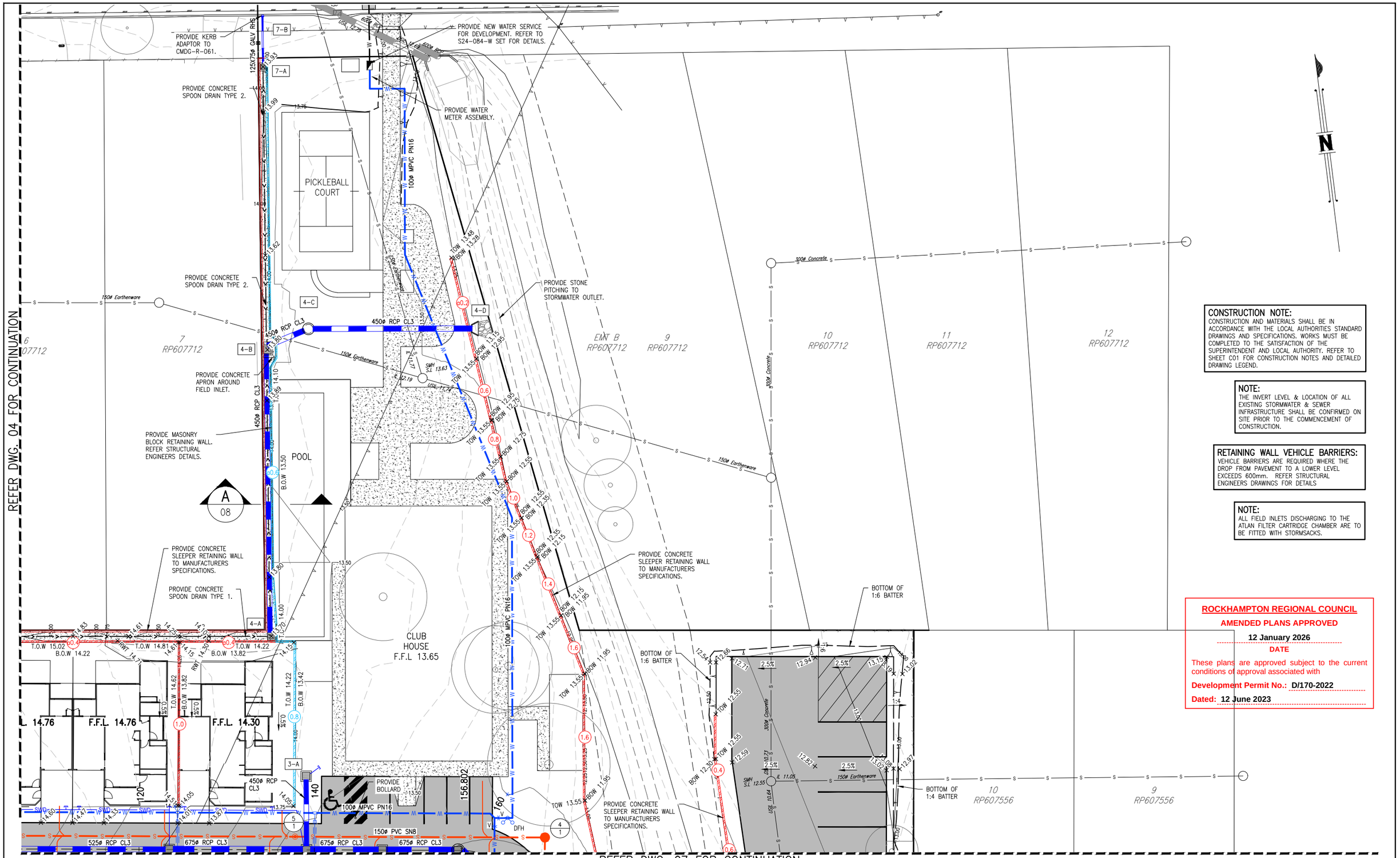
PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE CIVIL WORKS PLAN 2 of 4
CLIENT RUBY DEVELOPMENT PTY LTD

DRAWING STATUS FOR CONSTRUCTION
DRAWING NUMBER S24-018-C05
SHEET NUMBER 05 OF 37
REVISION G

S24-018-C_Civilwks.dwg



CIVIL WORKS PLAN

SCALE 1:200 (A1 SIZE) 0 2 4 6 8 10

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ROCKHAMPTON REGIONAL COUNCIL
AMENDED PLANS APPROVED
12 January 2026
DATE
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Development Permit No.: D/170-2022
Dated: 12 June 2023

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F	14.03.25	GENERAL AMENDED	S.C.M	J.J.D	J.M.H	J.M.H	DRAWN J.J.D
E	16.12.24	WATER AMENDED	S.C.M	J.J.D	J.M.H	J.M.H	CHECKED J.M.H
D	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H	APPROVED J.M.H
C	29.10.24	GENERAL AMENDEMENT	S.C.M	J.J.D	J.M.H	J.M.H	DATE JULY 2024

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SURVEYOR: CAPRICORN SURVEY GROUP CQ, PHONE 07 4927 5199
DATUM A.H.D. P.M. R.L.

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PROJECT: PROPOSED RETIREMENT LIVING ESTATE
LOCATION: LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE: CIVIL WORKS PLAN 3 of 4
CLIENT: RUBY DEVELOPMENT PTY LTD

DRAWING STATUS: FOR CONSTRUCTION
DRAWING NUMBER: S24-018-C06
SHEET NUMBER: 06 OF 37
REVISION: G

S24-018-C_Civilwks.dwg

REFER DWG. 06 FOR CONTINUATION

REFER DWG. 05 FOR CONTINUATION

PROVIDE BOLLARD

100ø MPVC PN16

450ø RCP CL3

525ø RCP CL3

675ø RCP CL3

150ø PVC SN8

750ø RCP CL3

825ø RCP CL3

900ø RCP CL3

600ø RCP CL3

PROVIDE CONCRETE SLEEPER RETAINING WALL TO MANUFACTURERS SPECIFICATIONS.

PROVIDE MASONRY BLOCK RETAINING WALL. REFER STRUCTURAL ENGINEERS DETAILS.

PROVIDE VEHICLE PARKING BARRIER TYPE TO BE CONFIRMED ON SITE.

PROVIDE VEHICLE RATED IMPACT BOLLARDS TO HIGH SIDE OF BASIN, BOLLARDS TO BE REMOVABLE IN FRONT OF MAINTENANCE GATE.

PROVIDE BIORETENTION BASIN.
FILTER MEDIA 235.6m²
S.L 9.70

PROVIDE 2x1500 CLEAR GATES & REMOVABLE BOLLARDS.

PROVIDE MIN 1200 HIGH OPEN POOL FENCING TO BASIN PERIMETER.

PROVIDE VEGETATED SWALE.

BOTTOM OF 1:6 BATTER.

BOTTOM OF 1:4 BATTER

TOP OF 1:4 BATTER

TOP OF 1:6 BATTER

PROVIDE NON STANDARD CROSSOVER TO EDINGTON STREET END. GENERALLY IN ACCORDANCE WITH IPWEA STD DRAWING.

PROVIDE SLAB DOWNTURN WITH BARRIER KERB.

PROVIDE CONCRETE CHANNEL.

PROVIDE CONCRETE HEADWALL & ROCK PROTECTION.

BREAK INTO EXISTING STORMWATER CHAMBER & RESTORE NEATLY.

ROAD 02

EDINGTON STREET

10 RP607556

9 RP607556

11 RP607556

12 RP6075562

EMT C RP608342

EMT D SP238740

F.F.L. 14.76

F.F.L. 13.91

F.F.L. 13.79

F.F.L. 14.50

F.F.L. 13.83

F.F.L. 13.43

F.F.L. 13.14

169.368

214.332

202.30

N

ROCKHAMPTON REGIONAL COUNCIL
AMENDED PLANS APPROVED
12 January 2026
DATE
These plans are approved subject to the current conditions of approval associated with
Development Permit No.: D/170-2022
Dated: 12 June 2023

NOTE:
ALL FIELD INLETS DISCHARGING TO THE ATLAN FILTER CARTRIDGE CHAMBER ARE TO BE FITTED WITH STORMSACKS.

CIVIL WORKS PLAN

SCALE 1:200 (A1 SIZE)

RETAINING WALL VEHICLE BARRIERS:
VEHICLE BARRIERS ARE REQUIRED WHERE THE DROP FROM PAVEMENT TO A LOWER LEVEL EXCEEDS 600mm. REFER STRUCTURAL ENGINEERS DRAWINGS FOR DETAILS

NOTE:
THE INVERT LEVEL & LOCATION OF ALL EXISTING STORMWATER & SEWER INFRASTRUCTURE SHALL BE CONFIRMED ON SITE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.

CONSTRUCTION NOTE:
CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE LOCAL AUTHORITIES STANDARD DRAWINGS AND SPECIFICATIONS. WORKS MUST BE COMPLETED TO THE SATISFACTION OF THE SUPERINTENDENT AND LOCAL AUTHORITY. REFER TO SHEET C01 FOR CONSTRUCTION NOTES AND DETAILED DRAWING LEGEND.

No.	DATE	REVISIONS	DES	DRN	CHK	APD
H	29.05.25	GENERAL AMENDED	S.C.M	J.J.D	J.M.H	J.M.H
G	12.03.25	GENERAL AMENDED	S.C.M	J.J.D	J.M.H	J.M.H
F	16.12.24	WATER AMENDED	S.C.M	J.J.D	J.M.H	J.M.H
E	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
D	10.12.24	RETAINING WALL LEVELS UPDATE	S.C.M	J.J.D	J.M.H	J.M.H

DOCUMENT CONTROL: DESIGNED S.C.M | DRAWN J.J.D | CHECKED J.M.H | APPROVED J.M.H | DATE JULY 2024

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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NORTHERN NSW T 02 6674 8047 E nsw@westerapartners.com.au
CENTRAL VICTORIA T 03 5441 0922 E centralvic@westerapartners.com.au

SURVEYOR: CAPRICORN SURVEY GROUP CQ
PHONE 07 4927 5199
DATUM A.H.D. P.M. R.L.

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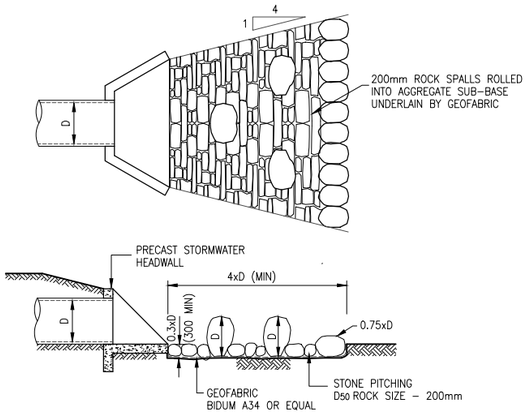
PROJECT: PROPOSED RETIREMENT LIVING ESTATE
LOCATION: LOT 24 ON RP607814 & LOT 8 ON RP607712
192 DEAN STREET, BERSERKER
TITLE: CIVIL WORKS PLAN 4 of 4
CLIENT: RUBY DEVELOPMENT PTY LTD

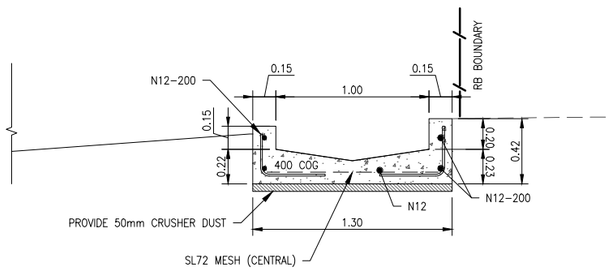
DRAWING STATUS: FOR CONSTRUCTION
DRAWING NUMBER: S24-018-C07
SHEET NUMBER: 07 OF 37
REVISION: H

S24-018-C_Civilwks.dwg



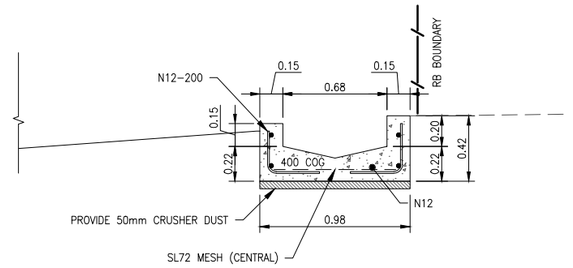
STONE PITCHING DETAIL

SCALE A1 – N.T.S.
A3 – N.T.S.



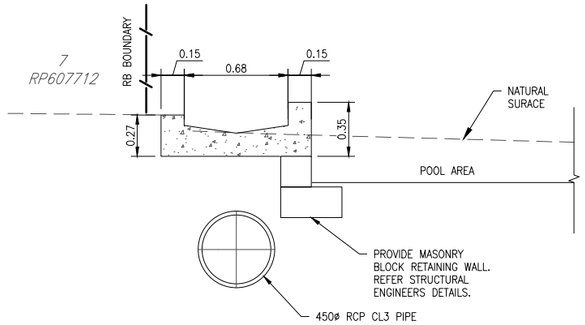
CONCRETE SPOON DRAIN TYPE 1

SCALE A1 – 1 : 20
A3 – 1 : 40



CONCRETE SPOON DRAIN TYPE 2

SCALE A1 – 1 : 20
A3 – 1 : 40

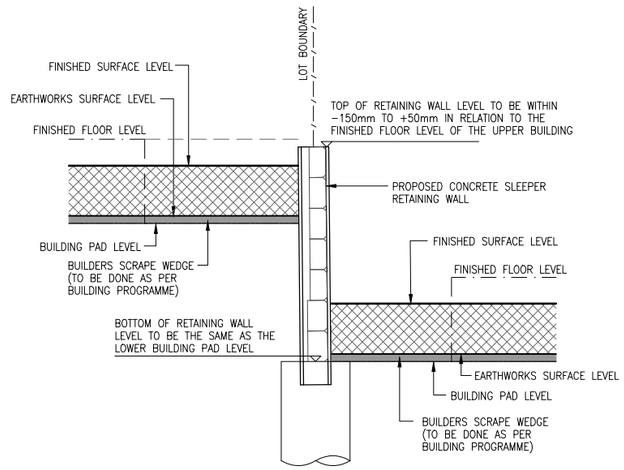


SECTION A

SCALE A1 – 1 : 20
A3 – 1 : 40

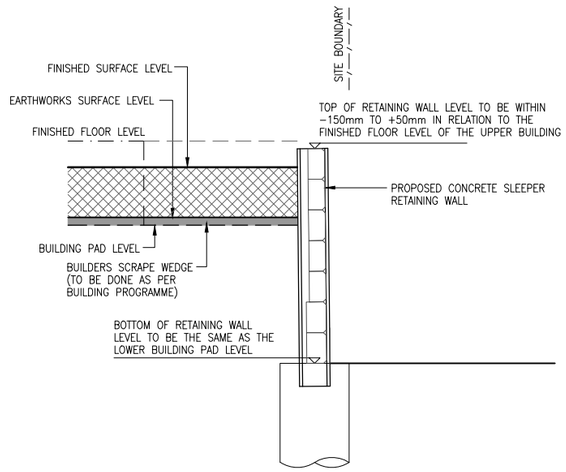
06

ROCKHAMPTON REGIONAL COUNCIL
AMENDED PLANS APPROVED
12 January 2026
DATE
These plans are approved subject to the current conditions of approval associated with
Development Permit No.: D/170-2022
Dated: 12 June 2023



TYPICAL LOT BOUNDARY RETAINING WALL

SCALE A1 – 1 : 20
A3 – 1 : 40



TYPICAL SITE BOUNDARY RETAINING WALL

SCALE A1 – 1 : 20
A3 – 1 : 40

No.	DATE	REVISIONS	DES	DRN	CHK	APD
C	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
B	18.10.24	GENERAL AMENDMENT	S.C.M	J.J.D	J.M.H	J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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SUNSHINE COAST T 07 5391 3777 E sunshinecoast@westerapartners.com.au
NORTHERN NSW T 02 6674 8047 E nsw@westerapartners.com.au
CENTRAL VICTORIA T 03 5441 0922 E centralvic@westerapartners.com.au

SURVEYOR
CAPRICORN SURVEY GROUP CQ
PHONE 07 4927 5199
DATUM A.H.D.
P.M.
R.L.

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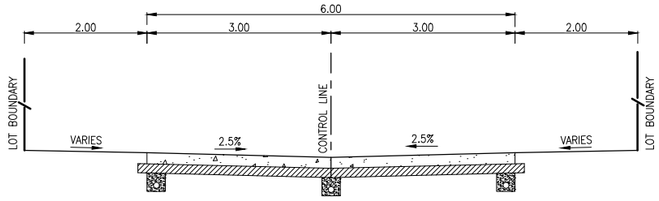
PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE TYPICAL DETAILS
CLIENT RUBY DEVELOPMENT PTY LTD

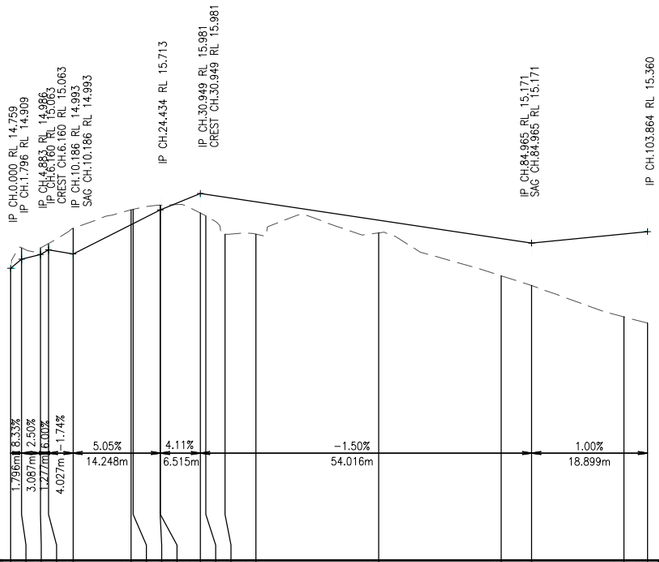
DRAWING STATUS: FOR CONSTRUCTION
DRAWING NUMBER: S24–018–C08
SHEET NUMBER: 08 OF 37
REVISION: C

S24-018-C_Typ_Det.dwg



TYPICAL ROAD CROSS SECTION

SCALE A1 – 1 : 50
A3 – 1 : 100



DATUM R.L.10.0

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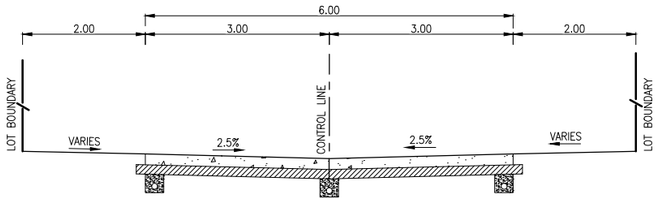
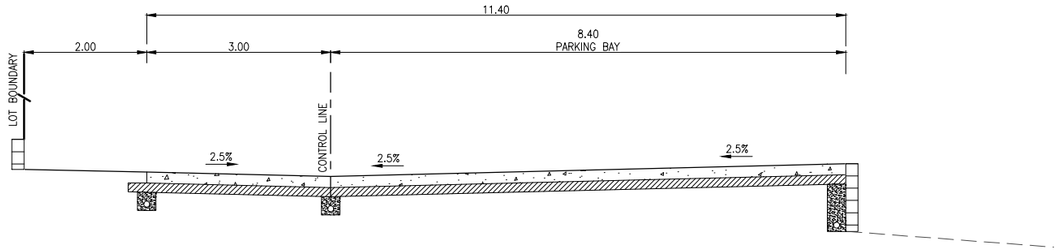


TYPICAL ROAD CROSS SECTION

SCALE A1 – 1 : 50
A3 – 1 : 100



TYPICAL ROAD CROSS SECTION

SCALE A1 – 1 : 50
A3 – 1 : 100

ROCKHAMPTON REGIONAL COUNCIL

AMENDED PLANS APPROVED

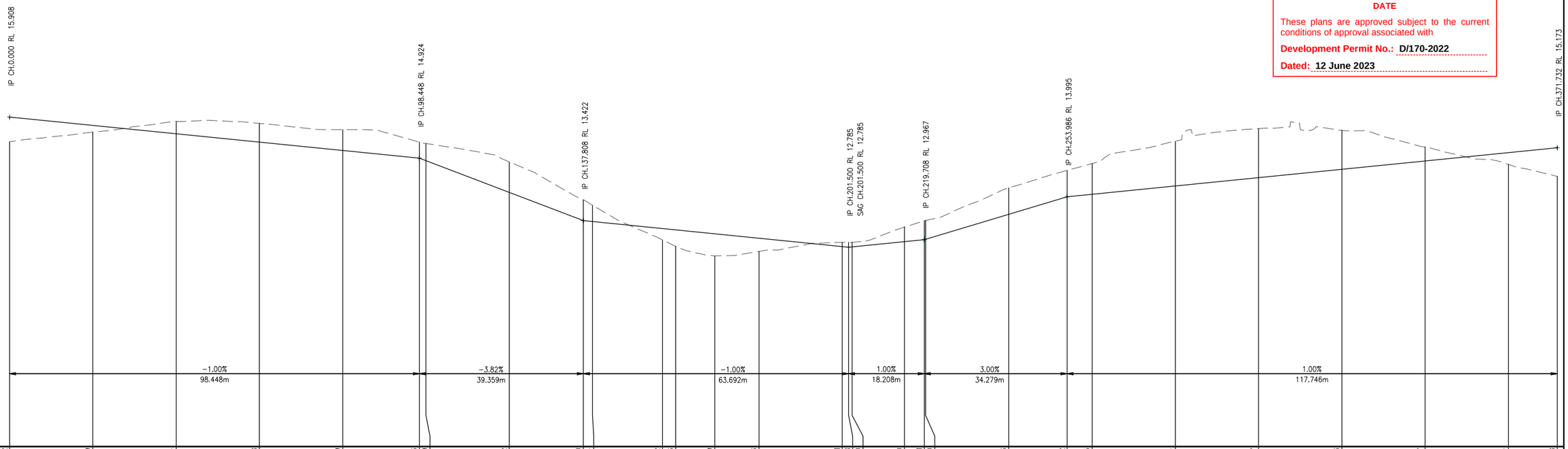
12 January 2026

DATE

These plans are approved subject to the current conditions of approval associated with

Development Permit No.: **D/170-2022**

Dated: **12 June 2023**



DATUM R.L.8.0

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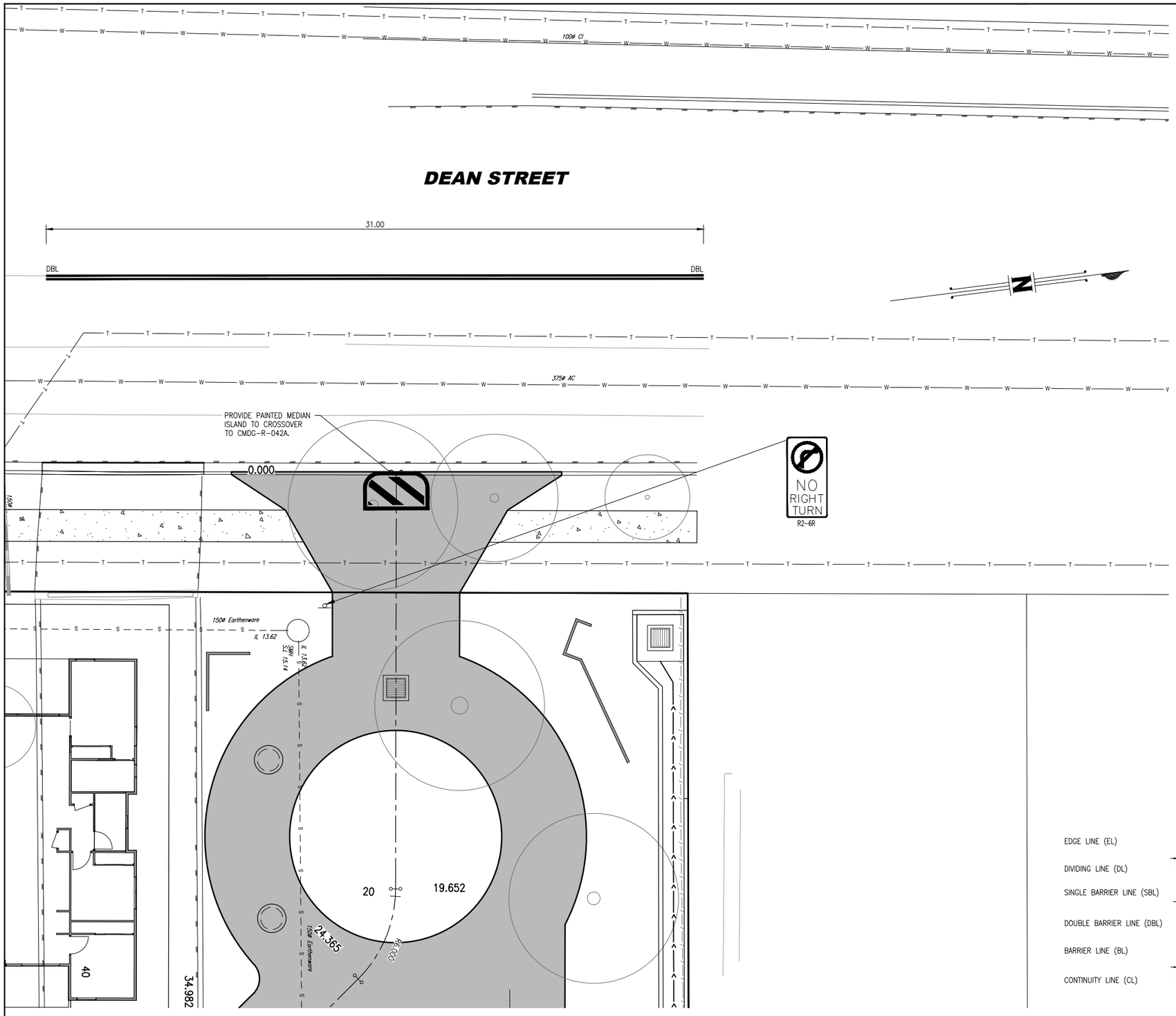
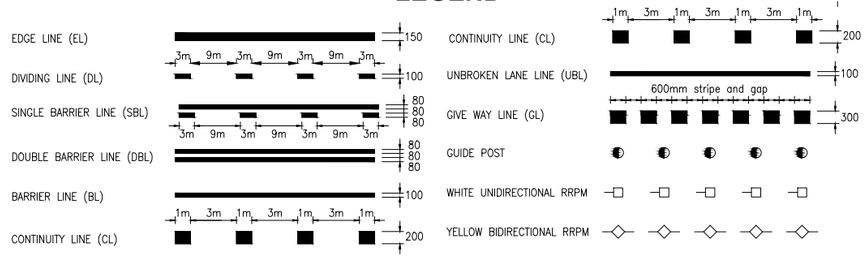


LEGEND



ROCKHAMPTON REGIONAL COUNCIL

AMENDED PLANS APPROVED

12 January 2026

DATE

These plans are approved subject to the current conditions of approval associated with

Development Permit No.: D/170-2022

Dated: 12 June 2023

SIGNS & LINEMARKING PLAN

SCALE 1:100 (A1 SIZE)

0 1 2 3 4 5

No.	DATE	REVISIONS	DES	DRN	CHK	APD
D	16.12.24	WATER AMENDED	S.C.M	J.J.D	J.M.H	J.M.H
C	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
B	29.10.24	GENERAL AMENDMENT	S.C.M	J.J.D	J.M.H	J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024

DOCUMENT CONTROL

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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SURVEYOR
CAPRICORN SURVEY GROUP CQ
PHONE 07 4927 5199

DATUM A.H.D.
P.M.
R.L.

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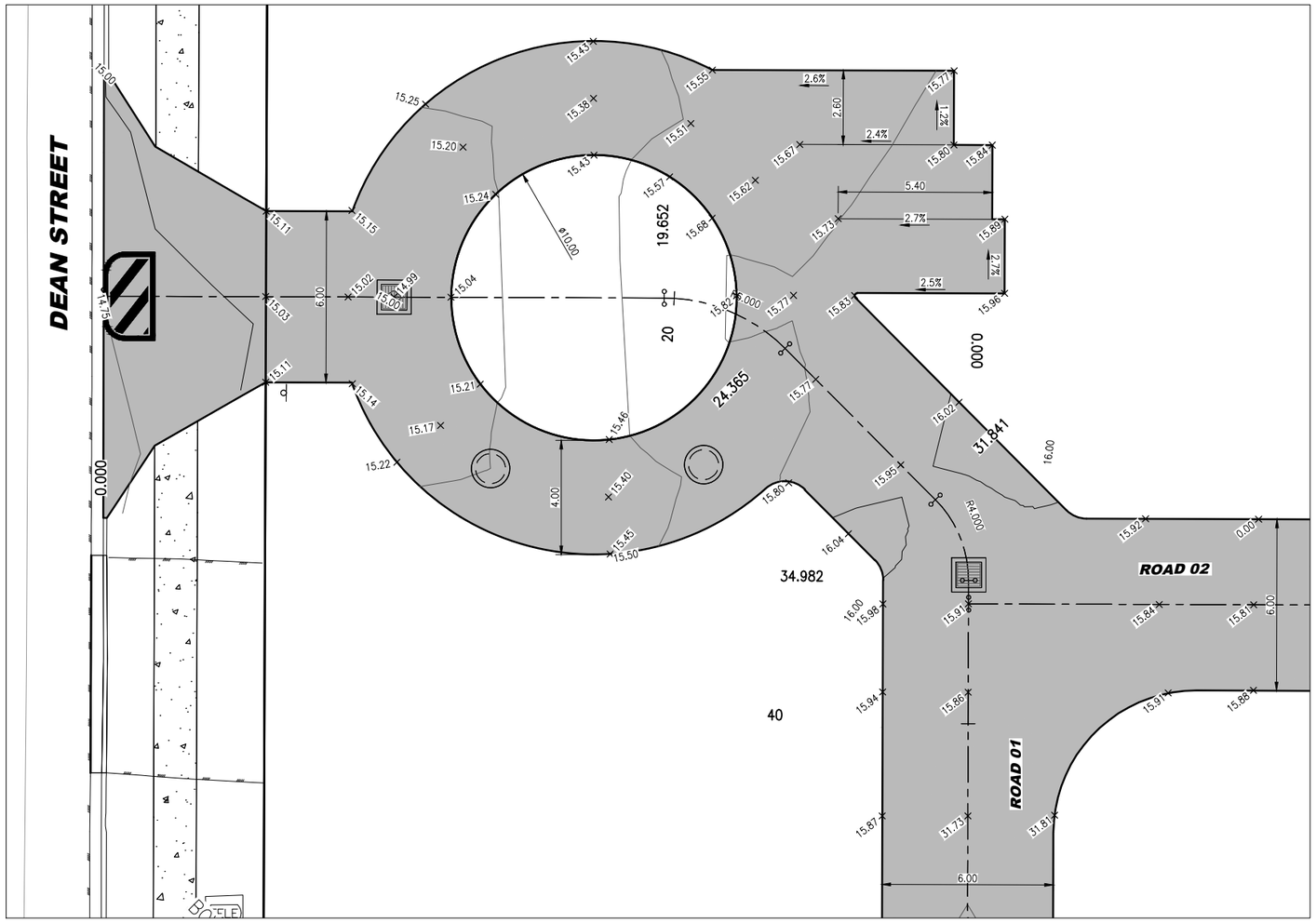
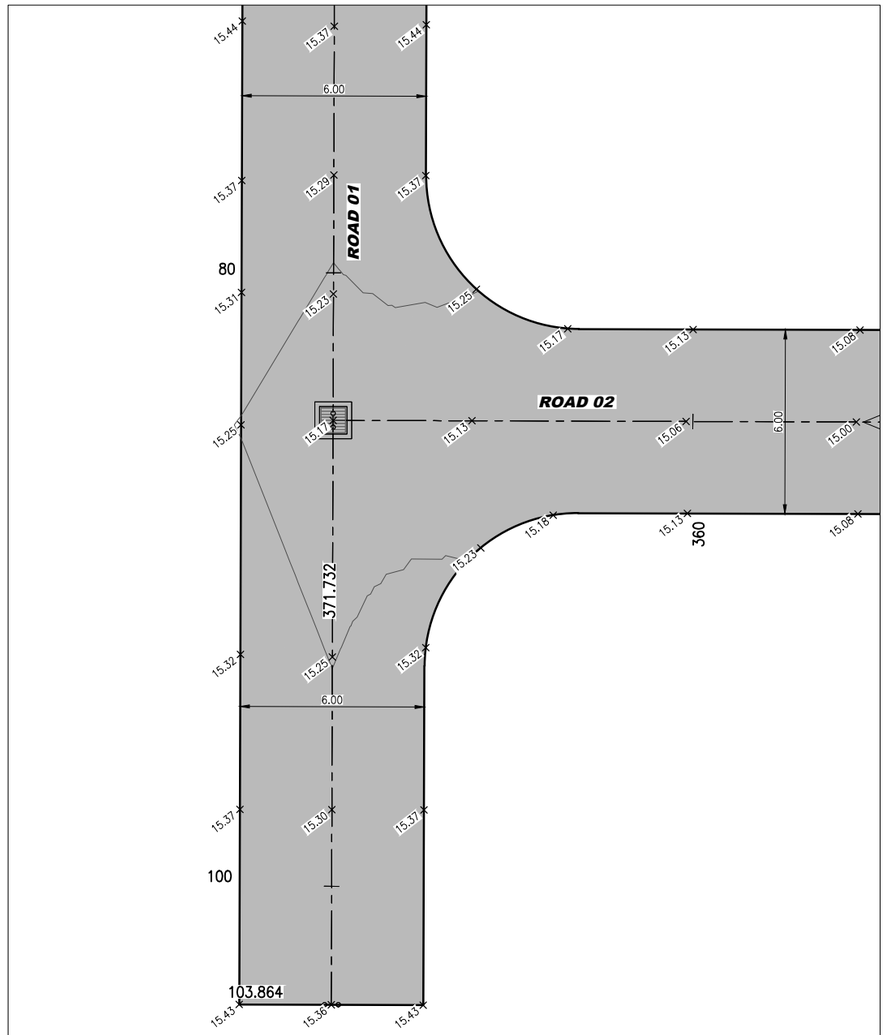
PROJECT	PROPOSED RETIREMENT LIVING ESTATE
LOCATION	LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE	SIGNS & LINEMARKING PLAN
CLIENT	RUBY DEVELOPMENT PTY LTD

DRAWING STATUS	FOR CONSTRUCTION
DRAWING NUMBER	S24-018-C11
SHEET NUMBER	11 OF 37
REVISION	D

S24-018-C_Signs & Linemark.dwg





INTERSECTION PLAN

SCALE 1:100 (A1 SIZE)

0 1 2 3 4 5

ROCKHAMPTON REGIONAL COUNCIL

AMENDED PLANS APPROVED

12 January 2026

DATE

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Development Permit No.: D/170-2022

Dated: 12 June 2023

No.	DATE	REVISIONS	DES	DRN	CHK	APD
B	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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CENTRAL VICTORIA T 03 5441 0922 E centralvic@westerapartners.com.au

SURVEYOR
CAPRICORN SURVEY GROUP CQ
PHONE 07 4927 5199

DATUM A.H.D.
P.M.
R.L.

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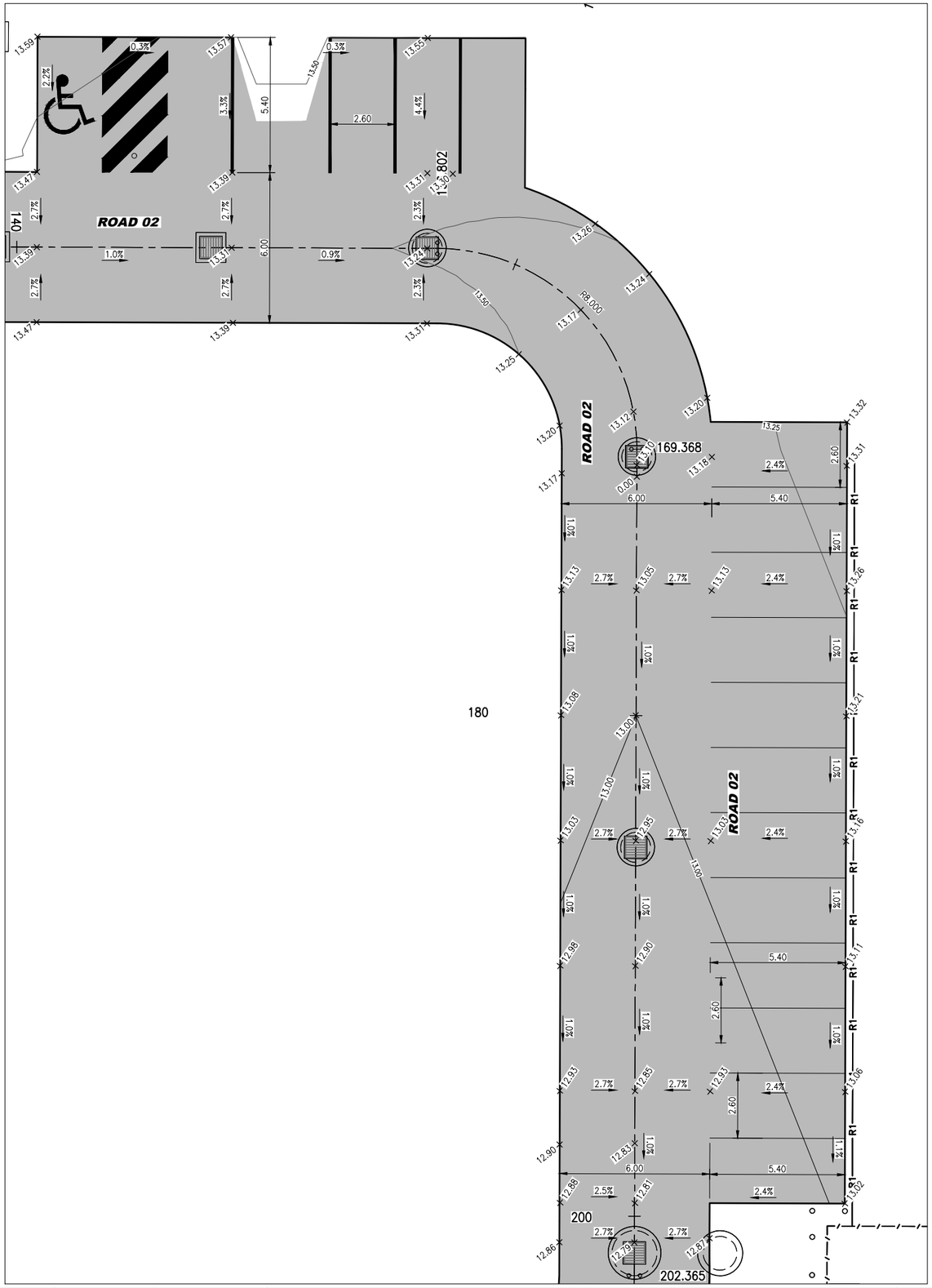
PROJECT	PROPOSED RETIREMENT LIVING ESTATE
LOCATION	LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE	INTERSECTION DETAILS 1 of 2
CLIENT	RUBY DEVELOPMENT PTY LTD

DRAWING STATUS	FOR CONSTRUCTION
DRAWING NUMBER	S24-018-C12
SHEET NUMBER	12 OF 37
REVISION	B

S24-018-C_Intersec.dwg



N

ROCKHAMPTON REGIONAL COUNCIL

AMENDED PLANS APPROVED

12 January 2026

DATE

These plans are approved subject to the current conditions of approval associated with

Development Permit No.: D/170-2022

Dated: 12 June 2023

INTERSECTION PLAN

SCALE 1:100 (A1 SIZE)

0 1 2 3 4 5

No.	DATE	REVISIONS	DES	DRN	CHK	APD
D	14.03.25	GENERAL AMENDED	S.C.M	J.J.D	J.M.H	J.M.H
C	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
B	18.10.24	GENERAL AMENDMENT	S.C.M	J.J.D	J.M.H	J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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SURVEYOR CAPRICORN SURVEY GROUP CQ PHONE 07 4927 5199
DATUM A.H.D. P.M. R.L.

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PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE INTERSECTION DETAILS 2 of 2
CLIENT RUBY DEVELOPMENT PTY LTD

DRAWING STATUS: FOR CONSTRUCTION
DRAWING NUMBER: S24-018-C13
SHEET NUMBER: 13 OF 37
REVISION: D

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REFER BELOW FOR CONTINUATION

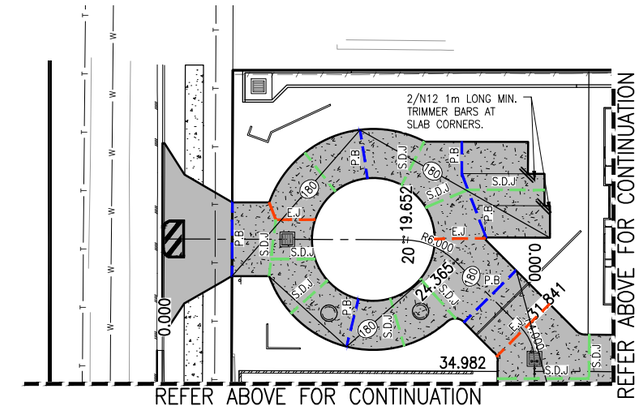
REFER BELOW FOR CONTINUATION

ROAD 01

ROAD 02

ROAD 02

ROAD 02



PAVEMENT & JOINTING PLAN

SCALE 1:250 (A1 SIZE)

0 2.5 5 7.5 10 12.5

ROCKHAMPTON REGIONAL COUNCIL

AMENDED PLANS APPROVED

12 January 2026

DATE

These plans are approved subject to the current conditions of approval associated with

Development Permit No.: D/170-2022

Dated: 12 June 2023

LEGEND

- EXPANSION JOINT (E.J.)
- POUR BREAK (P.B.)
- SAWN DOWELLED JOINT (S.D.J)
- EXPOSED AGGREGATE CONCRETE

N

PAVEMENTS SUBGRADE PREPARATION

1. FOLLOWING EARTHWORKS THE PAVEMENT SUBGRADE SHALL BE PROOF ROLLED AND ANY AREAS SHOWING EXCESSIVE MOVEMENT SHALL BE TREATED BY TYNING AND DRYING OUT OR EXCAVATING AND REPLACING WITH SUITABLE IMPORTED MATERIAL AND RE-COMPACTING UNDER ENGINEERS SUPERVISION.
2. ONCE A HARD FLAT SUBGRADE IS ACHIEVED A BEDDING LAYER OF MINIMUM 50 GRANULAR MATERIAL (CRUSHER DUST OR EQ.) SHALL BE PLACED AND PROFILED TO ACHIEVE THE SPECIFIED SLAB THICKNESS.
3. A LAYER OF 200 MICRON HDPE SHEET SHALL BE PLACED OVER THE BEDDING MATERIAL PRIOR TO STEELING UP.

No.	DATE	REVISIONS	DES	DRN	CHK	APD
E	14.03.25	GENERAL AMENDED	S.C.M	J.J.D	J.M.H	J.M.H
D	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
C	29.10.24	GENERAL AMENDEMENT	S.C.M	J.J.D	J.M.H	J.M.H
B	18.10.24	GENERAL AMENDMENT	S.C.M	J.J.D	J.M.H	J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DOCUMENT CONTROL

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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SURVEYOR CAPRICORN SURVEY GROUP CQ PHONE 07 4927 5199

DATUM A.H.D. P.M. R.L.

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PROJECT PROPOSED RETIREMENT LIVING ESTATE

LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER

TITLE PAVEMENT & JOINTING PLAN

CLIENT RUBY DEVELOPMENT PTY LTD

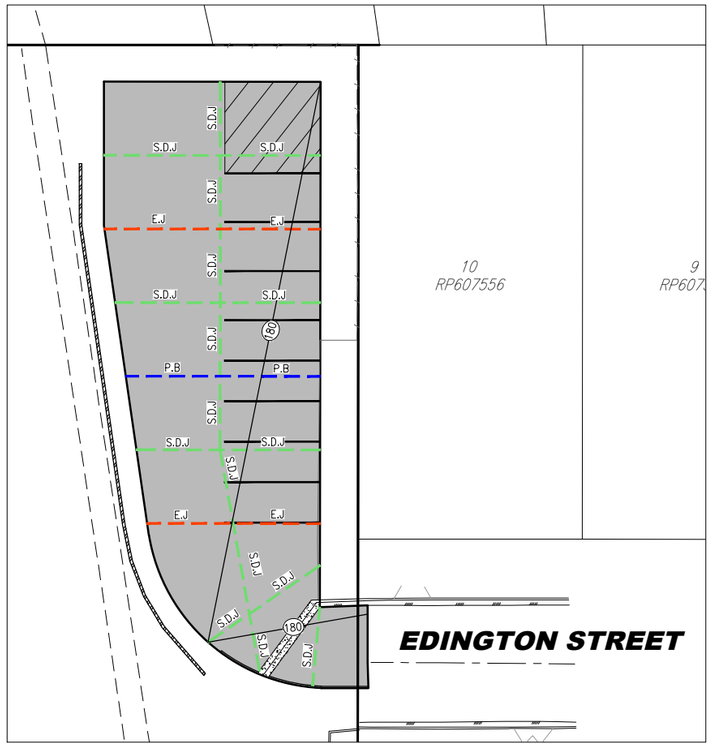
DRAWING STATUS FOR CONSTRUCTION

DRAWING NUMBER S24-018-C14

SHEET NUMBER 14 OF 37

REVISION E

S24-018-C_Pavement.dwg



ROCKHAMPTON REGIONAL COUNCIL

AMENDED PLANS APPROVED

12 January 2026

DATE

These plans are approved subject to the current conditions of approval associated with

Development Permit No.: D/170-2022

Dated: 12 June 2023

LEGEND

- EXPANSION JOINT (E.J.)
- POUR BREAK (P.B.)
- SAWN DOWELLED JOINT (S.D.J)
- EXPOSED AGGREGATE CONCRETE

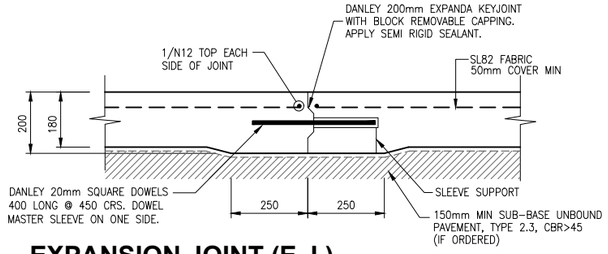
PAVEMENT & JOINTING PLAN

SCALE 1:250 (A1 SIZE)

0 2.5 5 7.5 10 12.5

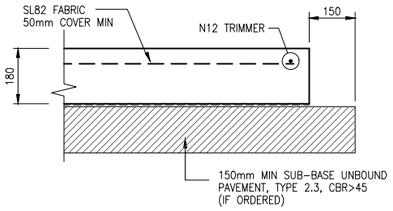
PAVEMENTS SUBGRADE PREPARATION

1. FOLLOWING EARTHWORKS THE PAVEMENT SUBGRADE SHALL BE PROOF ROLLED AND ANY AREAS SHOWING EXCESSIVE MOVEMENT SHALL BE TREATED BY TYNING AND DRYING OUT OR EXCAVATING AND REPLACING WITH SUITABLE IMPORTED MATERIAL AND RE-COMPACTING UNDER ENGINEERS SUPERVISION.
2. ONCE A HARD FLAT SUBGRADE IS ACHIEVED A BEDDING LAYER OF MINIMUM 50 GRANULAR MATERIAL (CRUSHER DUST OR EQ.) SHALL BE PLACED AND PROFILED TO ACHIEVE THE SPECIFIED SLAB THICKNESS.
3. A LAYER OF 200 MICRON HDPE SHEET SHALL BE PLACED OVER THE BEDDING MATERIAL PRIOR TO STEELING UP.



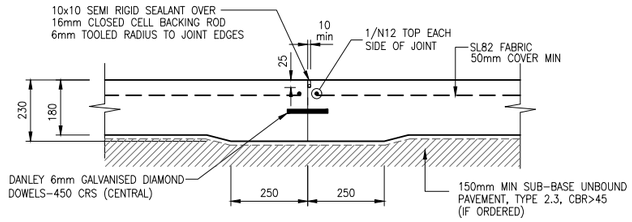
EXPANSION JOINT (E.J.)

SCALE A1 – 1 : 10
A3 – 1 : 20



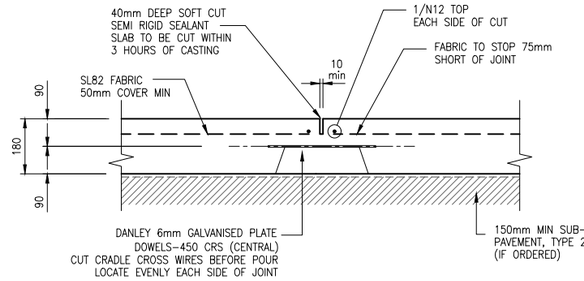
TYPICAL EDGE TREATMENT

SCALE A1 – 1 : 10
A3 – 1 : 20



POUR BREAK (P.B.)

SCALE A1 – 1 : 10
A3 – 1 : 20

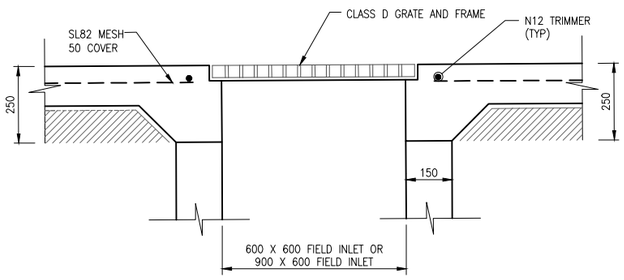


SAWN DOWELLED JOINT (S.D.J.)

SCALE A1 – 1 : 10
A3 – 1 : 20

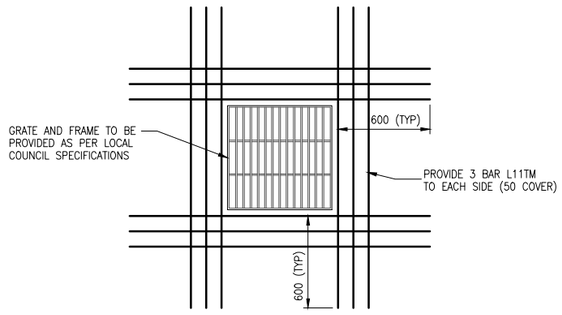
NOTES:

1. CONCRETE STRENGTH TO BE N40
2. THE PAVEMENT DEPTHS SHOWN ARE PRELIMINARY ONLY AND ARE TO BE VERIFIED FOLLOWING CBR TESTS OF THE SUBGRADE MATERIAL
3. MARK PROPOSED JOINT LOCATIONS CLEARLY ON EDGE FORMS
4. POUR BREAK JOINTS ARE TO BE PLACED AT NOT MORE THAN PRIOR TO POURING.
5. EXPANSION JOINTS ARE TO BE PLACED AT NOT MORE THAN 36m MAXIMUM SPACINGS.
6. SAWN DOWELLED JOINTS ARE TO BE PLACED AT NOT MORE THAN 12m MAXIMUM SPACINGS.
7. JOINT SPACING AND ARRANGEMENT MAY BE ALTERED ONSITE WITH 6m MAXIMUM SPACINGS. THE APPROVAL OF THE INSPECTING ENGINEER.



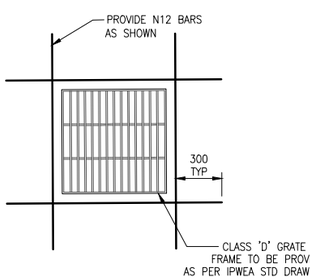
TYPICAL FIELD INLET DETAIL

SCALE A1 – 1 : 10
A3 – 1 : 20

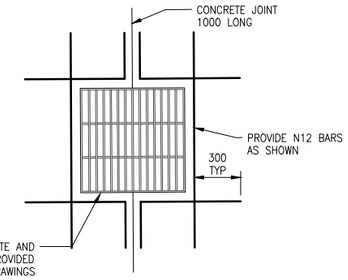


STORMWATER GRATE ADDITIONAL STEEL DETAIL

SCALE A1 – 1 : 20
A3 – 1 : 40



PLAN



PLAN - WITH JOINT

No.	DATE	REVISIONS	DES	DRN	CHK	APD
D	29.05.25	GENERAL AMENDED	S.C.M	J.J.D	J.M.H	J.M.H
C	14.03.25	GENERAL AMENDEMENT	S.C.M	J.J.D	J.M.H	J.M.H
B	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DOCUMENT CONTROL: DESIGNED S.C.M; DRAWN J.J.D; CHECKED J.M.H; APPROVED J.M.H; DATE JULY 2024

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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SURVEYOR: CAPRICORN SURVEY GROUP CQ PHONE 07 4927 5199
DATUM A.H.D. P.M. R.L.

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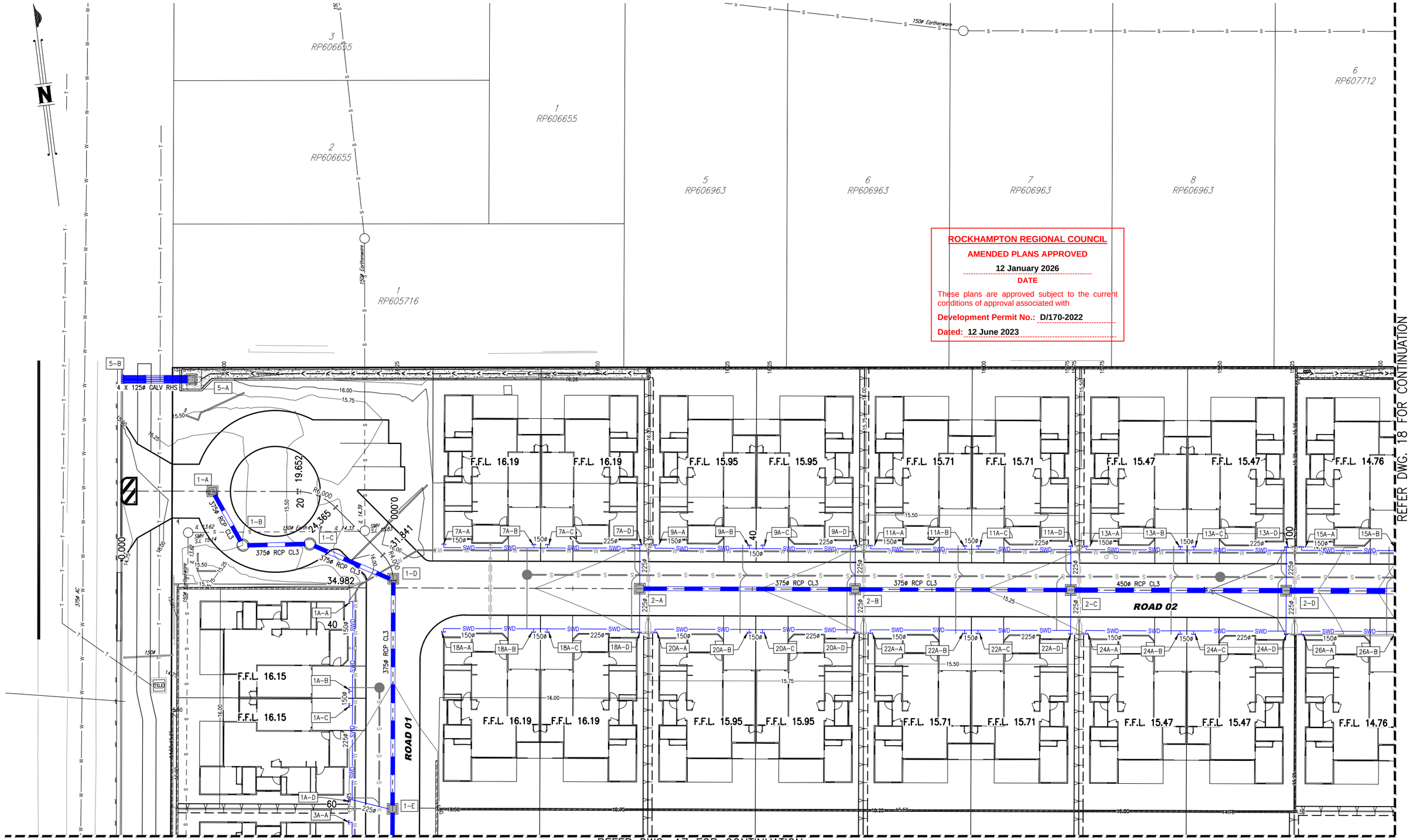
PROJECT: PROPOSED RETIREMENT LIVING ESTATE
LOCATION: LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE: PAVEMENT & JOINTING DETAILS
CLIENT: RUBY DEVELOPMENT PTY LTD

DRAWING STATUS: FOR CONSTRUCTION
DRAWING NUMBER: S24-018-C15
SHEET NUMBER: 15 OF 37
REVISION: D

S24-018-C_Pavement.dwg



NOTE:
ALL FIELD INLETS DISCHARGING TO THE ATLAN FILTER CARTRIDGE CHAMBER ARE TO BE FITTED WITH STORMSACKS.

STORMWATER LAYOUT PLAN

SCALE 1:200 (A1 SIZE) 0 2 4 6 8 10

No.	DATE	REVISIONS	DES	DRN	CHK	APD
D	16.12.24	WATER AMENDED	S.C.M	J.J.D	J.M.H	J.M.H
C	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
B	18.10.24	GENERAL AMENDMENT	S.C.M	J.J.D	J.M.H	J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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SURVEYOR
CAPRICORN SURVEY GROUP CQ
PHONE 07 4927 5199

DATUM A.H.D.
P.M.
R.L.

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PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE STORMWATER LAYOUT PLAN 1 of 4
CLIENT RUBY DEVELOPMENT PTY LTD

DRAWING STATUS: FOR CONSTRUCTION
DRAWING NUMBER: S24-018-C16
SHEET NUMBER: 16 OF 37
REVISION: D

S24-018-C_Stm_Layout.dwg

REFER DWG. 16 FOR CONTINUATION

REFER DWG. 19 FOR CONTINUATION

DEAN STREET

ROAD 02

375ø RCP CL3

450ø RCP CL3

525ø RCP CL3

F.F.L. 15.79 F.F.L. 15.79 F.F.L. 15.74 F.F.L. 15.74 F.F.L. 15.46 F.F.L. 15.46 F.F.L. 15.46 F.F.L. 15.46 F.F.L. 15.22 F.F.L. 15.22 F.F.L. 15.22 F.F.L. 15.22 F.F.L. 14.98 F.F.L. 14.98 F.F.L. 14.98 F.F.L. 14.98 F.F.L. 14.74 F.F.L. 14.74 F.F.L. 14.74 F.F.L. 14.74 F.F.L. 14.50 F.F.L. 14.50

60 80 100 103.864 371.732 360 340 320 300 280

20 RP607814

19 RP607814

18 RP607814

17 RP607814

16 RP607814

15 RP607814

14 RP607814

13 RP607814

12 RP607814

150ø Earthenware

375ø RCP

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STORMWATER LAYOUT PLAN

SCALE 1:200 (A1 SIZE)

0 2 4 6 8 10

ROCKHAMPTON REGIONAL COUNCIL
AMENDED PLANS APPROVED
12 January 2026
DATE
These plans are approved subject to the current conditions of approval associated with
Development Permit No.: D/170-2022
Dated: 12 June 2023

No.	DATE	REVISIONS	DES	DRN	CHK	APD
E	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
D	08.11.24	RETAINING WALL UPDATE	S.C.M	J.J.D	J.M.H	J.M.H
C	29.10.24	GENERAL AMENDEMENT	S.C.M	J.J.D	J.M.H	J.M.H
B	18.10.24	GENERAL AMENDMENT	S.C.M	J.J.D	J.M.H	J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
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SURVEYOR
CAPRICORN SURVEY GROUP CQ
PHONE 07 4927 5199

DATUM A.H.D.
P.M.
R.L.

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PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712
192 DEAN STREET, BERSERKER
TITLE STORMWATER LAYOUT PLAN 2 of 4
CLIENT RUBY DEVELOPMENT PTY LTD

DRAWING STATUS: FOR CONSTRUCTION
DRAWING NUMBER: S24-018-C17
SHEET NUMBER: 17 OF 37
REVISION: E

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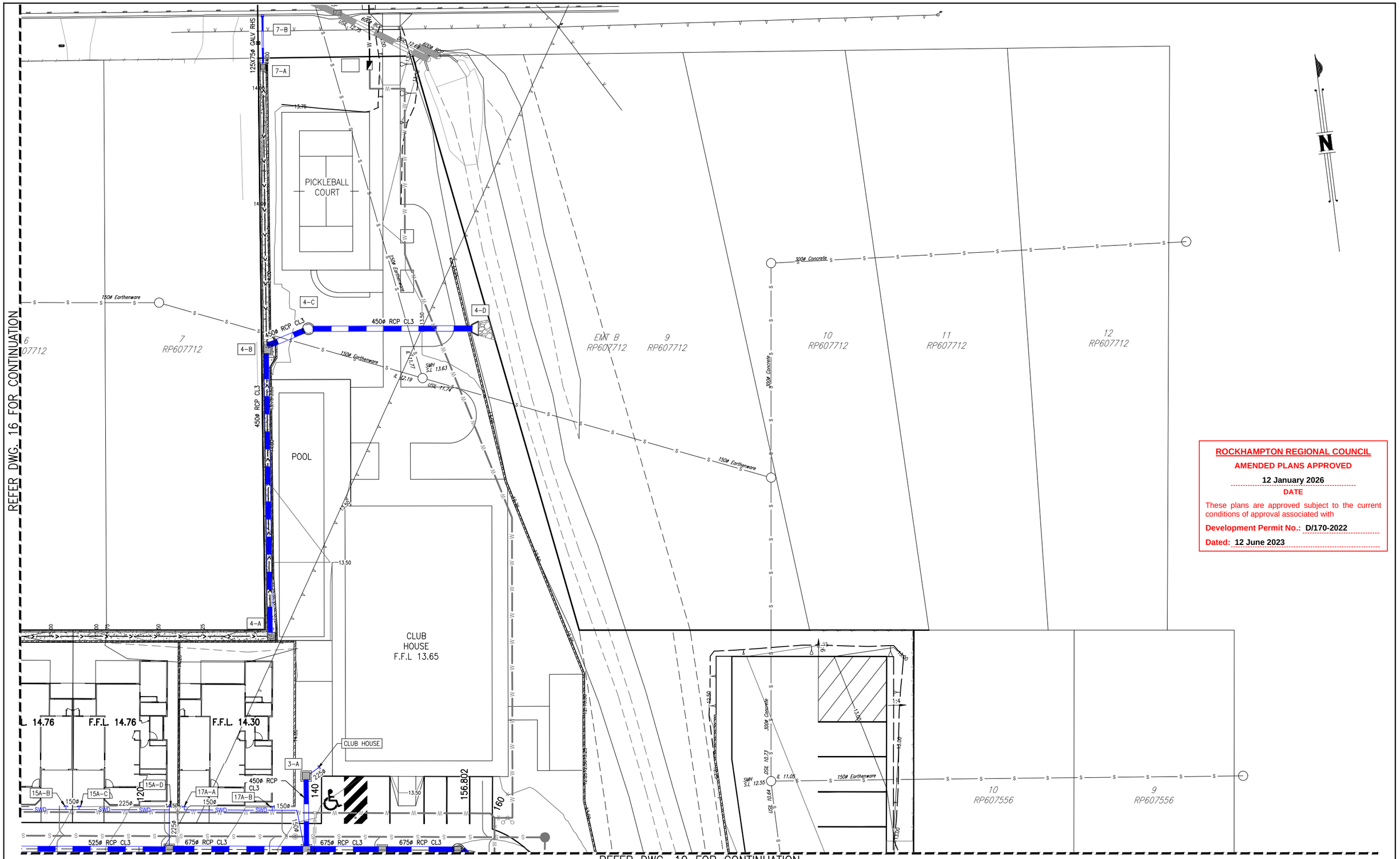

NOTE:
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STORMWATER LAYOUT PLAN

SCALE 1:200 (A1 SIZE) 0 2 4 6 8 10

ROCKHAMPTON REGIONAL COUNCIL
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12 January 2026
DATE
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Dated: 12 June 2023

No.	DATE	REVISIONS	DES	DRN	CHK	APD
G	29.05.25	GENERAL AMENDED	S.C.M	J.J.D	J.M.H	J.M.H
F	14.03.25	GENERAL AMENDED	S.C.M	J.J.D	J.M.H	J.M.H
E	16.12.24	WATER AMENDED	S.C.M	J.J.D	J.M.H	J.M.H
D	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
C	29.10.24	GENERAL AMENDEMENT	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

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SURVEYOR CAPRICORN SURVEY GROUP CQ PHONE 07 4927 5199
DATUM A.H.D. P.M. R.L.

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PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE STORMWATER LAYOUT PLAN 3 of 4
CLIENT RUBY DEVELOPMENT PTY LTD

DRAWING STATUS FOR CONSTRUCTION
DRAWING NUMBER S24-018-C18
SHEET NUMBER 18 OF 37
REVISION G

S24-018-C_Stm_Layout.dwg

REFER DWG. 18 FOR CONTINUATION

REFER DWG. 17 FOR CONTINUATION

ROAD 02

EDINGTON STREET

10 RP607556

9 RP607556

11 RP607556

12 RP6075562

EMT C RP608342

EMT D SP238740

N

ROCKHAMPTON REGIONAL COUNCIL

AMENDED PLANS APPROVED

12 January 2026

DATE

These plans are approved subject to the current conditions of approval associated with

Development Permit No.: D/170-2022

Dated: 12 June 2023

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STORMWATER LAYOUT PLAN

SCALE 1:200 (A1 SIZE)

0 2 4 6 8 10

No.	DATE	REVISIONS	DES	DRN	CHK	APD
F	29.05.25	GENERAL AMENDED	S.C.M	J.J.D	J.M.H	J.M.H
E	12.03.25	GENERAL AMENDED	S.C.M	J.J.D	J.M.H	J.M.H
D	16.12.24	WATER AMENDED	S.C.M	J.J.D	J.M.H	J.M.H
C	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
B	18.10.24	GENERAL AMENDMENT	S.C.M	J.J.D	J.M.H	J.M.H

DOCUMENT CONTROL

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
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SURVEYOR
CAPRICORN SURVEY GROUP CQ
PHONE 07 4927 5199

DATUM A.H.D.
P.M.
R.L.

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PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE STORMWATER LAYOUT PLAN 4 of 4
CLIENT RUBY DEVELOPMENT PTY LTD

DRAWING STATUS FOR CONSTRUCTION
DRAWING NUMBER S24-018-C19
SHEET NUMBER 19 OF 37
REVISION F

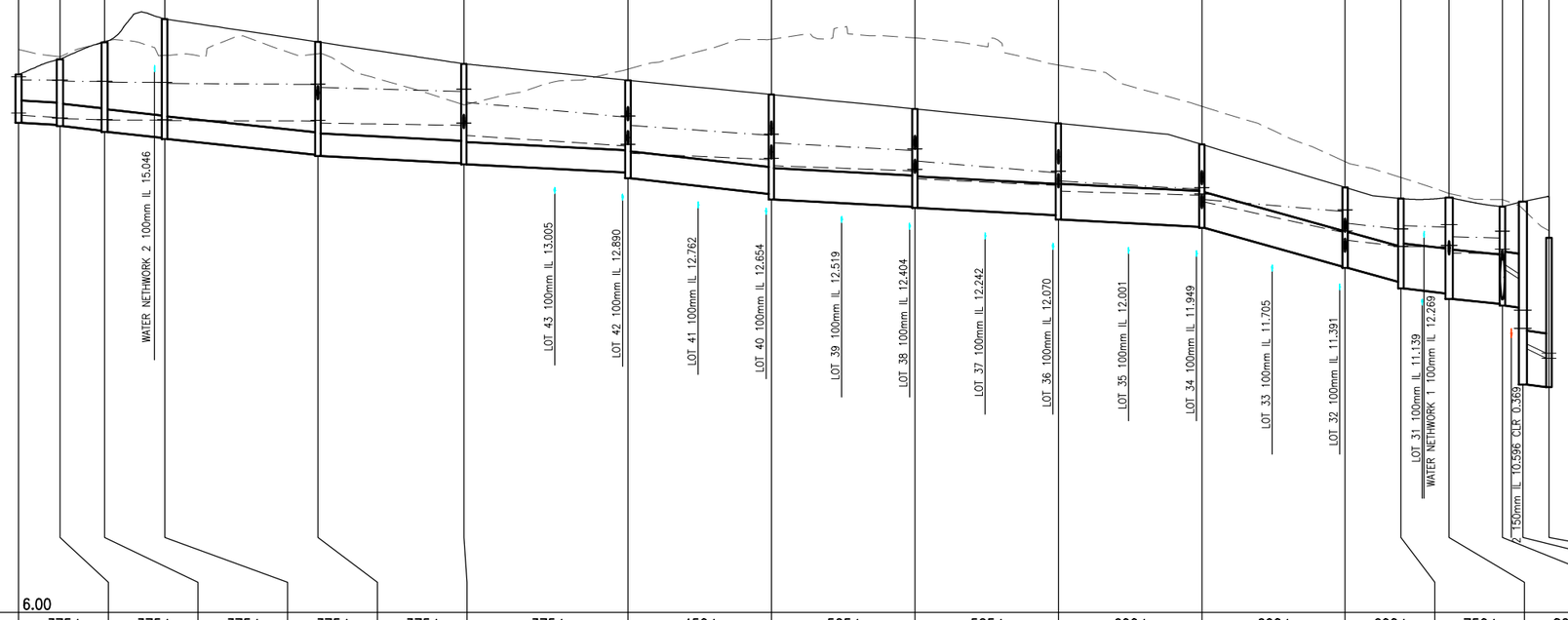
S24-018-C_Stm_Layout.dwg

PIT TYPE	1-A FIELD INLET TYPE 2	1-B MANHOLE	1-C MANHOLE	1-D FIELD INLET TYPE 2	1-E FIELD INLET TYPE 2	1-F FIELD INLET TYPE 2	1-G FIELD INLET TYPE 2	1-H FIELD INLET TYPE 2	1-I FIELD INLET TYPE 2	1-J FIELD INLET TYPE 2	1-K FIELD INLET TYPE 2	1-L FIELD INLET TYPE 2	1-M FIELD INLET TYPE 2 GRATE	1-N MANHOLE	1-O FIELD INLET TYPE 2 GRATE	1-P MANHOLE	1-Q BIO BASIN
PIT SIZE	0.900 0.900 CLASS D	1.050ø CLASS D	1.050ø CLASS D	0.900 0.900 CLASS D	0.900 0.900 CLASS D	0.900 0.900 CLASS D	0.900 0.900 CLASS D	0.900 0.900 CLASS D	0.900 0.900 CLASS D	0.900 0.900 CLASS D	0.900 0.900 CLASS D	0.900 0.900 CLASS D	1.350ø 0.900SQ CLASS D GRATE	1.200ø CLASS D	1.800ø 0.900SQ CLASS D GRATE	1.350ø CLASS D	
PIPE FLOW (L/s)	30.7	30.6	30.5	31.7	68.0	140.3	196.3	257.3	317.5	377.0	434.7	492.5	498.5	516.1	1014.9	1013.9	
PART PIPE VELOCITY (m/s)	0.93	1.19	1.19	1.22	1.15	1.27	2.00	1.58	1.59	1.73	3.43	3.45	2.45	2.35	2.93	2.93	
FULL PIPE VELOCITY (m/s)	0.28	0.28	0.28	0.29	0.62	1.27	1.23	1.19	1.47	1.33	1.54	1.74	1.13	0.97	1.60	1.59	
PIT LOSS FACTOR	9.70	2.39	1.77	2.52	1.85	2.06	1.57	1.42	1.22	1.07	0.96	0.88	0.00	2.15	2.11	2.09	
		-62°	24°	68°	LINE 1A: 77°	-90° LINE 3A	LINE 43A: -90° LINE 57A: 90°	LINE 41A: -90° LINE 55A: 90°	LINE 39A: -90° LINE 53A: 90°	LINE 37A: -90° LINE 51A: 90°	LINE 35A: -90° LINE 49A: 90°	LINE 33A: -90° LINE 47A: 90°		-90° LINE 45A	LINE 2: -90° LINE 31A: 38°		

LEGEND

— — — DENOTES 5% AEP HGL

— · — · — DENOTES 1% AEP HGL



DATUM (m)	6.00																
PIPE SIZE (mm)	375ø	375ø	375ø	375ø	375ø	375ø	450ø	525ø	525ø	600ø	600ø	600ø	750ø	825ø	900ø	900ø	
PIPE CLASS	RCP CL3	RCP CL3	RCP CL3	RCP CL3	RCP CL3	RCP CL3	RCP CL3	RCP CL3	RCP CL3	RCP CL3	RCP CL3	RCP CL3	RCP CL3	RCP CL3	RCP CL3	RCP CL3	
PIPE GRADE (%)	0.50%	1.00%	1.00%	1.02%	0.50%	0.50%	1.09%	0.50%	0.50%	0.50%	2.70%	2.51%	1.00%	0.88%	1.00%	1.00%	
HYDRAULIC GRADE LINE	14.350 14.312	14.266	14.255	14.240	14.231	14.236	14.224	14.226	14.181	14.182	13.975	13.827	13.678	13.593	13.469	13.408	13.250	13.156	13.042	12.995	12.860	12.379	12.221	12.121	12.135	12.007	12.073	11.727	10.749	10.405	10.247
DEPTH TO INVERT	0.808	1.100	1.120	1.476	1.496	1.989	2.009	1.887	1.907	1.663	1.683	1.544	1.639	1.661	1.756	1.636	1.656	1.536	1.611	1.377	1.397	1.325	1.345	1.393	1.505	1.604	1.699	1.625	1.655	1.772	3.060		2.500
INVERT LEVEL	14.185	14.150	14.130	14.055	14.035	13.935	13.915	13.652	13.632	13.510	13.490	13.354	13.259	12.997	12.902	12.782	12.762	12.642	12.567	12.447	12.427	11.781	11.761	11.527	11.415	11.334	11.239	11.161	11.131	11.097	9.809	9.765	9.765
FINISHED SURFACE LEVEL	14.993	15.250	15.532	15.924	15.539	15.173	14.898	14.659	14.419	14.179	13.824	13.106	12.920	12.938	12.786	12.869	12.265												
PIPE CHAINAGE	0.000	6.915	14.381	24.450	50.067	74.476	101.920	125.920	149.920	173.920	197.920	221.870	231.202	239.270	248.178	251.597	255.973												
PIPE LENGTH	6.915	7.466	10.069	25.617	24.409	27.444	24.000	24.000	24.000	24.000	23.950	9.332	8.068	8.908	3.419	4.376	

LINE 1

NOTE:
ALL FIELD INLETS DISCHARGING TO THE ATLAN FILTER CARTRIDGE CHAMBER ARE TO BE FITTED WITH STORMSACKS.

ROCKHAMPTON REGIONAL COUNCIL
AMENDED PLANS APPROVED
12 January 2026
DATE
These plans are approved subject to the current conditions of approval associated with
Development Permit No.: D/170-2022
Dated: 12 June 2023

STORMWATER MAIN LONGITUDINAL SECTIONS LINE 1

SCALE A1 – 1:500(H) 1:50(V)
A3 – 1:1000(H) 1:100(V)

No.	DATE	REVISIONS	DES	DRN	CHK	APD
C	14.03.25	GENERAL AMENDEMENT	S.C.M	J.J.D	J.M.H	J.M.H
B	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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NORTHERN NSW T 02 6674 8047 E nsw@westerapartners.com.au
CENTRAL VICTORIA T 03 5441 0922 E centralvic@westerapartners.com.au

SURVEYOR
CAPRICORN SURVEY GROUP CQ
PHONE 07 4927 5199
DATUM A.H.D. P.M. R.L.

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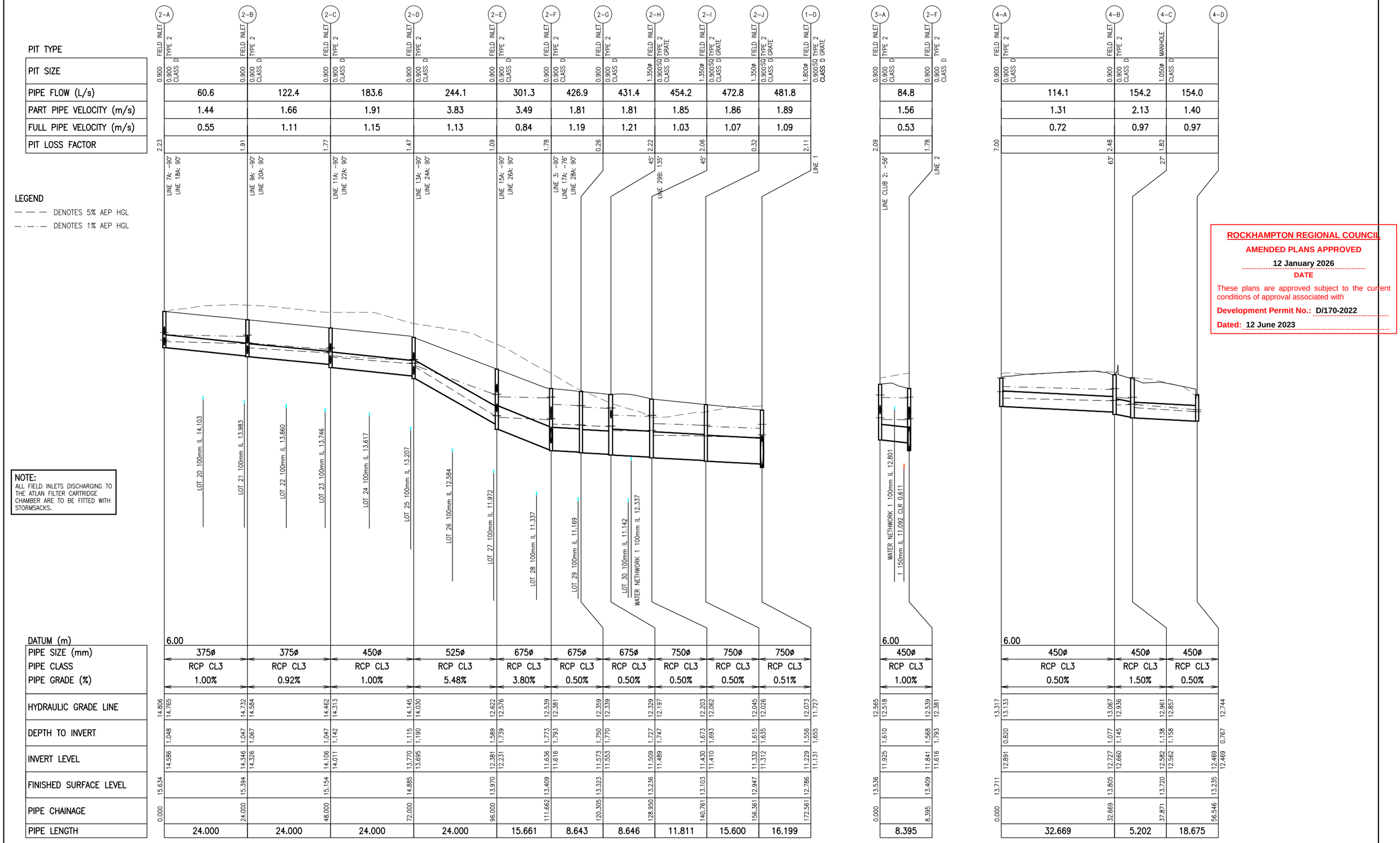
PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE STORMWATER LONGITUDINAL SECTIONS LINE 1
CLIENT RUBY DEVELOPMENT PTY LTD

DRAWING STATUS FOR CONSTRUCTION
DRAWING NUMBER S24-018-C20
SHEET NUMBER 20 OF 37
REVISION C

S24-018-C_Stm_Lsec.dwg



LEGEND

— — — DENOTES 5% AEP HGL

—·—·— DENOTES 1% AEP HGL

NOTE:
ALL FIELD INLETS DISCHARGING TO THE ATLAN FILTER CARTRIDGE CHAMBER ARE TO BE FITTED WITH STORMSACKS.

ROCKHAMPTON REGIONAL COUNCIL

AMENDED PLANS APPROVED

12 January 2026

DATE

These plans are approved subject to the current conditions of approval associated with

Development Permit No.: D/170-2022

Dated: 12 June 2023

STORMWATER MAIN LONGITUDINAL SECTIONS LINES 2 - 4

SCALE A1 – 1:500(H) 1:50(V)
A3 – 1:1000(H) 1:100(V)

No.	DATE	REVISIONS	DES	DRN	CHK	APD
D	14.03.25	GENERAL AMENDED	S.C.M	J.J.D	J.M.H	J.M.H
C	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
B	18.10.24	GENERAL AMENDMENT	S.C.M	J.J.D	J.M.H	J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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NORTHERN NSW T 02 6674 8047 E nsw@westerapartners.com.au
CENTRAL VICTORIA T 03 5441 0922 E centralvic@westerapartners.com.au

SURVEYOR CAPRICORN SURVEY GROUP CQ PHONE 07 4927 5199
DATUM A.H.D. P.M. R.L.

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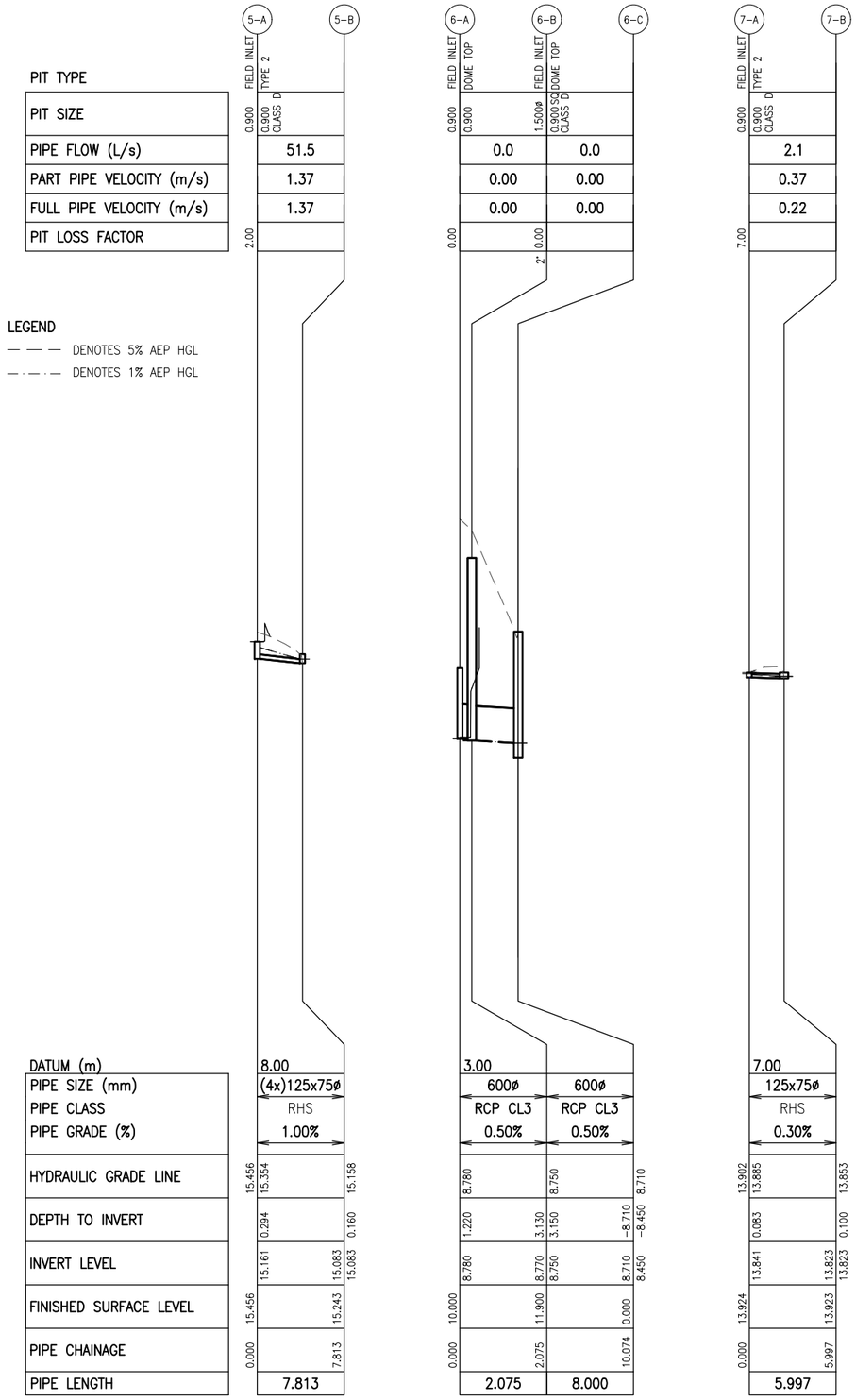
PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE STORMWATER LONGITUDINAL SECTIONS LINES 2 – 4
CLIENT RUBY DEVELOPMENT PTY LTD

DRAWING STATUS FOR CONSTRUCTION
DRAWING NUMBER S24-018-C21
SHEET NUMBER 21 OF 37
REVISION D

S24-018-C_Stm_Lsec.dwg



LEGEND

— — — DENOTES 5% AEP HGL

—·—·— DENOTES 1% AEP HGL

NOTE:
ALL FIELD INLETS DISCHARGING TO THE ATLAN FILTER CARTRIDGE CHAMBER ARE TO BE FITTED WITH STORMSACKS.

ROCKHAMPTON REGIONAL COUNCIL

AMENDED PLANS APPROVED

12 January 2026

DATE

These plans are approved subject to the current conditions of approval associated with

Development Permit No.: D/170-2022

Dated: 12 June 2023

STORMWATER MAINS LONGITUDINAL SECTIONS LINES 5 - 6

SCALE A1 – 1:500(H) 1:50(V)
A3 – 1:1000(H) 1:100(V)

No.	DATE	REVISIONS	DES	DRN	CHK	APD
C	14.03.25	GENERAL AMENDEMENT	S.C.M	J.J.D	J.M.H	J.M.H
B	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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CENTRAL VICTORIA T 03 5441 0922 E centralvic@westerapartners.com.au

SURVEYOR
CAPRICORN SURVEY GROUP CQ
PHONE 07 4927 5199

DATUM A.H.D.
P.M.
R.L.

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PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE STORMWATER LONGITUDINAL SECTIONS LINE 5 – 6
CLIENT RUBY DEVELOPMENT PTY LTD

DRAWING STATUS FOR CONSTRUCTION
DRAWING NUMBER S24-018-C22
SHEET NUMBER 22 OF 37
REVISION C

S24-018-C_Stm_Lsec.dwg

PIT TYPE	1A–A	1A–B	1A–C	1A–D	1–E
	STUB	STUB	STUB	STUB	FIELD INLET TYPE 2
PIT SIZE					0.900 0.900 CLASS D
PIPE FLOW (L/s)	5.0	10.0	14.9	19.9	
PART PIPE VELOCITY (m/s)	0.77	0.92	1.79	1.09	
FULL PIPE VELOCITY (m/s)	0.28	0.56	0.38	0.50	
PIT LOSS FACTOR	2.00	2.00	2.00	2.00	1.85
				–77°	LINE 1

PIT TYPE	3A–A	3A–B	3A–C	3A–D	3A–E	1–F
	STUB	STUB	STUB	STUB	TEE	FIELD INLET TYPE 2
PIT SIZE						0.900 0.900 CLASS D
PIPE FLOW (L/s)	5.0	10.0	14.9	19.9	41.0	
PART PIPE VELOCITY (m/s)	0.77	0.92	1.82	1.97	1.72	
FULL PIPE VELOCITY (m/s)	0.28	0.56	0.38	0.50	1.03	
PIT LOSS FACTOR	2.00	2.00	2.00	2.00	2.00	2.06
					–90° 90° LINE 6A	LINE 1

PIT TYPE	6A–A	6A–B	6A–C	6A–D	3A–E
	STUB	STUB	STUB	STUB	TEE
PIT SIZE					
PIPE FLOW (L/s)	5.0	10.0	14.9	21.1	
PART PIPE VELOCITY (m/s)	0.77	0.92	1.71	2.00	
FULL PIPE VELOCITY (m/s)	0.28	0.56	0.38	0.53	
PIT LOSS FACTOR	2.00	2.00	2.00	2.00	2.00
					LINE 3A

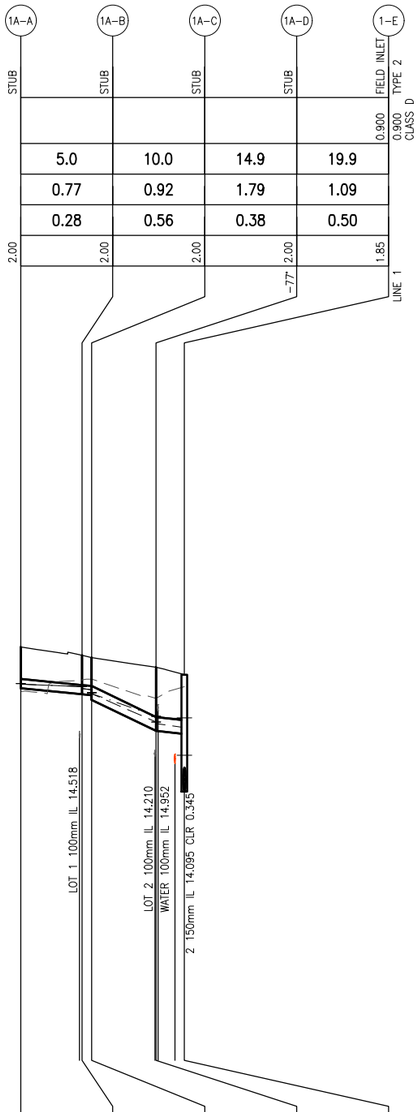
PIT TYPE	7A–A	7A–B	7A–C	7A–D	2–A
	STUB	STUB	STUB	STUB	FIELD INLET TYPE 2
PIT SIZE					0.900 0.900 CLASS D
PIPE FLOW (L/s)	5.0	10.0	14.9	20.7	
PART PIPE VELOCITY (m/s)	0.77	0.92	1.73	1.11	
FULL PIPE VELOCITY (m/s)	0.28	0.56	0.38	0.52	
PIT LOSS FACTOR	2.00	2.00	2.00	2.00	2.23
				90°	LINE 2

LEGEND

— — — DENOTES 5% AEP HGL

— · — · — DENOTES 1% AEP HGL

NOTE:
ALL FIELD INLETS DISCHARGING TO THE ATLAN FILTER CARTRIDGE CHAMBER ARE TO BE FITTED WITH STORMSACKS.

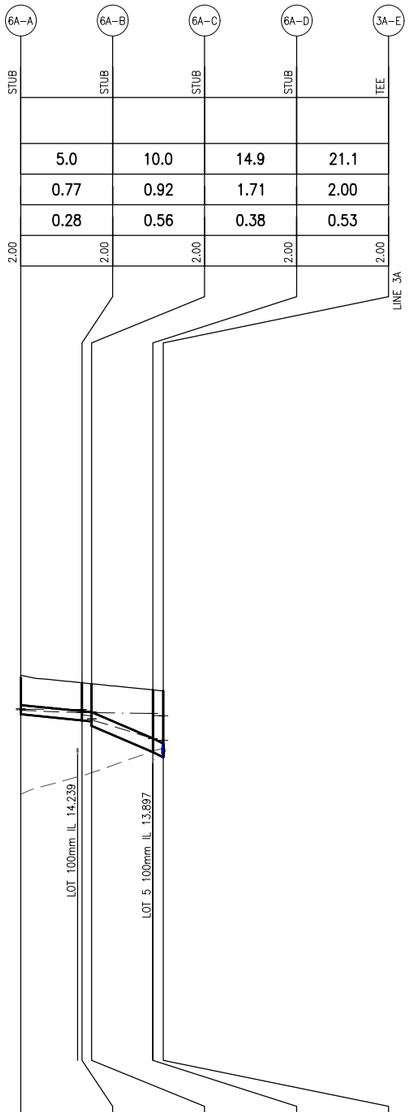


DATUM (m)	8.00				
PIPE SIZE (mm)	150ø	150ø	225ø	225ø	
PIPE CLASS	PVC SN8	PVC SN8	PVC SN8	PVC SN8	
PIPE GRADE (%)	1.00%	1.00%	4.81%	1.00%	
HYDRAULIC GRADE LINE	15.392 15.384	15.345 15.312	15.244 15.230	14.766 14.741	14.226 14.181
DEPTH TO INVERT	0.670	0.634	0.614 0.689	1.035	0.961 1.907
INVERT LEVEL	15.320	15.220 15.220	15.204 15.129	14.624 14.624	14.578 13.632
FINISHED SURFACE LEVEL	15.990	15.854	15.818	15.659	15.539
PIPE CHAINAGE	0.000 9.985	9.985 11.585	11.585 22.076	22.076	26.692
PIPE LENGTH	9.985	1.600	10.491	4.617	

LINE 1A

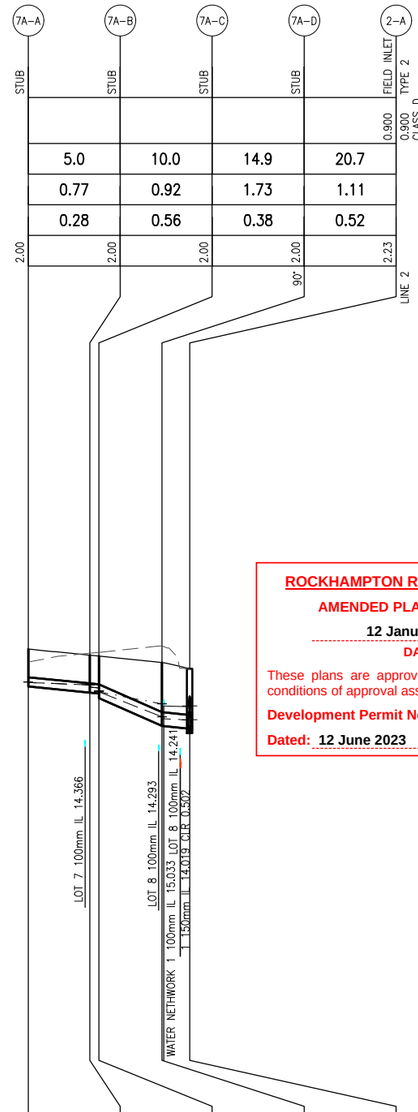
DATUM (m)	8.00				
PIPE SIZE (mm)	150ø	150ø	225ø	225ø	225ø
PIPE CLASS	PVC SN8	PVC SN8	PVC SN8	PVC SN8	PVC SN8
PIPE GRADE (%)	1.00%	1.00%	5.03%	5.00%	2.06%
HYDRAULIC GRADE LINE	15.024 15.016	14.976 14.944	14.875 14.861	14.496 14.471	14.469 14.360 14.182 13.975
DEPTH TO INVERT	0.670	0.664	0.651 0.726	1.040	1.087 1.075 1.683
INVERT LEVEL	14.951	14.851 14.851	14.835 14.760	14.258 14.258	14.191 14.191 14.098 13.490
FINISHED SURFACE LEVEL	15.621	15.515	15.487	15.298	15.278 15.173
PIPE CHAINAGE	–0.400 9.585	9.585 11.185	11.185 21.167	21.167	22.505 27.011
PIPE LENGTH	9.985	1.600	9.982	1.339	4.506

LINE 3A



DATUM (m)	8.00				
PIPE SIZE (mm)	150ø	150ø	225ø	225ø	
PIPE CLASS	PVC SN8	PVC SN8	PVC SN8	PVC SN8	
PIPE GRADE (%)	1.00%	1.00%	4.28%	5.00%	
HYDRAULIC GRADE LINE	14.966 14.958	14.918 14.886	14.817 14.803	14.499 14.470	14.469 14.360
DEPTH TO INVERT	0.635	0.613	0.613 0.688	1.016	1.087
INVERT LEVEL	14.893	14.793 14.793	14.777 14.702	14.275 14.275	14.191 14.191
FINISHED SURFACE LEVEL	15.491	15.407	15.391	15.291	15.278
PIPE CHAINAGE	0.000 9.985	9.985 11.585	11.585 21.570	21.570	23.245
PIPE LENGTH	9.985	1.600	9.985	1.675	

LINE 6A



DATUM (m)	8.00				
PIPE SIZE (mm)	150ø	150ø	225ø	225ø	
PIPE CLASS	PVC SN8	PVC SN8	PVC SN8	PVC SN8	
PIPE GRADE (%)	1.00%	1.00%	4.39%	1.00%	
HYDRAULIC GRADE LINE	15.420 15.412	15.372 15.340	15.273 15.258	14.852 14.824	14.806 14.765
DEPTH TO INVERT	0.608	0.609	0.609 0.684	1.034	0.974 1.048
INVERT LEVEL	15.348	15.247 15.247	15.232 15.157	14.705 14.705	14.660 14.586
FINISHED SURFACE LEVEL	15.955	15.857	15.842	15.739	15.634
PIPE CHAINAGE	–0.400 9.632	9.632 11.132	11.132 21.432	21.432	25.936
PIPE LENGTH	10.032	1.500	10.300	4.505	

LINE 7A

ROCKHAMPTON REGIONAL COUNCIL
AMENDED PLANS APPROVED
12 January 2026
DATE
These plans are approved subject to the current conditions of approval associated with
Development Permit No.: D/170-2022
Dated: 12 June 2023

ROOF WATER LONGITUDINAL SECTIONS LINES 1A - 7A

SCALE A1 – 1:500(H) 1:50(V)
A3 – 1:1000(H) 1:100(V)

No.	DATE	REVISIONS	DES	DRN	CHK	APD
C	14.03.25	GENERAL AMENDEMENT	S.C.M	J.J.D	J.M.H	J.M.H
B	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

J. HILL RPEQ 19891
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CENTRAL VICTORIA T 03 5441 0922 E centralvic@westerapartners.com.au

SURVEYOR CAPRICORN SURVEY GROUP CQ
PHONE 07 4927 5199
DATUM A.H.D. P.M. R.L.

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PROJECT	PROPOSED RETIREMENT LIVING ESTATE
LOCATION	LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE	STORMWATER LONGITUDINAL SECTIONS LINE 1A – 7A
CLIENT	RUBY DEVELOPMENT PTY LTD

DRAWING STATUS	FOR CONSTRUCTION
DRAWING NUMBER	S24–018–C23
SHEET NUMBER	23 OF 37
REVISION	C

S24–018–C_Stm_Lsec.dwg

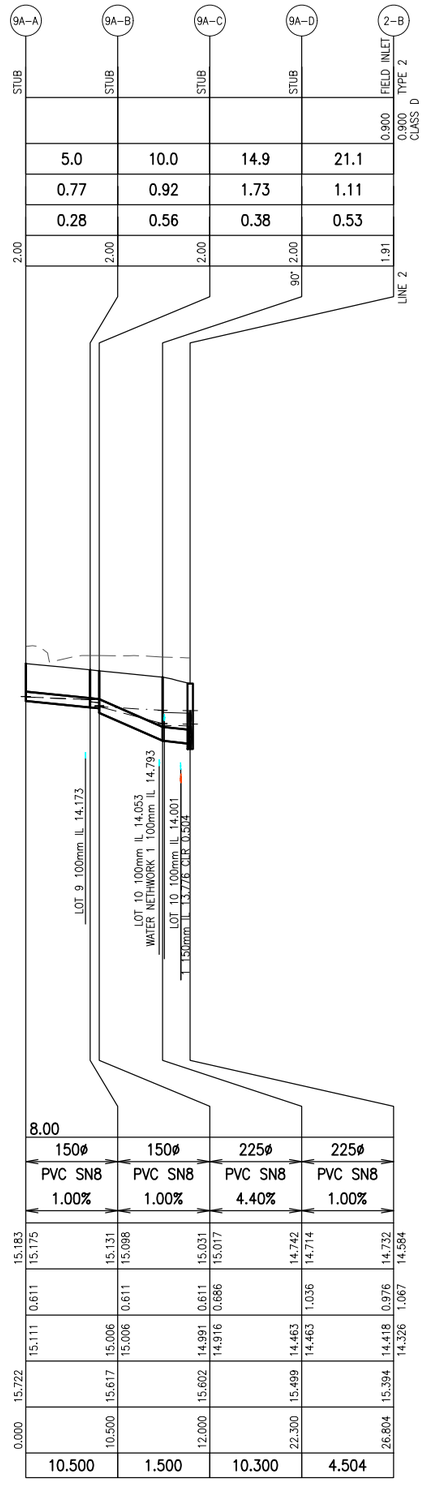
PIT TYPE					
PIT SIZE					0.900 CLASS D
PIPE FLOW (L/s)	5.0	10.0	14.9	21.1	
PART PIPE VELOCITY (m/s)	0.77	0.92	1.73	1.11	
FULL PIPE VELOCITY (m/s)	0.28	0.56	0.38	0.53	
PIT LOSS FACTOR					1.91

LEGEND

— — — DENOTES 5% AEP HGL

—·—·— DENOTES 1% AEP HGL

NOTE:
ALL FIELD INLETS DISCHARGING TO THE ATLAN FILTER CARTRIDGE CHAMBER ARE TO BE FITTED WITH STORMSACKS.

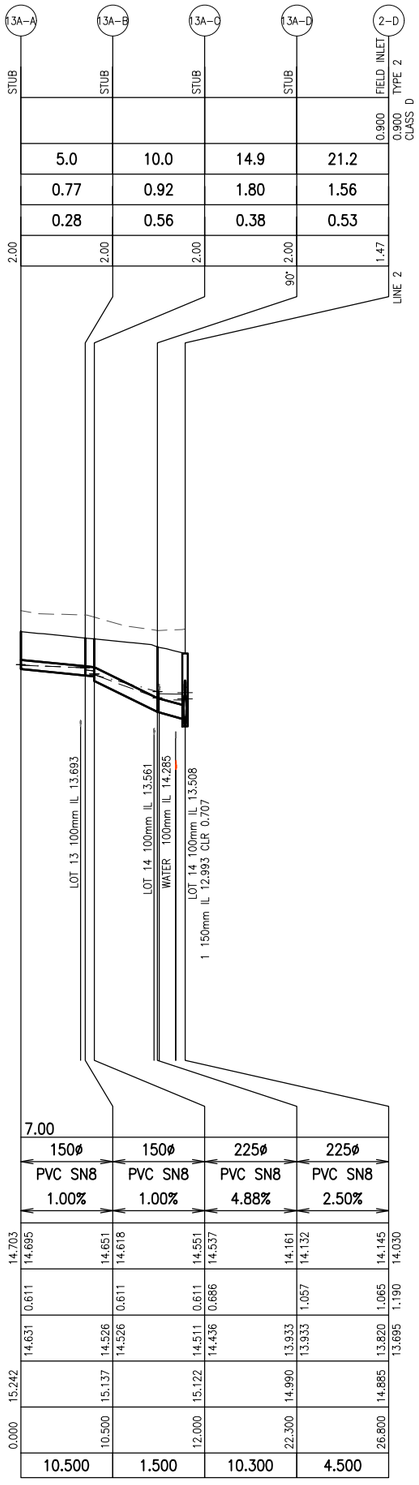


DATUM (m)	8.00				
PIPE SIZE (mm)	150ø	150ø	225ø	225ø	
PIPE CLASS	PVC SN8	PVC SN8	PVC SN8	PVC SN8	
PIPE GRADE (%)	1.00%	1.00%	4.40%	1.00%	
HYDRAULIC GRADE LINE	15.183 / 15.175	15.131 / 15.098	15.031 / 15.017	14.742 / 14.714	14.732 / 14.584
DEPTH TO INVERT	0.611	0.611	0.611 / 0.686	1.036	0.976 / 1.067
INVERT LEVEL	15.111	15.006 / 15.006	14.991 / 14.916	14.463 / 14.463	14.418 / 14.326
FINISHED SURFACE LEVEL	15.722	15.617	15.602	15.499	15.394
PIPE CHAINAGE	0.000	10.500	12.000	22.300	26.804
PIPE LENGTH	10.500	1.500	10.300	4.504	

LINE 9A

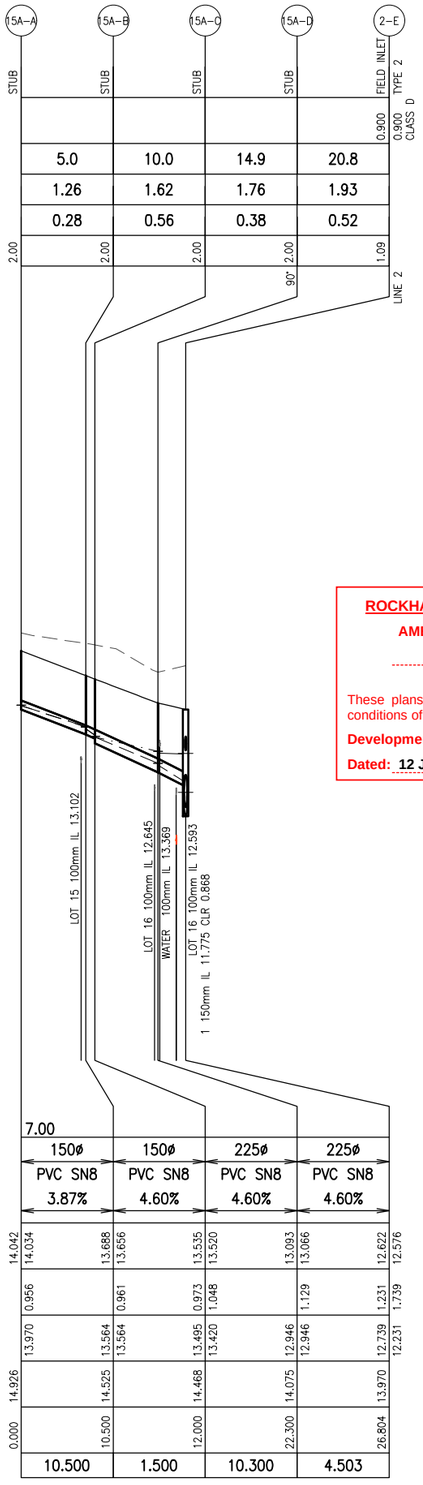
DATUM (m)	8.00				
PIPE SIZE (mm)	150ø	150ø	225ø	225ø	
PIPE CLASS	PVC SN8	PVC SN8	PVC SN8	PVC SN8	
PIPE GRADE (%)	1.00%	1.00%	4.40%	2.04%	
HYDRAULIC GRADE LINE	14.943 / 14.935	14.891 / 14.858	14.791 / 14.777	14.472 / 14.443	14.462 / 14.313
DEPTH TO INVERT	0.611	0.611	0.611 / 0.886	1.036	1.022 / 1.142
INVERT LEVEL	14.871	14.766 / 14.766	14.751 / 14.676	14.223 / 14.223	14.131 / 14.011
FINISHED SURFACE LEVEL	15.482	15.377	15.362	15.259	15.154
PIPE CHAINAGE	0.000	10.500	12.000	22.300	26.802
PIPE LENGTH	10.500	1.500	10.300	4.502	

LINE 11A



DATUM (m)	7.00				
PIPE SIZE (mm)	150ø	150ø	225ø	225ø	
PIPE CLASS	PVC SN8	PVC SN8	PVC SN8	PVC SN8	
PIPE GRADE (%)	1.00%	1.00%	4.88%	2.50%	
HYDRAULIC GRADE LINE	14.703 / 14.695	14.651 / 14.618	14.561 / 14.537	14.161 / 14.132	14.145 / 14.030
DEPTH TO INVERT	0.611	0.611	0.611 / 0.886	1.057	1.065 / 1.190
INVERT LEVEL	14.631	14.526 / 14.526	14.511 / 14.436	13.933 / 13.933	13.820 / 13.695
FINISHED SURFACE LEVEL	15.242	15.137	15.122	14.990	14.885
PIPE CHAINAGE	0.000	10.500	12.000	22.300	26.800
PIPE LENGTH	10.500	1.500	10.300	4.500	

LINE 13A



DATUM (m)	7.00				
PIPE SIZE (mm)	150ø	150ø	225ø	225ø	
PIPE CLASS	PVC SN8	PVC SN8	PVC SN8	PVC SN8	
PIPE GRADE (%)	3.87%	4.60%	4.60%	4.60%	
HYDRAULIC GRADE LINE	14.042 / 14.034	13.688 / 13.656	13.535 / 13.520	13.093 / 13.066	12.622 / 12.576
DEPTH TO INVERT	0.956	0.961	0.973 / 1.048	1.129	1.231 / 1.739
INVERT LEVEL	13.970	13.564 / 13.564	13.495 / 13.420	12.946 / 12.946	12.739 / 12.231
FINISHED SURFACE LEVEL	14.926	14.525	14.468	14.075	13.970
PIPE CHAINAGE	0.000	10.500	12.000	22.300	26.804
PIPE LENGTH	10.500	1.500	10.300	4.503	

LINE 15A

ROOF WATER LONGITUDINAL SECTIONS LINES 9A - 15A

SCALE A1 – 1:500(H) 1:50(V)
A3 – 1:1000(H) 1:100(V)

ROCKHAMPTON REGIONAL COUNCIL
AMENDED PLANS APPROVED
12 January 2026
DATE
These plans are approved subject to the current conditions of approval associated with
Development Permit No.: D/170-2022
Dated: 12 June 2023

No.	DATE	REVISIONS	DES	DRN	CHK	APD
C	14.03.25	GENERAL AMENDEMENT	S.C.M	J.J.D	J.M.H	J.M.H
B	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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SURVEYOR
CAPRICORN SURVEY GROUP CQ
PHONE 07 4927 5199
DATUM A.H.D.
P.M.
R.L.

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PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712
192 DEAN STREET, BERSERKER
TITLE STORMWATER LONGITUDINAL SECTIONS LINES 9A – 15A
CLIENT RUBY DEVELOPMENT PTY LTD

DRAWING STATUS: FOR CONSTRUCTION
DRAWING NUMBER: S24–018–C24
SHEET NUMBER: 24 OF 37
REVISION: C

S24-018-C_Stm_Lsec.dwg

PIT TYPE	17A–A	17A–B	17A–C	2–F
	STUB	STUB	BEND	FIELD INLET TYPE 2 CLASS D
PIT SIZE				0.900 0.900
PIPE FLOW (L/s)	5.0	10.0	10.0	
PART PIPE VELOCITY (m/s)	1.48	1.91	0.92	
FULL PIPE VELOCITY (m/s)	0.28	0.56	0.56	
PIT LOSS FACTOR	2.00	2.00	2.00 76°	1.78 LINE 2

PIT TYPE	18A–A	18A–B	18A–C	18A–D	2–A
	STUB	STUB	STUB	STUB	FIELD INLET TYPE 2 CLASS D
PIT SIZE					0.900 0.900
PIPE FLOW (L/s)	5.0	10.0	14.9	21.1	
PART PIPE VELOCITY (m/s)	0.77	0.92	1.02	1.46	
FULL PIPE VELOCITY (m/s)	0.28	0.56	0.38	0.53	
PIT LOSS FACTOR	2.00	2.00	2.00	2.00 –90°	2.23 LINE 2

PIT TYPE	20A–A	20A–B	20A–C	20A–D	2–B
	STUB	STUB	STUB	STUB	FIELD INLET TYPE 2 CLASS D
PIT SIZE					0.900 0.900
PIPE FLOW (L/s)	5.0	10.0	14.9	21.1	
PART PIPE VELOCITY (m/s)	0.77	0.92	1.02	1.44	
FULL PIPE VELOCITY (m/s)	0.28	0.56	0.38	0.53	
PIT LOSS FACTOR	2.00	2.00	2.00	2.00 –90°	1.91 LINE 2

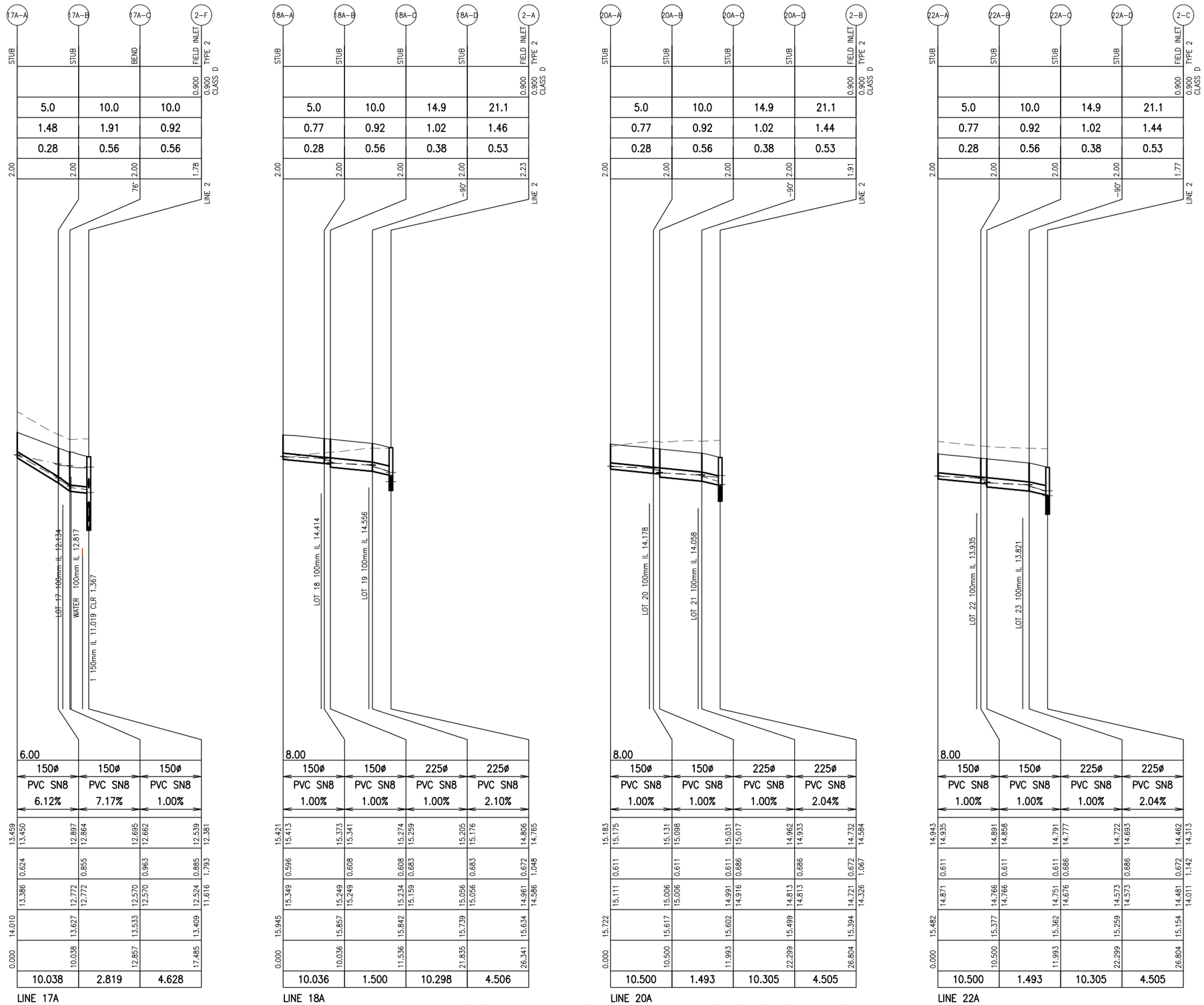
PIT TYPE	22A–A	22A–B	22A–C	22A–D	2–C
	STUB	STUB	STUB	STUB	FIELD INLET TYPE 2 CLASS D
PIT SIZE					0.900 0.900
PIPE FLOW (L/s)	5.0	10.0	14.9	21.1	
PART PIPE VELOCITY (m/s)	0.77	0.92	1.02	1.44	
FULL PIPE VELOCITY (m/s)	0.28	0.56	0.38	0.53	
PIT LOSS FACTOR	2.00	2.00	2.00	2.00 –90°	1.77 LINE 2

LEGEND

— — — DENOTES 5% AEP HGL

—·—·— DENOTES 1% AEP HGL

NOTE:
ALL FIELD INLETS DISCHARGING TO THE ATLAN FILTER CARTRIDGE CHAMBER ARE TO BE FITTED WITH STORMSACKS.



DATUM (m)	6.00			
PIPE SIZE (mm)	150ø	150ø	150ø	
PIPE CLASS	PVC SN8	PVC SN8	PVC SN8	
PIPE GRADE (%)	6.12%	7.17%	1.00%	
HYDRAULIC GRADE LINE	13.459 13.450	12.897 12.864	12.695 12.662	12.539 12.381
DEPTH TO INVERT	0.624	0.855	0.963	0.885 1.793
INVERT LEVEL	13.386	12.772 12.772	12.570 12.570	12.524 11.616
FINISHED SURFACE LEVEL	14.010	13.627	13.533	13.409
PIPE CHAINAGE	0.000	10.038	12.857	17.485
PIPE LENGTH	10.038	2.819	4.628	

LINE 17A

DATUM (m)	8.00				
PIPE SIZE (mm)	150ø	150ø	225ø	225ø	
PIPE CLASS	PVC SN8	PVC SN8	PVC SN8	PVC SN8	
PIPE GRADE (%)	1.00%	1.00%	1.00%	2.10%	
HYDRAULIC GRADE LINE	15.421 15.413	15.373 15.341	15.274 15.259	15.205 15.176	14.806 14.765
DEPTH TO INVERT	0.596	0.608	0.608 0.683	0.683	0.672 1.048
INVERT LEVEL	15.349	15.249 15.249	15.234 15.159	15.056 15.056	14.961 14.586
FINISHED SURFACE LEVEL	15.945	15.857	15.842	15.739	15.634
PIPE CHAINAGE	0.000	10.036	11.536	21.835	26.341
PIPE LENGTH	10.036	1.500	10.298	4.506	

LINE 18A

DATUM (m)	8.00				
PIPE SIZE (mm)	150ø	150ø	225ø	225ø	
PIPE CLASS	PVC SN8	PVC SN8	PVC SN8	PVC SN8	
PIPE GRADE (%)	1.00%	1.00%	1.00%	2.04%	
HYDRAULIC GRADE LINE	15.183 15.175	15.131 15.098	15.031 15.017	14.962 14.933	14.732 14.584
DEPTH TO INVERT	0.611	0.611	0.611 0.686	0.686	0.672 1.067
INVERT LEVEL	15.111	15.006 15.006	14.991 14.916	14.813 14.813	14.721 14.326
FINISHED SURFACE LEVEL	15.722	15.617	15.602	15.499	15.394
PIPE CHAINAGE	0.000	10.500	11.993	22.299	26.804
PIPE LENGTH	10.500	1.493	10.305	4.505	

LINE 20A

DATUM (m)	8.00				
PIPE SIZE (mm)	150ø	150ø	225ø	225ø	
PIPE CLASS	PVC SN8	PVC SN8	PVC SN8	PVC SN8	
PIPE GRADE (%)	1.00%	1.00%	1.00%	2.04%	
HYDRAULIC GRADE LINE	14.943 14.935	14.891 14.858	14.791 14.777	14.722 14.693	14.462 14.313
DEPTH TO INVERT	0.611	0.611	0.611 0.686	0.686	0.672 1.142
INVERT LEVEL	14.871	14.766 14.766	14.751 14.676	14.573 14.573	14.481 14.011
FINISHED SURFACE LEVEL	15.482	15.377	15.362	15.259	15.154
PIPE CHAINAGE	0.000	10.500	11.993	22.299	26.804
PIPE LENGTH	10.500	1.493	10.305	4.505	

LINE 22A

ROOF WATER LONGITUDINAL SECTIONS LINES 17A - 22A

SCALE A1 – 1:500(H) 1:50(V)
A3 – 1:1000(H) 1:100(V)

ROCKHAMPTON REGIONAL COUNCIL
AMENDED PLANS APPROVED
12 January 2026
DATE
These plans are approved subject to the current conditions of approval associated with
Development Permit No.: D/170-2022
Dated: 12 June 2023

No.	DATE	REVISIONS	DES	DRN	CHK	APD
C	14.03.25	GENERAL AMENDEMENT	S.C.M	J.J.D	J.M.H	J.M.H
B	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

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For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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SURVEYOR
CAPRICORN SURVEY GROUP CQ
PHONE 07 4927 5199

DATUM A.H.D.
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PROJECT	PROPOSED RETIREMENT LIVING ESTATE
LOCATION	LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE	STORMWATER LONGITUDINAL SECTIONS LINES 17A – 22A
CLIENT	RUBY DEVELOPMENT PTY LTD

DRAWING STATUS	FOR CONSTRUCTION
DRAWING NUMBER	S24-018-C25
SHEET NUMBER	25 OF 37
REVISION	C

S24-018-C_Stm_Lsec.dwg

PIT TYPE	24A–A	24A–B	24A–C	24A–D	2–D
	STUB	STUB	STUB	STUB	FIELD INLET TYPE 2
PIT SIZE					0.900 0.900 CLASS D
PIPE FLOW (L/s)	5.0	10.0	14.9	21.1	
PART PIPE VELOCITY (m/s)	0.77	0.92	1.02	1.56	
FULL PIPE VELOCITY (m/s)	0.28	0.56	0.38	0.53	
PIT LOSS FACTOR	2.00	2.00	2.00	2.00 –90°	1.47 LINE 2

PIT TYPE	26A–A	26A–B	26A–C	26A–D	2–E
	STUB	STUB	STUB	STUB	FIELD INLET TYPE 2
PIT SIZE					0.900 0.900 CLASS D
PIPE FLOW (L/s)	5.0	10.0	14.9	21.1	
PART PIPE VELOCITY (m/s)	0.77	0.92	1.55	1.44	
FULL PIPE VELOCITY (m/s)	0.28	0.56	0.38	0.53	
PIT LOSS FACTOR	2.00	2.00	2.00	2.00 –90°	1.09 LINE 2

PIT TYPE	28A–A	28A–B	28A–C	28A–D	2–F
	STUB	STUB	STUB	BEND	FIELD INLET TYPE 2
PIT SIZE					0.900 0.900 CLASS D
PIPE FLOW (L/s)	5.0	10.0	16.2	16.2	
PART PIPE VELOCITY (m/s)	0.77	0.92	1.54	1.54	
FULL PIPE VELOCITY (m/s)	0.28	0.56	0.41	0.41	
PIT LOSS FACTOR	2.00	2.00	2.00	2.00 –90°	1.78 LINE 2

PIT TYPE	29B–A	29B–B	29B–C	2–H
	STUB	STUB	TEE	FIELD INLET TYPE 2
PIT SIZE				1.350ø 0.900SQ TYPE 2 CLASS D GRATE
PIPE FLOW (L/s)	5.0	10.9	15.9	
PART PIPE VELOCITY (m/s)	0.77	1.26	1.33	
FULL PIPE VELOCITY (m/s)	0.28	0.62	0.40	
PIT LOSS FACTOR	2.00	2.00	2.00 –90°	2.22 LINE 2

LINE 30B: 90°

LEGEND

— — — DENOTES 5% AEP HGL

—·—·— DENOTES 1% AEP HGL

NOTE:
ALL FIELD INLETS DISCHARGING TO THE ATLAN FILTER CARTRIDGE CHAMBER ARE TO BE FITTED WITH STORMSACKS.

LOT 24 100mm IL 13.692

LOT 25 100mm IL 13.282

LOT 26 100mm IL 12.659

LOT 27 100mm IL 12.047

LOT 28 100mm IL 11.412

DATUM (m)	7.00								7.00								6.00								5.00						
PIPE SIZE (mm)	150ø			150ø			225ø		150ø			150ø			225ø		150ø			150ø			225ø		150ø			150ø			225ø
PIPE CLASS	PVC SN8			PVC SN8			PVC SN8		PVC SN8			PVC SN8			PVC SN8		PVC SN8			PVC SN8			PVC SN8		PVC SN8			PVC SN8			PVC SN8
PIPE GRADE (%)	1.00%			1.00%			1.00%		1.00%			1.00%			3.22%		1.00%			1.00%			3.00%		1.00%			2.18%			2.00%
HYDRAULIC GRADE LINE	14.703	14.695		14.651	14.618		14.551	14.537	13.993	13.985		13.941	13.908		13.841	13.827	13.114	13.106		13.062	13.029		12.969	12.952	13.028	13.020		13.020	12.981		12.771	12.755
DEPTH TO INVERT	0.611			0.611			0.611	0.686	1.005			0.709	0.667		0.742	0.680	0.968			0.672	0.630		0.705	0.726	0.529			0.529	0.615		0.690	0.675
INVERT LEVEL	14.631			14.526	14.526		14.511	14.436	13.921			13.816	13.816		13.801	13.726	13.042			12.937	12.937		12.922	12.847	12.899			12.884	12.884		12.726	12.651	12.561
FINISHED SURFACE LEVEL	15.242			15.137	15.122		14.990		14.926			14.525	14.468		14.075	13.970	14.010			13.609	13.552		13.514	13.409	13.428			13.413	13.341		13.252	13.236	13.197
PIPE CHAINAGE	0.000	10.500		12.000			22.298	26.803	0.000	10.508		12.008			22.306	26.806	0.000	10.499		11.999			13.960	18.465	0.000	1.500		8.749			13.252	16.197
PIPE LENGTH	10.500			1.500			10.298	4.505	10.508			1.500			10.298	4.500	10.499			1.500			1.961	4.505	1.500			7.249			4.503	
	LINE 24A								LINE 26A								LINE 28A								LINE 29B						

ROOF WATER LONGITUDINAL SECTIONS LINES 24A - 29B

SCALE A1 – 1:500(H) 1:50(V)
A3 – 1:1000(H) 1:100(V)

ROCKHAMPTON REGIONAL COUNCIL
AMENDED PLANS APPROVED
12 January 2026
DATE
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B	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
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SURVEYOR CAPRICORN SURVEY GROUP CQ PHONE 07 4927 5199
DATUM A.H.D. P.M. R.L.

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PROJECT	PROPOSED RETIREMENT LIVING ESTATE
LOCATION	LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE	STORMWATER LONGITUDINAL SECTIONS LINES 24A – 29B
CLIENT	RUBY DEVELOPMENT PTY LTD

DRAWING STATUS	FOR CONSTRUCTION
DRAWING NUMBER	S24–018–C26
SHEET NUMBER	26 OF 37
REVISION	C

S24–018–C_Stm_Lsec.dwg

PIT TYPE																					
PIT SIZE																					
PIPE FLOW (L/s)		5.0				5.0	10.0			5.0	10.0	14.9	21.1			5.0	10.0	14.9	21.1		
PART PIPE VELOCITY (m/s)		1.41				1.28	0.92			0.77	0.92	1.51	1.66			0.77	0.92	1.31	1.48		
FULL PIPE VELOCITY (m/s)		0.28				0.28	0.56			0.28	0.56	0.38	0.53			0.28	0.56	0.38	0.53		
PIT LOSS FACTOR	2.00		2.00		2.00			2.11		2.00				0.88		2.00				0.96	
	30B–A		29B–C		31A–A		31A–B		1–O	33A–A		33A–C	33A–D		1–L	35A–A	35A–B	35A–C	35A–D		1–K
	STUB		TEE		STUB		STUB		FIELD INLET 1.500ø 0.900SQ TYPE 2 CLASS D GRATE	STUB		STUB	STUB		FIELD INLET 0.900 0.900 TYPE 2 CLASS D	STUB		STUB	STUB		FIELD INLET 0.900 0.900 TYPE 2 CLASS D
			LINE 29B				–38°		LINE 1				90°		LINE 1				90°		LINE 1

LEGEND

— — — DENOTES 5% AEP HGL

—·—·— DENOTES 1% AEP HGL

NOTE:
ALL FIELD INLETS DISCHARGING TO THE ATLAN FILTER CARTRIDGE CHAMBER ARE TO BE FITTED WITH STORMSACKS.

WATER NETWORK 1 100mm IL 12.271

LOT 33 100mm IL 11.780

LOT 32 100mm IL 11.466

LOT 35 100mm IL 12.076

LOT 34 100mm IL 12.024

DATUM (m)																					
PIPE SIZE (mm)		150ø				150ø	150ø			150ø	150ø	225ø	225ø			150ø	150ø	225ø	225ø		
PIPE CLASS		PVC SN8				PVC SN8	PVC SN8			PVC SN8	PVC SN8	PVC SN8	PVC SN8			PVC SN8	PVC SN8	PVC SN8	PVC SN8		
PIPE GRADE (%)		5.33%				4.11%	1.00%			1.00%	1.00%	3.00%	3.00%			1.00%	1.00%	2.00%	2.16%		
HYDRAULIC GRADE LINE	12.947	12.939		12.771	12.755	12.653	12.645	12.097	12.064	12.073	13.072	13.064	13.020	12.987	12.920	12.906	12.647	12.618	12.379	12.221	13.728	13.720	13.676	13.643	13.576	13.562	13.404	13.375	12.995	12.860
DEPTH TO INVERT	0.399		0.615	0.690		0.577	0.793	0.990		0.885	1.655	0.878	0.668	0.638	0.713	0.805	0.713	0.743	1.345		0.610	0.610	0.610	0.685		0.674	0.667	1.397		
INVERT LEVEL	12.875		12.726	12.651		12.581	12.169	11.972		11.901	11.131	13.000	12.895	12.880	12.805		12.498	12.498	12.363	11.761	13.656	13.551	13.551	13.536	13.461	13.255	13.255	13.158	12.427	
FINISHED SURFACE LEVEL	13.274		13.341			13.158	12.962			12.786		13.878	13.563	13.518		13.211		13.106			14.266	14.161		14.146		13.929		13.824		
PIPE CHAINAGE	0.000		2.785			0.000	10.035			17.174		0.000	10.500	12.000		22.250		26.749			0.000	10.500		12.000		22.300		26.800		
PIPE LENGTH	2.785					10.035		7.139				10.500		1.500		10.250		4.499			10.500		1.500		10.300		4.499			
	LINE 30B					LINE 31A						LINE 33A									LINE 35A									

ROOF WATER LONGITUDINAL SECTIONS LINES 30B - 35A

SCALE A1 – 1:500(H) 1:50(V)
A3 – 1:1000(H) 1:100(V)

ROCKHAMPTON REGIONAL COUNCIL
AMENDED PLANS APPROVED
12 January 2026
DATE
These plans are approved subject to the current conditions of approval associated with
Development Permit No.: D/170-2022
Dated: 12 June 2023

No.	DATE	REVISIONS	DES	DRN	CHK	APD
C	14.03.25	GENERAL AMENDEMENT	S.C.M	J.J.D	J.M.H	J.M.H
B	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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NORTHERN NSW T 02 6674 8047 E nsw@westerapartners.com.au
CENTRAL VICTORIA T 03 5441 0922 E centralvic@westerapartners.com.au

SURVEYOR CAPRICORN SURVEY GROUP CQ
PHONE 07 4927 5199
DATUM A.H.D.
P.M.
R.L.

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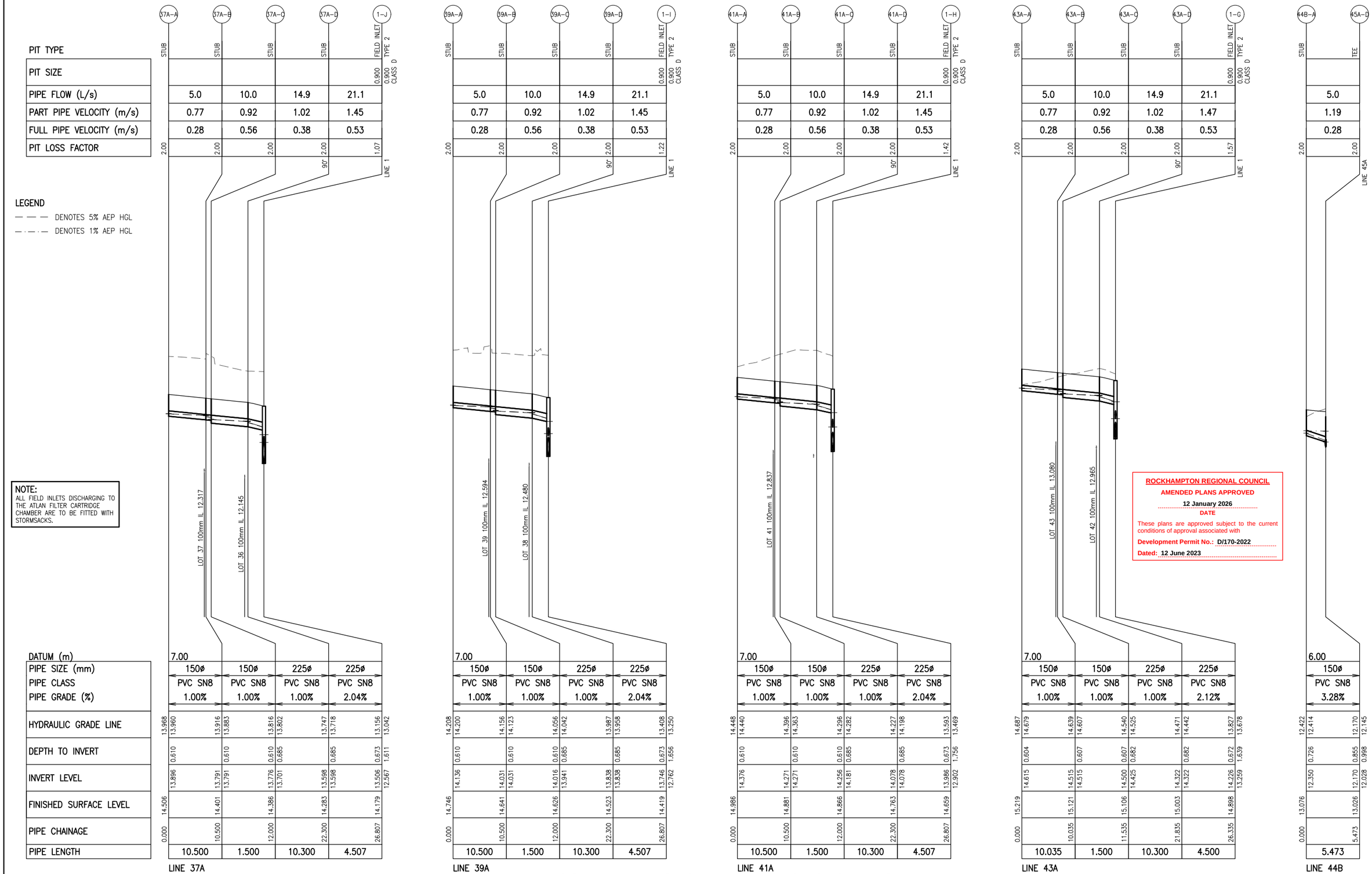
PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712
192 DEAN STREET, BERSERKER
TITLE STORMWATER LONGITUDINAL SECTIONS LINES 30B – 35A
CLIENT RUBY DEVELOPMENT PTY LTD

DRAWING STATUS FOR CONSTRUCTION
DRAWING NUMBER S24-018-C27
SHEET NUMBER 27 OF 37
REVISION C

S24-018-C_Stm_Lsec.dwg



PIT TYPE																							
PIT SIZE				0.900				0.900				0.900				0.900				0.900			
PIPE FLOW (L/s)	5.0	10.0	14.9	21.1	5.0	10.0	14.9	21.1	5.0	10.0	14.9	21.1	5.0	10.0	14.9	21.1	5.0	1.19				
PART PIPE VELOCITY (m/s)	0.77	0.92	1.02	1.45	0.77	0.92	1.02	1.45	0.77	0.92	1.02	1.45	0.77	0.92	1.02	1.47	0.28					
FULL PIPE VELOCITY (m/s)	0.28	0.56	0.38	0.53	0.28	0.56	0.38	0.53	0.28	0.56	0.38	0.53	0.28	0.56	0.38	0.53						
PIT LOSS FACTOR	2.00	2.00	2.00	2.00	1.07	2.00	2.00	2.00	2.00	1.22	2.00	2.00	2.00	2.00	2.00	1.42	2.00	2.00	2.00	2.00	1.57	2.00	2.00

DATUM (m)	7.00								7.00								7.00								7.00								6.00	
PIPE SIZE (mm)	150ø		150ø		225ø		225ø		150ø		150ø		225ø		225ø		150ø		150ø		225ø		225ø		150ø		150ø		225ø		225ø		150ø	
PIPE CLASS	PVC SN8		PVC SN8		PVC SN8		PVC SN8		PVC SN8		PVC SN8		PVC SN8		PVC SN8		PVC SN8		PVC SN8		PVC SN8		PVC SN8		PVC SN8		PVC SN8		PVC SN8		PVC SN8		PVC SN8	
PIPE GRADE (%)	1.00%		1.00%		1.00%		2.04%		1.00%		1.00%		1.00%		2.04%		1.00%		1.00%		1.00%		2.04%		1.00%		1.00%		1.00%		2.12%		3.28%	
HYDRAULIC GRADE LINE	13.968	13.960	13.916	13.883	13.816	13.802	13.747	13.718	13.156	13.042	14.208	14.200	14.156	14.123	14.056	14.042	13.987	13.958	13.408	13.250	14.448	14.440	14.396	14.363	14.296	14.282	14.227	14.198	13.593	13.469	14.687	14.679	14.639	14.607	14.540	14.525	14.471	14.442	13.827	13.678	12.422	12.414	12.170	12.145
DEPTH TO INVERT	0.610		0.610		0.610	0.685		0.685	0.673	1.611	0.610		0.610		0.610	0.685		0.685	0.673	1.656	0.610		0.610		0.610	0.685		0.685	0.673	1.756		0.604		0.607		0.607	0.682		0.682	0.672	1.639		0.726	0.855	0.998
INVERT LEVEL	13.896		13.791	13.791	13.776	13.701	13.598	13.598	13.506	12.567	13.136	14.031	14.031	14.016	13.941	13.838	13.838	13.523	13.746	12.762	14.376		14.271	14.271	14.256	14.181	14.078	14.078	13.986	12.902	14.615		14.515	14.515	14.500	14.425	14.322	14.322	14.226	13.259	12.350	12.170	12.028	
FINISHED SURFACE LEVEL	14.506		14.401		14.386		14.283		14.179		14.746		14.641		14.626		14.523		14.419		14.986		14.881		14.866		14.763		14.659		15.219		15.121		15.106		15.003		14.898		13.076		13.026	
PIPE CHAINAGE	0.000	10.500		12.000		22.300		26.807			0.000	10.500		12.000		22.300		26.807			0.000	10.500		12.000		22.300		26.807			0.000	10.035		11.535		21.835		26.335			0.000	5.473		
PIPE LENGTH	10.500		1.500		10.300		4.507				10.500		1.500		10.300		4.507				10.500		1.500		10.300		4.507				10.035		1.500		10.300		4.500				5.473		

NOTE:
ALL FIELD INLETS DISCHARGING TO THE ATLAN FILTER CARTRIDGE CHAMBER ARE TO BE FITTED WITH STORMSACKS.

ROCKHAMPTON REGIONAL COUNCIL
AMENDED PLANS APPROVED
12 January 2026
DATE
These plans are approved subject to the current conditions of approval associated with
Development Permit No.: D/170-2022
Dated: 12 June 2023

ROOF WATER LONGITUDINAL SECTIONS LINES 37A - 44B

SCALE A1 – 1:500(H) 1:50(V)
A3 – 1:1000(H) 1:100(V)

No.	DATE	REVISIONS	DES	DRN	CHK	APD
C	14.03.25	GENERAL AMENDEMENT	S.C.M	J.J.D	J.M.H	J.M.H
B	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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NORTHERN NSW T 02 6674 8047 E nsw@westerapartners.com.au
CENTRAL VICTORIA T 03 5441 0922 E centralvic@westerapartners.com.au

SURVEYOR
CAPRICORN SURVEY GROUP CQ
PHONE 07 4927 5199
DATUM A.H.D.
P.M.
R.L.

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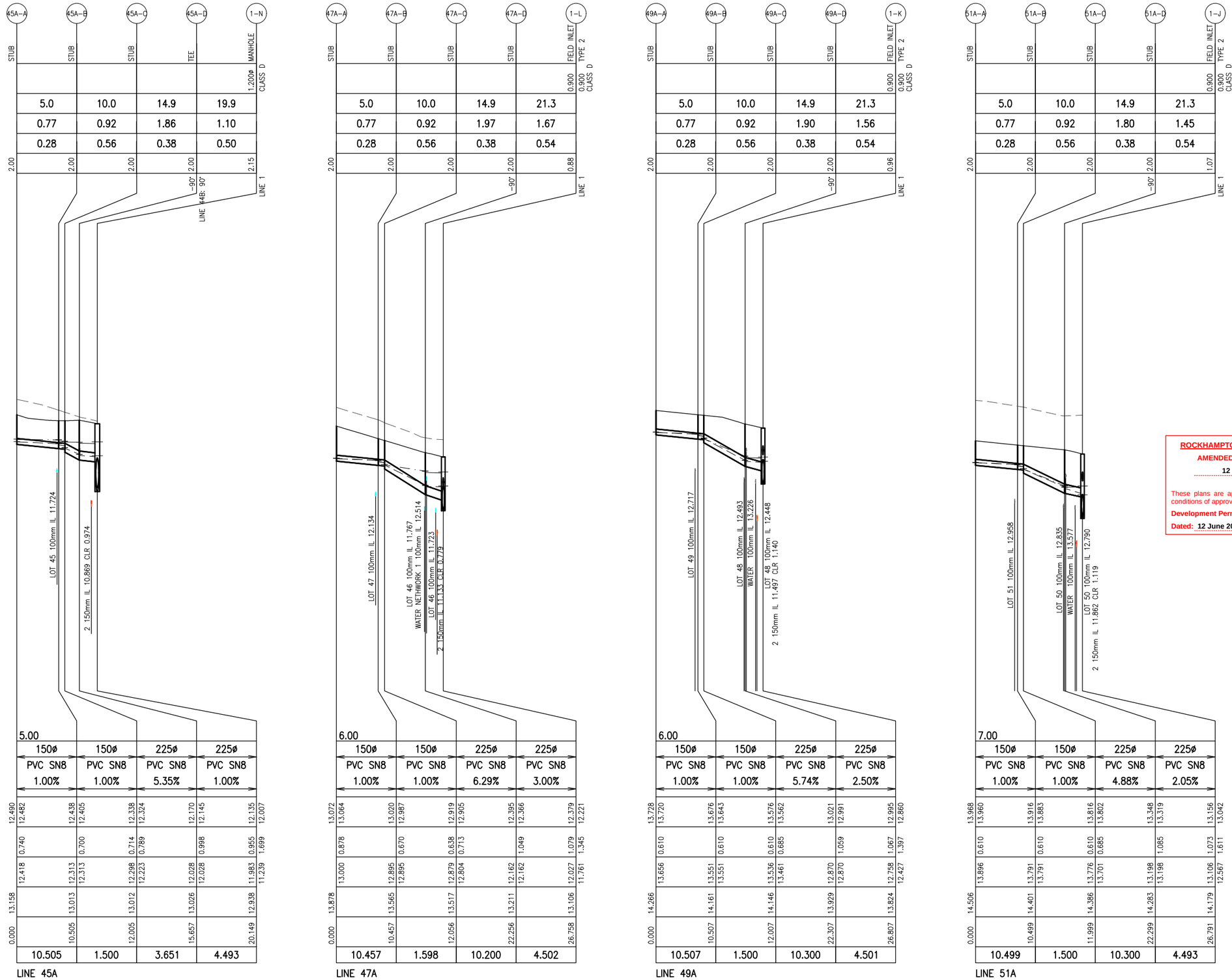
PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712
192 DEAN STREET, BERSERKER
TITLE STORMWATER LONGITUDINAL SECTIONS LINES 37A – 44B
CLIENT RUBY DEVELOPMENT PTY LTD

DRAWING STATUS FOR CONSTRUCTION
DRAWING NUMBER S24-018-C28
SHEET NUMBER 28 OF 37
REVISION C

S24-018-C_Stm_Lsec.dwg



PIT TYPE

PIT SIZE					
PIPE FLOW (L/s)	5.0	10.0	14.9	19.9	
PART PIPE VELOCITY (m/s)	0.77	0.92	1.86	1.10	
FULL PIPE VELOCITY (m/s)	0.28	0.56	0.38	0.50	
PIT LOSS FACTOR	2.00	2.00	2.00	2.00	2.15

PIT SIZE					
PIPE FLOW (L/s)	5.0	10.0	14.9	21.3	
PART PIPE VELOCITY (m/s)	0.77	0.92	1.97	1.67	
FULL PIPE VELOCITY (m/s)	0.28	0.56	0.38	0.54	
PIT LOSS FACTOR	2.00	2.00	2.00	2.00	0.88

PIT SIZE					
PIPE FLOW (L/s)	5.0	10.0	14.9	21.3	
PART PIPE VELOCITY (m/s)	0.77	0.92	1.90	1.56	
FULL PIPE VELOCITY (m/s)	0.28	0.56	0.38	0.54	
PIT LOSS FACTOR	2.00	2.00	2.00	2.00	0.96

PIT SIZE					
PIPE FLOW (L/s)	5.0	10.0	14.9	21.3	
PART PIPE VELOCITY (m/s)	0.77	0.92	1.80	1.45	
FULL PIPE VELOCITY (m/s)	0.28	0.56	0.38	0.54	
PIT LOSS FACTOR	2.00	2.00	2.00	2.00	1.07

LEGEND

— — — DENOTES 5% AEP HGL

—·—·— DENOTES 1% AEP HGL

NOTE:
ALL FIELD INLETS DISCHARGING TO THE ATLAN FILTER CARTRIDGE CHAMBER ARE TO BE FITTED WITH STORMSACKS.

DATUM (m)	5.00			
PIPE SIZE (mm)	150ø	150ø	225ø	225ø
PIPE CLASS	PVC SN8	PVC SN8	PVC SN8	PVC SN8
PIPE GRADE (%)	1.00%	1.00%	5.35%	1.00%
HYDRAULIC GRADE LINE	12.490 / 12.482	12.438 / 12.405	12.338 / 12.324	12.170 / 12.145	12.135 / 12.007
DEPTH TO INVERT	0.740	0.700	0.714 / 0.789	0.998	0.955 / 1.699
INVERT LEVEL	12.418	12.313 / 12.313	12.298 / 12.223	12.028 / 12.028	11.983 / 11.239
FINISHED SURFACE LEVEL	13.158	13.013	13.012	13.026	12.938
PIPE CHAINAGE	0.000	10.505	12.005	15.657	20.149
PIPE LENGTH	10.505	1.500	3.651	4.493	

LINE 45A

DATUM (m)	6.00			
PIPE SIZE (mm)	150ø	150ø	225ø	225ø
PIPE CLASS	PVC SN8	PVC SN8	PVC SN8	PVC SN8
PIPE GRADE (%)	1.00%	1.00%	6.29%	3.00%
HYDRAULIC GRADE LINE	13.072 / 13.064	13.020 / 12.987	12.919 / 12.905	12.395 / 12.366	12.379 / 12.221
DEPTH TO INVERT	0.878	0.670	0.638 / 0.713	1.049	1.079 / 1.345
INVERT LEVEL	13.000	12.895 / 12.895	12.879 / 12.804	12.162 / 12.162	12.027 / 11.761
FINISHED SURFACE LEVEL	13.878	13.565	13.517	13.211	13.106
PIPE CHAINAGE	0.000	10.457	12.056	22.256	26.758
PIPE LENGTH	10.457	1.598	10.200	4.502	

LINE 47A

DATUM (m)	6.00			
PIPE SIZE (mm)	150ø	150ø	225ø	225ø
PIPE CLASS	PVC SN8	PVC SN8	PVC SN8	PVC SN8
PIPE GRADE (%)	1.00%	1.00%	5.74%	2.50%
HYDRAULIC GRADE LINE	13.728 / 13.720	13.676 / 13.643	13.676 / 13.562	13.021 / 12.991	12.995 / 12.860
DEPTH TO INVERT	0.610	0.610	0.610 / 0.685	1.059	1.067 / 1.397
INVERT LEVEL	13.656	13.551 / 13.551	13.536 / 13.461	12.870 / 12.870	12.758 / 12.427
FINISHED SURFACE LEVEL	14.266	14.161	14.146	13.929	13.824
PIPE CHAINAGE	0.000	10.507	12.007	22.307	26.807
PIPE LENGTH	10.507	1.500	10.300	4.501	

LINE 49A

DATUM (m)	7.00			
PIPE SIZE (mm)	150ø	150ø	225ø	225ø
PIPE CLASS	PVC SN8	PVC SN8	PVC SN8	PVC SN8
PIPE GRADE (%)	1.00%	1.00%	4.88%	2.05%
HYDRAULIC GRADE LINE	13.968 / 13.960	13.916 / 13.883	13.816 / 13.802	13.348 / 13.319	13.156 / 13.042
DEPTH TO INVERT	0.610	0.610	0.610 / 0.685	1.085	1.073 / 1.611
INVERT LEVEL	13.896	13.791 / 13.791	13.776 / 13.701	13.198 / 13.198	13.106 / 12.567
FINISHED SURFACE LEVEL	14.506	14.401	14.386	14.283	14.179
PIPE CHAINAGE	0.000	10.499	11.999	22.299	26.791
PIPE LENGTH	10.499	1.500	10.300	4.493	

LINE 51A

ROCKHAMPTON REGIONAL COUNCIL
AMENDED PLANS APPROVED
12 January 2026
DATE
These plans are approved subject to the current conditions of approval associated with
Development Permit No.: D/170-2022
Dated: 12 June 2023

ROOF WATER LONGITUDINAL SECTIONS LINES 45A - 51A

SCALE A1 – 1:500(H) 1:50(V)
A3 – 1:1000(H) 1:100(V)

No.	DATE	REVISIONS	DES	DRN	CHK	APD
C	14.03.25	GENERAL AMENDEMENT	S.C.M	J.J.D	J.M.H	J.M.H
B	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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SURVEYOR
CAPRICORN SURVEY GROUP CQ
PHONE 07 4927 5199
DATUM A.H.D.
P.M.
R.L.

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PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE ROOFWATER LONGITUDINAL SECTIONS LINES 45A – 51A
CLIENT RUBY DEVELOPMENT PTY LTD

DRAWING STATUS: FOR CONSTRUCTION
DRAWING NUMBER: S24-018-C29
SHEET NUMBER: 29 OF 37
REVISION: C

S24-018-C_Stm_Lsec.dwg

PIT TYPE	53A–A	53A–B	53A–C	53A–D	1–I
	STUB	STUB	STUB	STUB	FIELD INLET TYPE 2
PIT SIZE					0.900 0.900 CLASS D
PIPE FLOW (L/s)	5.0	10.0	14.9	21.3	
PART PIPE VELOCITY (m/s)	0.77	0.92	1.80	1.45	
FULL PIPE VELOCITY (m/s)	0.28	0.56	0.38	0.54	
PIT LOSS FACTOR	2.00	2.00	2.00	2.00	1.22
				–90°	LINE 1

PIT TYPE	55A–A	55A–B	55A–C	55A–D	1–H
	STUB	STUB	STUB	STUB	FIELD INLET TYPE 2
PIT SIZE					0.900 0.900 CLASS D
PIPE FLOW (L/s)	5.0	10.0	14.9	21.4	
PART PIPE VELOCITY (m/s)	0.77	0.92	1.80	1.45	
FULL PIPE VELOCITY (m/s)	0.28	0.56	0.38	0.54	
PIT LOSS FACTOR	2.00	2.00	2.00	2.00	1.42
				–90°	LINE 1

PIT TYPE	57A–A	57A–B	57A–C	57A–D	1–G
	STUB	STUB	STUB	STUB	FIELD INLET TYPE 2
PIT SIZE					0.900 0.900 CLASS D
PIPE FLOW (L/s)	5.0	10.0	14.9	14.9	
PART PIPE VELOCITY (m/s)	0.77	0.92	1.80	1.33	
FULL PIPE VELOCITY (m/s)	0.28	0.56	0.38	0.37	
PIT LOSS FACTOR	2.00	2.00	2.00	2.00	1.57
				–90°	LINE 1

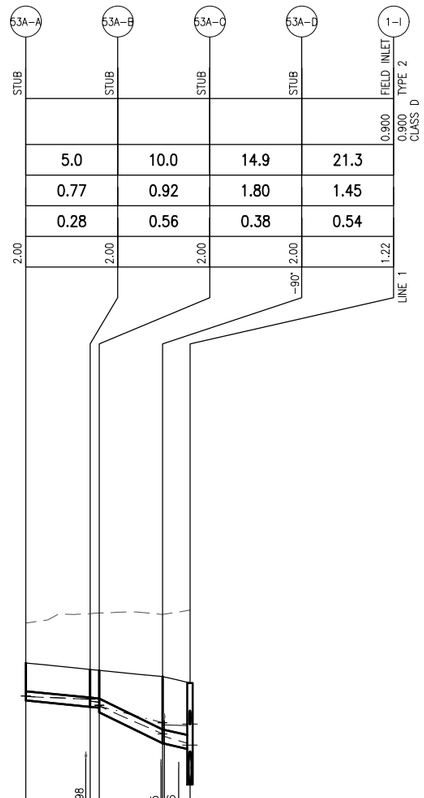
PIT TYPE	CLUB 2–A	3–A
	STUB	FIELD INLET TYPE 2
PIT SIZE		0.900 0.900 CLASS D
PIPE FLOW (L/s)	85.8	
PART PIPE VELOCITY (m/s)	2.16	
FULL PIPE VELOCITY (m/s)	2.16	
PIT LOSS FACTOR	2.00	2.09
		LINE 3

LEGEND

— — — DENOTES 5% AEP HGL

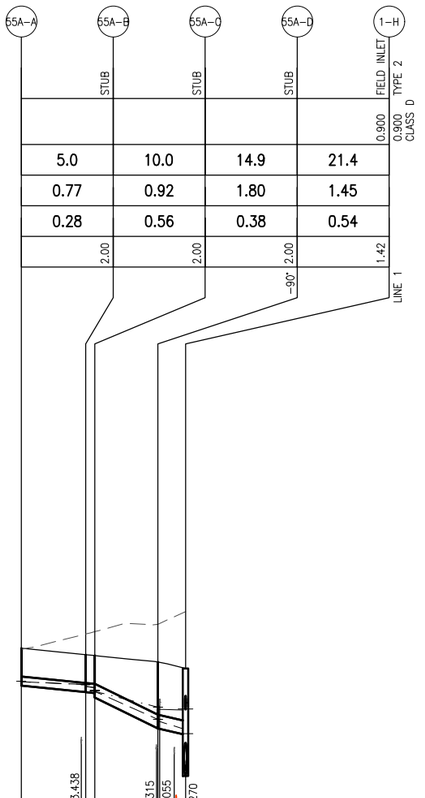
—·—·— DENOTES 1% AEP HGL

NOTE:
ALL FIELD INLETS DISCHARGING TO THE ATLAN FILTER CARTRIDGE CHAMBER ARE TO BE FITTED WITH STORMSACKS.



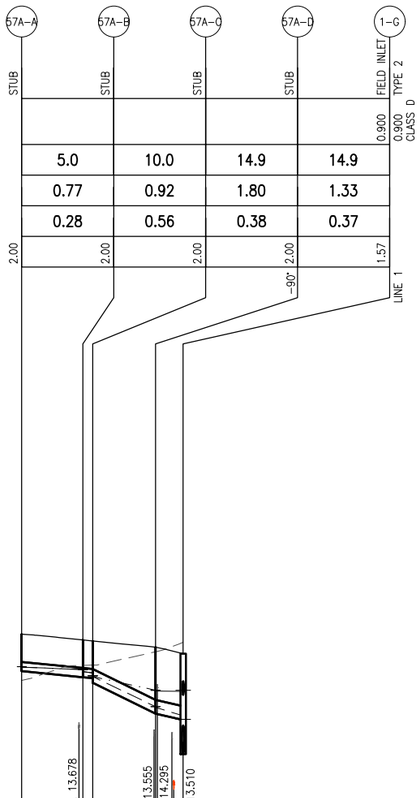
DATUM (m)	7.00									
PIPE SIZE (mm)	150ø		150ø		225ø		225ø			
PIPE CLASS	PVC SN8		PVC SN8		PVC SN8		PVC SN8			
PIPE GRADE (%)	1.00%		1.00%		4.88%		2.05%			
HYDRAULIC GRADE LINE	14.208	14.200		14.156	14.123		14.056	14.042	13.589	13.559	13.408	13.250
DEPTH TO INVERT		0.610			0.610		0.610	0.685		1.085	1.073	1.656
INVERT LEVEL		14.136		14.031	14.031		14.016	13.941	13.438	13.438	13.346	12.762
FINISHED SURFACE LEVEL	14.746			14.641			14.626		14.523		14.419	
PIPE CHAINAGE	0.000			10.500			12.000		22.298		26.791	
PIPE LENGTH	10.500			1.500			10.298		4.493			

LINE 53A



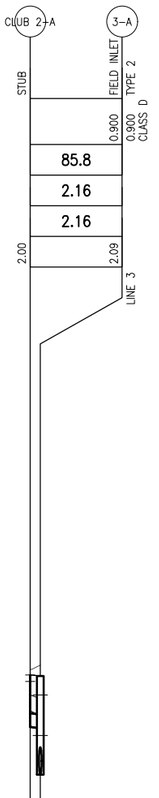
DATUM (m)	7.00									
PIPE SIZE (mm)	150ø		150ø		225ø		225ø			
PIPE CLASS	PVC SN8		PVC SN8		PVC SN8		PVC SN8			
PIPE GRADE (%)	1.00%		1.00%		4.88%		2.05%			
HYDRAULIC GRADE LINE	14.440	14.396		14.363	14.296		14.282	13.829	13.799	13.593	13.469	
DEPTH TO INVERT	0.610			0.610	0.610		0.685		1.085	1.073	1.756	
INVERT LEVEL	14.376	14.271		14.271	14.256		14.181	13.678	13.678	13.586	12.902	
FINISHED SURFACE LEVEL		14.881			14.866			14.763		14.659		
PIPE CHAINAGE		10.499			11.999			22.298		26.791		
PIPE LENGTH	10.499			1.500			10.300		4.493			

LINE 55A



DATUM (m)	7.00									
PIPE SIZE (mm)	150ø		150ø		225ø		225ø			
PIPE CLASS	PVC SN8		PVC SN8		PVC SN8		PVC SN8			
PIPE GRADE (%)	1.00%		1.00%		4.90%		2.10%			
HYDRAULIC GRADE LINE	14.686	14.678		14.639	14.606		14.538	14.524	14.035	14.021	13.827	13.678
DEPTH TO INVERT		0.603			0.608		0.608	0.683		1.083	1.072	1.639
INVERT LEVEL		14.614		14.514	14.514		14.498	14.423	13.921	13.921	13.826	13.259
FINISHED SURFACE LEVEL	15.217			15.122			15.106		15.003		14.898	
PIPE CHAINAGE	–0.400			9.587			11.185		21.435		25.935	
PIPE LENGTH	9.987			1.598			10.250		4.500			

LINE 57A



DATUM (m)	6.00			
PIPE SIZE (mm)	225ø			
PIPE CLASS	PVC SN8			
PIPE GRADE (%)	1.00%			
HYDRAULIC GRADE LINE	13.444	12.970		12.565	12.518
DEPTH TO INVERT		0.848		0.849	1.610
INVERT LEVEL		12.703		12.687	11.925
FINISHED SURFACE LEVEL	13.552			13.536	
PIPE CHAINAGE	0.000			1.644	
PIPE LENGTH	1.644				

LINE CLUB 2

ROOF WATER LONGITUDINAL SECTIONS LINES 53A - CLUB HOUSE

SCALE A1 – 1:500(H) 1:50(V)
A3 – 1:1000(H) 1:100(V)

ROCKHAMPTON REGIONAL COUNCIL
AMENDED PLANS APPROVED
12 January 2026
DATE
These plans are approved subject to the current conditions of approval associated with
Development Permit No.: D/170-2022
Dated: 12 June 2023

No.	DATE	REVISIONS	DES	DRN	CHK	APD
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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SURVEYOR
CAPRICORN SURVEY GROUP CQ
PHONE 07 4927 5199
DATUM A.H.D.
P.M.
R.L.

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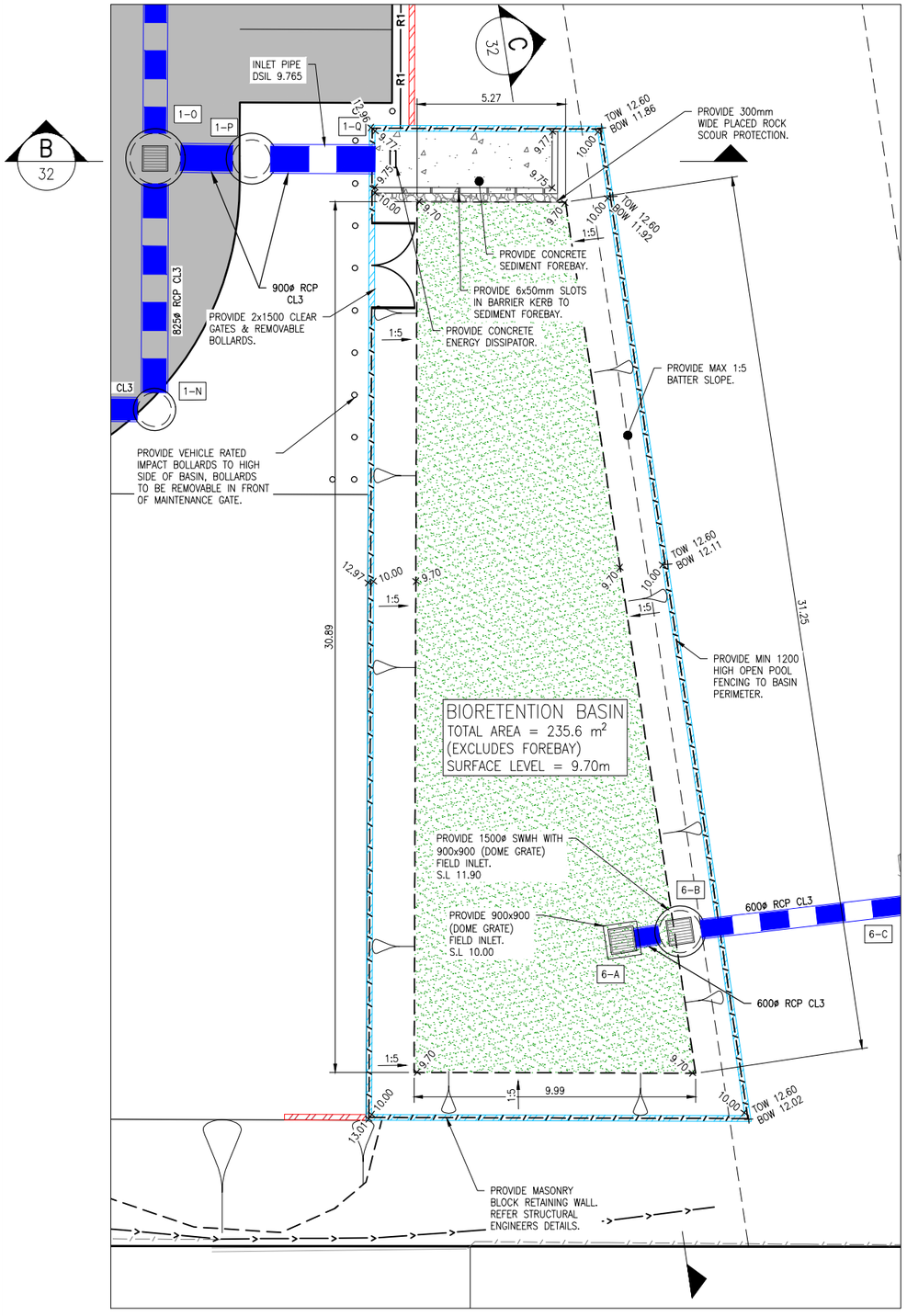
PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE ROOFWATER LONGITUDINAL SECTIONS LINES 53A – CLUB HOUSE
CLIENT RUBY DEVELOPMENT PTY LTD

DRAWING STATUS: FOR CONSTRUCTION
DRAWING NUMBER: S24–018–C30
SHEET NUMBER: 30 OF 37
REVISION: C

S24–018–C_Stm_Lsec.dwg

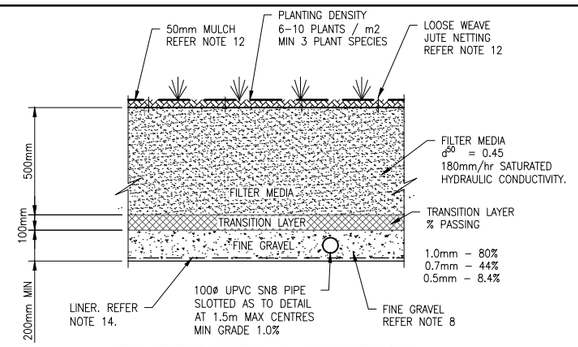


DETENTION TANK PLAN

SCALE 1:100 (A1 SIZE)

0 1 2 3 4 5

N



FILTER MEDIA SECTION

(NOT TO SCALE)

ROCKHAMPTON REGIONAL COUNCIL

AMENDED PLANS APPROVED

12 January 2026

DATE

These plans are approved subject to the current conditions of approval associated with

Development Permit No.: D/170-2022

Dated: 12 June 2023

NOTE:
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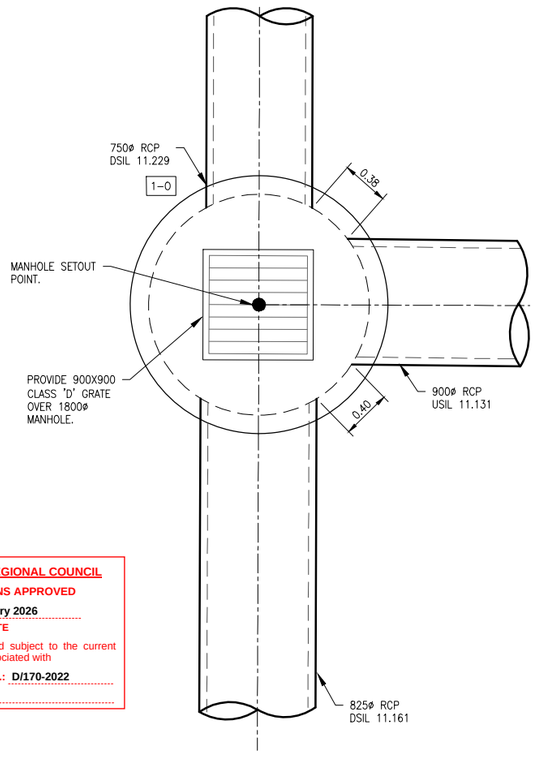
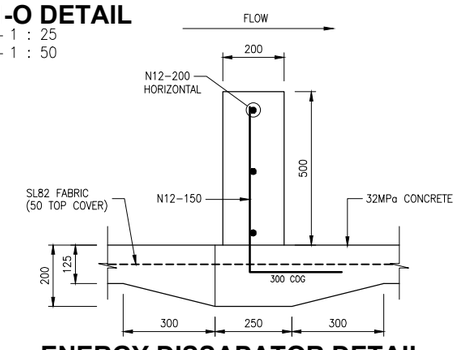


MANHOLE 1-O DETAIL

SCALE A1 – 1 : 25
A3 – 1 : 50



ENERGY DISSAPATOR DETAIL

SCALE A1 – 1 : 10
A3 – 1 : 20

BIO–RETENTION NOTES

1. PLEASE ASK IF THERE ARE ANY DOUBTS REGARDING DETAILS SUPPLIED ON THIS DRAWING.

2. GENERAL CONSTRUCTION AND PROCUREMENT CONSIDERATIONS SHALL COMPLY WITH THE LATEST VERSION OF THE HEALTHY WATERWAYS GUIDELINE FOR CONSTRUCTION AND ESTABLISHMENT OF VEGETATED STORMWATER MANAGEMENT SYSTEMS. WHERE CONFLICT EXISTS BETWEEN THE GUIDELINE AND THE SPECIFICATIONS ON THIS DRAWING THE SPECIFICATIONS ON THIS DRAWING SHALL BE FOLLOWED.

3. THE HYDRAULIC CONDUCTIVITY OF POTENTIAL FILTER MEDIA SHOULD BE MEASURED USING THE ASTM F1815–06 METHOD. TESTING SHOULD BE UNDERTAKEN AT LEAST
   (i) ONE MONTH FOLLOWING COMMENCEMENT OF OPERATION
   (ii) IN THE SECOND YEAR OF OPERATION
   TESTING SHOULD BE CHECKED AT A MINIMUM OF THREE POINTS WITHIN THE SYSTEM.

4. THE FOLLOWING PARTICLE SIZE DISTRIBUTION FOR FILTER MEDIA IS A GUIDE FOR SELECTING AN APPROPRIATE MATERIAL

CLAY & SILT	< 3%	(<0.05mm)
VERY FINE SAND	5–30%	(<0.05 – 0.15mm)
FINE SAND	10–30%	(<0.15 – 0.25mm)
MEDIUM TO COARSE SAND	40–60%	(<0.25 – 1.0mm)
COARSE SAND	7–10%	(<1.0 – 2.0mm)
FINE GRAVEL	< 3%	(<2.0 – 3.4mm)

   THE FILTER MEDIA SHOULD BE WELL GRADED ie, IT SHOULD HAVE ALL PARTICLE SIZE RANGES PRESENT FROM THE 0.075mm TO THE 4.75mm. THERE SHOULD BE NO GAP IN THE PARTICLE SIZE GRADING, AND THE COMPOSITION SHOULD NOT BE DOMINATED BY A SMALL PARTICLE SIZE RANGE.

5. SOIL PROPERTIES AS4419–2003 (SOILS FOR LANDSCAPING & GARDEN USE) FILTER MEDIA THAT DOES NOT MEET THE FOLLOWING SPECIFICATION WILL BE REJECTED :
   i) ORGANIC MATTER CONTENT – LESS THAN 5 % (w/w)
   ii) PH – 5.5 – 7.5 iii) ELECTRICAL CONDUCTIVITY (E/C) – < 1.2dS/m
   iv) PHOSPHORUS < 100mg/kg
   v) ORTHOPHOSPHATE < 30mg/kg

6. POTENTIAL FILTER MEDIA SHOULD BE ASSESSED BY A HORTICULTURALIST TO ENSURE THAT THEY ARE CAPABLE OF SUPPORTING A HEALTHY VEGETATION COMMUNITY.

7. THE TRANSITION LAYER MATERIAL IS TO BE A CLEAN WELL GRADED SAND/COARSE SAND MATERIAL CONTAINING LITTLE OR NO FINES.

8. THE DRAINAGE LAYER IS TO BE CLEAN, FINE GRAVEL, SUCH AS 2–5mm WASHED SCREENINGS.

9. THE FILTER MATERIAL IS TO BE LIGHTLY COMPACTED DURING INSTALLATION TO PREVENT MIGRATION OF FINE PARTICLES. IN SMALL SYSTEMS, A SINGLE PASS WITH A VIBRATING PLATE, WHILE IN LARGE SYSTEMS A SINGLE PASS WITH A ROLLER MACHINERY (eg. A DRUM LAWN ROLLER) WILL BE ADEQUATE. FILTER MEDIA SHOULD BE INSTALLED IN TWO LIFTS UNLESS THE DEPTH IS LESS THAN 500mm.

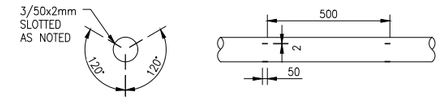
10. FILTER MEDIA SHALL COMPLY WITH THE LATEST VERSION OF THE FAWB GUIDELINES FOR SOIL FILTER MEDIA IN BIO–RETENTION SYSTEMS. WHERE CONFLICT EXISTS BETWEEN THE FAWB GUIDELINE AND THE SPECIFICATIONS ON THIS DRAWING THE SPECIFICATIONS ON THIS DRAWING SHALL BE FOLLOWED.

11. LANDSCAPING, SUCH AS PLANTING AND MULCH SHALL COMPLY WITH THE LATEST VERSION OF THE HEALTHY WATERWAYS GUIDELINE FOR CONSTRUCTION AND ESTABLISHMENT OF VEGETATED STORMWATER MANAGEMENT SYSTEMS. PLANT SPECIES AND CHARACTERISTICS MUST BE IN ACCORDANCE WITH APPENDIX A– PLANT SELECTION FRO WSUD SYSTEMS, OF THE WSUD TECHNICAL DESIGN GUIDELINES FOR SOUTH EAST QUEENSLAND VERSION 1 JUNE 2006.

12. MULCH SHALL BE ORGANIC FRIABLE MULCH THAT DEGRADES WITHIN 6 MONTHS EG. FINE SUGAR CANE OR TEA TREE MULCH. MULCH TYPE TO BE CONFIRMED WITH DESIGNER PRIOR TO PROCUREMENT OR INSTALLATION. THE MULCH SHALL BE PINNED DOWN WITH LOOSE WEAVE JUTE NETTING AND PINNED AT NOT MORE THAN 500mm CENTRES. HEAVY DUTY MATTING EG. 500gsm JUTE MAT, SHALL BE AVOIDED.

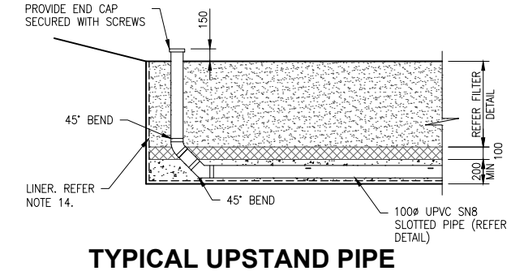
13. THE BIO–RETENTION BASIN SHALL BE PROTECTED WITH GEOTEXTILE, 75mm TOPSOIL AND TURF FOR AT LEAST 12 MONTHS AND UNTIL 80% OF HOUSES HAVE BEEN CONSTRUCTED. THE PROTECTION IS THEN TO BE REMOVED, PLANTED OUT AND MAINTAINED FOR A FURTHER 12 MONTHS.

14. THE BIO–RETENTION BASIN SHALL TYPICALLY BE LINED WITH BIDIM A34 GEOFABRIC. IMPERMEABLE PE SHEETING SHALL BE PROVIDED WHERE SITE CONDITIONS DICTATE INCLUDING STRUCTURES IN CLOSE VICINITY, PERCHED WATER TABLE OR WHERE OTHERWISE CALLED UP BY INSPECTING ENGINEER.



TYPICAL SLOTTED PIPE DETAILS

(NOT TO SCALE)



TYPICAL UPSTAND PIPE DETAILS

(NOT TO SCALE)

No.	DATE	REVISIONS	DES	DRN	CHK	APD
D	14.03.25	GENERAL AMENDED	S.C.M	J.J.D	J.M.H	J.M.H
C	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
B	18.10.24	GENERAL AMENDMENT	S.C.M	J.J.D	J.M.H	J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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STRUCTURAL+CIVIL+ENVIRONMENTAL ENGINEERS
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SUNSHINE COAST T 07 5391 3777 E sunshinecoast@westerapartners.com.au
NORTHERN NSW T 02 6674 8047 E nsw@westerapartners.com.au
CENTRAL VICTORIA T 03 5441 0922 E centralvic@westerapartners.com.au

SURVEYOR
CAPRICORN SURVEY GROUP CQ
PHONE 07 4927 5199

DATUM A.H.D.
P.M.
R.L.

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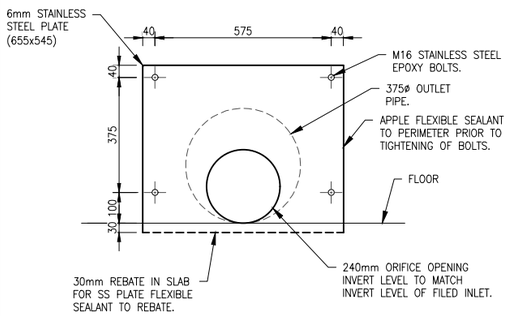
PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712
192 DEAN STREET, BERSERKER
TITLE STORMWATER DETAILS 1 of 2
CLIENT RUBY DEVELOPMENT PTY LTD

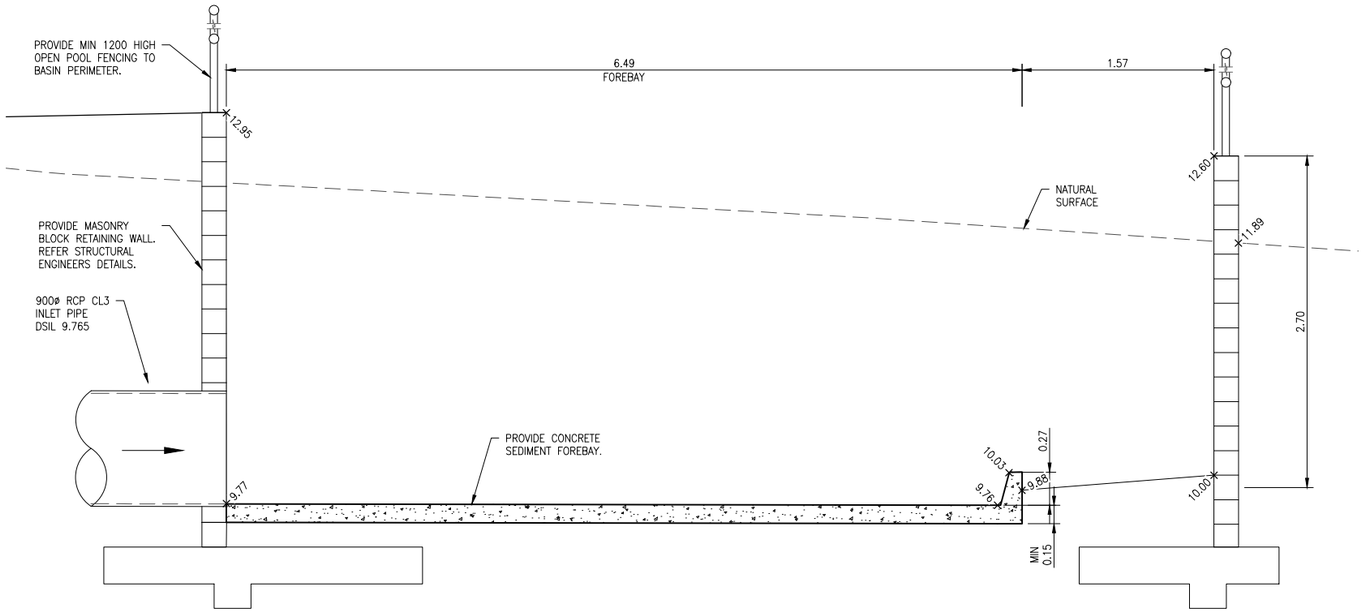
DRAWING STATUS: FOR CONSTRUCTION
DRAWING NUMBER: S24–018–C31
SHEET NUMBER: 31 OF 37
REVISION: D

S24–018–C_Stm_Det.dwg



ORIFICE PLATE DETAIL

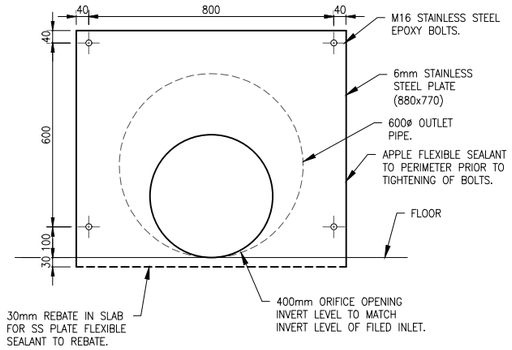
SCALE A1 – 1 : 10
A3 – 1 : 20



SECTION B

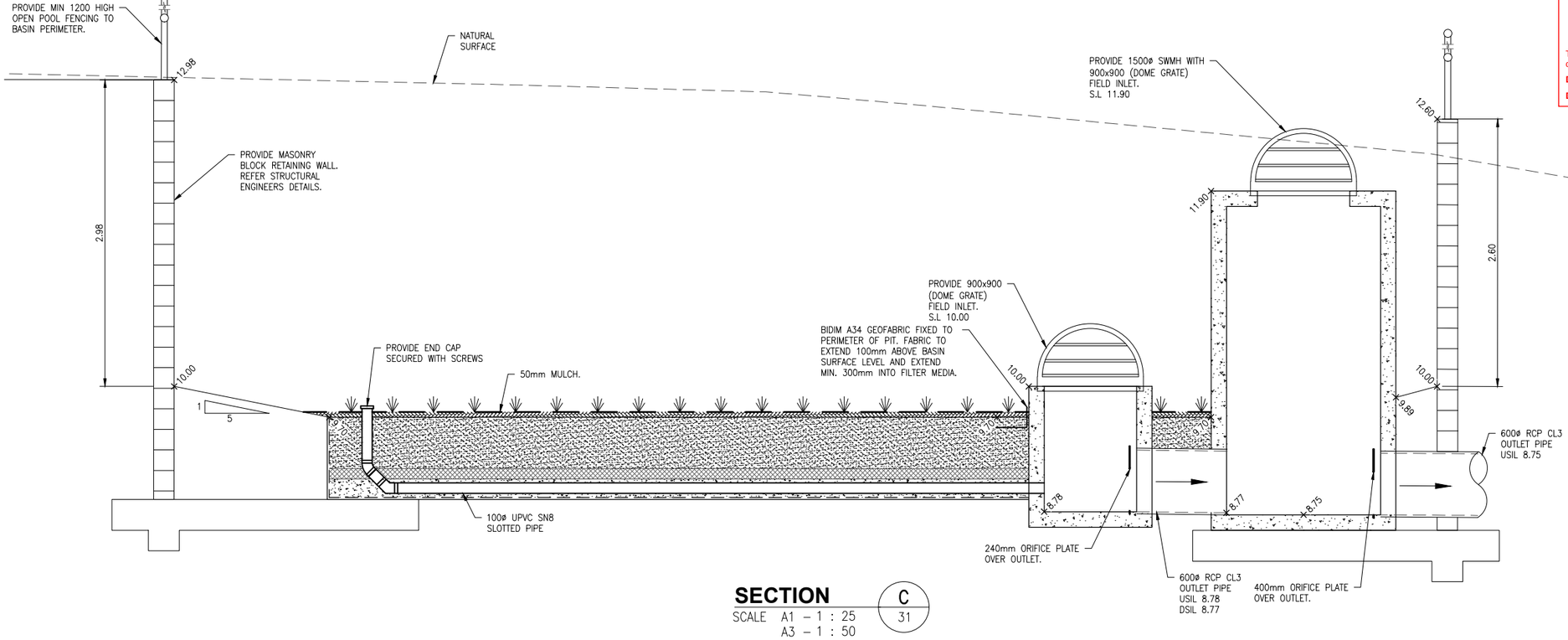
SCALE A1 – 1 : 25
A3 – 1 : 50

31



ORIFICE PLATE DETAIL

SCALE A1 – 1 : 10
A3 – 1 : 20



SECTION C

SCALE A1 – 1 : 25
A3 – 1 : 50

31

NOTE:
ALL FIELD INLETS DISCHARGING TO THE ATLAN FILTER CARTRIDGE CHAMBER ARE TO BE FITTED WITH STORMSACKS.

ROCKHAMPTON REGIONAL COUNCIL
AMENDED PLANS APPROVED
12 January 2026
DATE
These plans are approved subject to the current conditions of approval associated with
Development Permit No.: D/170-2022
Dated: 12 June 2023

No.	DATE	REVISIONS	DES	DRN	CHK	APD
D	14.03.25	GENERAL AMENDED	S.C.M	J.J.D	J.M.H	J.M.H
C	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
B	18.10.24	GENERAL AMENDMENT	S.C.M	J.J.D	J.M.H	J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

J. HILL RPEQ 19891
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APPROVED

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SURVEYOR
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DATUM A.H.D.
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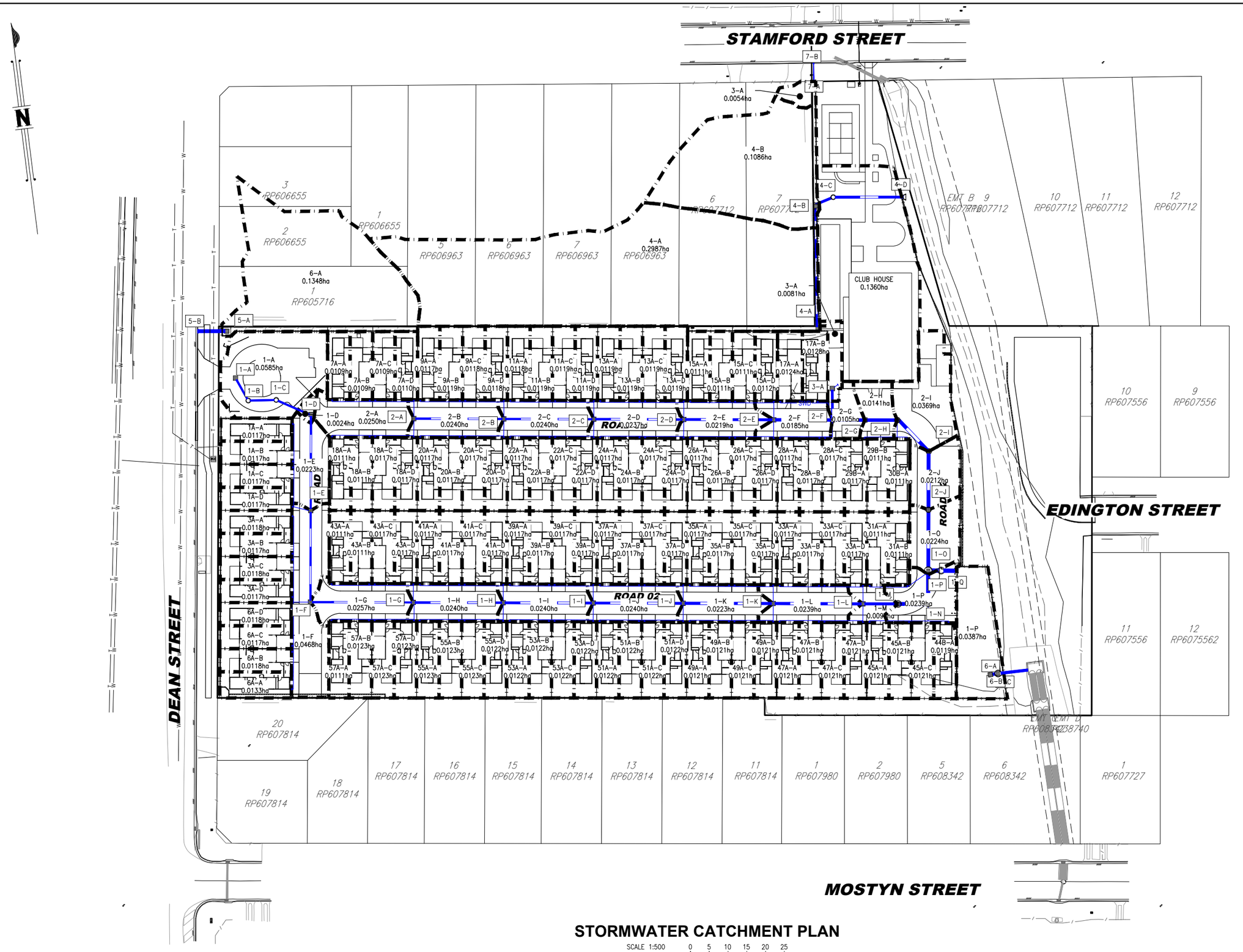
PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE STORMWATER DETAILS 2 of 2
CLIENT RUBY DEVELOPMENT PTY LTD

DRAWING STATUS: FOR CONSTRUCTION
DRAWING NUMBER: S24-018-C32
SHEET NUMBER: 32 OF 37
REVISION: D

S24-018-C_Stm_Det.dwg



STORMWATER CATCHMENT PLAN

SCALE 1:500 (A1 SIZE)

0 5 10 15 20 25

ROCKHAMPTON REGIONAL COUNCIL

AMENDED PLANS APPROVED

12 January 2026

DATE

These plans are approved subject to the current conditions of approval associated with

Development Permit No.: D/170-2022

Dated: 12 June 2023

NOTE:
ALL FIELD INLETS DISCHARGING TO THE ATLAN FILTER CARTRIDGE CHAMBER ARE TO BE FITTED WITH STORMSACKS.

No.	DATE	REVISIONS	DES	DRN	CHK	APD
F	14.03.25	GENERAL AMENDED	S.C.M	J.J.D	J.M.H	J.M.H
E	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
D	08.11.24	RETAINING WALL UPDATE	S.C.M	J.J.D	J.M.H	J.M.H
C	29.10.24	GENERAL AMENDEMENT	S.C.M	J.J.D	J.M.H	J.M.H
B	18.10.24	GENERAL AMENDMENT	S.C.M	J.J.D	J.M.H	J.M.H

DOCUMENT CONTROL: DESIGNED S.C.M; DRAWN J.J.D; CHECKED J.M.H; APPROVED J.M.H; DATE JULY 2024

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

WESTERA PARTNERS
STRUCTURAL+CIVIL+ENVIRONMENTAL ENGINEERS
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SURVEYOR: CAPRICORN SURVEY GROUP CQ, PHONE 07 4927 5199
DATUM A.H.D. P.M. R.L.

USE FIGURED DIMENSIONS ONLY. DO NOT SCALE. IF A DISCREPANCY ARISES CHECK WITH THE PROJECT ENGINEER AND/OR SUPERVISING AUTHORITY. DO NOT WORK FROM REDUCED SCALE DRAWINGS (A1-A3 SIZE PAPER). COPYRIGHT OF ALL DRAWINGS & WORKS EXECUTED FROM THEM IS VESTED IN WESTERA PARTNERS AND USE OF THERE FORE WITHOUT PERMISSION IS STRICTLY PROHIBITED! IT IS THE BUILDERS RESPONSIBILITY TO ENSURE ALL WORKS ARE CARRIED OUT WITH DUE CARE AND DILIGENCE TO COMPLY WITH THE CONTRACT DOCUMENTS.

PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712
192 DEAN STREET, BERSERKER
TITLE STORMWATER CATCHMENT PLAN
CLIENT RUBY DEVELOPMENT PTY LTD

DRAWING STATUS FOR CONSTRUCTION
DRAWING NUMBER S24-018-C33
SHEET NUMBER 33 OF 37
REVISION F

S24-018-C_Stm_Catch.dwg

5% AEP HYDROLOGY

Node Name	Node Type	Setout Easting	Setout Northing	Setout RL	Grate RL	Cover RL	Road Name	Road Chainage	Road Offset	Catch ID	Time Tc	Intensity I	Runoff C	Area A	Full CA	Full Sum CA	Full Qc=CIA	Partial CA	Partial Sum CA	Partial Qc=CIA	Catchment Flow Qc	Direct Flow Qdg	Approach Flow Qa	Road Capacity	Flooded Depth	Max Pond Depth	Choke Factor	Inlet Curve Name	Inlet Flow Qg	Bypass Flow Qb	Bypass Node
(-)	(-)	(m)	(m)	(m)	(m)	(m)	(-)	(m)	(m)	(-)	(min)	(mm/hr)	(-)	(ha)	(ha)	(ha)	(L/s)	(ha)	(ha)	(L/s)	(L/s)	(L/s)	(L/s)	(L/s)	(m)	(m)	(-)	(-)	(L/s)	(L/s)	(-)
1-A	FIELD INLET 900x900	248036.19	7414221.23	14.99	14.99	14.99				1P	5	230	0.81	0.0322	0.026	0.048	30.7	0.026	0.048	30.7	30.7		30.7	55	0.047	0.07	0.5	SAG	30.7		-
										1I	5	230	0.83	0.0263	0.0219			0.0219													
1-B	MH1050	248038.83	7414214.83	15.25	15.25	15.25																									-
1-C	MH1050	248046.25	7414214.08	15.53	15.53	15.53																									-
1-D	FIELD INLET 900x900	248055.02	7414209.14	15.92	15.92	15.92				1P	5	230	0.92	0.0002	0.0002	0.002	1.3	0.0002	0.002	1.3	1.3		1.3	33	0.004	0.05	0.5	SAG	1.3		1-E
										1I	5	230	0.83	0.0022	0.0018			0.0018													
1-E	FIELD INLET 900x900	248051.89	7414183.71	15.54	15.54	15.54				1P	5	230	0.92	0.0022	0.0021	0.0188	12	0.0021	0.0188	12	12		17	33	0.029	0.05	0.5	SAG	17		1-F
										1I	5	230	0.83	0.0201	0.0167			0.0167													
1-F	FIELD INLET 900x900	248048.9	7414159.49	15.17	15.17	15.17	ROAD 02	371.73	0	1P	5	230	0.92	0.0047	0.0043	0.0394	25.2	0.0043	0.0394	25.2	25.2		34.7	33	0.05	0.05	0.5	SAG	33	1.7	1-G
										1I	5	230	0.83	0.0421	0.0351			0.0351													
1-G	FIELD INLET 900x900	248076.14	7414156.13	14.9	14.9	14.9	ROAD 02	344.28	0	1P	5	230	0.92	0.0026	0.0024	0.0216	13.8	0.0024	0.0216	13.8	13.8		22.2	33	0.036	0.05	0.5	SAG	22.2		1-H
										1I	5	230	0.83	0.0231	0.0192			0.0192													
1-H	FIELD INLET 900x900	248099.96	7414153.18	14.66	14.66	14.66	ROAD 02	320.28	-0.01	1P	5	230	0.92	0.0024	0.0022	0.0202	12.9	0.0022	0.0202	12.9	12.9		21.2	33	0.034	0.05	0.5	SAG	21.2		1-I
										1I	5	230	0.83	0.0216	0.018			0.018													
1-I	FIELD INLET 900x900	248123.78	7414150.24	14.42	14.42	14.42	ROAD 02	296.28	-0.01	1P	5	230	0.92	0.0024	0.0022	0.0202	12.9	0.0022	0.0202	12.9	12.9		21.1	33	0.034	0.05	0.5	SAG	21.1		1-J
										1I	5	230	0.83	0.0216	0.018			0.018													
1-J	FIELD INLET 900x900	248147.6	7414147.31	14.18	14.18	14.18	ROAD 02	272.28	-0.01	1P	5	230	0.92	0.0024	0.0022	0.0202	12.9	0.0022	0.0202	12.9	12.9		21	33	0.034	0.05	0.5	SAG	21		1-K
										1I	5	230	0.83	0.0216	0.018			0.018													
1-K	FIELD INLET 900x900	248171.42	7414144.38	13.82	13.82	13.82	ROAD 02	248.28	0	1P	5	230	0.92	0.0022	0.0021	0.0188	12	0.0021	0.0188	12	12		20.1	33	0.033	0.05	0.5	SAG	20.1		1-L
										1I	5	230	0.83	0.0201	0.0167			0.0167													
1-L	FIELD INLET 900x900	248195.19	7414141.44	13.11	13.11	13.11	ROAD 02	224.33	0	1P	5	230	0.92	0.0024	0.0022	0.0202	12.9	0.0022	0.0202	12.9	12.9		20.9	33	0.034	0.05	0.5	SAG	20.9		1-M
										1I	5	230	0.83	0.0215	0.0179			0.0179													
1-M	FIELD INLET 900x900 1350 dia	248204.45	7414140.3	12.92	12.92	12.92	ROAD 02	215	0	1P	5	230	0.92	0.001	0.0009	0.0081	5.2	0.0009	0.0081	5.2	5.2		7.5	33	0.016	0.05	0.5	SAG	7.5		LOST
										1I	5	230	0.83	0.0086	0.0072			0.0072													
1-N	MH1200	248212.46	7414139.31	12.94	12.94	12.94																									-
1-O	FIELD INLET 900x900 1800 dia	248213.55	7414148.15	12.79	12.79	12.79				1P	5	230	0.92	0.0023	0.0021	0.0192	12.2	0.0021	0.0192	12.2	12.2		12.2	33	0.022	0.05	0.5	SAG	12.2		-
										1I	5	230	0.83	0.0205	0.0171			0.0171													
1-P	MH1350	248216.95	7414147.73	12.87	12.87	12.87																									-
1-Q	HW outlet	248221.29	7414147.19	9.77	12.27	12.27																									-
1A-A	GEMLIFE ROOFWATER STUB	248050.24	7414207.17	15.99	15.99	15.99				1I	5	230	0.83	0.0117	0.0098	0.0098	6.2	0.0098	0.0098	6.2	6.2		6.2	5	-1	0	0.5	SAG	5	1.2	1-E
1A-B	GEMLIFE ROOFWATER STUB	248049.02	7414197.26	15.85	15.85	15.85				1I	5	230	0.83	0.0117	0.0098	0.0098	6.2	0.0098	0.0098	6.2	6.2		6.2	5	-1	0	0.5	SAG	5	1.2	1-E
1A-C	GEMLIFE ROOFWATER STUB	248048.82	7414195.67	15.82	15.82	15.82				1I	5	230	0.83	0.0117	0.0098	0.0098	6.2	0.0098	0.0098	6.2	6.2		6.2	5	-1	0	0.5	SAG	5	1.2	1-E
1A-D	GEMLIFE ROOFWATER STUB	248047.54	7414185.26	15.66	15.66	15.66				1I	5	230	0.83	0.0117	0.0098	0.0098	6.2	0.0098	0.0098	6.2	6.2		6.2	5	-1	0	0.5	SAG	5	1.2	1-E
2-A	FIELD INLET 900x900	248082.14	7414204.76	15.63	15.63	15.63				1P	5	230	0.92	0.0025	0.0023	0.0211	13.5	0.0023	0.0211	13.5	13.5		18.9	33	0.031	0.05	0.5	SAG	18.9		2-B
										1I	5	230	0.83	0.0225	0.0188			0.0188													
2-B	FIELD INLET 900x900	248105.96	7414201.83	15.39	15.39	15.39				1P	5	230	0.92	0.0024	0.0022	0.0202	12.9	0.0022	0.0202	12.9	12.9		20.5	33	0.033	0.05	0.5	SAG	20.5		2-C
										1I	5	230	0.83	0.0216	0.018			0.018													
2-C	FIELD INLET 900x900	248129.78	7414198.89	15.15	15.15	15.15				1P	5	230	0.92	0.0024	0.0022	0.0202	12.9	0.0022	0.0202	12.9	12.9		20.5	33	0.033	0.05	0.5	SAG	20.5		2-D
										1I	5	230	0.83	0.0216	0.018			0.018													
2-D	FIELD INLET 900x900	248153.6	7414195.95	14.89	14.89	14.89				1P	5	230	0.92	0.0024	0.0022	0.02	12.7	0.0022	0.02	12.7	12.7		20.4	33	0.033	0.05	0.5	SAG	20.4		2-E
										1I	5	230	0.83	0.0213	0.0178			0.0178													
2-E	FIELD INLET 900x900	248177.42	7414193.01	13.97	13.97	13.97	ROAD 02	123.45	0	1P	5	230	0.92	0.0022	0.002	0.0185	11.8	0.002	0.0185	11.8	11.8		18.2	33	0.03	0.05	0.5	SAG	18.2		2-F
										1I	5	230	0.83	0.0197	0.0164			0.0164													
2-F	FIELD INLET 900x900	248192.96	7414191.1	13.41	13.41	13.41	ROAD 02	139.11	-0.01	1P	5	230	0.92	0.0018	0.0017	0.0156	9.9	0.0017	0.0156	9.9	9.9		19.1	33	0.032	0.05	0.5	SAG	19.1		2-G
										1I	5	230	0.83	0.0166	0.0139			0.0139													
2-G	FIELD INLET 900x900	248201.54	7414190.04	13.32	13.32	13.32	ROAD 02	147.76	-0.01	1P	5	230	0.92	0.001	0.001	0.0088	5.6	0.001	0.0088	5.6	5.6		5.6	66	0.009	0.05	1	SAG	5.6		2-H
										1I	5	230	0.83	0.0094	0.0078			0.0078													
2-H	FIELD INLET 900x900 1350 dia	248210.12	7414188.98	13.24	13.24	13.24	ROAD 02	156.4	-0.01	1P	5	230	0.92	0.0014	0.0013	0.0119	7.6	0.0013	0.0119	7.6	7.6		8.8	33	0.018	0.05	0.5	SAG	8.8		2-I
										1I	5	230	0.83	0.0127	0.0106			0.0106													
2-I	FIELD INLET 900x900 1350 dia	248217.44	7414179.71	13.1	13.1	13.1	ROAD 02	169.67	0	1P	5	230	0.92	0.0037	0.0034	0.0311	19.8	0.0034	0.0311	19.8	19.8		20.8	33	0.034	0.05	0.5	SAG	20.8		2-J
										1I	5	230	0.83	0.0332	0.0276			0.0276													
2-J	FIELD INLET 900x900 1350 dia	248215.53	7414164.23	12.95	12.95	12.95				1P	5	230	0.92	0.0021	0.002	0.0178	11.4	0.002	0.0178	11.4	11.4		11.4	33	0.021	0.05	0.5	SAG	11.4		1-O
										1I	5	230	0.83	0.0191	0.0159			0.0159													
3-A	FIELD INLET 900x900	248193.92	7414199.43	13.54	13.54	13.54				1P	10	193	0.75	0.0065	0.0048	0.0062	3.3	0.0024	0.0038	2.4	3.3		3.3	0	0	-0.039	0.5	SAG	0	3.3	2-F
										1I	5	230	0.83	0.0016	0.0013			0.0013													
3A-A	GEMLIFE ROOFWATER STUB	248047.23	7414182.77	15.62	15.62	15.62				1I	5	230	0.83	0.0118	0.0098	0.0098	6.3	0.0098	0.0098	6.3	6.3		6.3	5	-1	0	0.5	SAG	5	1.3	1-F
3A-B	GEMLIFE ROOFWATER STUB	248045.99	7414172.86	15.51	15.51	15.51				1I	5	230	0.83	0.0117	0.0098	0.0098	6.2	0.0098	0.0098	6.2	6.2		6.2	5	-1	0	0.5	SAG	5	1.2	1-F
3A-C	GEMLIFE ROOFWATER STUB	248045.8	7414171.27	15.49	15.49	15.49				1I	5	230	0.83	0.0118	0.0098	0.0098	6.3	0.0098	0.0098	6.3	6.3		6.3	5	-1	0	0.5	SAG	5	1.3	1-F
3A-D	GEMLIFE ROOFWATER STUB	248044.59	7414161.37	15.3	15.3	15.3				1I	5	230	0.83	0.0117	0.0097	0.0097	6.2	0.0097	0.0097	6.2	6.2		6.2	5	-1	0	0.5	SAG	5	1.2	1-F
3A-E	TEE	248044.43	7414160.04	15.28	15.28	15.28																	0		0	0	0.5		0		-
4-A	FIELD INLET 900x900	248191.87	7414215.74	13.71	13.71	13.71				1P	13	176.2	0.75	0.1792	0.1336	0.2331	114.1	0.0514	0.1509	96.4	114.1		114.1	94	0.113	0.1	0.5	SAG	114.1		-
										1I	5	230	0.83	0.1195	0.0995			0.0995													
4-B	FIELD INLET 900x900	248195.39	7414248.22	13.8	13.8	13.8				1P	13	176.2	0.75	0.0652	0.0486	0.0848	41.5	0.0187	0.0549	35.1	41.5		41.5		0.058	-0.305	0.5	SAG	41.5		-
										1I	5	230	0.83	0.0434	0.0362			0.0362													
4-C	MH1050	248200.26	7414250.04	13.68	13.72	13.72																									-
4-D	HW OUT	248218.8	7414247.85	13.24	13.2	13.24																									-
5-A	FIELD INLET 900x900	248035.35	7414233.87	15.46	15.46	15.46				1P	13	176.2	0.75	0.0809	0.0603	0.1052	51.5	0.0232	0.0681	43.5	51.5		51.5	384.8	0.067	0.255	0.5	SAG	51.5		-
										1I	5	230	0.83	0.0539	0.0449			0.0449													
5-B	HW OUT	248027.59	7414234.83	15.24	15.24	15.24																									-
6-A	FIELD INLET 900x900	248226.7	7414118.64	10	10	10																	0		0		1		0		-
6-B	FIELD INLET 900x900 1500 dia	248228.77	7414118.7	9.65	11.9	11.9																									-
6-C	HW outlet	248236.77	7414118.67	8.45	10.63	0																									-
6A-A	GEMLIFE ROOFWATER STUB	248041.58	7414136.97	15.53	15.53	15.53				1I	5	230	0.83	0.0133	0.0111	0.0111	7.1	0.0111	0.0111	7.1	7.1		7.1	5	-1	0	0.5	SAG	5	2.1	1-F
6A-B	GEMLIFE ROOFWATER STUB	248042.8	7414146.88	15.41	15.41	15.41				1I	5	230	0.83	0.0118	0.0099	0.0099	6.3	0.0099	0.0099	6.3	6.3		6.3	5	-1	0	0.5	SAG	5	1.3	1-F
6A-C	GEMLIFE ROOFWATER STUB	248043	7414148.47	15.39	15.39	15.39				1I	5	230	0.83	0.0117	0.0097	0.0097	6.2	0.0097	0.0097	6.2	6.2		6.2	5	-1	0	0.5	SAG	5	1.2	1-F
6A-D	GEMLIFE ROOFWATER STUB	248044.22	7414158.38	15.29	15.29	15.29				1I	5	230	0.83	0.0118	0.0098	0.0098	6.3	0.0098	0.0098	6.3	6.3		6.3	5	-1	0	0.5	SAG	6.3		-
7-A	FIELD INLET 900x900	248198.73	7414280.31	13.92	13.92	13.92				1P	13	176.2	0.75	0.0032	0.0024	0.0042	2.1	0.0009	0.0027	1.7	2.1		2.1		0.007	-0.034	0.5	SAG	2.1		-
										1I	5	230	0.83	0.0022	0.0018			0.0018													
7-B	HW outlet	248199.38	7414286.27	13.82	13.92	13.92																									-

ROCKHAMPTON REGIONAL COUNCIL
AMENDED PLANS APPROVED
12 January 2026
DATE
These plans are approved subject to the current conditions of approval associated with
Development Permit No.: D/170-2022
Dated: 12 June 2023

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A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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SURVEYOR: CAPRICORN SURVEY GROUP CQ, PHONE 07 4927 5199
DATUM A.H.D. P.M. R.L.

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PROJECT: PROPOSED RETIREMENT LIVING ESTATE
LOCATION: LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE: STORMWATER CALCULATIONS 5% AEP HYDROLOGY
CLIENT: RUBY DEVELOPMENT PTY LTD

DRAWING STATUS: FOR CONSTRUCTION
DRAWING NUMBER: S24-018-C34
SHEET NUMBER: 34 OF 37
REVISION: D

S24-018-C_Stm_Calc.dwg

5% AEP HYDRAULICS

Pipe ID	Pipe Type	Pipe Length	Pipe Size	Full Pipe Area Af	Pipe Grade	Pipe Grade	Full-area Tct	Full-area I	Full-area Sum CA	Full-area Qc=CIA	Part-area Tct	Part-area I	Part-area Sum CA	Part-area Qc=CIA	Catchment Flow Qc	Direct Node Flow Qdg	Peak Flow Qrat	Net Bypass Flow Qb	Pipe Flow Q	Excess Pipe Flow Qx	Capacity Flow Qcap	Q/Qcap Ratio	Full Pipe Vel Vf=Q/Af	Norm Depth Vel Vn=Q/An	Crit Depth Vel Vc=Q/Ac	Capacity Vel Vcap=Qcap/Af	US Node Grate RL	Pipe US IL	Pipe DS IL	DS Node Grate RL	Cover Limit	Cover Min	Pipe DS Bend	Pipe DS Drop	US Node Ku	US Node Kw	Pipe V'head	P'head Loss (Ku.V'head)	WSE Loss (Kw.V'head)	Pipe T'head Loss	US Node HGL	Pipe US HGL	Pipe DS HGL	DS Node HGL	HGL Grade	HGL Grade	F'board US
(-)	(-)	(m)	(mm)	(sq.m)	(%)	(1 in)	(min)	(mm/hr)	(ha)	(L/s)	(min)	(mm/hr)	(ha)	(L/s)	(L/s)	(L/s)	(L/s)	(L/s)	(L/s)	(L/s)	(L/s)	(-)	(m/s)	(m/s)	(m/s)	(m/s)	(m)	(m)	(m)	(m)	(m)	(m)	(deg)	(m)	(-)	(-)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(%)	(1 in)	(m)
1-A to 1-B	RCP CL3	6.91	375	0.11	0.5	200	5	230	0.048	30.7	5	230	0.048	30.7	30.7		30.7		30.7		124	0.25	0.28	0.93	0.95	1.12	14.99	14.18	14.15	15.25	0.6	0.45	-61.8	0.02	9.7		0	0.04		0.03	14.35	14.31	14.28	14.27	0.52	191	0.64
1-B to 1-C	RCP CL3	7.47	375	0.11	1	100	5.06	229.57	0.048	30.6	5.06	229.57	0.048	30.6	30.6		30.6		30.6		175.4	0.17	0.28	1.19	0.95	1.59	15.25	14.13	14.06	15.53	1.1	0.77	23.7	0.02	2.39	2.68	0	0.01	0.01	0.05	14.27	14.26	14.24	14.24	0.23	439.7	0.98
1-C to 1-D	RCP CL3	10.07	375	0.11	1	100	5.12	229.11	0.048	30.5	5.12	229.11	0.048	30.5	30.5		30.5		30.5		175.4	0.17	0.28	1.19	0.95	1.59	15.53	14.04	13.93	15.92	1.1	1.14	67.6	0.02	1.77	2.13	0	0.01	0.01	0.01	14.24	14.23	14.23	14.24	-0.03	-3375.2	1.29
1-D to 1-E	RCP CL3	25.62	375	0.11	1.02	97.7	5.2	228.49	0.05	31.7	5	230	0.0481	30.7	31.7		31.7		31.7		177.5	0.18	0.29	1.22	0.96	1.61	15.92	13.91	13.65	15.54	1.1	1.52	0	0.02	2.52	2.78	0	0.01	0.01	0.01	14.24	14.22	14.22	14.23	0.03	3869.9	1.69
1-E to 1-F	RCP CL3	24.41	375	0.11	0.5	200	5.42	226.91	0.1079	68	5.22	228.35	0.106	67.3	68		68		68		124	0.55	0.62	1.15	1.21	1.12	15.54	13.63	13.51	15.17	1.1	1.29	-90	0.02	1.85	2.31	0.02	0.04	0.04	0.04	14.23	14.18	14.14	14.18	0.15	664.9	1.31
1-F to 1-G	RCP CL3	27.44	375	0.11	0.5	202	5.62	225.41	0.2269	142.1	5.43	226.85	0.225	141.8	142.1		142.1	-1.7	140.3		123.4	1.14	1.27	1.27	1.61	1.12	15.17	13.49	13.35	14.9	1.1	1.17	0	0.095	2.06	2.51	0.08	0.17	0.21	0.18	14.18	13.98	13.8	13.83	0.64	156.2	0.99
1-G to 1-H	RCP CL3	24	450	0.159	1.09	91.5	10.12	192.31	0.3162	168.9	5.65	225.16	0.3139	196.3	196.3		196.3		196.3		298.2	0.66	1.23	2	1.67	1.87	14.9	13.26	13	14.66	1.1	1.18	0	0.095	1.57	1.92	0.08	0.12	0.15	0.11	13.83	13.68	13.57	13.59	0.44	225.9	1.07
1-H to 1-I	RCP CL3	24	525	0.216	0.5	200	10.32	191.19	0.4162	221.1	5.77	224.29	0.413	257.3	257.3		257.3		257.3		304.2	0.85	1.19	1.58	1.72	1.41	14.66	12.9	12.78	14.42	1.1	1.12	0	0.02	1.42	1.71	0.07	0.1	0.12	0.09	13.59	13.47	13.38	13.41	0.36	279.6	1.07
1-I to 1-J	RCP CL3	24	525	0.216	0.5	200	10.52	190.07	0.5161	272.5	5.87	223.56	0.5113	317.5	317.5		317.5		317.5		304.2	1.04	1.47	1.59	1.88	1.41	14.42	12.76	12.64	14.18	1.1	1.02	0	0.075	1.22	1.45	0.11	0.13	0.16	0.11	13.41	13.25	13.14	13.16	0.46	217.3	1.01
1-J to 1-K	RCP CL3	24	600	0.283	0.5	200	10.72	188.95	0.6159	323.3	6.06	222.18	0.6108	377	377		377		377		434.4	0.87	1.33	1.73	1.87	1.54	14.18	12.57	12.45	13.82	1.1	0.79	0	0.02	1.07	1.26	0.09	0.1	0.11	0.09	13.16	13.04	12.98	12.99	0.28	360.4	1.02
1-K to 1-L	RCP CL3	23.95	600	0.283	2.7	37.1	10.92	187.83	0.7141	372.6	6.23	220.88	0.7084	434.7	434.7		434.7		434.7		1009	0.43	1.54	3.43	1.99	3.57	13.82	12.43	11.78	13.11	1.1	0.74	0	0.02	0.96	1.12	0.12	0.12	0.14	0.58	12.99	12.86	12.36	12.38	2.1	47.7	0.83
1-L to 1-M	RCP CL3	9.33	600	0.283	2.51	39.9	11.12	186.71	0.8136	422	6.38	219.82	0.8065	492.5	492.5		492.5		492.5		972.7	0.51	1.74	3.45	2.12	3.44	13.11	11.76	11.53	12.92	1.1	0.72	0	0.112	0.88	1.02	0.15	0.14	0.16	0.17	12.38	12.22	12.12	12.12	1.07	93.5	0.73
1-M to 1-N	RCP CL3	8.07	750	0.442	1	100	11.2	186.28	0.8217	425.2	6.45	219.24	0.8146	496.1	496.1		496.1	2.4	498.5		1113.7	0.45	1.13	2.45	1.88	2.52	12.92	11.42	11.33	12.94	1.1	0.75	-90	0.095			0.06			0.01	12.12	12.12	12.11	12.14	0.14	718.8	0.8
1-N to 1-O	RCP CL3	8.91	825	0.535	0.88	113.5	11.27	185.9	0.8619	445.1	6.52	218.76	0.8547	519.4	519.4		519.4	-3.3	516.1		1348	0.38	0.97	2.35	1.83	2.52	12.94	11.24	11.16	12.79	1.1	0.8	90	0.03	2.15	2.69	0.05	0.1	0.13	0.01	12.14	12.01	12	12.07	0.08	1325.7	0.8
1-O to 1-P	RCP CL3	3.42	900	0.636	1	100	11.34	185.49	1.6686	859.7	6.46	219.19	1.6534	1006.7	1006.7	13.4	1020.1	-5.1	1014.9		1811.2	0.56	1.6	2.93	2.27	2.85	12.79	11.13	11.1	12.87	1.1	0.77	0	1.288	2.11	2.66	0.13	0.27	0.35	0	12.07	11.73	11.58	10.75	4.34	23	0.71
1-P to 1-Q	RCP CL3	4.38	900	0.636	1	100	11.37	185.33	1.6686	859	6.49	218.98	1.6534	1005.7	1005.7	13.4	1019.1	-5.1	1013.9		1811.1	0.56	1.59	2.93	2.27	2.85	12.87	9.81	9.77	12.27	1.1	2.17	0		2.09	2.66	0.13	0.27	0.34	0	10.75	10.4	10.25	10.25	3.61	27.7	2.12
1A-A to 1A-B	PVC SN8	9.98	150	0.018	1	100	5	230	0.0098	6.2	5	230	0.0098	6.2	6.2		6.2	-1.2	5		15.2	0.33	0.28	0.77	0.69	0.86	15.99	15.32	15.22	15.85	1.1	0.48	0	0	2		0	0.01		0.06	15.39	15.38	15.34	15.34	0.4	253	0.6
1A-B to 1A-C	PVC SN8	1.6	150	0.018	1	100	5.08	229.38	0.0195	12.5	5	230	0.0194	12.4	12.5		12.5	-2.5	10		15.2	0.65	0.56	0.92	0.87	0.86	15.85	15.22	15.2	15.82	1.1	0.46	0	0.075	2		0.02	0.03		0.02	15.34	15.31	15.29	15.24	1.23	81.1	0.51
1A-C to 1A-D	PVC SN8	10.49	225	0.04	4.81	20.8	5.1	229.29	0.0293	18.7	5.01	229.9	0.0292	18.6	18.7		18.7	-3.7	14.9		98.5	0.15	0.38	1.79	0.87	2.48	15.82	15.13	14.62	15.66	1.1	0.46	-77.5	0	2		0.01	0.01		0.01	15.24	15.23	14.77	14.77	4.42	22.6	0.57
1A-D to 1-E	PVC SN8	4.62	225	0.04	1	100	5.18	228.64	0.0391	24.8	5.1	229.25	0.0389	24.8	24.8		24.8	-5	19.9		44.9	0.44	0.5	1.09	0.95	1.13	15.66	14.62	14.58	15.54	1.1	0.75	77.5	0.946	2		0.01	0.03		0.04	14.77	14.74	14.68	14.23	1.26	79.4	0.89
2-A to 2-B	RCP CL3	24	375	0.11	100.1	5.22	228.38	0.0955	60.6	5.22	228.38	0.0955	60.6	60.6			60.6		60.6		175.3	0.35	0.55	1.44	1.17	1.59	15.63	14.59	14.35	15.39	1.1	0.67	0	0.02	2.23	2.69	0.02	0.03	0.04	0.11	14.81	14.76	14.7	14.73	0.26	391.7	0.83
2-B to 2-C	RCP CL3	24	375	0.11	0.92	109	5.42	226.9	0.194	122.3	5.34	227.51	0.1937	122.4	122.4		122.4		122.4		168	0.73	1.11	1.66	1.51	1.52	15.39	14.33	14.11	15.15	1.1	0.68	0	0.095	1.91	2.36	0.06	0.12	0.15	0.19	14.73	14.58	14.43	14.46	0.63	158.8	0.66
2-C to 2-D	RCP CL3	24	450	0.159	1	99.7	5.62	225.42	0.2927	183.3	5.52	226.13	0.2923	183.6	183.6		183.6		183.6		285.6	0.64	1.15	1.91	1.62	1.8	15.15	14.01	13.77	14.89	1.1	0.68	0	0.075	1.77	2.2	0.07	0.12	0.15	0.23	14.46	14.31	14.12	14.14	0.78	127.5	0.69
2-D to 2-E	RCP CL3	24	525	0.216	5.48	18.3	5.82	223.94	0.3914	243.5	5.64	225.28	0.39	244.1	244.1		244.1		244.1		1006.9	0.24	1.13	3.83	1.68	4.65	14.89	13.7	12.38	13.97	1.1	0.65	0	0.15	1.47	1.78	0.06	0.1	0.12	1.21	14.14	14.03	12.62	12.62	5.89	17	0.74
2-E to 2-F	RCP CL3	15.66	675	0.358	3.8	26.3	6.02	222.46	0.4859	300.3	5.82	223.91	0.4844	301.3	301.3		301.3		301.3		1639.3	0.18	0.84	3.49	1.64	4.58	13.97	12.23	11.64	13.41	1.1	1.05	0	0.02	1.09	1.28	0.04	0.04	0.05	0.17	12.62	12.58	12.51	12.54	0.42	237	1.35
2-F to 2-G	RCP CL3	8.64	675	0.358	0.5	200	10.07	192.61	0.6712	359.1	5.93	223.11	0.6673	413.5	413.5	13.4	426.9		426.9		594.6	0.72	1.19	1.81	1.85	1.66	13.41	11.62	11.57	13.32	1.1	1.08	0	0.02	1.78	2.17	0.07	0.13	0.16	0.02	12.54	12.38	12.36	12.36	0.26	388	0.87
2-G to 2-H	RCP CL3	8.65	675	0.358	0.5	200	10.14	192.2	0.6801	363.1	6	222.58	0.6761	418	418	13.4	431.4		431.4		594.7	0.73	1.21	1.81	1.86	1.66	13.32	11.55	11.51	13.24	1.1	1.06	44.7	0.02	0.26		0.07	0.02		0.02	12.36	12.34	12.32	12.33	0.26	380	0.96
2-H to 2-I	RCP CL3	11.81	750	0.442	0.5	200	10.21	191.8	0.7202	383.7	6.01	222.52	0.7147	441.8	441.8	13.4	455.1	-0.9	454.2		787.5	0.58	1.03	1.85	1.81	1.78	13.24	11.49	11.43	13.1	1.1	0.94	45.3	0.02	2.22	2.45	0.05	0.12	0.13	0.02	12.33	12.2	12.18	12.2	0.12	814.9	0.91
2-I to 2-J	RCP CL3	15.6	750	0.442	0.5	200	10.31	191.25	0.7512	399.1	6.11	221.79	0.7457	459.4	459.4	13.4	472.8		472.8		787.5	0.6	1.07	1.86	1.84	1.78	13.1	11.41	11.33	12.95	1.1	0.87	0	0.02	2.06	2.42	0.06	0.12	0.14	0.02	12.2	12.06	12.05	12.05	0.11	930.4	0.9
2-J to 1-O	RCP CL3	16.2	750	0.442	0.51	195.2	10.44	190.52	0.7691	407	6.24	220.83	0.7636	468.4	468.4	13.4	481.8		481.8		797.2	0.6	1.09	1.89	1.85	1.8	12.95	11.31	11.23	12.79	1.1	0.81	-90	0.098	0.32		0.06	0.02		0.03	12.05	12.03	12	12.07	0.16	632.7	0.9
3-A to 2-F	RCP CL3	8.4	450	0.159	1	100	10	193	0.1195	64	5.01	229.9	0.1171	74.8	74.8	13.4	88.1	-3.3	84.8		285.2	0.3	0.53	1.56	1.23	1.79	13.54	11.93	11.84	13.41	1.1	1.13	-89.6	0.226	2.09	3.24	0.01	0.03	0.05	0.01	12.56	12.52	12.51	12.54	0.09	1130.1	0.97
3A-A to 3A-B	PVC SN8	9.99	150	0.018	1	100	5	230	0.0098	6.3	5	230	0.0098	6.3	6.3		6.3	-1.3	5		15.2	0.33	0.28	0.77	0.69	0.86	15.62	14.95	14.85	15.51	1.1	0.48	-0.4	0	2		0	0.01		0.06	15.02	14.98	14.98	14.98	0.4	253	0.6
3A-B to 3A-C	PVC SN8	1.6	150	0.018	1	100	5.08	229.38	0.0195	12.5	5	230	0.0194	12.4	12.5		12.5	-2.5	10		15.2	0.65	0.56	0.92	0.87	0.86	15.51	14.85	14.84	15.49	1.1	0.5	0.2	0.075	2		0.02	0.03		0.02	14.98	14.94	14.92	14.88	1.23	81.1	0.54
3A-C to 3A-D	PVC SN8	9.98	225	0.04	5.03	19.9	5.1	229.29	0.0294	18.7	5.01	229.9	0.0292	18.6	18.7		18.7	-3.8	14.9		100.8	0.15	0.38	1.82	0.87	2.53	15.49	14.76	14.26	15.3	1.1	0.5	0	0	2		0.01	0.01		0.4	14.88	14.86	14.5	14.5	3.66	27.4	0.61
3A-D to 3A-E	PVC SN8	1.34	225	0.04	5	20	5.18	228.67	0.0391	24.8	5.1	229.29	0.0389	24.8	24.8		24.8	-5	19.9		100.5	0.2	0.5	1.97	0.95	2.53	15.3	14.26	14.19	15.28	1.1	0.82	-89.9	0	2		0.01	0.03		0	14.5	14.47	14.47	14.47	0.14	734.6	0.8
3A-E to 1-F	PVC SN8	4.51	225	0.04	2.06	48.5	5.19	228.57	0.0796	50.5	5.19	228.59	0.0796	50.5	50.5		50.5	-9.6	41		64.5	0.64	1.03	1.72	1.27	1.62	15.28	14.19	14.1	15.17	1.1	0.86	0	0.608	2		0.05	0.11		0.06	14.47	14.36	14.23	14.18	2.93	34.1	0.81
4-A to 4-B	RCP CL3	32.67	450	0.159	0.5	200	13	176.2	0.2331	114.1	5	230	0.1509	96.4	114.1		114.1		114.1		201.7	0.57	0.72	1.31	1.35	1.27	13.71	12.89	12.73	13.8	1.1	0.4	63.4	0.068	7		0.03	0.18		0.12	13.32	13.13	13.05	13.07	0.24	414.7	0.39
4-B to 4-C	RCP CL3	5.2	450	0.159	1.5	66.7	13.27	174.68	0.3179	154.2	13	176.2	0.3151	154.2	154.2		154.2		154.2		349.3	0.44	0.97	2.13	1.51	2.2	13.8	12.66	12.58	13.72	1.1	0.67	27.2	0.02	2.48	2.74	0.05	0.12	0.13	0.04	13.07	12.94	12.94	12.96	-0.15	-654.1	0.74
4-C to 4-D	RCP CL3	18.68	450	0.159	0.5	200	13.32	174.43	0.3179	154	13.04	175.96	0.3151	154	154		154		154		201.7	0.76	0.97	1.4	1.51	1.27	13.72	12.56	12.47	13.2	1.1	0.47	0		1.82	2.18	0.05	0.09	0.1	0.1	12.96	12.86	12.74	12.74	0.6	166	0.76
5-A to 5-B	RHS	7.81	(4x)125x75	0.037	1	100	13	176.2	0.1052	51.5	5	230	0.0681	43.5	51.5		51.5		51.5	14.1	23.6	2.18	1.37	1.37	1.37	0.63	15.46	15.16	15.08	15.24	1.1	0.23	0		2		0.05	0.1		0.2	15.46	15.35	15.16	15.16	2.51	39.9	0
6-A to 6-B	RCP CL3	2.07	600	0.283	0.5	200									0		0		0		434.4	0	0	0	0	1.54	10	8.78	8.77	11.9	1.1	-0.58	1.8	0.02			0			0.01	8.78	8.78	8.77	8.75	0.5	200	1.22
6-B to 6-C	RCP CL3	8	600	0.283	0.5	200									0		0		0		434.4	0	0	0	0	1.54	11.9	8.75	8.71	10.63	1.1	0.5	0				0			0.04	8.75	8.75	8.71	8.71	0.5	200	3.15
6A-A to 6A-B	PVC SN8	9.98	150	0.018	1	100	5	230	0.0111	7.1	5	230	0.0111	7.1	7.1		7.1	-2.1	5		15.2	0.33	0.28	0.77	0.69	0.86	15.53	14.89	14.79	15.41	1.1	0.46	0	0	2		0	0.01		0.06	14.97	14.96	14.92	14.92	0.4	252.8	0.56
6A-B to 6A-C	PVC SN8	1.6	150	0.018	1	100	5.08	229.38	0.0209	13.3	5	230	0.0208	13.3	13.3		13.3	-3.4	10		15.2	0.65	0.56	0.92	0.87	0.86	15.41	14.79	14.78	15.39	1.1	0.46	0	0.075	2		0.02	0.03		0.02	14.92	14.89	14.87	14.82	1.23	81.1	0.49
6A-C to 6A-D	PVC SN8	9.98	225	0.04	4.28	23.3	5.1	229.29	0.0307	19.5	5.01	229.9	0.0305	19.5	19.5		19.5	-4.6	14.9		93	0.16	0.38	1.71	0.87	2.34	15.39	14.7	14.27	15.29	1.1	0.46	0.1	0	2		0.01	0.01		0.34	14.82	14.8	14.5	14.5	3.05	32.8	0.57
6A-D to 3A-E	PVC SN8	1.67	225	0.04	5	20	5.18	228.67	0.0405	25.7	5.1	229.29	0.0403	25.7	25.7		25.7	-4.6	21.1		100.5	0.21	0.53	2	0.97	2.53	15.29	14.27	14.19	15.28	1.1	0.79	89.9	0	2		0.01	0.03		0	14.5	14.47	14.47	14.47	0.05	2039.6	0.79
7-A to 7-B	RHS	6	125x75	0.009	0.3	333.3	13	176.2	0.0042	2.1	5	230	0.0027	1.7	2.1		2.1		2.1		3.2	0.64	0.22	0.37	0.54	0.35	13.92	13.84	13.82	13.92	1.1	0.02	0		7		0	0.02		0.02	13.9	13.88	13.85	13.85	0.53	189.6	0.02

ROCKHAMPTON REGIONAL COUNCIL
AMENDED PLANS APPROVED
12 January 2026
DATE
These plans are approved subject to the current conditions of approval associated with
Development Permit No.: D/170-2022
Dated: 12 June 2023

No.	DATE	REVISIONS	DES	DRN	CHK	APD
D	14.03.25	GENERAL AMENDED	S.C.M	J.J.D	J.M.H	J.M.H
C	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
B	18.10.24	GENERAL AMENDMENT	S.C.M	J.J.D	J.M.H	J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

WESTERA PARTNERS
STRUCTURAL+CIVIL+ENVIRONMENTAL ENGINEERS
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SURVEYOR CAPRICORN SURVEY GROUP CQ PHONE 07 4927 5199
DATUM A.H.D. P.M. R.L.

USE FIGURED DIMENSIONS ONLY. DO NOT SCALE. IF A DISCREPANCY ARISES CHECK WITH THE PROJECT ENGINEER AND/OR SUPERVISING AUTHORITY. DO NOT WORK FROM REDUCED SCALE DRAWINGS (A1-A3 SIZE PAPER). COPYRIGHT OF ALL DRAWINGS & WORKS EXECUTED FROM THEM IS VESTED IN WESTERA PARTNERS AND USE OF THERE FORE WITHOUT PERMISSION IS STRICTLY PROHIBITED! IT IS THE BUILDERS RESPONSIBILITY TO ENSURE ALL WORKS ARE CARRIED OUT WITH DUE CARE AND DILIGENCE TO COMPLY WITH THE CONTRACT DOCUMENTS.

PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE STORMWATER CALCULATIONS 5% AEP HYDRAULICS
CLIENT RUBY DEVELOPMENT PTY LTD

DRAWING STATUS FOR CONSTRUCTION
DRAWING NUMBER S24-018-C35
SHEET NUMBER 35 OF 37
REVISION D

S24-018-C_Stm_Calc.dwg

1% AEP HYDROLOGY

Node	Node	Setout	Setout	Setout	Grate	Cover	Road	Road	Road	Catch	Time	Intensity	Runoff	Area	Full	Full	Full	Partial	Partial	Partial	Catchment	Direct	Approach	Road	Flooded	Max Pond	Choke	Inlet	Inlet	Bypass	Bypass
Name	Type	Easting	Northing	RL	RL	RL	Name	Chainage	Offset	ID	Tc	I	C	A	CA	Sum CA	Qc=CIA	CA	Sum CA	Qc=CIA	Flow Qc	Flow Qdg	Flow Qa	Capacity	Depth	Depth	Factor	Curve Name	Flow Qg	Flow Qb	Node
(-)	(-)	(m)	(m)	(m)	(m)	(m)	(-)	(m)	(m)	(-)	(min)	(mm/hr)	(-)	(ha)	(ha)	(ha)	(L/s)	(ha)	(ha)	(L/s)	(L/s)	(L/s)	(L/s)	(L/s)	(m)	(m)	(-)	(-)	(L/s)	(L/s)	(-)
1-A	FIELD INLET 900x900	248036.19	7414221.23	14.99	14.99	14.99				1P	5	302	0.92	0.0322	0.0298	0.0517	43.4	0.0298	0.0517	43.4	43.4		43.4	55	0.059	0.07	0.5	SAG	43.4		-
										1I	5	302	0.83	0.0263	0.0219			0.0219													
1-B	MH1050	248038.83	7414214.83	15.25	15.25	15.25																									-
1-C	MH1050	248046.25	7414214.08	15.53	15.53	15.53																									-
1-D	FIELD INLET 900x900	248055.02	7414209.14	15.92	15.92	15.92				1P	5	302	1	0.0002	0.0002	0.0021	1.7	0.0002	0.0021	1.7	1.7		1.7	33	0.006	0.05	0.5	SAG	1.7		1-E
										1I	5	302	0.83	0.0022	0.0018			0.0018													
1-E	FIELD INLET 900x900	248051.89	7414183.71	15.54	15.54	15.54				1P	5	302	1	0.0022	0.0022	0.019	15.9	0.0022	0.019	15.9	15.9		28.7	33	0.044	0.05	0.5	SAG	28.7		1-F
										1I	5	302	0.83	0.0201	0.0167			0.0167													
1-F	FIELD INLET 900x900	248048.9	7414159.49	15.17	15.17	15.17	ROAD 02	371.73	0	1P	5	302	1	0.0047	0.0047	0.0398	33.3	0.0047	0.0398	33.3	33.3		56.9	33	0.05	0.05	0.5	SAG	33	23.9	1-G
										1I	5	302	0.83	0.0421	0.0351			0.0351													
1-G	FIELD INLET 900x900	248076.14	7414156.13	14.9	14.9	14.9	ROAD 02	344.28	0	1P	5	302	1	0.0026	0.0026	0.0218	18.3	0.0026	0.0218	18.3	18.3		60.4	33	0.05	0.05	0.5	SAG	33	27.4	1-H
										1I	5	302	0.83	0.0231	0.0192			0.0192													
1-H	FIELD INLET 900x900	248099.96	7414153.18	14.66	14.66	14.66	ROAD 02	320.28	-0.01	1P	5	302	1	0.0024	0.0024	0.0204	17.1	0.0024	0.0204	17.1	17.1		64.7	33	0.05	0.05	0.5	SAG	33	31.7	1-I
										1I	5	302	0.83	0.0216	0.018			0.018													
1-I	FIELD INLET 900x900	248123.78	7414150.24	14.42	14.42	14.42	ROAD 02	296.28	-0.01	1P	5	302	1	0.0024	0.0024	0.0204	17.1	0.0024	0.0204	17.1	17.1		69	33	0.05	0.05	0.5	SAG	33	36	1-J
										1I	5	302	0.83	0.0216	0.018			0.018													
1-J	FIELD INLET 900x900	248147.6	7414147.31	14.18	14.18	14.18	ROAD 02	272.28	-0.01	1P	5	302	1	0.0024	0.0024	0.0204	17.1	0.0024	0.0204	17.1	17.1		73.1	33	0.05	0.05	0.5	SAG	33	40.1	1-K
										1I	5	302	0.83	0.0216	0.018			0.018													
1-K	FIELD INLET 900x900	248171.42	7414144.38	13.82	13.82	13.82	ROAD 02	248.28	0	1P	5	302	1	0.0022	0.0022	0.019	15.9	0.0022	0.019	15.9	15.9		76	33	0.05	0.05	0.5	SAG	33	43	1-L
										1I	5	302	0.83	0.0201	0.0167			0.0167													
1-L	FIELD INLET 900x900	248195.19	7414141.44	13.11	13.11	13.11	ROAD 02	224.33	0	1P	5	302	1	0.0024	0.0024	0.0203	17.1	0.0024	0.0203	17.1	17.1		80	33	0.05	0.05	0.5	SAG	33	47	1-M
										1I	5	302	0.83	0.0215	0.0179			0.0179													
1-M	FIELD INLET 900x900 1350 dia	248204.45	7414140.3	12.92	12.92	12.92	ROAD 02	215	0	1P	5	302	1	0.001	0.001	0.0082	6.8	0.001	0.0082	6.8	6.8		60.1	33	0.05	0.05	0.5	SAG	33	27.1	LOST
										1I	5	302	0.83	0.0086	0.0072			0.0072													
1-N	MH1200	248212.46	7414139.31	12.94	12.94	12.94																									-
1-O	FIELD INLET 900x900 1800 dia	248213.55	7414148.15	12.79	12.79	12.79				1P	5	302	1	0.0023	0.0023	0.0193	16.2	0.0023	0.0193	16.2	16.2		16.2	33	0.028	0.05	0.5	SAG	16.2		-
										1I	5	302	0.83	0.0205	0.0171			0.0171													
1-P	MH1350	248216.95	7414147.73	12.87	12.87	12.87																									-
1-Q	HW outlet	248221.29	7414147.19	9.77	12.27	12.27																									-
1A-A	GEMLIFE ROOFWATER STUB	248050.24	7414207.17	15.99	15.99	15.99				1I	5	302	0.83	0.0117	0.0098	0.0098	8.2	0.0098	0.0098	8.2	8.2		8.2	5	-1	0	0.5	SAG	5	3.2	1-E
1A-B	GEMLIFE ROOFWATER STUB	248049.02	7414197.26	15.85	15.85	15.85				1I	5	302	0.83	0.0117	0.0098	0.0098	8.2	0.0098	0.0098	8.2	8.2		8.2	5	-1	0	0.5	SAG	5	3.2	1-E
1A-C	GEMLIFE ROOFWATER STUB	248048.82	7414195.67	15.82	15.82	15.82				1I	5	302	0.83	0.0117	0.0098	0.0098	8.2	0.0098	0.0098	8.2	8.2		8.2	5	-1	0	0.5	SAG	5	3.2	1-E
1A-D	GEMLIFE ROOFWATER STUB	248047.54	7414185.26	15.66	15.66	15.66				1I	5	302	0.83	0.0117	0.0098	0.0098	8.2	0.0098	0.0098	8.2	8.2		8.2	5	-1	0	0.5	SAG	5	3.2	1-E
2-A	FIELD INLET 900x900	248082.14	7414204.76	15.63	15.63	15.63				1P	5	302	1	0.0025	0.0025	0.0213	17.8	0.0025	0.0213	17.8	17.8		34.4	33	0.05	0.05	0.5	SAG	33	1.4	2-B
										1I	5	302	0.83	0.0225	0.0188			0.0188													
2-B	FIELD INLET 900x900	248105.96	7414201.83	15.39	15.39	15.39				1P	5	302	1	0.0024	0.0024	0.0204	17.1	0.0024	0.0204	17.1	17.1		37.8	33	0.05	0.05	0.5	SAG	33	4.8	2-C
										1I	5	302	0.83	0.0216	0.018			0.018													
2-C	FIELD INLET 900x900	248129.78	7414198.89	15.15	15.15	15.15				1P	5	302	1	0.0024	0.0024	0.0204	17.1	0.0024	0.0204	17.1	17.1		41.3	33	0.05	0.05	0.5	SAG	33	8.3	2-D
										1I	5	302	0.83	0.0216	0.018			0.018													
2-D	FIELD INLET 900x900	248153.6	7414195.95	14.89	14.89	14.89				1P	5	302	1	0.0024	0.0024	0.0201	16.9	0.0024	0.0201	16.9	16.9		44.7	33	0.05	0.05	0.5	SAG	33	11.7	2-E
										1I	5	302	0.83	0.0213	0.0178			0.0178													
2-E	FIELD INLET 900x900	248177.42	7414193.01	13.97	13.97	13.97	ROAD 02	123.45	0	1P	5	302	1	0.0022	0.0022	0.0186	15.6	0.0022	0.0186	15.6	15.6		45.2	33	0.05	0.05	0.5	SAG	33	12.2	2-F
										1I	5	302	0.83	0.0197	0.0164			0.0164													
2-F	FIELD INLET 900x900	248192.96	7414191.1	13.41	13.41	13.41	ROAD 02	139.11	-0.01	1P	5	302	1	0.0018	0.0018	0.0157	13.2	0.0018	0.0157	13.2	13.2		44.2	33	0.05	0.05	0.5	SAG	33	11.2	2-G
										1I	5	302	0.83	0.0166	0.0139			0.0139													
2-G	FIELD INLET 900x900	248201.54	7414190.04	13.32	13.32	13.32	ROAD 02	147.76	-0.01	1P	5	302	1	0.001	0.001	0.0089	7.5	0.001	0.0089	7.5	7.5		18.6	66	0.018	0.05	1	SAG	18.6		2-H
										1I	5	302	0.83	0.0094	0.0078			0.0078													
2-H	FIELD INLET 900x900 1350 dia	248210.12	7414188.98	13.24	13.24	13.24	ROAD 02	156.4	-0.01	1P	5	302	1	0.0014	0.0014	0.012	10	0.0014	0.012	10	10		13.2	33	0.024	0.05	0.5	SAG	13.2		2-I
										1I	5	302	0.83	0.0127	0.0106			0.0106													
2-I	FIELD INLET 900x900 1350 dia	248217.44	7414179.71	13.1	13.1	13.1	ROAD 02	169.67	0	1P	5	302	1	0.0037	0.0037	0.0313	26.3	0.0037	0.0313	26.3	26.3		29.1	33	0.045	0.05	0.5	SAG	29.1		2-J
										1I	5	302	0.83	0.0332	0.0276			0.0276													
2-J	FIELD INLET 900x900 1350 dia	248215.53	7414164.23	12.95	12.95	12.95				1P	5	302	1	0.0021	0.0021	0.018	15.1	0.0021	0.018	15.1	15.1		15.1	33	0.026	0.05	0.5	SAG	15.1		1-O
										1I	5	302	0.83	0.0191	0.0159			0.0159													
3-A	FIELD INLET 900x900	248193.92	7414199.43	13.54	13.54	13.54				1P	10	254	0.85	0.0065	0.0055	0.0069	4.8	0.0028	0.0041	3.4	4.8		4.8	0	0	-0.039	0.5	SAG	0	4.8	2-F
										1I	5	302	0.83	0.0016	0.0013			0.0013													
3A-A	GEMLIFE ROOFWATER STUB	248047.23	7414182.77	15.62	15.62	15.62				1I	5	302	0.83	0.0118	0.0098	0.0098	8.2	0.0098	0.0098	8.2	8.2		8.2	5	-1	0	0.5	SAG	5	3.2	1-F
3A-B	GEMLIFE ROOFWATER STUB	248045.99	7414172.86	15.51	15.51	15.51				1I	5	302	0.83	0.0117	0.0098	0.0098	8.2	0.0098	0.0098	8.2	8.2		8.2	5	-1	0	0.5	SAG	5	3.2	1-F
3A-C	GEMLIFE ROOFWATER STUB	248045.8	7414171.27	15.49	15.49	15.49				1I	5	302	0.83	0.0118	0.0098	0.0098	8.2	0.0098	0.0098	8.2	8.2		8.2	5	-1	0	0.5	SAG	5	3.2	1-F
3A-D	GEMLIFE ROOFWATER STUB	248044.59	7414161.37	15.3	15.3	15.3				1I	5	302	0.83	0.0117	0.0097	0.0097	8.2	0.0097	0.0097	8.2	8.2		8.2	5	-1	0	0.5	SAG	5	3.2	1-F
3A-E	TEE	248044.43	7414160.04	15.28	15.28	15.28																	0		0	0	0.5		0		-
4-A	FIELD INLET 900x900	248191.87	7414215.74	13.71	13.71	13.71				1P	13	232.4	0.85	0.1792	0.1527	0.2522	162.8	0.0587	0.1582	132.7	162.8		162.8	94	0.143	0.1	0.5	SAG	162.8		-
										1I	5	302	0.83	0.1195	0.0995			0.0995													
4-B	FIELD INLET 900x900	248195.39	7414248.22	13.8	13.8	13.8				1P	13	232.4	0.82	0.0652	0.0537	0.0899	58.1	0.0207	0.0569	47.7	58.1		58.1		0.072	-0.305	0.5	SAG	58.1		-
										1I	5	302	0.83	0.0434	0.0362			0.0362													
4-C	MH1050	248200.26	7414250.04	13.68	13.72	13.72																									-
4-D	HW OUT	248218.8	7414247.85	13.24	13.2	13.24																									-
5-A	FIELD INLET 900x900	248035.35	7414233.87	15.46	15.46	15.46				1P	13	232.4	0.85	0.0809	0.0689	0.1138	73.5	0.0265	0.0714	59.9	73.5		73.5	384.8	0.084	0.255	0.5	SAG	73.5		-
										1I	5	302	0.83	0.0539	0.0449			0.0449													
5-B	HW OUT	248027.59	7414234.83	15.24	15.24	15.24																									-
6-A	FIELD INLET 900x900	248226.7	7414118.64	10	10	10																	0		0		1		0		-
6-B	FIELD INLET 900x900 1500 dia	248228.77	7414118.7	9.65	11.9	11.9																									-
6-C	HW outlet	248236.77	7414118.67	8.45	10.63	0																									-
6A-A	GEMLIFE ROOFWATER STUB	248041.58	7414136.97	15.53	15.53	15.53				1I	5	302	0.83	0.0133	0.0111	0.0111	9.3	0.0111	0.0111	9.3	9.3		9.3	5	-1	0	0.5	SAG	5	4.3	1-F
6A-B	GEMLIFE ROOFWATER STUB	248042.8	7414146.88	15.41	15.41	15.41				1I	5	302	0.83	0.0118	0.0099	0.0099	8.3	0.0099	0.0099	8.3	8.3		8.3	5	-1	0	0.5	SAG	5	3.3	1-F
6A-C	GEMLIFE ROOFWATER STUB	248043	7414148.47	15.39	15.39	15.39				1I	5	302	0.83	0.0117	0.0097	0.0097	8.2	0.0097	0.0097	8.2	8.2		8.2	5	-1	0	0.5	SAG	5	3.2	1-F
6A-D	GEMLIFE ROOFWATER STUB	248044.22	7414158.38	15.29	15.29	15.29				1I	5	302	0.83	0.0118	0.0098	0.0098	8.3	0.0098	0.0098	8.3	8.3		8.3	5	-1	0	0.5	SAG	8.3		-
7-A	FIELD INLET 900x900	248198.73	7414280.31	13.92	13.92	13.92				1P	13	232.4	0.82	0.0032	0.0027	0.0045	2.9	0.001	0.0028	2.4	2.9		2.9		0.01	-0.034	0.5	SAG	2.9		-
										1I	5	302	0.83	0.0022	0.0018			0.0018													
7-B	HW outlet	248199.38	7414286.27	13.82	13.92	13.92																									-

ROCKHAMPTON REGIONAL COUNCIL
AMENDED PLANS APPROVED
12 January 2026
DATE
These plans are approved subject to the current conditions of approval associated with
Development Permit No.: D/170-2022
Dated: 12 June 2023

No.	DATE	REVISIONS	DES	DRN	CHK	APD
D	14.03.25	GENERAL AMENDED	S.C.M	J.J.D	J.M.H	J.M.H
C	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
B	18.10.24	GENERAL AMENDMENT	S.C.M	J.J.D	J.M.H	J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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STRUCTURAL+CIVIL+ENVIRONMENTAL ENGINEERS
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SURVEYOR
CAPRICORN SURVEY GROUP CQ
PHONE 07 4927 5199
DATUM A.H.D.
P.M.
R.L.

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PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE STORMWATER CALCULATIONS 1% AEP HYDROLOGY
CLIENT RUBY DEVELOPMENT PTY LTD

DRAWING STATUS FOR CONSTRUCTION
DRAWING NUMBER S24-018-C36
SHEET NUMBER 36 OF 37
REVISION D

S24-018-C_Stm_Calc.dwg

1% AEP HYDRAULICS

Pipe ID	Pipe Type	Pipe Length	Pipe Size	Full Pipe Area Af	Pipe Grade	Pipe Grade	Full-area Tct	Full-area I	Full-area Sum CA	Full-area Qc=CIA	Part-area Tct	Part-area I	Part-area Sum CA	Part-area Qc=CIA	Catchment Flow Qc	Direct Node Flow Qdg	Peak Flow Qrat	Net Bypass Flow Qb	Pipe Flow Q	Excess Pipe Flow Qx	Capacity Flow Qcap	Q/Qcap Ratio	Full Pipe Vel Vf=Q/Af	Norm Depth Vel Vn=Q/An	Crit Depth Vel Vc=Q/Ac	Capacity Vel Vcap=Qcap/Af	US Node Grate RL	Pipe US IL	Pipe DS IL	DS Node Grate RL	Cover Limit	Cover Min	Pipe DS Bend	Pipe DS Drop	US Node Ku	US Node Kw	Pipe V'head	P'head Loss (Ku.V'head)	WSE Loss (Kw.V'head)	Pipe T'head Loss	US Node HGL	Pipe US HGL	Pipe DS HGL	DS Node HGL	HGL Grade	HGL Grade	F'board US
(-)	(-)	(m)	(mm)	(sq.m)	(%)	(1 in)	(min)	(mm/hr)	(ha)	(L/s)	(min)	(mm/hr)	(ha)	(L/s)	(L/s)	(L/s)	(L/s)	(L/s)	(L/s)	(L/s)	(L/s)	(-)	(m/s)	(m/s)	(m/s)	(m/s)	(m)	(m)	(m)	(m)	(m)	(m)	(deg)	(m)	(-)	(-)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)	(%)	(1 in)	(m)
1-A to 1-B	RCP CL3	6.91	375	0.11	0.5	200	5	302	0.0517	43.4	5	302	0.0517	43.4	43.4		43.4		43.4		124	0.35	0.39	1.02	1.05	1.12	14.99	14.18	14.15	15.25	0.6	0.45	-61.8	0.02	6.76		0.01	0.05		0	14.96	14.9	14.9	14.9	0.06	1635.7	0.04
1-B to 1-C	RCP CL3	7.47	375	0.11	1	100	5.06	301.45	0.0517	43.3	5.06	301.45	0.0517	43.3	43.3		43.3		43.3		175.4	0.25	0.39	1.32	1.05	1.59	15.25	14.13	14.06	15.53	1.1	0.77	23.7	0.02	1.96	2.34	0.01	0.02	0.02	0	14.9	14.88	14.88	14.88	0.06	1641.7	0.35
1-C to 1-D	RCP CL3	10.07	375	0.11	1	100	5.12	300.85	0.0517	43.2	5.12	300.85	0.0517	43.2	43.2		43.2		43.2		175.4	0.25	0.39	1.31	1.05	1.59	15.53	14.04	13.93	15.92	1.1	1.14	67.6	0.02	1.47	1.66	0.01	0.01	0.01	0.01	14.88	14.87	14.86	14.86	0.06	1648.2	0.65
1-D to 1-E	RCP CL3	25.62	375	0.11	1.02	97.7	5.2	300.04	0.0538	44.8	5	302	0.0516	43.3	44.8		44.8		44.8		177.5	0.25	0.41	1.34	1.06	1.61	15.92	13.91	13.65	15.54	1.1	1.52	0	0.02	1.95	2.12	0.01	0.02	0.02	0.02	14.86	14.84	14.83	14.83	0.07	1532.7	1.06
1-E to 1-F	RCP CL3	24.41	375	0.11	0.5	200	5.42	297.99	0.1118	92.6	5.22	299.86	0.1098	91.5	92.6		92.6		92.6		124	0.75	0.84	1.23	1.35	1.12	15.54	13.63	13.51	15.17	1.1	1.29	-90	0.02	1.4	1.55	0.04	0.05	0.06	0.07	14.83	14.78	14.71	14.75	0.28	359.1	0.71
1-F to 1-G	RCP CL3	27.44	375	0.11	0.5	202	5.62	296.04	0.2312	190.1	5.43	297.91	0.2292	189.6	190.1		190.1	-23.9	166.2		123.4	1.35	1.51	1.51	1.76	1.12	15.17	13.49	13.35	14.9	1.1	1.17	0	0.095	1.57	1.91	0.12	0.18	0.22	0.25	14.75	14.53	14.28	14.3	0.9	111.3	0.42
1-G to 1-H	RCP CL3	24	450	0.159	1.09	91.5	10.12	253.11	0.3206	225.4	5.85	293.85	0.3202	261.4	261.4		261.4	-27.4	234		298.2	0.78	1.47	2.07	1.81	1.87	14.9	13.26	13	14.66	1.1	1.18	0	0.095	1.27	1.45	0.11	0.14	0.16	0.16	14.3	14.14	13.98	14	0.67	148.5	0.6
1-H to 1-I	RCP CL3	24	525	0.216	0.5	200	10.32	251.67	0.4209	294.2	5.77	294.6	0.4174	341.6	341.6		341.6	-31.7	309.9		304.2	1.02	1.43	1.6	1.86	1.41	14.66	12.9	12.78	14.42	1.1	1.12	0	0.02	1.25	1.4	0.1	0.13	0.15	0.12	14	13.85	13.73	13.75	0.52	192.8	0.66
1-I to 1-J	RCP CL3	24	525	0.216	0.5	200	10.52	250.23	0.521	362.1	5.87	293.64	0.5158	420.7	420.7		420.7	-36	384.8		304.2	1.26	1.78	1.78	2.08	1.41	14.42	12.76	12.64	14.18	1.1	1.02	0	0.075	1.12	1.26	0.16	0.18	0.2	0.19	13.75	13.55	13.35	13.38	0.8	125	0.67
1-J to 1-K	RCP CL3	24	600	0.283	0.5	200	10.72	248.79	0.6209	429.1	6.06	291.82	0.6156	499	499		499	-40.1	458.9		434.4	1.06	1.62	1.74	2.04	1.54	14.18	12.57	12.45	13.82	1.1	0.79	0	0.02	1.06	1.24	0.13	0.14	0.17	0.13	13.38	13.21	13.08	13.1	0.56	179.2	0.8
1-K to 1-L	RCP CL3	23.95	600	0.283	2.7	37.1	10.92	247.35	0.7193	494.2	6.23	290.17	0.7133	574.9	574.9		574.9	-43	531.9		1009	0.53	1.88	3.61	2.21	3.57	13.82	12.43	11.78	13.11	1.1	0.74	0	0.02	0.96	1.1	0.18	0.17	0.2	0.27	13.1	12.9	12.7	12.73	0.84	119.1	0.72
1-L to 1-M	RCP CL3	9.33	600	0.283	2.51	39.9	11.12	245.92	0.819	559.4	6.38	288.79	0.8115	651	651		651	-47	604		972.7	0.62	2.14	3.62	2.38	3.44	13.11	11.76	11.53	12.92	1.1	0.72	0	0.112	0.86	0.97	0.23	0.2	0.23	0.09	12.73	12.5	12.41	12.41	0.97	103.4	0.38
1-M to 1-N	RCP CL3	8.07	750	0.442	1	100	11.2	245.36	0.8271	563.7	6.45	288.04	0.8197	655.8	655.8		655.8	-20.8	635		1113.7	0.57	1.44	2.6	2.06	2.52	12.92	11.42	11.33	12.94	1.1	0.75	-90	0.095	-0.52		0.11	-0.05		0.03	12.41	12.47	12.44	12.48	0.33	307.6	0.51
1-N to 1-O	RCP CL3	8.91	825	0.535	0.88	113.5	11.27	244.87	0.8673	590	6.52	287.42	0.8598	686.5	686.5		686.5	-34.6	651.9		1348	0.48	1.22	2.5	1.99	2.52	12.94	11.24	11.16	12.79	1.1	0.8	90	0.03	2.14	2.68	0.08	0.16	0.2	0.02	12.48	12.28	12.26	12.38	0.21	485.3	0.45
1-O to 1-P	RCP CL3	3.42	900	0.636	1	100	11.34	244.34	1.6766	1137.9	6.46	287.97	1.6606	1328.4	1328.4	22.9	1351.2	-40.1	1311.1		1811.2	0.72	2.06	3.1	2.55	2.85	12.79	11.13	11.1	12.87	1.1	0.77	0	1.288	2.09	2.61	0.22	0.45	0.57	0	12.38	11.81	11.66	11.05	4.23	23.6	0.41
1-P to 1-Q	RCP CL3	4.38	900	0.636	1	100	11.37	244.13	1.6766	1137	6.49	287.7	1.6606	1327.1	1327.1	22.9	1350	-40.1	1309.9		1811.1	0.72	2.06	3.1	2.55	2.85	12.87	9.81	9.77	12.27	1.1	2.17	0		2.08	2.61	0.22	0.45	0.56	0	11.05	10.49	10.33	10.33	3.53	28.4	1.82
1A-A to 1A-B	PVC SN8	9.98	150	0.018	1	100	5	302	0.0098	8.2	5	302	0.0098	8.2	8.2		8.2	-3.2	5		15.2	0.33	0.28	0.77	0.69	0.86	15.99	15.32	15.22	15.85	1.1	0.48	0	0	2		0	0.01		0.06	15.39	15.38	15.34	15.34	0.4	252.3	0.6
1A-B to 1A-C	PVC SN8	1.6	150	0.018	1	100	5.08	301.2	0.0195	16.4	5	302	0.0194	16.3	16.4		16.4	-6.4	10		15.2	0.65	0.56	0.92	0.87	0.86	15.85	15.22	15.2	15.82	1.1	0.46	0	0.075	2		0.02	0.03		0.02	15.34	15.31	15.29	15.24	1.23	81	0.51
1A-C to 1A-D	PVC SN8	10.49	225	0.04	4.81	20.8	5.1	301.07	0.0293	24.5	5.01	301.87	0.0292	24.5	24.5		24.5	-9.6	14.9		98.5	0.15	0.38	1.79	0.87	2.48	15.82	15.13	14.62	15.66	1.1	0.46	-77.5	0	2		0.01	0.01		0.4	15.24	15.23	14.86	14.86	3.51	28.5	0.57
1A-D to 1-E	PVC SN8	4.62	225	0.04	1	100	5.18	300.23	0.0391	32.6	5.1	301.03	0.0389	32.6	32.6		32.6	-12.8	19.8		44.9	0.44	0.5	1.09	0.95	1.13	15.66	14.62	14.58	15.54	1.1	0.75	77.5	0.946	2		0.01	0.03		0.01	14.86	14.84	14.83	14.83	0.17	585.9	0.8
2-A to 2-B	RCP CL3	24	375	0.11	100.1	5.22	299.89	0.0957	79.7	5.22	299.89	0.0957	79.7	79.7		79.7	-1.4	78.3		175.3	0.45	0.71	1.54	1.27	1.59	15.63	14.59	14.35	15.39	1.1	0.67	0	0.02	2.27	2.69	0.03	0.06	0.07	0.05	15.03	14.96	14.91	14.95	0.2	505.9	0.6
2-B to 2-C	RCP CL3	24	375	0.11	0.92	109	5.42	297.97	0.1944	160.9	5.34	298.78	0.1941	161.1	161.1		161.1	-4.8	156.3		168	0.93	1.41	1.73	1.7	1.52	15.39	14.33	14.11	15.15	1.1	0.68	0	0.095	1.82	2.22	0.1	0.19	0.23	0.19	14.95	14.73	14.54	14.58	0.79	126	0.44
2-C to 2-D	RCP CL3	24	450	0.159	1	99.7	5.62	296.05	0.2933	241.2	5.52	296.98	0.2929	241.6	241.6		241.6	-8.3	233.3		285.6	0.82	1.47	2	1.81	1.8	15.15	14.01	13.77	14.89	1.1	0.68	0	0.075	1.68	2.08	0.11	0.18	0.23	0.19	14.58	14.35	14.22	14.25	0.55	180.6	0.57
2-D to 2-E	RCP CL3	24	525	0.216	5.48	18.3	5.82	294.13	0.3921	320.4	5.64	295.88	0.3908	321.2	321.2		321.2	-11.7	309.5		1006.9	0.31	1.43	4.09	1.86	4.65	14.89	13.7	12.38	13.97	1.1	0.65	0	0.15	1.4	1.68	0.1	0.15	0.18	0.91	14.25	14.07	13.23	13.24	3.51	28.5	0.64
2-E to 2-F	RCP CL3	15.66	675	0.358	3.8	26.3	6.02	292.21	0.4868	395.2	5.82	294.1	0.4853	396.4	396.4		396.4	-12.2	384.3		1639.3	0.23	1.07	3.74	1.78	4.58	13.97	12.23	11.64	13.41	1.1	1.05	0	0.02	1.04	1.22	0.06	0.06	0.07	0.03	13.24	13.17	13.14	13.16	0.21	478.9	0.73
2-F to 2-G	RCP CL3	8.64	675	0.358	0.5	200	10.07	253.5	0.673	473.9	5.93	293.07	0.6687	544.4	544.4	22.9	567.2	-11.2	556		594.6	0.94	1.55	1.89	2.07	1.66	13.41	11.62	11.57	13.32	1.1	1.08	0	0.02	1.48	1.7	0.12	0.18	0.21	0.04	13.16	12.95	12.92	12.92	0.44	228.7	0.25
2-G to 2-H	RCP CL3	8.65	675	0.358	0.5	200	10.14	252.98	0.6819	479.2	6	292.38	0.6776	550.3	550.3	22.9	573.2		573.2		594.7	0.96	1.6	1.89	2.1	1.66	13.32	11.55	11.51	13.24	1.1	1.06	44.7	0.02	0.33		0.13	0.04		0.04	12.92	12.87	12.83	12.85	0.46	215.3	0.41
2-H to 2-I	RCP CL3	11.81	750	0.442	0.5	200	10.21	252.46	0.7221	506.4	6.07	291.68	0.7178	581.6	581.6	22.9	604.5	-2.8	601.7		787.5	0.76	1.36	1.96	2.02	1.78	13.24	11.49	11.43	13.1	1.1	0.94	45.3	0.02	2.05	2.2	0.09	0.19	0.21	0.03	12.85	12.64	12.61	12.64	0.29	342.6	0.39
2-I to 2-J	RCP CL3	15.6	750	0.442	0.5	200	10.31	251.75	0.7534	526.9	6.11	291.35	0.7476	605.1	605.1	22.9	627.9		627.9		787.5	0.8	1.42	1.98	2.05	1.78	13.1	11.41	11.33	12.95	1.1	0.87	0	0.02	2.01	2.31	0.1	0.21	0.24	0.05	12.64	12.4	12.35	12.35	0.32	314.6	0.47
2-J to 1-O	RCP CL3	16.2	750	0.442	0.51	195.2	10.44	250.81	0.7714	537.5	6.24	290.11	0.7656	617	617	22.9	639.8		639.8		797.2	0.8	1.45	2.01	2.07	1.8	12.95	11.31	11.23	12.79	1.1	0.81	-90	0.098	0.32		0.11	0.03		0.05	12.35	12.31	12.26	12.38	0.33	303	0.6
3-A to 2-F	RCP CL3	8.4	450	0.159	1	100	10	254	0.1202	84.8	5.01	301.87	0.1174	98.4	98.4	22.9	121.3	-4.8	116.5		285.2	0.41	0.73	1.7	1.36	1.79	13.54	11.93	11.84	13.41	1.1	1.13	-89.6	0.226	1.15	2.75	0.03	0.03	0.08	0.01	13.23	13.15	13.14	13.16	0.17	599.6	0.31
3A-A to 3A-B	PVC SN8	9.99	150	0.018	1	100	5	302	0.0098	8.2	5	302	0.0098	8.2	8.2		8.2	-3.2	5		15.2	0.33	0.28	0.77	0.69	0.86	15.62	14.95	14.85	15.51	1.1	0.48	-0.4	0	2		0	0.01		0.06	15.02	15.02	14.98	14.98	0.4	252.3	0.6
3A-B to 3A-C	PVC SN8	1.6	150	0.018	1	100	5.08	301.2	0.0195	16.3	5	302	0.0194	16.3	16.3		16.3	-6.4	10		15.2	0.65	0.56	0.92	0.87	0.86	15.51	14.85	14.84	15.49	1.1	0.5	0.2	0.075	2		0.02	0.03		0.02	14.98	14.94	14.92	14.91	1.23	81	0.54
3A-C to 3A-D	PVC SN8	9.98	225	0.04	5.03	19.9	5.1	301.07	0.0294	24.6	5.01	301.87	0.0292	24.5	24.6		24.6	-9.6	14.9		100.8	0.15	0.38	1.82	0.87	2.53	15.49	14.76	14.26	15.3	1.1	0.5	0	0	2		0.01	0.01		0.01	14.91	14.9	14.9	14.9	0.01	10232.4	0.57
3A-D to 3A-E	PVC SN8	1.34	225	0.04	5	20	5.18	300.27	0.0391	32.6	5.1	301.07	0.0389	32.6	32.6		32.6	-12.8	19.8		100.5	0.2	0.5	1.96	0.95	2.53	15.3	14.26	14.19	15.28	1.1	0.82	-89.9	0	2		0.01	0.03		0	14.9	14.87	14.87	14.87	0.19	514	0.4
3A-E to 1-F	PVC SN8	4.51	225	0.04	2.06	48.5	5.19	300.14	0.0796	66.4	5.19	300.17	0.0796	66.4	66.4		66.4	-23.5	42.8		64.5	0.66	1.08	1.73	1.3	1.62	15.28	14.19	14.1	15.17	1.1	0.86	0	0.608	2		0.06	0.12		0.04	14.87	14.75	14.71	14.75	0.91	109.9	0.41
4-A to 4-B	RCP CL3	32.67	450	0.159	0.5	200	13	232.4	0.2522	162.8	5	302	0.1582	132.7	162.8		162.8		162.8	15.7	201.7	0.81	1.02	1.41	1.54	1.27	13.71	12.89	12.73	13.8	1.1	0.4	63.4	0.068	5.58		0.04	0.24		0.09	13.71	13.47	13.38	13.41	0.27	375.8	0
4-B to 4-C	RCP CL3	5.2	450	0.159	1.5	66.7	13.27	230.44	0.3421	219	13	232.4	0.3389	218.8	219		219		219		349.3	0.63	1.38	2.32	1.75	2.2	13.8	12.66	12.58	13.72	1.1	0.67	27.2	0.02	2.33	2.62	0.1	0.23	0.25	0.03	13.41	13.16	13.12	13.16	0.59	169.6	0.4
4-C to 4-D	RCP CL3	18.68	450	0.159	0.5	200	13.32	230.13	0.3421	218.7	13.04	232.09	0.3389	218.5	218.7		218.7		218.7		201.7	1.08	1.38	1.38	1.75	1.27	13.72	12.56	12.47	13.2	1.1	0.47	0		1.82	2.18	0.1	0.18	0.21	0.11	13.16	12.95	12.8	12.8	0.81	123.9	0.56
5-A to 5-B	RHS	7.81	(4x)125x75	0.037	1	100	13	232.4	0.1138	73.5	5	302	0.0714	59.9	73.5		73.5		73.5	36.1	23.6	3.11	1.96	1.96	1.96	0.63	15.46	15.16	15.08	15.24	1.1	0.23	0		2		0.05	0.1		0.2	15.46	15.35	15.16	15.16	2.51	39.9	0
6-A to 6-B	RCP CL3	2.07	600	0.283	0.5	200									0		0		0		434.4	0	0	0	0	1.54	10	8.78	8.77	11.9	1.1	-0.58	1.8	0.02			0			0.01	8.78	8.78	8.77	8.75	0.5	200	1.22
6-B to 6-C	RCP CL3	8	600	0.283	0.5	200									0		0		0		434.4	0	0	0	0	1.54	11.9	8.75	8.71	10.63	1.1	0.5	0				0			0.04	8.75	8.75	8.71	8.71	0.5	200	3.15
6A-A to 6A-B	PVC SN8	9.98	150	0.018	1	100	5	302	0.0111	9.3	5	302	0.0111	9.3	9.3		9.3	-4.3	5		15.2	0.33	0.28	0.77	0.69	0.86	15.53	14.89	14.79	15.41	1.1	0.46	0	0	2		0	0.01		0.01	14.98	14.98	14.97	14.97	0.04	2241.3	0.54
6A-B to 6A-C	PVC SN8	1.6	150	0.018	1	100	5.08	301.2	0.0209	17.5	5	302	0.0208	17.4	17.5		17.5	-7.6	10		15.2	0.65	0.56	0.92	0.87	0.86	15.41	14.79	14.78	15.39	1.1	0.46	0	0.075	2		0.02	0.03		0.01	14.97	14.94	14.93	14.93	0.39	254	0.43
6A-C to 6A-D	PVC SN8	9.98	225	0.04	4.28	23.3	5.1	301.07	0.0307	25.6	5.01	301.87	0.0305	25.6	25.6		25.6	-10.7	14.9		93	0.16	0.38	1.71	0.87	2.34	15.39	14.7	14.27	15.29	1.1	0.46	0.1	0	2		0.01	0.01		0.01	14.93	14.92	14.91	14.91	0.11	941.9	0.46
6A-D to 3A-E	PVC SN8	1.67	225	0.04	5	20	5.18	300.27	0.0405	33.8	5.1	301.07	0.0403	33.7	33.8		33.8	-10.7	23.1		100.5	0.23	0.58	2.05	1	2.53	15.29	14.27	14.19	15.28	1.1	0.79	89.9	0	2		0.02	0.03		0	14.91	14.87	14.87	14.87	0.26	379.3	0.38
7-A to 7-B	RHS	6	125x75	0.009	0.3	333.3	13	232.4	0.0045	2.9	5	302	0.0028	2.4	2.9		2.9		2.9		3.2	0.89	0.31	0.4	0.61	0.35	13.92	13.84	13.82	13.92	1.1	0.02	0		7		0	0.03		0.02	13.92	13.89	13.86	13.86	0.56	180.1	0

ROCKHAMPTON REGIONAL COUNCIL
AMENDED PLANS APPROVED
12 January 2026
DATE
These plans are approved subject to the current conditions of approval associated with
Development Permit No.: D/170-2022
Dated: 12 June 2023

No.	DATE	REVISIONS	DES	DRN	CHK	APD
D	14.03.25	GENERAL AMENDED	S.C.M	J.J.D	J.M.H	J.M.H
C	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
B	18.10.24	GENERAL AMENDMENT	S.C.M	J.J.D	J.M.H	J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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SURVEYOR CAPRICORN SURVEY GROUP CQ PHONE 07 4927 5199
DATUM A.H.D. P.M. R.L.

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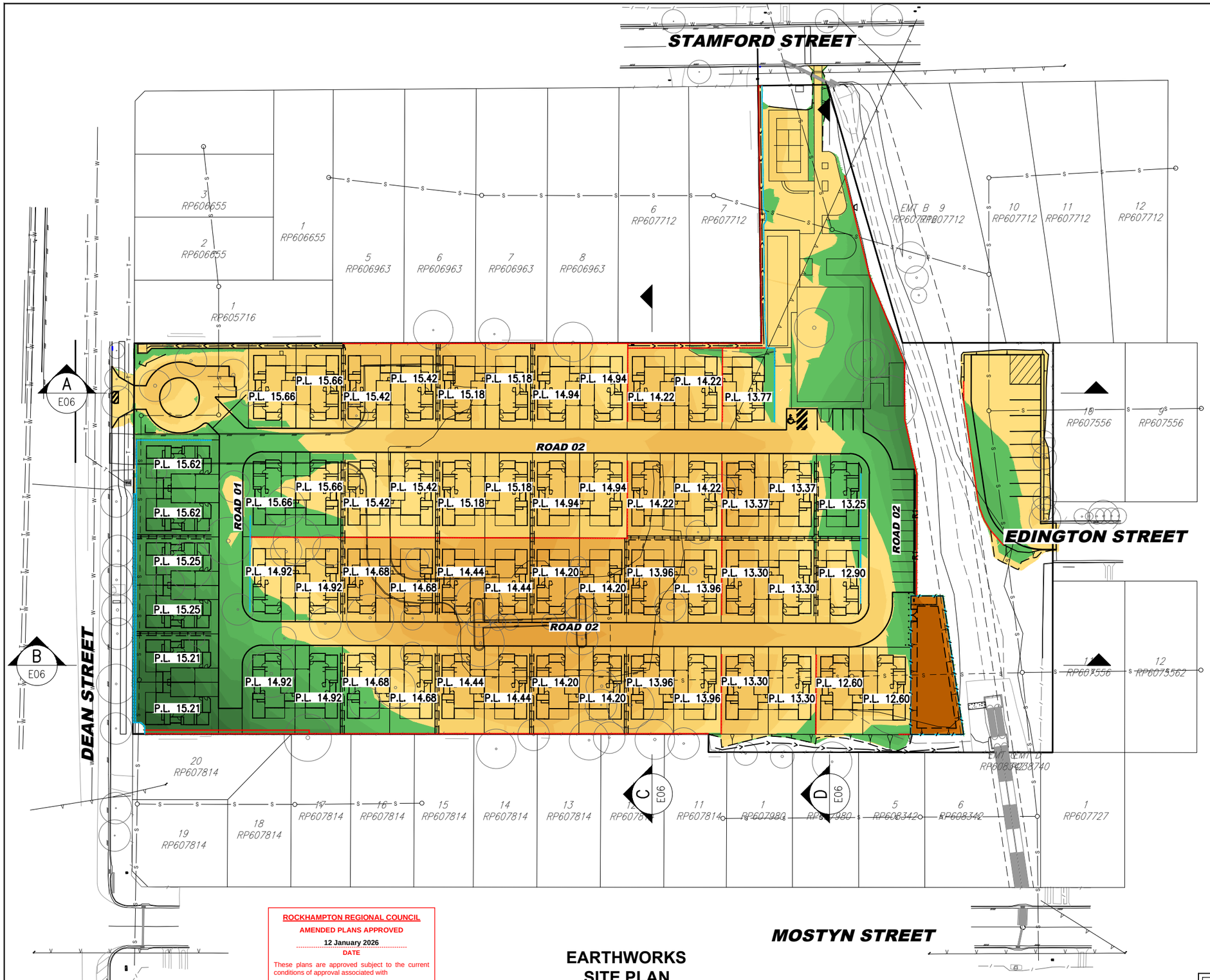
PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE STORMWATER CALCULATIONS 1% AEP HYDRAULICS
CLIENT RUBY DEVELOPMENT PTY LTD

DRAWING STATUS FOR CONSTRUCTION
DRAWING NUMBER S24-018-C37
SHEET NUMBER 37 OF 37
REVISION D

S24-018-C_Stm_Calc.dwg



EARTHWORKS LEGEND

DEPTH OF CUT TABLE	DEPTH OF FILL TABLE
0.0m – 0.25m	0.0m – 0.25m
0.25m – 0.5m	0.25m – 0.5m
0.5m – 0.75m	0.5m – 0.75m
0.75m – 1.0m	0.75m – 1.0m
1.0m – 1.25m	1.0m – 1.25m
1.25m – 1.5m	1.25m – 1.5m
1.5m – 1.75m	1.5m – 1.75m
1.75m – 2.0m	1.75m – 2.0m
2.0m – 2.25m	2.0m – 2.25m
2.25m – 2.5m	2.25m – 2.5m
> 2.5m	> 2.5m

EARTHWORKS SUMMARY

AREA OF CUT – 16,450m²
VOLUME OF CUT – 9,462m³
AREA OF FILL – 6,050m²
VOLUME OF FILL – 3,476m³

THE EARTHWORKS VOLUMES SHOWN ARE INDICATIVE NETT FIGURES ONLY BETWEEN EXISTING SURFACE LEVEL AND FINISHED EARTHWORKS LEVEL AND DO NOT ALLOW FOR DEMOLITION WORKS, STRIPPING OF TOPSOIL, UNSUITABLE MATERIAL AND VEGETATION OR COMPACTION LOSSES.

PAVEMENT LEVELS SHOWN ARE 330mm BELOW F.S.L
BUILDING PAD LEVELS SHOWN ARE 250mm BELOW F.S.L
LANDSCAPING LEVELS SHOWN ARE 100mm BELOW F.S.L

EARTHWORKS LEVELS MAY BE ADJUSTED TO SUIT FFL'S AND CONCRETE THICKNESS BASED ON STRUCTURAL DESIGN AS APPROVED BY SUPERINTENDENT.

GENERAL NOTES

1. IN CASE OF DOUBT – ASK!
2. ALL LEVELS TO AHD, DIMENSIONS IN METERS U.N.O
3. ALL LIAISON WITH LOCAL, STATE & STATUTORY AUTHORITIES IS THE CONTRACTOR'S RESPONSIBILITY.
4. THE LOCATION OF EXISTING SERVICES IS FOR CONTRACTOR'S INFORMATION ONLY, THE LOCATION OF SERVICES WILL BE CONFIRMED BY THE CONTRACTOR PRIOR TO THE COMMENCEMENT OF WORKS.
5. ANY DAMAGE CAUSED TO THE EXISTING SERVICE WILL BE MADE GOOD AT THE CONTRACTORS EXPENSE.
6. EARTHWORKS PROCEDURES ARE TO BE CARRIED OUT IN ACCORDANCE WITH AS 3798 – 2007 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS".
7. EARTHWORKS OPERATIONS ARE TO BE CARRIED OUT IN GENERAL ACCORDANCE WITH THE GEOTECHNICAL REPORT.
8. WORKS NOT SPECIFICALLY REFERRED TO, ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE GENERAL DRAWINGS AND SPECIFICATIONS OF THE LOCAL AUTHORITY.
9. THE CONTRACTOR IS TO ALLOW FOR ALL FEES AND HAULAGE COSTS ASSOCIATED WITH DISPOSAL OF MATERIAL FROM THE SITE.
10. ALL COSTS ASSOCIATED WITH NOISE AND DUST SUPPRESSION FOR SITE WORKS ARE DEEMED THE CONTRACTOR'S RESPONSIBILITY.
11. COMPACTION STANDARDS
    – 'MODIFIED' TO AS 1289 TEST 5.2.1
    – 'STANDARD TO AS 1289 TEST 5.1.1
12. PRIOR TO COMMENCEMENT OF WORKS THE CONTRACTOR WILL PROVIDE SCOUR AND EROSION PROTECTION INCLUDING PROVISION OF SILT TRAPS AND FENCES TO MINIMISE DEPOSITION OF MATERIAL DOWNSTREAM OF THE PROPERTY.
13. NO BLASTING WILL BE PERMITTED.
14. THE LOCATION OF THE SITE SHEDS, SITE OFFICE AND AMENITIES BUILDING WILL BE LOCATED TO SUIT TEMPORARY UTILITY SERVICES OR AS AGREED WITH THE MANAGER.
15. TESTING FREQUENCY AS 3798 – 2007 SECTION 8.0 OR AS APPROVED BY THE GEOTECHNICAL ENGINEER.
16. AT COMPLETION OF CONSTRUCTION THE CONTRACTOR SHALL ARRANGE FOR AN INDEPENDENT LICENSED SURVEYOR TO CARRY OUT A "WORKS AS CONSTRUCTED" SURVEY AND SUBMIT THE DETAIL PLAN TO THE MANAGER.
17. THE LOCATION OF TEMPORARY STOCKPILES DURING CONSTRUCTION IS TO BE AGREED WITH THE MANAGER.

ROCKHAMPTON REGIONAL COUNCIL
AMENDED PLANS APPROVED
12 January 2026
DATE
These plans are approved subject to the current conditions of approval associated with
Development Permit No.: D/170-2022
Dated: 12 June 2023

EARTHWORKS SITE PLAN

SCALE 1:500 (A1 SIZE)
0 5 10 15 20 25

ALL RETAINING WALLS LOCATED WITHIN THE SITE TO STABILISE CUT ARE TO BE WHOLLY WITHIN THE PROPERTY BOUNDARY INCLUDING ALL ASSOCIATED FOOTINGS AND SUB-SOIL DRAINAGE.

CONTRACTOR TO USE EXCAVATION TECHNIQUE THAT WILL PREVENT SUBSIDIANCE WITHIN NEIGHBOURING PROPERTIES IN ACCORDANCE WITH GEOTECHNICAL ENGINEERS REPORT AND ADVICE ON SITE.

NOTE: TEMPORARY EXCAVATIONS ARE TO BE SUPERVISED BY A SUITABLY QUALIFIED GEOTECHNICAL ENGINEER.

No.	DATE	REVISIONS	DES	DRN	CHK	APD
G	29.05.25	GENERAL AMENDED	S.C.M	J.J.D	J.M.H	J.M.H
F	14.03.25	GENERAL AMENDED	S.C.M	J.J.D	J.M.H	J.M.H
E	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
D	08.11.24	RETAINING WALL UPDATE	S.C.M	J.J.D	J.M.H	J.M.H
C	29.10.24	GENERAL AMENDEMENT	S.C.M	J.J.D	J.M.H	J.M.H

DOCUMENT CONTROL: DESIGNED S.C.M | DRAWN J.J.D | CHECKED J.M.H | APPROVED J.M.H | DATE JULY 2024

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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CENTRAL VICTORIA T 03 5441 0922 E centralvic@westerapartners.com.au

SURVEYOR: CAPRICORN SURVEY GROUP CQ
PHONE 07 4927 5199
DATUM A.H.D. P.M. R.L.

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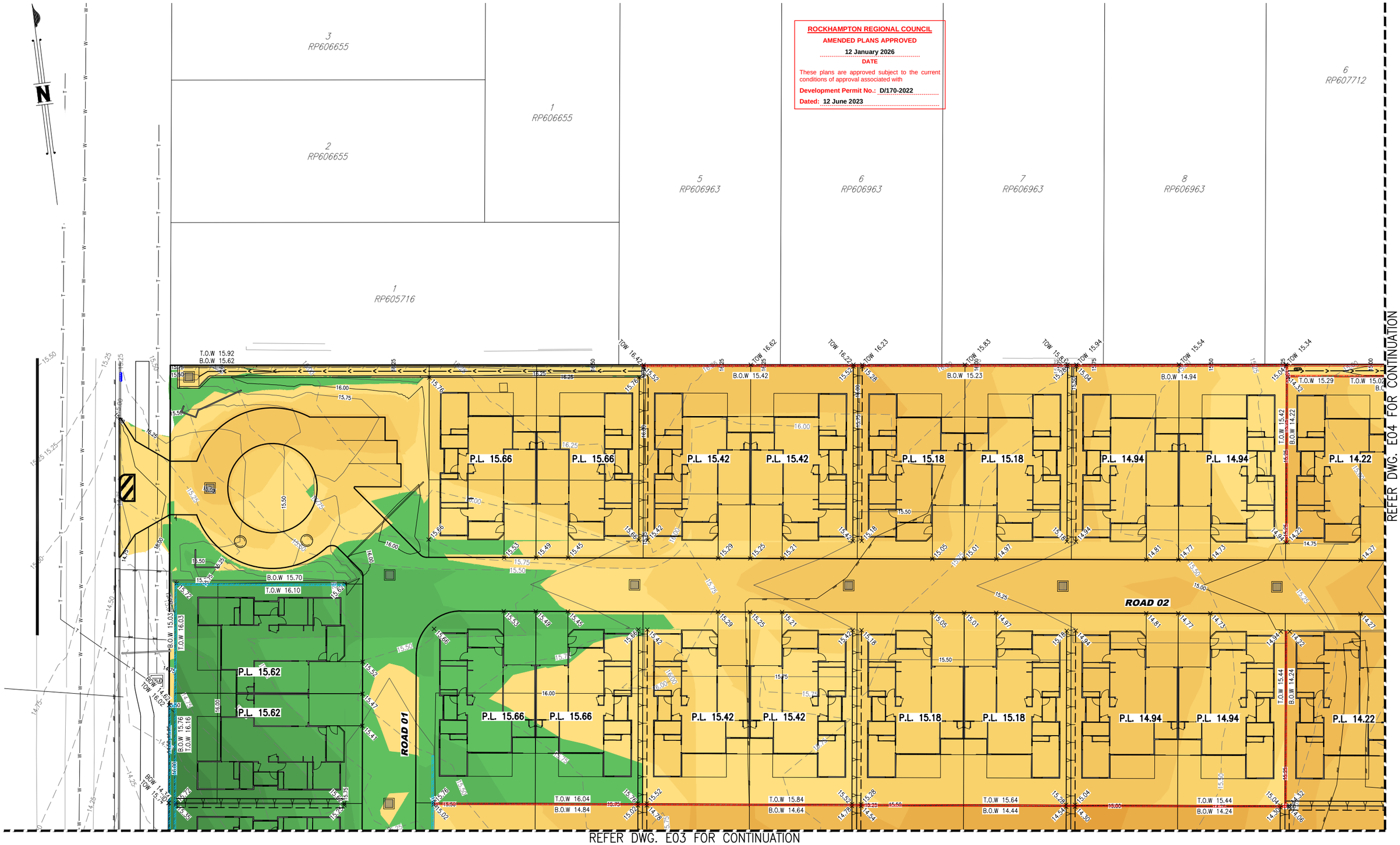
PROJECT: PROPOSED RETIREMENT LIVING ESTATE
LOCATION: LOT 24 ON RP607814 & LOT 8 ON RP607712
192 DEAN STREET, BERSERKER
TITLE: EARTHWORKS SITE PLAN
CLIENT: RUBY DEVELOPMENT PTY LTD

DRAWING STATUS: FOR CONSTRUCTION
DRAWING NUMBER: S24-018-E01
SHEET NUMBER: 01 OF 07
REVISION: G

S24-018-E_Earth_Site.dwg



EARTHWORKS PLAN

SCALE 1:200 (A1 SIZE)

0 2 4 6 8 10

No.	DATE	REVISIONS	DES	DRN	CHK	APD
D	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
C	10.12.24	RETAINING WALL LEVELS UPDATE	S.C.M	J.J.D	J.M.H	J.M.H
B	18.10.24	GENERAL AMENDMENT	S.C.M	J.J.D	J.M.H	J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
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SURVEYOR
CAPRICORN SURVEY GROUP CQ
PHONE 07 4927 5199

DATUM A.H.D.
P.M.
R.L.

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PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712
192 DEAN STREET, BERSERKER
TITLE EARTHWORKS PLAN 1 of 4
CLIENT RUBY DEVELOPMENT PTY LTD

DRAWING STATUS: FOR CONSTRUCTION
DRAWING NUMBER: S24-018-E02
SHEET NUMBER: 02 OF 07
REVISION: D

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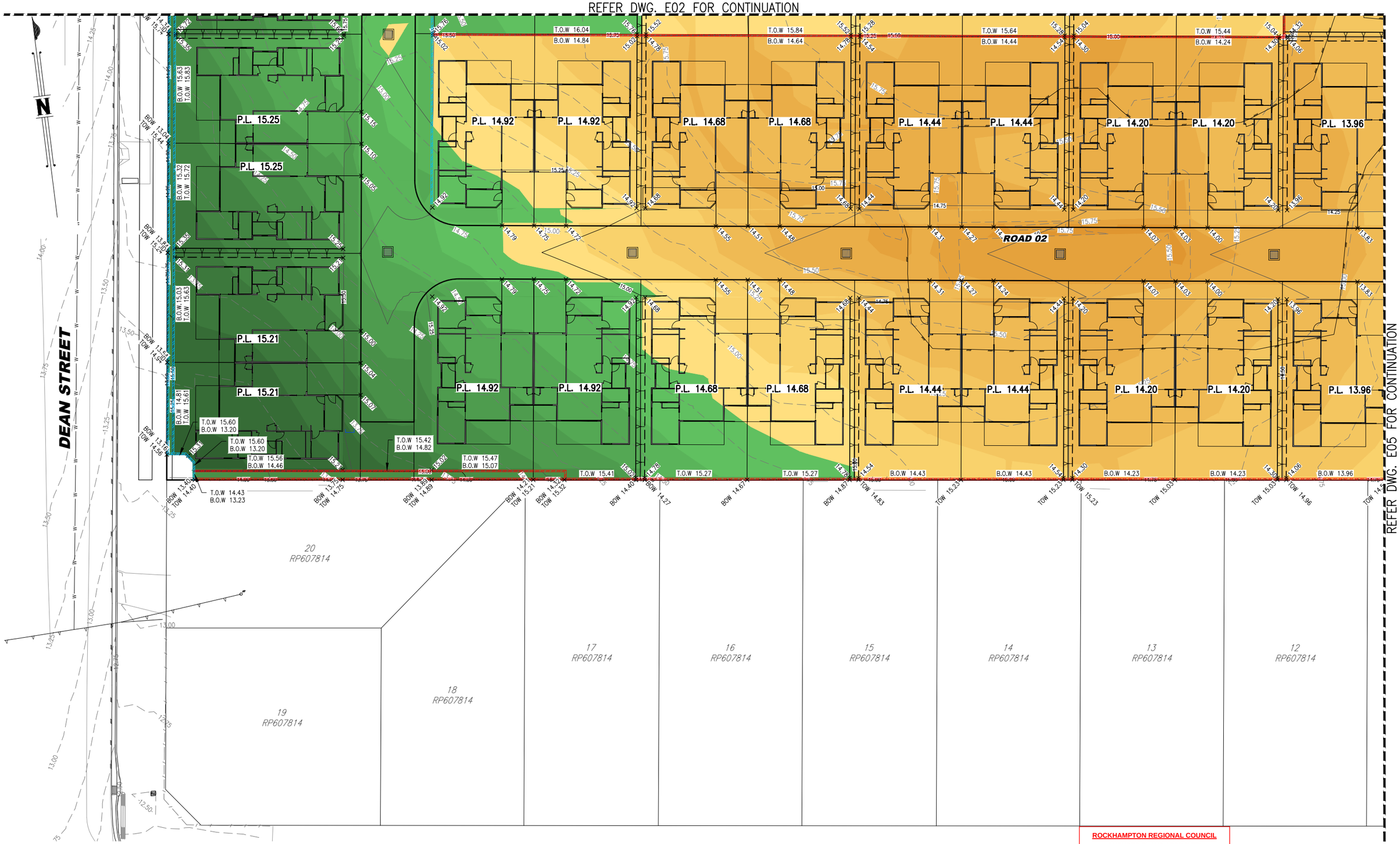
REFER DWG. E02 FOR CONTINUATION



REFER DWG. E05 FOR CONTINUATION

EARTHWORKS PLAN

SCALE 1:200 (A1 SIZE)

0 2 4 6 8 10

ROCKHAMPTON REGIONAL COUNCIL
AMENDED PLANS APPROVED
12 January 2026
DATE
These plans are approved subject to the current conditions of approval associated with
Development Permit No.: D/170-2022
Dated: 12 June 2023

No.	DATE	REVISIONS	DES	DRN	CHK	APD
F	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
E	10.12.24	RETAINING WALL LEVELS UPDATE	S.C.M	J.J.D	J.M.H	J.M.H
D	08.11.24	RETAINING WALL UPDATE	S.C.M	J.J.D	J.M.H	J.M.H
C	29.10.24	GENERAL AMENDEMENT	S.C.M	J.J.D	J.M.H	J.M.H
B	18.10.24	GENERAL AMENDMENT	S.C.M	J.J.D	J.M.H	J.M.H

DOCUMENT CONTROL: DESIGNED S.C.M; DRAWN J.J.D; CHECKED J.M.H; APPROVED J.M.H; DATE JULY 2024

J. HILL RPEQ 19891
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SURVEYOR: CAPRICORN SURVEY GROUP CQ
PHONE 07 4927 5199
DATUM A.H.D. P.M. R.L.

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PROJECT: PROPOSED RETIREMENT LIVING ESTATE
LOCATION: LOT 24 ON RP607814 & LOT 8 ON RP607712
192 DEAN STREET, BERSERKER
TITLE: EARTHWORKS PLAN 2 of 4
CLIENT: RUBY DEVELOPMENT PTY LTD

DRAWING STATUS: FOR CONSTRUCTION
DRAWING NUMBER: S24-018-E03
SHEET NUMBER: 03 OF 07
REVISION: F

S24-018-E_Earthwks.dwg

REFER DWG. E02 FOR CONTINUATION

N

6 RP607712

7 RP607712

EMN B RP607712

9 RP607712

10 RP607712

11 RP607712

12 RP607712

10 RP607556

9 RP607556

REFER DWG. E05 FOR CONTINUATION

ROCKHAMPTON REGIONAL COUNCIL
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Dated: 12 June 2023

EARTHWORKS PLAN

SCALE 1:200 (A1 SIZE)

0 2 4 6 8 10

No.	DATE	REVISIONS	DES	DRN	CHK	APD	DOCUMENT CONTROL
F	29.05.25	GENERAL AMENDED	S.C.M	J.J.D	J.M.H	J.M.H	DESIGNED S.C.M
E	14.03.25	GENERAL AMENDED	S.C.M	J.J.D	J.M.H	J.M.H	DRAWN J.J.D
D	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H	CHECKED J.M.H
C	29.10.24	GENERAL AMENDEMENT	S.C.M	J.J.D	J.M.H	J.M.H	APPROVED J.M.H
B	18.10.24	GENERAL AMENDMENT	S.C.M	J.J.D	J.M.H	J.M.H	DATE JULY 2024

J. HILL RPEQ 19891
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APPROVED

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SURVEYOR
CAPRICORN SURVEY GROUP CQ
PHONE 07 4927 5199
DATUM A.H.D. P.M. R.L.

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PROJECT: PROPOSED RETIREMENT LIVING ESTATE
LOCATION: LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE: EARTHWORKS PLAN 3 of 4
CLIENT: RUBY DEVELOPMENT PTY LTD

DRAWING STATUS: FOR CONSTRUCTION
DRAWING NUMBER: S24-018-E04
SHEET NUMBER: 04 OF 07
REVISION: F

S24-018-E_Earthwks.dwg

REFER DWG. E04 FOR CONTINUATION

REFER DWG. E03 FOR CONTINUATION

ROAD 02

EDINGTON STREET

10 RP607556

9 RP607556

11 RP607556

12 RP6075562

EMT C RP608342

EMT D SP238740

N

ROCKHAMPTON REGIONAL COUNCIL
AMENDED PLANS APPROVED
12 January 2026
DATE
These plans are approved subject to the current conditions of approval associated with
Development Permit No.: D/170-2022
Dated: 12 June 2023

EARTHWORKS PLAN

SCALE 1:200 (A1 SIZE)

0 2 4 6 8 10

No.	DATE	REVISIONS	DES	DRN	CHK	APD
F	29.05.25	GENERAL AMENDED	S.C.M	J.J.D	J.M.H	J.M.H
E	14.03.25	GENERAL AMENDED	S.C.M	J.J.D	J.M.H	J.M.H
D	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
C	10.12.24	RETAINING WALL LEVELS UPDATE	S.C.M	J.J.D	J.M.H	J.M.H
B	18.10.24	GENERAL AMENDMENT	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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CENTRAL VICTORIA T 03 5441 0922 E centralvic@westerapartners.com.au

SURVEYOR
CAPRICORN SURVEY GROUP CQ
PHONE 07 4927 5199

DATUM A.H.D.
P.M.
R.L.

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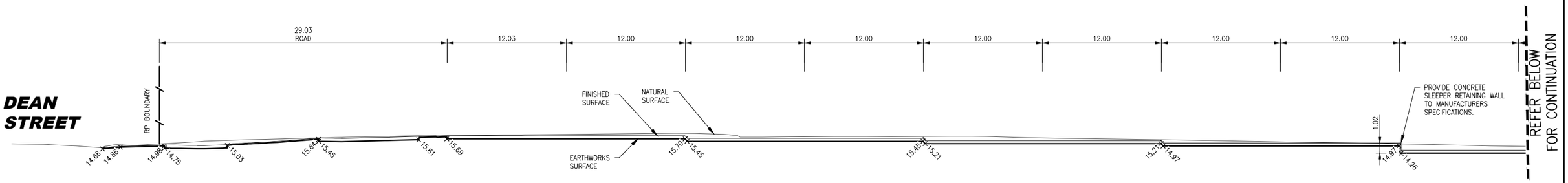
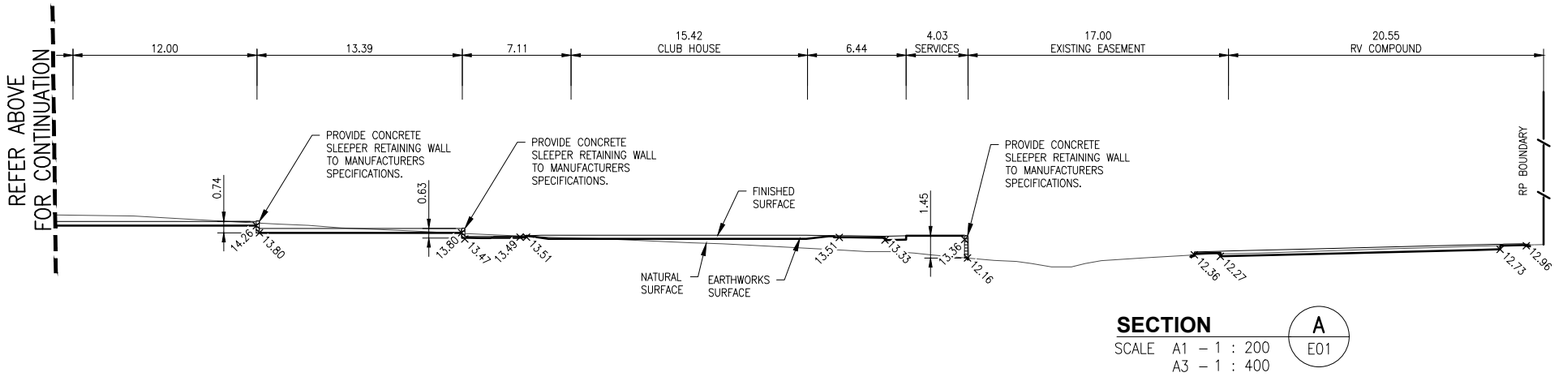
PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE EARTHWORKS PLAN 4 of 4
CLIENT RUBY DEVELOPMENT PTY LTD

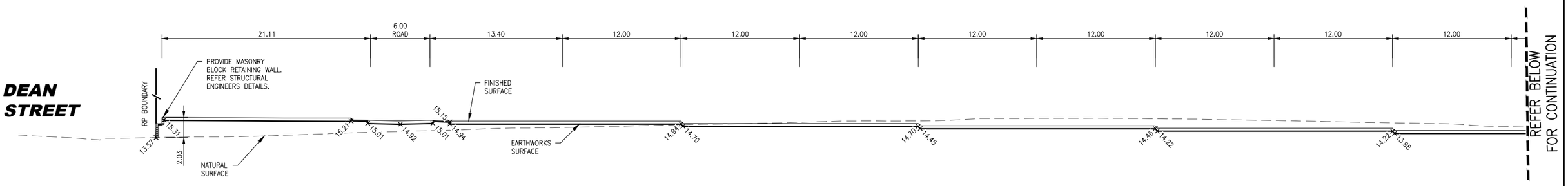
DRAWING STATUS FOR CONSTRUCTION
DRAWING NUMBER S24-018-E05
SHEET NUMBER 05 OF 07
REVISION F

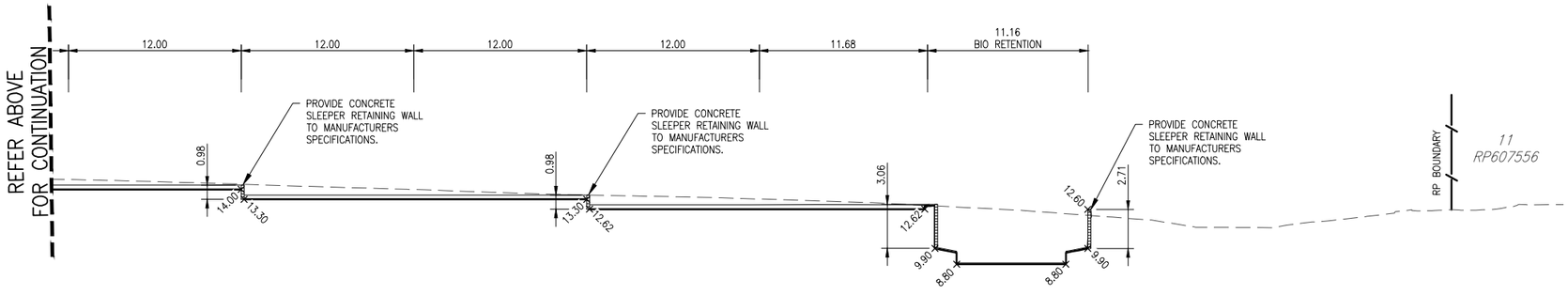
S24-018-E_Earthwks.dwg





SECTION A
SCALE A1 – 1 : 200
A3 – 1 : 400
E01





SECTION B
SCALE A1 – 1 : 200
A3 – 1 : 400
E01

ROCKHAMPTON REGIONAL COUNCIL
AMENDED PLANS APPROVED
12 January 2026
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D	14.03.25	GENERAL AMENDED	S.C.M	J.J.D	J.M.H	J.M.H
C	10.12.24	ISSUE FOR CONSTRUCTION	S.C.M	J.J.D	J.M.H	J.M.H
B	18.10.24	GENERAL AMENDMENT	S.C.M	J.J.D	J.M.H	J.M.H
A	05.09.24	FOR APPROVAL	S.C.M	J.J.D	J.M.H	J.M.H

DESIGNED S.C.M
DRAWN J.J.D
CHECKED J.M.H
APPROVED J.M.H
DATE JULY 2024
DOCUMENT CONTROL

J. HILL RPEQ 19891
For and on behalf of WESTERA PARTNERS PTY. LTD.
APPROVED

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E centralvic@westerapartners.com.au

SURVEYOR
CAPRICORN SURVEY GROUP CQ
PHONE 07 4927 5199
DATUM A.H.D.
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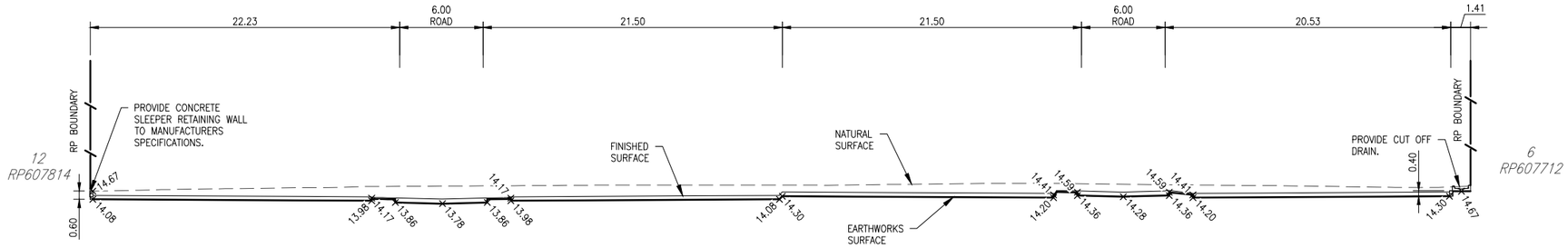
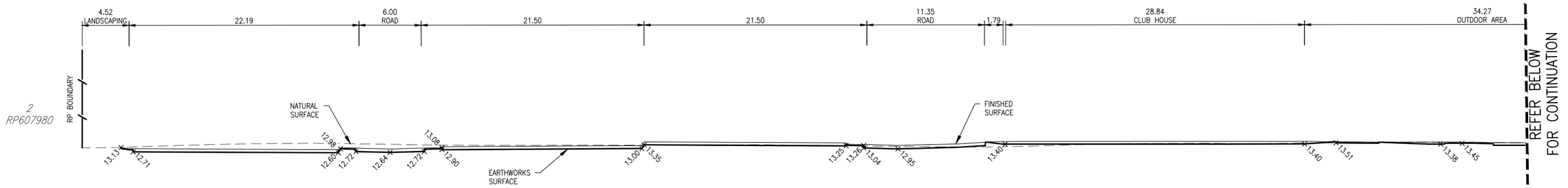
PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712 192 DEAN STREET, BERSERKER
TITLE EARTHWORKS SECTIONS 1 of 2
CLIENT RUBY DEVELOPMENT PTY LTD

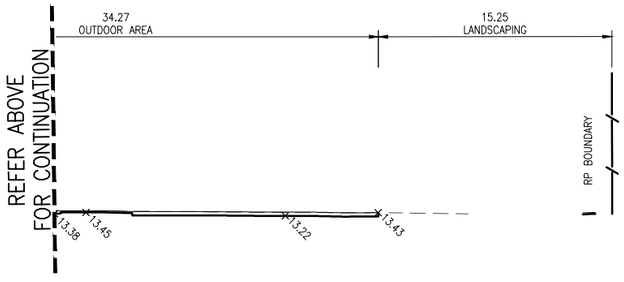
DRAWING STATUS FOR CONSTRUCTION
DRAWING NUMBER S24-018-E06
SHEET NUMBER 06 OF 07
REVISION D

S24-018-E_Earthwks.dwg



SECTION C
SCALE A1 – 1 : 200 E01
A3 – 1 : 400





STAMFORD STREET

SECTION D
SCALE A1 – 1 : 200 E01
A3 – 1 : 400

ROCKHAMPTON REGIONAL COUNCIL
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PROJECT PROPOSED RETIREMENT LIVING ESTATE
LOCATION LOT 24 ON RP607814 & LOT 8 ON RP607712
192 DEAN STREET, BERSERKER
TITLE EARTHWORKS SECTIONS 2 of 2
CLIENT RUBY DEVELOPMENT PTY LTD

DRAWING STATUS FOR CONSTRUCTION
DRAWING NUMBER S24-018-E07
SHEET NUMBER 07 OF 07
REVISION D

S24-018-E_Earthwks.dwg