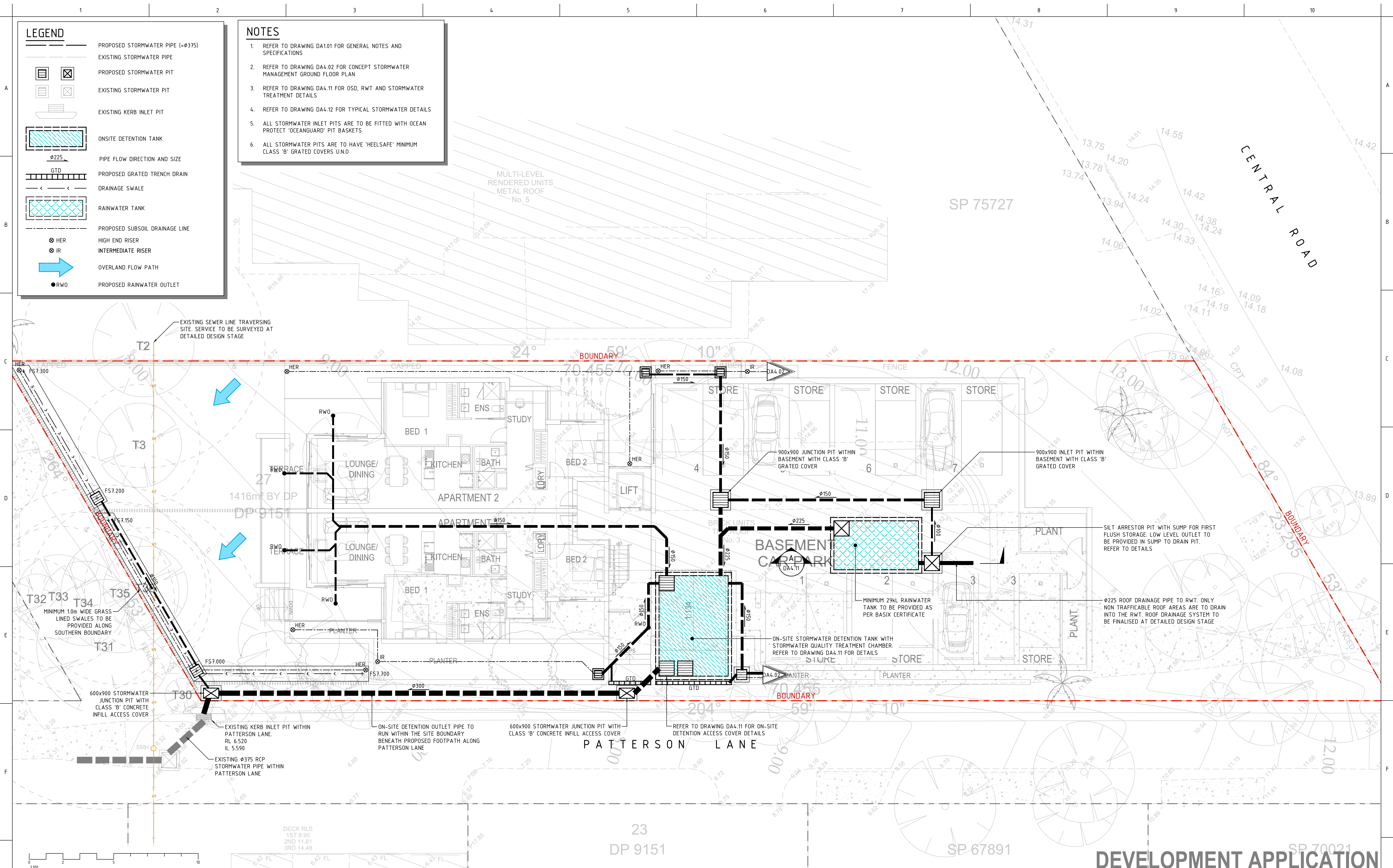


LEGEND

PROPOSED STORMWATER PIPE (40375)
EXISTING STORMWATER PIPE
PROPOSED STORMWATER PIT
EXISTING STORMWATER PIT
EXISTING KERB INLET PIT
EXISTING KERB INLET PIT
ON-SITE DETENTION TANK
ON-SITE DETENTION TANK
PIPE FLOW DIRECTION AND SIZE
PROPOSED GRATED TRENCH DRAIN
DRAINAGE SWALE
RAINWATER TANK
RAINWATER TANK
PROPOSED SUBSOIL DRAINAGE LINE
HIGH END RISER
INTERMEDIATE RISER
OVERLAND FLOW PATH
PROPOSED RAINWATER OUTLET

NOTES

1. REFER TO DRAWING DA1.01 FOR GENERAL NOTES AND SPECIFICATIONS
2. REFER TO DRAWING DA4.02 FOR CONCEPT STORMWATER MANAGEMENT GROUND FLOOR PLAN
3. REFER TO DRAWING DA4.11 FOR OSD, RWT AND STORMWATER TREATMENT DETAILS
4. REFER TO DRAWING DA4.12 FOR TYPICAL STORMWATER DETAILS
5. ALL STORMWATER INLET PITS ARE TO BE FITTED WITH OCEAN PROTECT 'OCEANGUARD' PIT BASKETS
6. ALL STORMWATER PITS ARE TO HAVE 'HEELSAFE' MINIMUM CLASS 'B' GRATED COVERS U.N.O



DEVELOPMENT APPLICATION

SPARKS + PARTNERS
CONSULTING ENGINEERS
HYDRAULIC | CIVIL | FIRE

Level 1, 91 George Street | Parramatta | NSW 2150
P 02 9891 5033 | F 02 9891 3898 | E admin@sparksandpartners.com.au
<https://sparksandpartners.com.au/>

DRAWING TITLE

CIVIL DESIGN
CONCEPT STORMWATER
MANAGEMENT PLAN - LOWER
GROUND

| | | | |
|------------|------------|----------|----------|
| DATE | DRAWN | DESIGNED | CHECKED |
| DEC 2019 | DL | DL | |
| PROJECT No | SCALE | SIZE | REVISION |
| 19279 | 1:100 @A1 | A1 | |
| | DRAWING No | | |
| | DA4 01 | | 3 |

[illegible]

CLIENT
AVALON BEACH CENTRAL PTY. LTD.

PROJECT
3 CENTRAL ROAD, AVALON BEACH

ARCHITECT

COTTEEPARKER ϕ JPR

SYDNEY
T 61 2 9386 1133

COTTEEPARKER ARCHITECTS PTY LTD
MBN 77 010 1924 106

COTTEEPARKER.COM.AU

<https://sparksandpartners.com.au/>



FPA
AUSTRALIA

Fire Protection Association Australia.
CORPORATE MEMBER



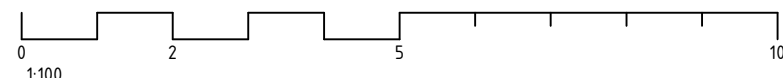
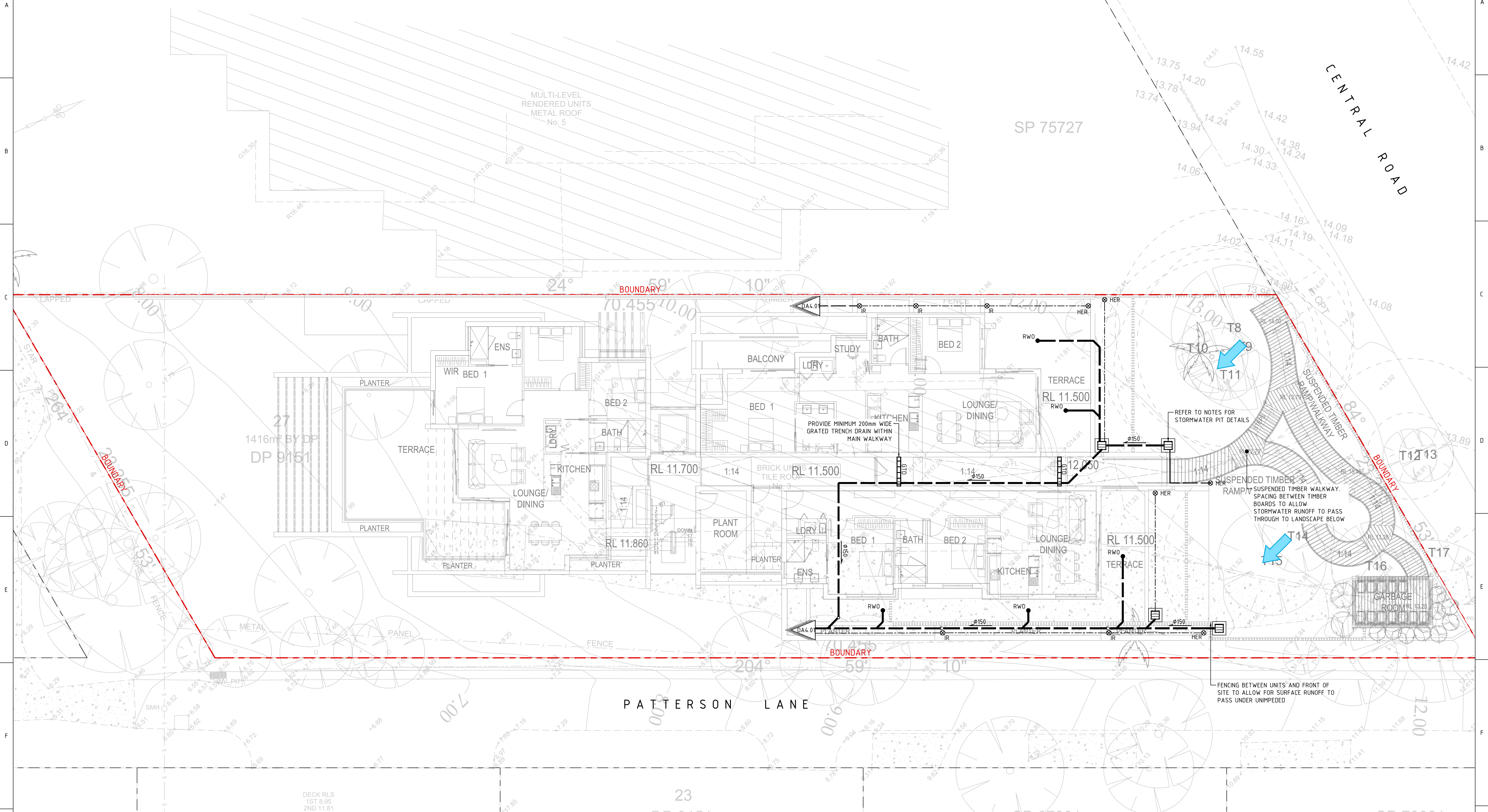
QUALITY SYSTEM CERTIFICATION

DNV-GL

ISO 9001

NOTES

1. REFER TO DRAWING DA4.01 FOR NOTES AND LEGEND



| DATE | AMENDMENT | INIT | REV | DATE | AMENDMENT | INIT | REV |
|----------|-------------------------|------|-----|------|-----------|------|-----|
| 12.12.19 | ISSUED FOR DA | DL | 1 | | | | |
| 31.07.20 | ISSUED FOR COORDINATION | DD | 2 | | | | |
| 08.09.20 | ISSUED FOR DA | DD | 3 | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

| | |
|------------|---|
| STRUCTURAL | - |
| MECHANICAL | - |
| ELECTRICAL | - |
| CIVIL | - |

| | |
|-----------|---|
| CLIENT | AVALON BEACH CENTRAL PTY. LTD. |
| PROJECT | 3 CENTRAL ROAD, AVALON BEACH |
| ARCHITECT | COTTEPARKER & JPR SYDNEY T: 61 2 9556 1133 COTTEPARKER ARCHITECTS PTY LTD ABN: 77 019 982 186 COTTEPARKER.COM.AU |

| | |
|-----------|---|
| PROJECT | 3 CENTRAL ROAD, AVALON BEACH |
| ARCHITECT | COTTEPARKER & JPR SYDNEY T: 61 2 9556 1133 COTTEPARKER ARCHITECTS PTY LTD ABN: 77 019 982 186 COTTEPARKER.COM.AU |

SPARKS+PARTNERS
CONSULTING ENGINEERS
HYDRAULIC | CIVIL | FIRE
Level 1, 91 George Street | Parramatta | NSW 2150
P 02 9891 5033 | F 02 9891 3898 | E admin@sparksandpartners.com.au
https://sparksandpartners.com.au/

| | | | |
|------------|-----------|----------|----------|
| DATE | DRAWN | DESIGNED | CHECKED |
| DEC 2019 | DL | DL | DL |
| PROJECT No | SCALE | SIZE | REVISION |
| 19279 | 1:100 @A1 | A1 | |
| DRAWING No | DA4.02 | | 3 |

W:\2 - PROJECTS\2019\19279 - 3 CENTRAL RD. AVALON BEACH - CIVIL\19279_DA4.02.DWG

A

B

C

D

E

F

G

A

B

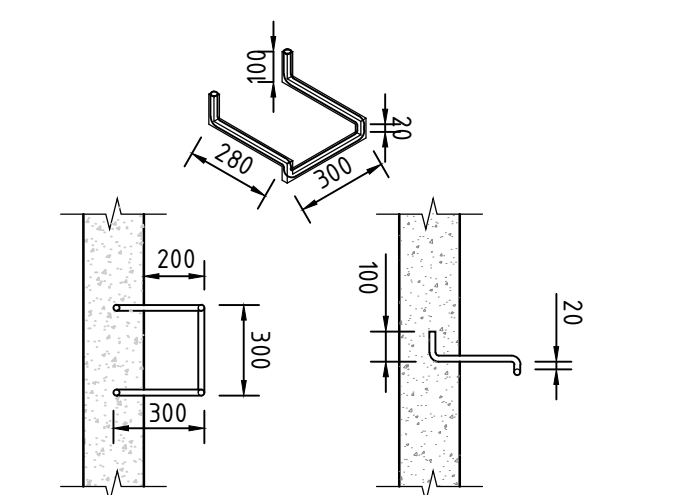
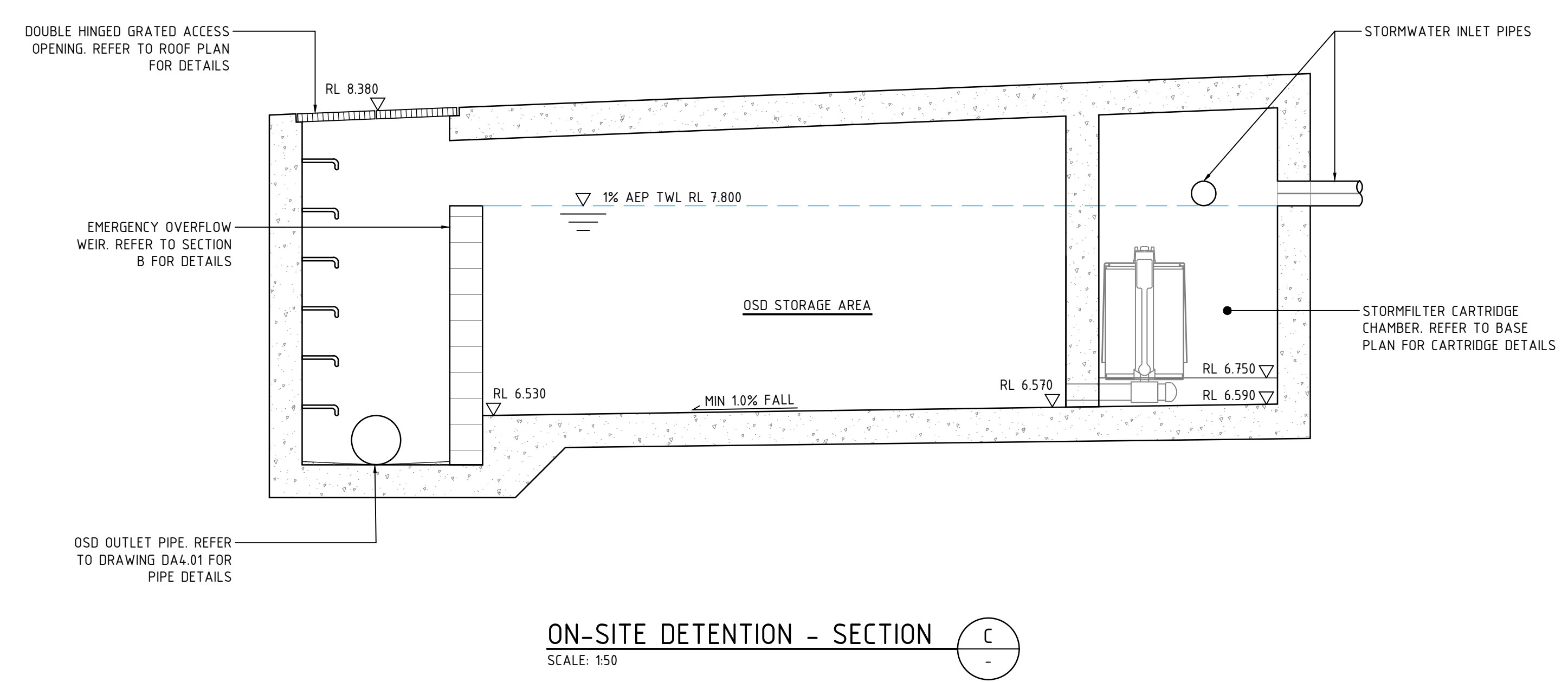
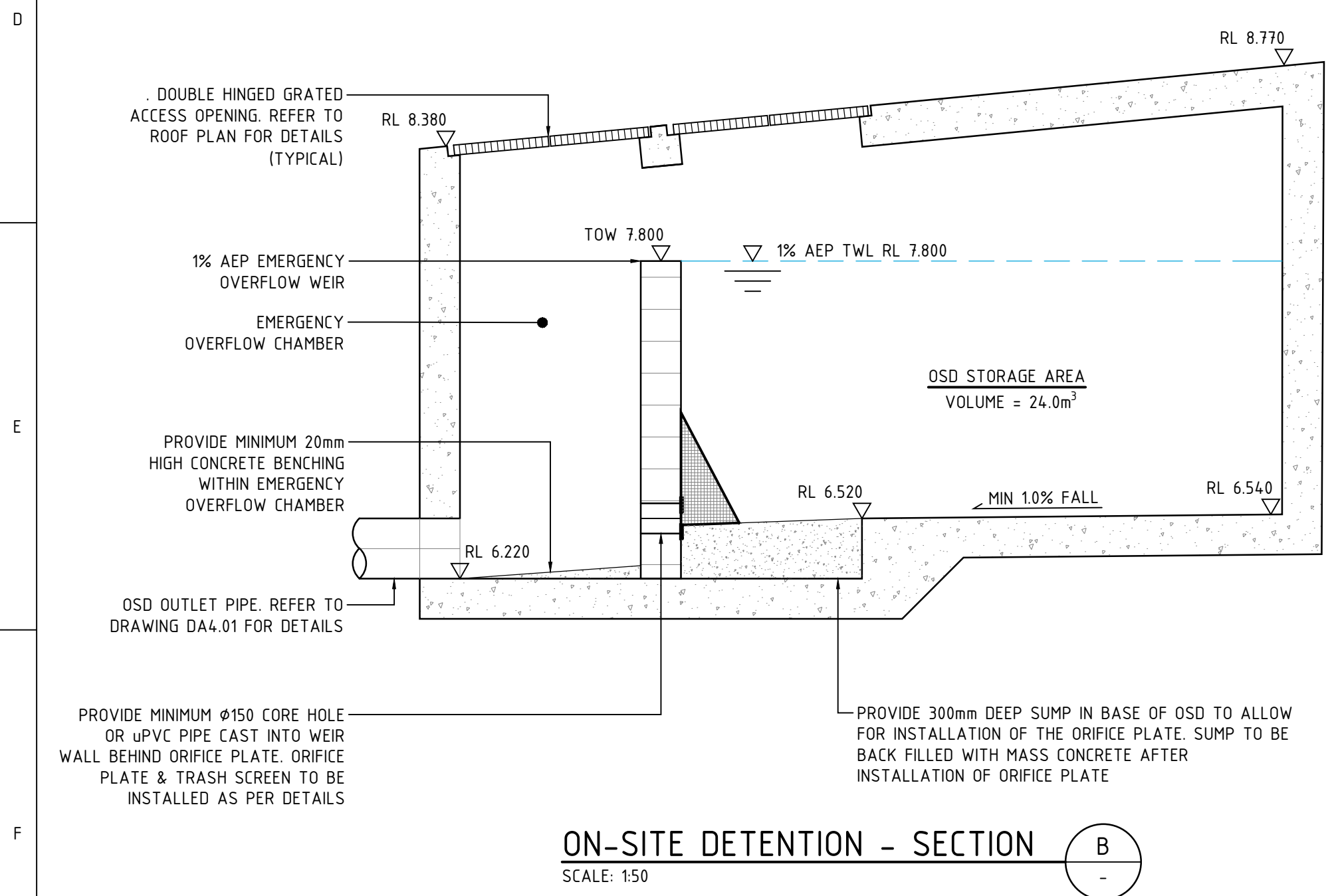
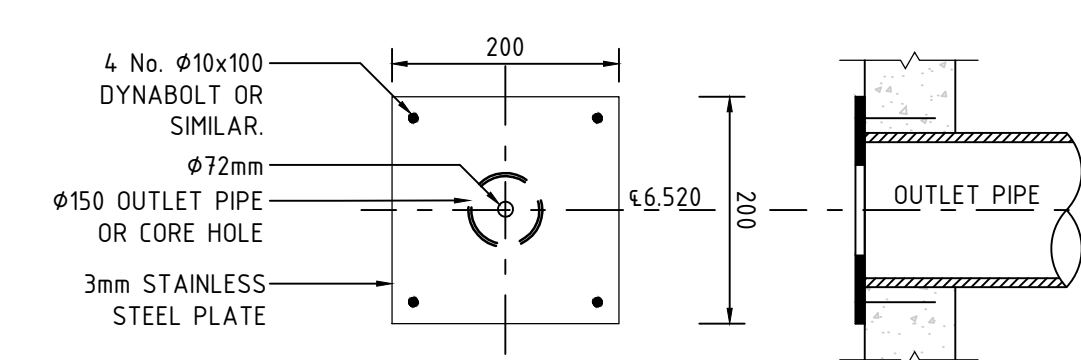
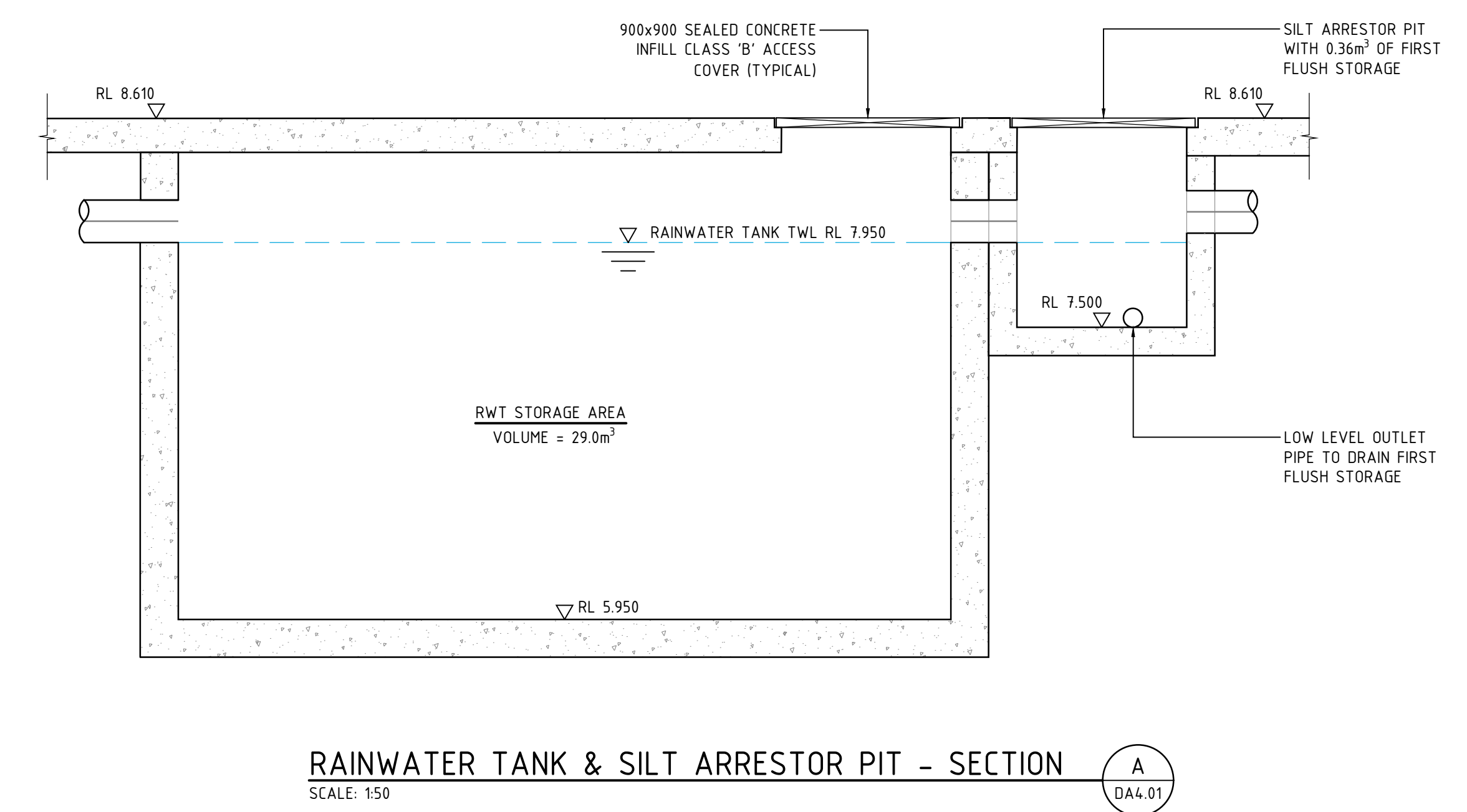
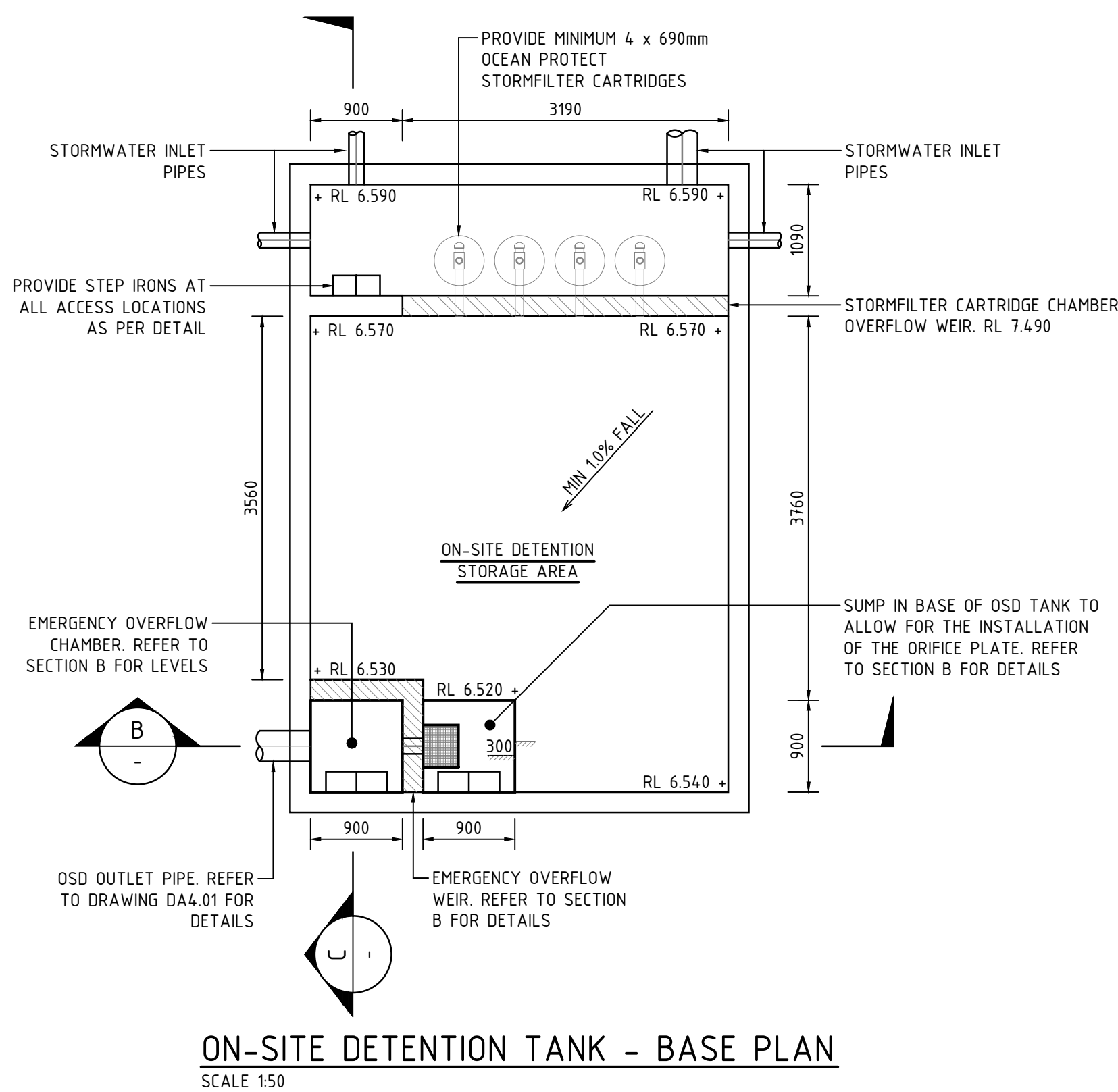
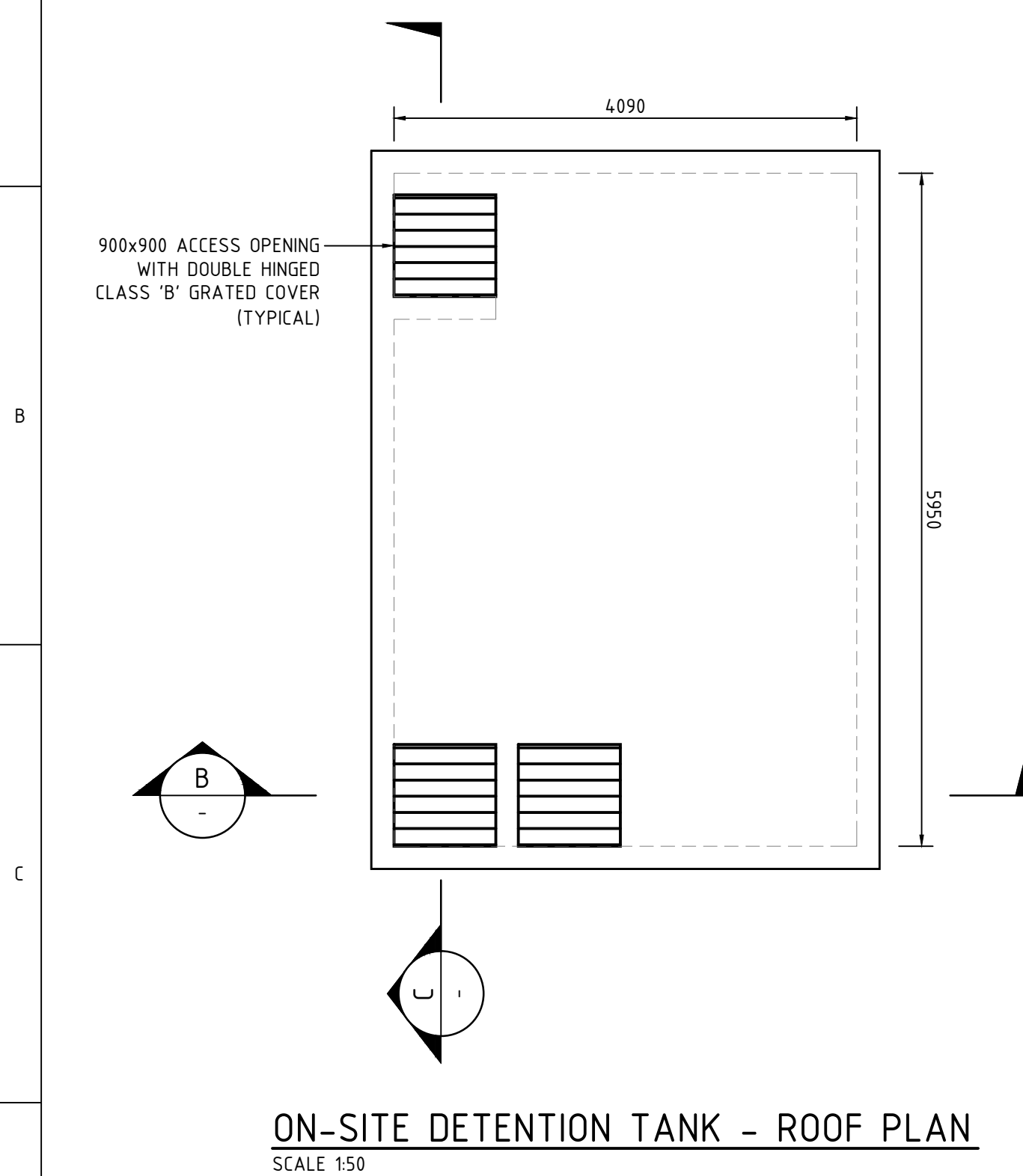
C

D

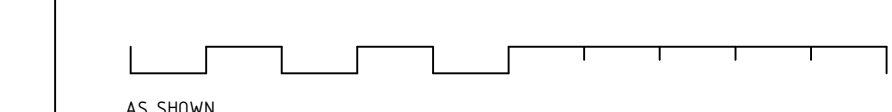
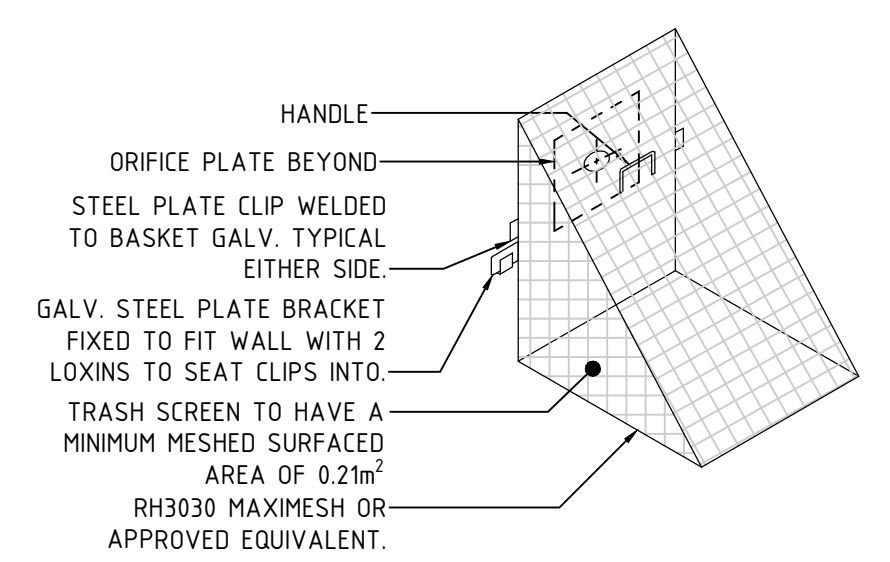
E

F

G



STEP IRON OF 20mm GALVANIZED STEEL MADE TO SHAPE AND DIMENSIONS SHOWN AND PLACED AT 300 CENTRES AND STAGGERED HORIZONTALLY FOR PITS DEEPER THAN 1.0m.



| DATE | AMENDMENT | INIT | REV | DATE | AMENDMENT | INIT | REV |
|----------|-------------------------|------|-----|------|-----------|------|-----|
| 12.12.19 | ISSUED FOR DA | DL | 1 | | | | |
| 31.07.20 | ISSUED FOR COORDINATION | DD | 2 | | | | |
| 08.09.20 | ISSUED FOR DA | DD | 3 | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

| | |
|------------|---|
| STRUCTURAL | - |
| MECHANICAL | - |
| ELECTRICAL | - |
| CIVIL | - |

| | |
|-----------|--------------------------------|
| CLIENT | AVALON BEACH CENTRAL PTY. LTD. |
| ARCHITECT | COTTEEPARKER & JPR |

| | |
|-----------|------------------------------|
| PROJECT | 3 CENTRAL ROAD, AVALON BEACH |
| ARCHITECT | COTTEEPARKER & JPR |

SPARKS + PARTNERS

CONSULTING ENGINEERS
HYDRAULIC | CIVIL | FIRE

Level 1, 91 George Street | Parramatta | NSW 2150
P 02 9891 5033 | F 02 9891 3898 | E admin@sparksandpartners.com.au
<https://sparksandpartners.com.au/>

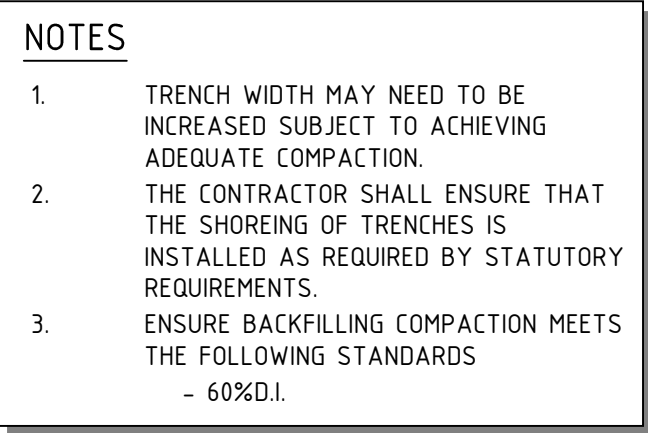
FPA

Fire Protection Association Australia
CORPORATE MEMBER

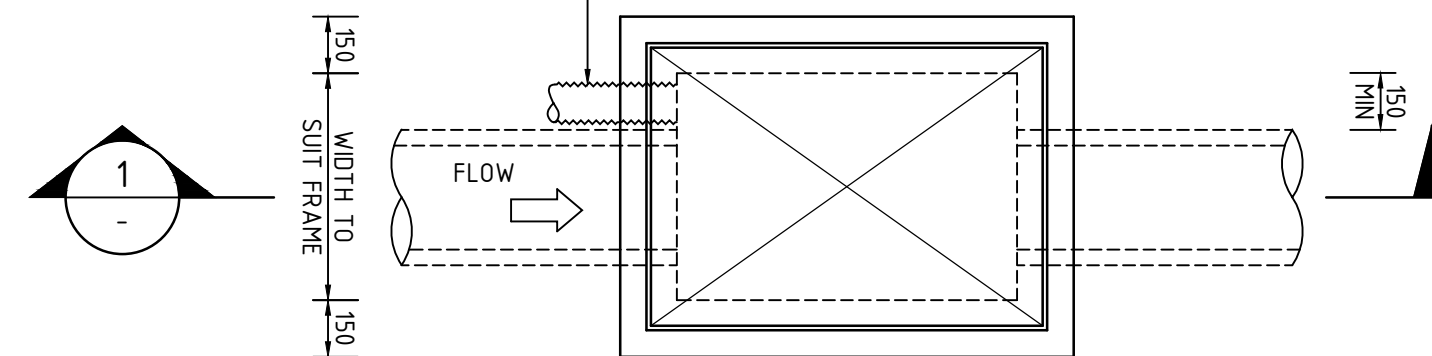
DNV-GL

QUALITY SYSTEM CERTIFICATION
ISO 9001

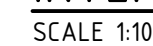
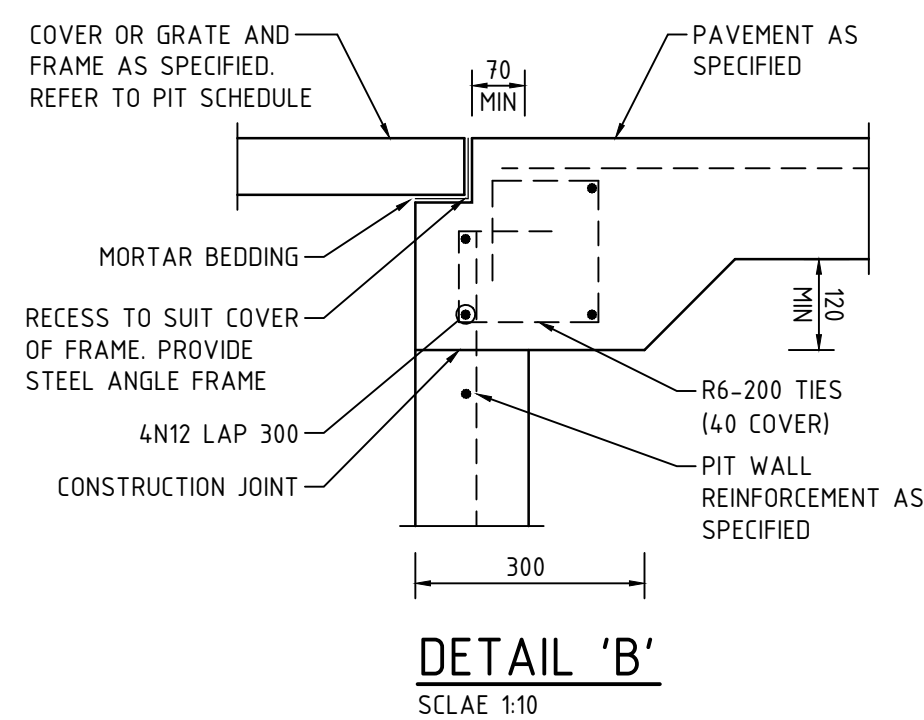
| | | | |
|--|----------|----------|----------|
| DRAWING TITLE | | | |
| CIVIL DESIGN STORMWATER MANAGEMENT DETAILS SHEET 1 | | | |
| DATE | DRAWN | DESIGNED | CHECKED |
| DEC 2019 | DL | DL | DL |
| PROJECT No | SCALE | SIZE | REVISION |
| 19279 | AS SHOWN | A1 | |
| DRAWING No | | | |
| DA4.11 | | | |
| | 3 | | |




SCALE 1:10



SCLAE 1:20

(PPIPE SIZES $\leq \phi 450$)

| | |
|------------|---|
| STRUCTURAL | - |
| MECHANICAL | - |
| ELECTRICAL | - |
| CIVIL | - |

| | |
|-----------|---|
| PROJECT | 3 CENTRAL ROAD, AVALON BEACH |
| ARCHITECT |  COTTEEPARKER SYDNEY T 61 2 9386 1133 COTTEER PARKER ARCHITECTS PTY LTD ABN: 77 003 104 106 |

| | | | |
|--|------------|----------|----------|
| DRAWING TITLE | | | |
| CIVIL DESIGN STORMWATER MANAGEMENT DETAILS SHEET 2 | | | |
| DATE | DRAWN | DESIGNED | CHECKED |
| DEC 2019 | DL | DL | |
| SCALE | SIZE | | REVISION |
| PROJECT No | AS SHOWN | | A1 |
| 19279 | DRAWING No | | DA4.12 |
| | | | 3 |

DEVELOPMENT APPLICATION

SPRKS+PARTNERS
CONSULTING ENGINEERS
HYDRAULIC | CIVIL | FIRE

Level 1, 91 George Street | Parramatta | NSW 2150
P 02 9891 5033 | F 02 9891 3898 | E admin@sparksandpartners.com.au
<https://sparksandpartners.com.au/>



FPA
AUSTRALIA
Fire Protection Association Australia
CORPORATE MEMBER



| | | | |
|------------|------------|----------|----------|
| DATE | DRAWN | DESIGNED | CHECKED |
| DEC 2019 | DL | DL | |
| PROJECT No | SCALE | SIZE | REVISION |
| 19279 | AS SHOWN | A1 | |
| | DRAWING No | PA4.12 | 3 |