

PROJECT:

OPERATIONAL WORKS CIVIL ENGINEERING

PROJECT DETAILS:

'ARCHERS WAY' ESTATE - STAGE 2
AT 22-80 CASH STREET, D'AGUILAR

PROJECT NUMBER: M2584E_2
MORETON BAY REGIONAL COUNCIL
REFERENCE: DA/38032/2019/V3RL

33 ALLOTMENTS
LOT1 ON RP230991 &
LOT2 ON RP80309
AREA - 2.46ha

LOCALITY PLAN



N.T.S.

SAFETY IN DESIGN

THE ENGINEERING DESIGN FOR THE PROPOSAL HAS BEEN DEVELOPED TO MEET THE STATED PROJECT BRIEF, AS EXPRESSED IN JFP URBAN CONSULTANTS OFFER FOR THE WORKS, AND THE DESIGN STANDARDS STIPULATED BY THE LOCAL AUTHORITY NAMED ON THIS PLAN. IT IS EXPECTED THAT A COMPETENT PRINCIPAL CONTRACTOR WILL BE APPOINTED FOR THE PROJECT AND THAT ALL 'HIGH RISK' CONSTRUCTION WORKS WILL BE ADDRESSED AS PART OF THEIR PROJECT SAFETY PLAN FOR THE SITE.

NON-STANDARD DESIGN SOLUTIONS ADOPTED IN THE PREPARATION OF THE PROPOSAL ARE LISTED AS FOLLOWS;

A HAZARD ASSESSMENT OF THESE NON-STANDARD ITEMS HAS BEEN CONDUCTED AND THE FOLLOWING HAZARDS, THEIR ASSOCIATED RISKS AND THE CONTROL MEASURES SUGGESTED ARE LISTED BELOW;

NON-STANDARD DESIGN ITEM	HAZARD IDENTIFIED	RISK ASSESSMENT	CONTROL MEASURE SUGGESTED
CONSTRUCTION OF WORKS WITHIN EXISTING ROAD RESERVE	POTENTIAL THREATS TO THE SAFETY OF THE PUBLIC USING THE EXISTING ROAD AND FOOTPATHS	MODERATE/POSSIBLE MAJOR RISK	PRINCIPAL CONTRACTOR TO INCLUDE TRAFFIC MANAGEMENT (INCLUDING PEDESTRIAN) FOR WORKS IN EXISTING ROAD RESERVE IN THEIR SAFETY PLAN
SITE ACCESS UNDER EXISTING OVERHEAD ELECTRICITY	ACCESS TO SITE UNDER OVERHEAD ELECTRICITY ALONG CASH STREET	MODERATE/POSSIBLE MAJOR RISK	IDENTIFYING MARKERS TO BE APPLIED TO EXISTING OVERHEAD ELECTRICITY THROUGHOUT CONSTRUCTION

INDEX:

STAGING & SITE SURVEY PLANS

M2584E_2	L01	A	CONSTRUCTION STAGING PLAN
M2584E_2	L02	A	EXISTING SERVICES AND SITE SURVEY PLAN

EARTHWORKS PLANS

M2584E_2	EW01	B	EARTHWORKS LAYOUT PLAN
M2584E_2	EW02	C	EARTHWORKS DETAIL LAYOUT PLAN SHEET 1 of 3
M2584E_2	EW03	B	EARTHWORKS DETAIL LAYOUT PLAN SHEET 2 of 3
M2584E_2	EW04	B	EARTHWORKS DETAIL LAYOUT PLAN SHEET 3 of 3
M2584E_2	EW05	C	EARTHWORKS DETAILS PLAN

ROADWORKS PLANS

M2584E_2	R01	A	ROADWORKS LAYOUT PLAN
M2584E_2	R02	A	ROADWORKS DETAILS PLAN
M2584E_2	R03	A	ROADWORKS INTERSECTION DETAILS PLAN
M2584E_2	R04	A	ROADWORKS LONGITUDINAL SECTION - CASH STREET
M2584E_2	R05	A	ROADWORKS CROSS SECTIONS - CASH STREET
M2584E_2	R06	A	ROADWORKS LONGITUDINAL - SECTION ROAD 2 (FLINDERS STREET)
M2584E_2	R07	A	ROADWORKS CROSS SECTIONS - ROAD 2 (FLINDERS STREET)
M2584E_2	R08	A	ROADWORKS LONGITUDINAL SECTION - ROAD 3 (MUSTER STREET & FLINDERS STREET)
M2584E_2	R09	A	ROADWORKS CROSS SECTIONS - ROAD 3 (MUSTER STREET & FLINDERS STREET)

SIGNS AND LINEMARKING PLANS

M2584E_2	SL01	A	SIGNS AND LINEMARKING LAYOUT PLAN
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DRAINAGE PLANS

M2584E_2	D01	A	DRAINAGE CATCHMENT PLAN
M2584E_2	D02	A	DRAINAGE LAYOUT PLAN
M2584E_2	D03	B	DRAINAGE LONGITUDINAL SECTIONS - LINES E & H
M2584E_2	D04	A	DRAINAGE LONGITUDINAL SECTIONS - LINES 3E, 3H & I
M2584E_2	D05	A	DRAINAGE CALCULATIONS TABLES - SHEET 1 of 2
M2584E_2	D06	A	DRAINAGE CALCULATIONS TABLES - SHEET 2 of 2
M2584E_2	D07	A	DRAINAGE STRUCTURE DETAILS

EROSION & SEDIMENT CONTROL PLANS

M2584E_2	ES01	A	EROSION AND SEDIMENT CONTROL LAYOUT - BULK EARTHWORKS PHASE
M2584E_2	ES02	A	EROSION AND SEDIMENT CONTROL LAYOUT - ROADS & DRAINAGE PHASE
M2584E_2	ES03	A	EROSION AND SEDIMENT CONTROL LAYOUT - PRACTICAL COMPLETION PHASE
M2584E_2	ES04	A	EROSION AND SEDIMENT CONTROL DETAILS
M2584E_2	ES05	A	EROSION AND SEDIMENT CONTROL DETAILS - SEDIMENT BASIN 1
M2584E_2	ES06	A	EROSION AND SEDIMENT CONTROL DETAILS - SEDIMENT BASIN 2

SEWERAGE RETICULATION PLANS

M2584E_2	S01	C	SEWERAGE LAYOUT PLAN
M2584E_2	S02	C	SEWERAGE DETAIL LAYOUT PLAN - SHEET 1 of 3
M2584E_2	S03	C	SEWERAGE DETAIL LAYOUT PLAN - SHEET 2 of 3
M2584E_2	S04	C	SEWERAGE DETAIL LAYOUT PLAN - SHEET 3 of 3
M2584E_2	S05	C	SEWERAGE DETAILS PLAN
M2584E_2	S06	C	SEWERAGE LONGITUDINAL SECTIONS - LINES 6 & 9
M2584E_2	S07	C	SEWERAGE LONGITUDINAL SECTIONS - LINES 8, 12 & 2

WATER RETICULATION PLANS

M2584E_2	W01	B	WATER RETICULATION LAYOUT PLAN - SHEET 1 of 3
M2584E_2	W02	B	WATER RETICULATION LAYOUT PLAN - SHEET 2 of 3
M2584E_2	W03	A	WATER RETICULATION LAYOUT PLAN - SHEET 3 of 3
M2584E_2	W04	B	WATER RETICULATION DETAILS PLAN - SHEET 1 of 2
M2584E_2	W05	B	WATER RETICULATION DETAILS PLAN - SHEET 2 of 2
M2584E_2	W06	B	WATER RETICULATION NOTES



BRISBANE - SUNSHINE COAST - CENTRAL QLD
SUNSHINE COAST
T209, Kon-Tiki Tower 1, 55 Plaza Parade,
Maroochydore Qld 4558
P 07 5450 3900 W www.jfp.com.au
JFP URBAN CONSULTANTS PTY. LTD. A.C.N. 050 414 045

PLANNERS
URBAN DESIGNERS
SURVEYORS
ENGINEERS
LANDSCAPE ARCHITECTS

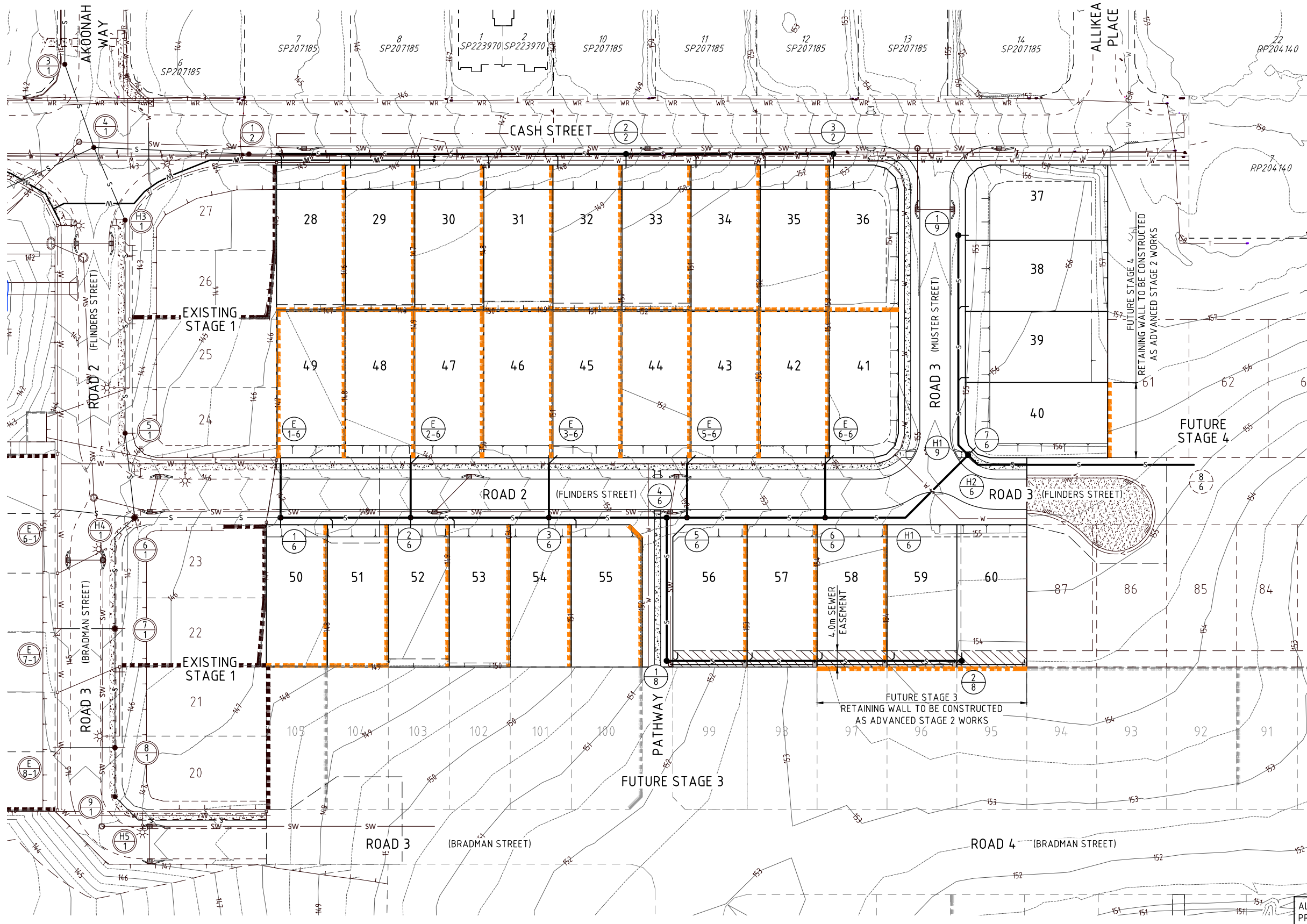


The Essential First Step

PROJECT NUMBER

M2584E_2

FILE NAME: COVERSHEET.DWG



NAME OF ESTATE	'ARCHERS WAY' ESTATE STAGE 2
SUBDIVIDER	DFC (PROJECT MANAGEMENT PTY LTD)
APPLICATION No.	-
UNITYWATER DELEGATE APPROVAL DATE	-
DRAWING/PLAN No.	-
No. OF ALLOTMENTS	33
AREA IN Ha.	2.460
LENGTH OF SEWERS	φ100mm uPVC φ150mm uPVC φ225mm uPVC
	680.607m

LEGEND:

FINISHED CONTOURS	16
PROPOSED SEWERAGE MAIN	S
EXISTING SEWERAGE MAIN	S
WATER MAIN	W
ROOFWATER DRAINAGE	RW
STORMWATER DRAINAGE	SW
ELECTRICITY	E
FINISHED SURFACE LEVEL AT ALLOTMENT CONTROL	× 14.50
PROPOSED RETAINING WALL	16
EXISTING RETAINING WALL	16
FUTURE RETAINING WALL	16
EASEMENT (ACCESS)	16

TREE LEGEND

TREES TO BE RETAINED AND PROTECTED	16
TREES TO BE RETAINED AND REQUIRES THE SUPERVISION OF ANY EXCAVATION OR SERVICES WORKS WITHIN THE HATCHED PROTECTION ZONE BY AN ARBORIST ON SITE.	16

TPZ
Tree Protection Zone
All vegetation to be protected in accordance with AS4970 - Protection of Trees on Development Sites & any conditions of approval.

THE DESIGN AND CONSTRUCTION OF THE WORKS SHALL COMPLY WITH ALL QUEENSLAND LEGISLATION. CONTACT THE DIVISION OF WORKPLACE HEALTH AND SAFETY FOR INFORMATION: 1300 362 128.

PROPERTY CONNECTIONS HAVE BEEN DESIGNED TO CONTROL THE REQUIRED SERVICE AREA OF EACH LOT AT A GRADE OF 1:60 AND A MAXIMUM DEPTH OF PROPERTY CONNECTION AT 1500mm UNLESS OTHERWISE STATED. REFER SEQ-SEW-1104-1 TO SEQ-SEW-1105-1

THE CONSTRUCTOR IS TO NOTIFY THE SUPERVISING ENGINEER OF ANY DISCREPANCIES BETWEEN THE DESIGN PLANS AND THE CONDITIONS ON SITE PRIOR TO COMMENCEMENT OF ANY PIPE LAYING.

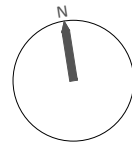
NOTE:
THE CONTRACTOR IS TO ENSURE THAT SEWERS AND ROOFWATER LINES HAVE 600mm CLEARANCE BETWEEN THE OUTSIDE OF RETAINING WALL FOOTINGS OR BORED PIERS.

ALL ENVIRONMENT PROTECTION MEASURES SHOULD BE IMPLEMENTED PRIOR TO ANY CONSTRUCTION WORK, INCLUDING CLEARING COMMENCING.

FOR DETAILS AND FURTHER NOTES REFER TO DWG No. M2584E_2 S05
CONSULTANT: JFP URBAN CONSULTANTS PTY LTD
CONTACT: HAYDN WATSON
TELEPHONE: 0412 802 582



NORTH:



SCALE:

1:500
A1
THIS SCALE SHOWN IS ORIGINAL DRAWING SCALE
0 5 10 15 20 25 30 35 40 45 50
(A1) 1:500
(A3) 1:1000
DO NOT SCALE FROM THIS DRAWING - USE ONLY DIMENSIONS PROVIDED - IF IN DOUBT PLEASE ENQUIRE

APPROVED
FOR AND ON BEHALF OF JFP URBAN CONSULTANTS PTY LTD
DESIGNED: CDV
DRAWN: BJ
CHECKED: HW
DATE: AHD
ISSUE: DETAILS

ISSUE:

LOTS 41 to 49 SEWER AMENDED
AMENDMENTS TO COINCIDE WITH STAGE 1 DESIGN
ISSUE FOR OPERATIONAL WORKS APPROVAL
07/04/21
09/03/21
16/06/20
DATE: INIT:

TITLE:

SEWERAGE LAYOUT PLAN
DFC (PROJECT MANAGEMENT) PTY LTD
'ARCHERS WAY' ESTATE - STAGE 2
AT 22-80 CASH STREET, D'AGUILAR

BRISBANE - SUNSHINE COAST - CENTRAL QLD

SUNSHINE COAST

T209, Kon-Tiki Tower 1, 55 Plaza Parade,

Maroochydore Qld 4558

P 07 5450 3900 W www.jfp.com.au

JFP URBAN CONSULTANTS PTY. LTD. A.C.N. 050 414 045

PLANNERS

URBAN DESIGNERS

SURVEYORS

ENGINEERS

LANDSCAPE ARCHITECTS

DETAILS:

PROJECT:

M2584E_2

PLAN:

S01

ISSUE:

C

LOCAL AUTHORITY REF:

MORETON BAY REGIONAL COUNCIL

COUNCIL REF:

DA/38032/2019/V3RL

FILE NAME:

SEWERAGE.DWG



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M2584E_2

PLAN:

S01

ISSUE:

C

LOCAL AUTHORITY REF:

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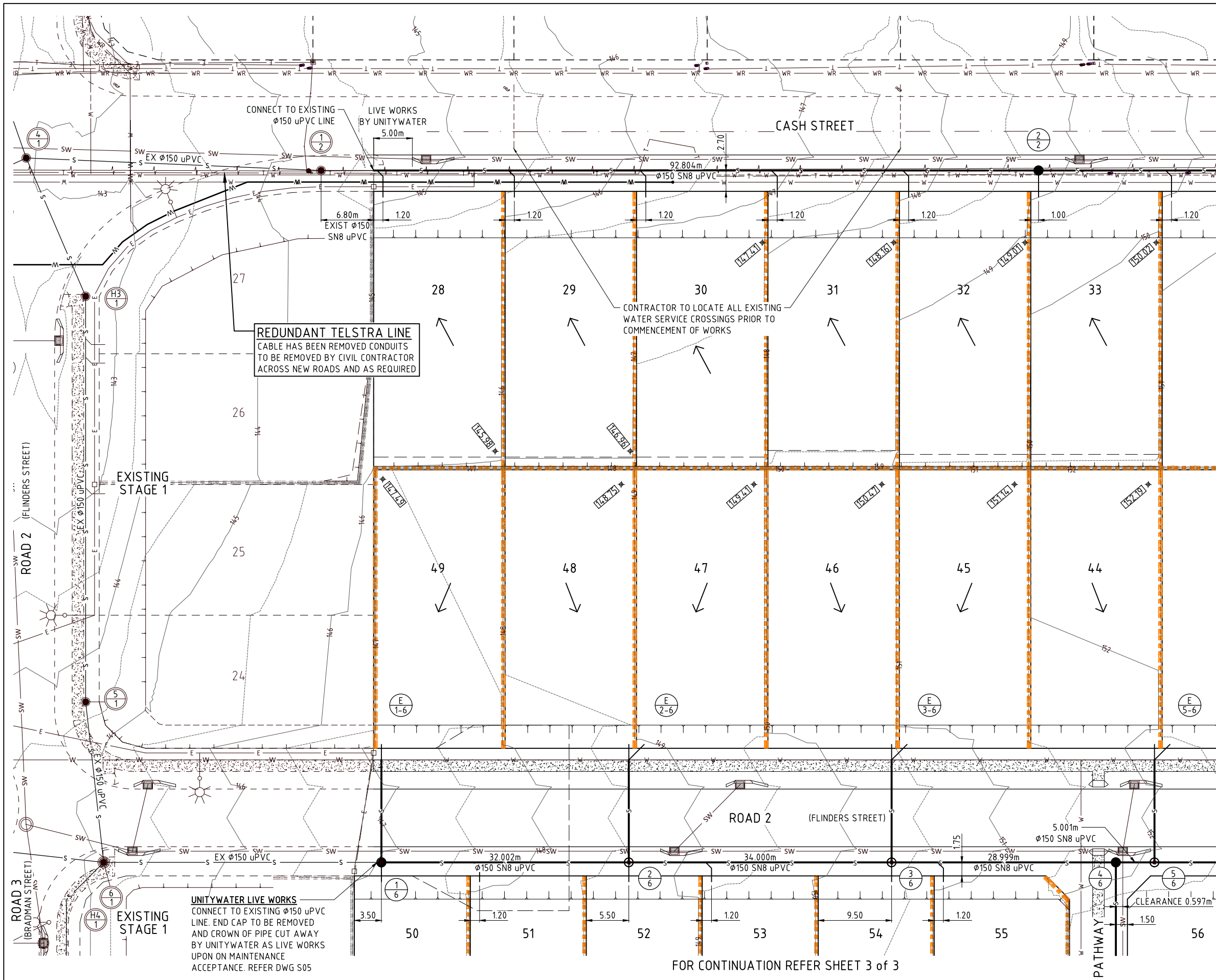
COUNCIL REF:

DA/38032/2019/V3RL

FILE NAME:

SEWERAGE.DWG





LEGEND:

- FINISHED CONTOURS
- PROPOSED SEWERAGE MAIN
- EXISTING SEWERAGE MAIN
- WATER MAIN
- ROOFWATER DRAINAGE
- STORMWATER DRAINAGE
- ELECTRICITY
- FINISHED SURFACE LEVEL AT ALLOTMENT CONTROL
- PROPOSED RETAINING WALL
- EXISTING RETAINING WALL
- FUTURE RETAINING WALL
- EASEMENT (ACCESS)

TREE LEGEND

- TREES TO BE RETAINED AND PROTECTED
- TREES TO BE RETAINED AND REQUIRES THE SUPERVISION OF ANY EXCAVATION OR SERVICES WORKS WITHIN THE HATCHED PROTECTION ZONE BY AN ARBORIST ON SITE.

TPZ
Tree Protection Zone
All vegetation to be protected in accordance with AS4970 - Protection of Trees on Development Sites & any conditions of approval.

FOR DETAILS AND FURTHER NOTES REFER TO DWG No. M2584E_2 S05

THE DESIGN AND CONSTRUCTION OF THE WORKS SHALL COMPLY WITH ALL QUEENSLAND LEGISLATION. CONTACT THE DIVISION OF WORKPLACE HEALTH AND SAFETY FOR INFORMATION: 1300 362 128.

PROPERTY CONNECTIONS HAVE BEEN DESIGNED TO CONTROL THE REQUIRED SERVICE AREA OF EACH LOT AT A GRADE OF 1:60 AND A MAXIMUM DEPTH OF PROPERTY CONNECTION AT 1500mm UNLESS OTHERWISE STATED. REFER SEQ-SEW-1104-1 TO SEQ-SEW-1105-1

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NOTE:
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CONTACT: HAYDN WATSON
TELEPHONE: 0412 802 582



JFOP
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PLANNERS
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NORTH:

SCALE:
1:250
A1
THIS SCALE SHOWN IS ORIGINAL DRAWING SCALE
0 2.5 5 7.5 10 12.5 25 Metres
(A1) 1:250
(A3) 1:500
DO NOT SCALE FROM THIS DRAWING - USE ONLY DIMENSIONS PROVIDED - IF IN DOUBT PLEASE ENQUIRE

APPROVED:
FOR AND ON BEHALF OF JFP URBAN CONSULTANTS PTY LTD

CHECKED: HW
DATE: AHD

DESIGNED: CDV
DRAWN: BJ
CHECKED: HW
DATE: AHD

ISSUE: C
DETAILS: LOTS 41 to 49 SEWER AMENDED AMENDMENTS TO COINCIDE WITH STAGE 1 DESIGN ISSUE FOR OPERATIONAL WORKS APPROVAL

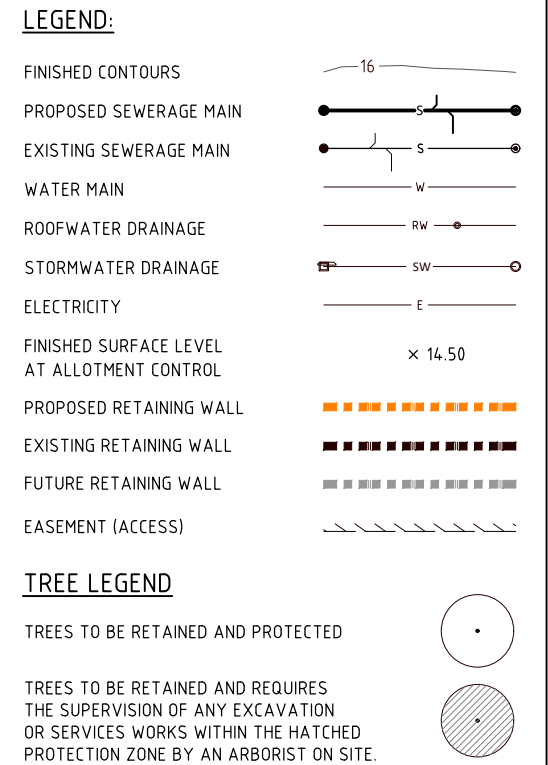
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DATE: 07/04/21
INIT: CDV

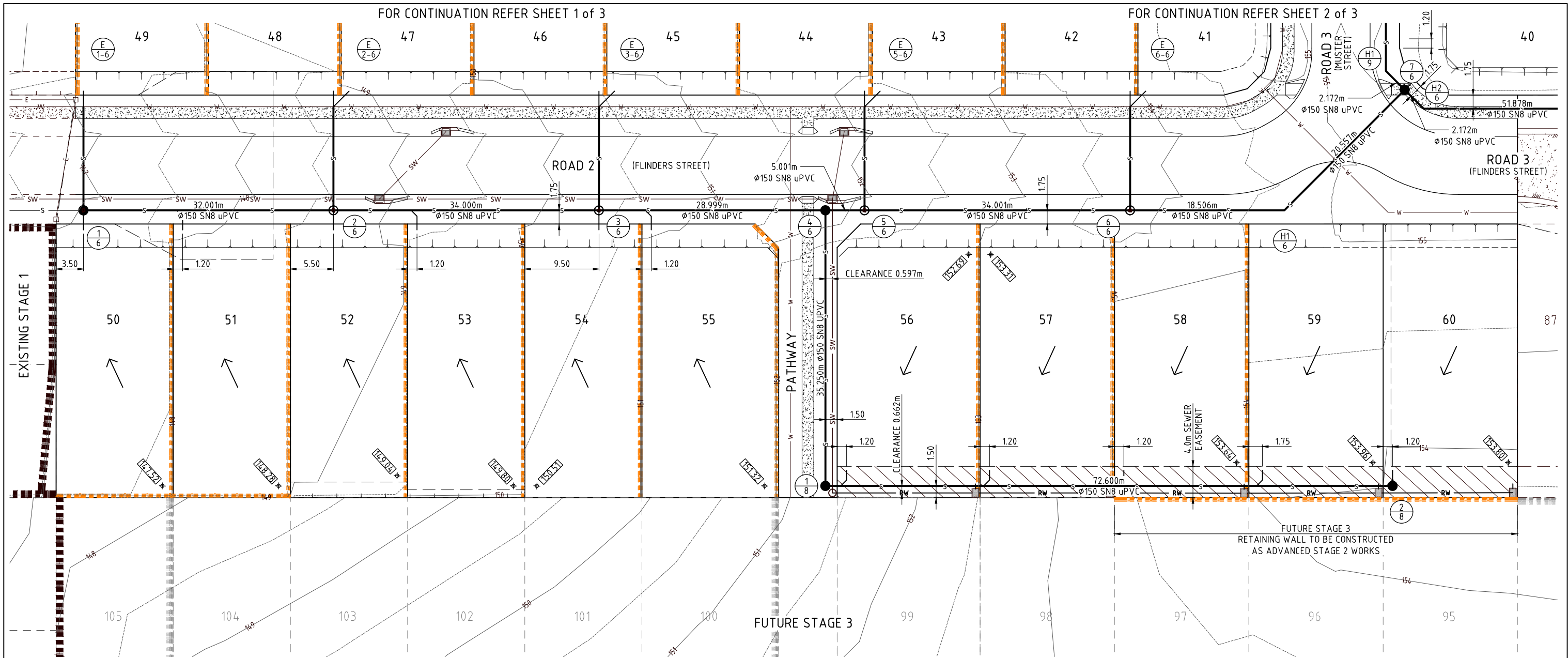
TITLE: SEWERAGE DETAIL LAYOUT PLAN SHEET 1 of 3
DFC (PROJECT MANAGEMENT) PTY LTD
'ARCHERS WAY' ESTATE - STAGE 2 AT 22-80 CASH STREET, D'AGUILAR

DETAILS: PROJECT: M2584E_2
PLAN: S02
ISSUE: C
LOCAL AUTHORITY REF: MORETON BAY REGIONAL COUNCIL
COUNCIL REF: DA/38032/2019/V3RL
FILE NAME: SEWERAGE.DWG

DENNIS FAMILY CORPORATION



 <p>BRISBANE - SUNSHINE COAST - CENTRAL QLD</p> <p>SUNSHINE COAST T209, Kon-Tiki Tower 1, 55 Plaza Parade, Maroochydore Qld 4558 P 07 5450 3900 W www.jfp.com.au</p> <p>JFP URBAN CONSULTANTS PTY. LTD. A.C.N. 050 414 045</p> <p>PLANNERS URBAN DESIGNERS SURVEYORS ENGINEERS LANDSCAPE ARCHITECTS</p>	<p>NORTH:</p> 	<p>SCALE:</p> <p>1:250 A1</p> <p>THIS SCALE SHOWN IS ORIGINAL DRAWING SCALE</p>  <p>DO NOT SCALE FROM THIS DRAWING - USE ONLY DIMENSIONS PROVIDED - IF IN DOUBT PLEASE ENQUIRE</p> <p>APPROVED  <input type="checkbox"/> T.M'KINNEY RPEQ 5087 <input checked="" type="checkbox"/> A.FRASER RPEQ 5691 <input type="checkbox"/> J.PAPPAS RPEQ 6086</p> <p><input type="checkbox"/> S.MARSH RPEQ 8088 <input type="checkbox"/></p> <p>FOR AND ON BEHALF OF JFP URBAN CONSULTANTS PTY LTD</p> <p>DESIGNED CDV DRAWN BJ CHECKED HW</p> <p>DATUM: AHD</p>	<p>ISSUE:</p> <p>C LOTS 41 to 49 SEWER AMENDED B AMENDMENTS TO COINCIDE WITH STAGE 1 DESIGN A ISSUE FOR OPERATIONAL WORKS APPROVAL</p> <p>07/04/21 09/03/21 16/06/20</p> <p>CDV WN BJ</p>	<p>TITLE:</p> <p>SEWERAGE DETAIL LAYOUT PLAN SHEET 2 of 3</p> <p>DFC (PROJECT MANAGEMENT) PTY LTD</p> <p>'ARCHERS WAY' ESTATE - STAGE 2 AT 22-80 CASH STREET, D'AGUILAR</p>	<p>DETAILS: PROJECT: M2584E_2 LOCAL AUTHORITY REF: MORETON BAY REGIONAL COUNCIL COUNCIL REF: DA/38032/2019/V3RL FILE NAME: SEWERAGE.DWG</p> <p>PLAN: S03 ISSUE: C</p> <p> DENNIS FAMILY CORPORATION</p>
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LEGEND:

FINISHED CONTOURS	16
PROPOSED SEWERAGE MAIN	
EXISTING SEWERAGE MAIN	
WATER MAIN	
ROOFWATER DRAINAGE	
STORMWATER DRAINAGE	
ELECTRICITY	
FINISHED SURFACE LEVEL AT ALLOTMENT CONTROL	× 14.50
PROPOSED RETAINING WALL	
EXISTING RETAINING WALL	
FUTURE RETAINING WALL	
EASEMENT (ACCESS)	

TREE LEGEND

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FOR DETAILS AND FURTHER NOTES REFER TO DWG No. M2584E_2 S05

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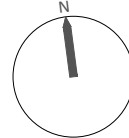
CONSULTANT: JFP URBAN CONSULTANTS PTY LTD
CONTACT: HAYDN WATSON
TELEPHONE: 0412 802 582



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PLANNERS
URBAN DESIGNERS
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NORTH:



SCALE:

1:250
A1
THIS SCALE SHOWN IS ORIGINAL DRAWING SCALE
0 2.5 5 7.5 10 12.5 (A1) 1:250 25
(A3) 1:500
DO NOT SCALE FROM THIS DRAWING - USE ONLY DIMENSIONS PROVIDED - IF IN DOUBT PLEASE ENQUIRE

APPROVED
FOR AND ON BEHALF OF JFP URBAN CONSULTANTS PTY LTD

T.M. KINNEY RPEQ 5087
A. FRASER RPEQ 5691
J. PAPPAS RPEQ 6086
S. MARSH RPEQ 8068

ISSUE:

DESIGNED: CDV
DRAWN: BJ
CHECKED: HW
DATE: 07/04/21
09/03/21
16/06/20
INIT:

TITLE:

SEWERAGE DETAIL LAYOUT PLAN
SHEET 3 of 3

DFC (PROJECT MANAGEMENT) PTY LTD
'ARCHERS WAY' ESTATE - STAGE 2
AT 22-80 CASH STREET, D'AGUILAR



DETAILS:
PROJECT: M2584E_2
LOCAL AUTHORITY REF: MORETON BAY REGIONAL COUNCIL
COUNCIL REF: DA/38032/2019/V3RL
FILE NAME: SEWERAGE.DWG
PLAN: S04
ISSUE: C

SEWER RETICULATION NOTES

1. ALL WORKS AND MATERIALS MUST BE IN ACCORDANCE WITH THE CURRENT UNITYWATER SPECIFICATIONS
GRAVITY SEWERAGE CODE OF AUSTRALIA
SEQ SERVICE PROVIDERS EDITION V2.0 (JULY 2019)
SEQ WS&S D&C CODE IPAM LIST
SEQ WATER SERVICE PROVIDERS STANDARD DRAWINGS
2. A REDUCED INFILTRATION GRAVITY SEWERAGE SYSTEM (RIGSS) SHALL BE INSTALLED. IN PARTICULAR:-

a. ALL GRAVITY SEWERS SHALL BE UPVC R.J.J. (ELASTOMERIC SEALED) TO AS 1260 IN 3.0m MAXIMUM LENGTHS (U.N.O.). DN100 TO BE SN10, DN150 AND LARGER TO BE SN8. PLAIN WALLED ONLY (NOT SANDWICH WALLED). PLAIN GREY COLOUR

b. FITTINGS TO BE PLAIN WALLED uPVC. DN100 TO BE SN10, D150 AND LARGER TO BE SN8

c. DUCTILE CEMENT LINED (DICL) PIPE INCORPORATED IN THE SEWER PIPELINES SHALL BE MINIMUM CLASS PN35 POLYURETHANE INTERNAL PROTECTION

d. GRAVITY SEWERS DEEPER THAN 3m OR LESS THAN MINIMUM COVER SHALL BE uPVC PRESSURE PIPE SEWER PN12 USING STANDARD DWV FITTINGS

e. SEWER MAINS SHALL BE TYPE 4 CONSTRUCTION IN ACCORDANCE SEQ-1200-1A TO 1205-1A UNLESS NOTED OTHERWISE INCLUDING DETECTABLE MARKING TAPE

f. ALL EXISTING ROAD CROSSINGS WHERE NEW SEWERS ARE TO BE LAID SHALL BE TUNNEL BORED (U.N.O.) IN ACCORDANCE WITH STD DWG SEQ-SEW-1402-1A & 1403-1B. IF OPEN TRENCH EXCAVATION IS SPECIFIED, TYPE 14 TO 17 TO BE ADOPTED UNDER EXISTING ROADS. ROAD BACKFILL TO BE IN ACCORDANCE WITH STD DWG RS-170F

g. POLYPROPYLENE PRODUCTS ARE NOT PERMITTED
3. BEDDING MATERIAL SHALL BE EITHER WASHED 5mm SCREENINGS OR NON COHESIVE GRANULAR MATERIAL FREE FROM PARTICLES WHICH MAYBE RETAINED ON A 9.5mm SIEVE. CRUSHER GRIT SHALL NOT BE USED
4. SEWER PIPE LINE BEDDING SHALL BE COMPACTED TO THE FOLLOWING DENSITY:-

a. SCREENINGS65% DENSITY INDEX.
5. MINIMUM COVER TO UPVC CLASS SN8 PIPE COLLARS SHALL BE:-

a. PRIVATE ALLOTMENTS (NO VEHICLE) 0.6m (NEW) 0.45M (EXISTING)

b. PRIVATE ALLOTMENTS (VEHICLE LOADING) 0.75M

c. FOOTPATHS 0.9m

d. ROAD CROSSINGS.... 1.2m OR 0.6m IF CLASS PN18 UPVC OR DICL FROM MH TO MH.

e. DEEP SEWERS 3M TO 4.5M CLASS PN18 UPVC FROM MH TO MH.
6. STANDARD SEWER ALIGNMENTS ARE:-

a. FRONT (VERGE OFF RP BOUNDARY)..... 1.75m

b. SIDE BOUNDARY150m.
7. SEWER MAINTENANCE HOLE (MH):-

a. TO BE IN ACCORDANCE WITH NOTES ON STD DRGS SEQ-SEW-1101-4A TO 1101-6A

b. ALL MAINTENANCE HOLES SHALL BE PROPERLY SEALED TO PREVENT INGRESS OF SUBSOIL & SURFACE WATERS

c. MAINTENANCE HOLES SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. DWGS. SEQ-SEW-1301-1A, 1302-1A, 1303-1B & 1307-1A.

d. SEWER MAINTENANCE HOLE LIDS LOCATED IN NON-TRAFFICABLE AREAS SHALL BE CLASS 'B' AND LIDS LOCATED IN TRAFFICABLE AREAS SHALL BE CLASS 'D'. LIDS TO BE CAST IRON, MACRO COMPOSITE OR THERMOPLASTIC. NO CONCRETE INFILL LIDS ARE PERMITTED. COVERS, FRAMES & CAST IRON LIDS SHALL COMPLY WITH AS.3996. MAINTENANCE HOLES LOCATED IN PARKS, RESERVES & OTHER AREAS SUBJECT TO FLOODING IN A Q10 ARI EVENT OR VANDALISM SHALL HAVE BOLT DOWN CAST IRON COVERS & FRAMES. MAINTENANCE HOLE COVERS & SURROUND DETAILS SHALL COMPLY WITH STD DWGS SEQ-SEW-1308-1C & 5A TO 11A. CAST IN-SITU MAINTENANCE HOLES OR APPROVED PRECAST MAINTENANCE HOLES TYPE P2 & P3 SHALL BE USED FOR MAINTENANCE HOLES UP TO AND INCLUDING Ø375mm OR SEWER DEPTHS UP TO 6.0m DEEP

f. NO STEP IRONS OR LADDERS TO BE INSTALLED IN SEWER MAINTENANCE HOLES

g. MAINTENANCE HOLES SHALL BE BENCHED & CHANNELS CONSTRUCTED IN ACCORDANCE WITH STD DWGS SEQ-SEW-1304-1A, 1305-1A & 1306-1A

h. MAINTENANCE HOLE NECKS TO BE 350mm MAX

i. MAINTENANCE HOLE OPENINGS TO BE 600mm MINIMUM FOR ALL SEWER MAINTENANCE HOLES.

j. CONCRETE FOR MAINTENANCE HOLE CONSTRUCTION SHALL BE SPECIAL CLASS SCC40 TO WASA 114 (10mm MIN AGGREGATE SIZE. NON CHLORIDE ADD MIXTURE)
8. MAINTENANCE SHAFTS (MS) SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD DWGS SEQ-SEW-1314-1C AND 1314-2C. MS TO BE TYPE G. MINIMUM SHAFT DIAMETER 300mm

9. HOUSE CONNECTIONS:-

a. HOUSE CONNECTIONS SHALL BE 100MM DIAMETER UPVC AND INSTALLED IN ACCORDANCE WITH STD. DWGS SEQ-SEW-1104-1C & 1105-1C

b. HOUSE DRAIN INSPECTION OPENINGS SHALL BE INSTALLED TO 1.4m MAXIMUM DEPTH BELOW FINISHED GROUND LEVEL

c. HOUSE DRAINS SHALL BE EXTENDED TO A MINIMUM OF 10M BEYOND ANY EXISTING OR PROPOSED STORMWATER PIPE CROSSINGS.

d. ENDS OF HOUSE DRAIN CONNECTIONS SHALL BE IDENTIFIED BY A 2.0m LONG x 40mmØ LENGTH OF ORANGE CONDUIT TAPED TO & PLACED VERTICALLY ABOVE PIPE END

e. HOUSE CONNECTION BRANCHES SHALL BE LOCATED GENERALLY 10M TO 12M UPSTREAM OF THE ALLOTMENT BOUNDARY, AT THE LOWEST PART OF THE ALLOTMENT & AT SUFFICIENT DEPTH TO SERVE THE WHOLE ALLOTMENT UNLESS SHOWN OTHERWISE

f. UNITYWATER REQUIRES PROPERTY CONNECTION BRANCHES TO EXTEND A MINIMUM OF 0.5m AND A MAXIMUM OF 0.75m INTO THE PROPERTY BEING SERVICES.
10. HORIZONTAL AND VERTICAL BENDS ON RIGSS SHALL BE INSTALLED IN ACCORDANCE WITH STD DWGS SEQ-SEQ-1103-1A, 1314-2C & 1314-3C. NO HCB'S TO BE INSTALLED ON BENDS. MAXIMUM VERTICAL BEND 30% & MAXIMUM HORIZONTAL BEND 45%. KERBS FORMED BY JOINT DEFLECTION OF RRJ SPIGOT - SOCKET PIPES OR COLD BENDING OF PIPES IS NOT PERMITTED. BENDS TO BE MANUFACTURED AS 3m LONG RADIUS BENDS
11. TANGENT POINT SET-OUT INFORMATION FOR HORIZONTAL BENDS IS TO BE INCLUDED IN THE "AS-CONSTRUCTED DRAWINGS"
12. CONCRETE STOPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD DWGS SEQ-SEW-1206-1B
13. CLEARANCES TO SEWERS & OTHER UNDERGROUND SERVICES SHALL COMPLY WITH TABLE 5.4 FROM WSA02. SPACE BETWEEN PIPES SHALL BE BACKFILLED WITH COMPACTED SAND.
14. ALL DISTURBED AREAS MUST BE REINSTATED WITHIN 7 DAYS OF BACKFILLING TO THE SATISFACTION OF THE SUPERINTENDENT, INCLUDING GRASSING, PLANTS, STRUCTURES & SPOIL
15. THE CONSULTING ENGINEER MUST BE NOTIFIED BY PHONE AND GIVEN THE OPPORTUNITY TO WITNESS THE FOLLOWING WHERE APPLICABLE. THE CONTRACTOR SHALL CALL THE CONSULTING ENGINEER TO ARRANGE INSPECTIONS WITH UNITYWATER INSPECTORS

- MANDATORY INSPECTIONS:-

a. COMMENCEMENT OF LAYING PIPE

b. ALL HC'S BEFORE POURING CONCRETE

c. ALL HC'S AFTER POURING CONCRETE

d. SAND BACKFILLING AROUND RISERS

e. VACUUM TESTS (UNLESS CARRIED OUT BY NATA CERTIFIED TESTER - HOWEVER UNITYWATER INSPECTOR SHALL STILL BE NOTIFIED WHEN TESTING IS TO BE UNDERTAKEN AND MAY CONDUCT RANDOM INSPECTION OF NATA CERTIFIED TESTING)
16. VACUUM TEST ALL SEWER PIPES IN ACCORDANCE WITH 21.4.2.1 FROM WASA 02. PRESSURE TESTING IS NOT ACCEPTABLE. INCLUDE EXTERNAL MH DROPS, PROPERTY CONNECTION SEWERS, VERTICAL RISERS, MC'S, MS'S, TMS'S, TEP'S, RE'S, INSPECTION SHAFTS AND FITTINGS. APPLY -27kPa FOR 3 MINUTES, ALLOW TO DROP TO -24kPa AND RECORD DROP IN PRESSURE OVER TEST TIME. MINIMUM TIME ALLOWED:-
17. VACUUM TEST ALL MANHOLES IN ACCORDANCE WITH 21.5 FROM WASA 02. PRESSURE TESTING IS NOT ACCEPTABLE. APPLY -37kPa FOR 3 MINUTES. ALLOW TO DROP TO -34kPa AND RECORD TIME TO DROP TO -30.4kPa. ACCEPT IF:-

DIAMETER	LENGTH				
	50m	100m	150m	200m	500m
100mm	2 min.	2 min.	2 min.	2 min.	3 min.
150mm	3 min.	3 min.	3 min.	5 min.	6 min.
225mm	4 min.	5 min.	8 min.	10 min.	15 min.
300mm	6 min.	9 min.	14 min.	18 min.	29 min.
375mm	7 min.	14 min.	22 min.	29 min.	43 min.

MAINTENANCE HOLES AND SEWERS ARE NOT TO BE TESTED OR CCTV'D BEFORE ALL EARTHWORKS HAVE BEEN COMPLETED.

MH DEPTH	MH DIAMETER				
	900mm	1050mm	1200mm	1500mm	1800mm
2.4m	14 min.	17 min.	20 min.	26 min.	33 min.
3.0m	18 min.	21 min.	25 min.	33 min.	41 min.
3.7m	21 min.	25 min.	30 min.	39 min.	49 min.
4.3m	25 min.	30 min.	35 min.	46 min.	57 min.
4.9m	29 min.	34 min.	40 min.	52 min.	65 min.
5.5m	32 min.	38 min.	45 min.	59 min.	73 min.
6.1m	35 min.	42 min.	50 min.	65 min.	81 min.

18. DEFLECTION (OVALITY) TESTING (AS DIRECTED)
TESTING SHALL BE CONDUCTED BY A NATA CERTIFIED TESTING ORGANISATION.

a. ALL FLEXIBLE SEWER PIPES ARE TO BE DEFLECTION TESTED IN ACCORDANCE WITH WSA SEWERAGE CODE OF AUSTRALIA (WHERE SINGLE SIZED BEDDING MATERIAL IS USED NO OVALITY TESTING IS REQUIRED). TESTING SHALL BE UNDERTAKEN A MINIMUM OF 14 DAYS AFTER COMPACTION TRENCH FILL HAS OCCURRED.
19. TRENCH BACKFILL COMPACTION RESULTS TO BE IN ACCORDANCE WITH AS3798 AND MORETON BAY REGIONAL COUNCIL OPERATIONAL WORKS INSPECTION, MAINTENANCE AND BONDING PROCEDURES PLANNING SCHEME POLICY
- SEWERAGE RETICULATION:-

a. COMPACTION TO TRENCH BOTTOM - FIELD DENSITY 1 PER 40m (IF ORDERED)

b. BACKFILL - FIELD DENSITY 1 PER 40m PER 2 LAYERS (MAX 400mm) AND 1 SET OF TESTS PER LINE (MH TO MH) FIRST TEST 750mm ABOVE OBVERT OF PIPE

c. MANHOLE CI COVERS AND FRAMES - CERTIFICATION FROM MANUFACTURER.
- SERVICE CONDUITS:-

a. COMPACTION TO TRENCH BOTTOM - FIELD DENSITY 1 PER ROAD CROSSING TO NATURAL SUBGRADE (IF ORDERED)

b. BEDDING - MATERIALS (SIEVE ANALYSIS) 1 PER 200m

c. BACKFILL - FIELD DENSITY 1 PER ROAD CROSSING PER 2 LAYERS (IF NOT SAND)
20. TRENCH COMPACTION TO COMPLY WITH TABLE 21.1 FROM WSA 02

MINIMUM COMPACTION OF EMBEDMENT, TRENCH, AND OTHER FILLS

MATERIAL TYPE	MINIMUM VALUE (%)			
	TRAFFICABLE AREAS		NON-TRAFFICABLE AREAS	
	EMBEDMENT	TRENCH	EMBEDMENT	TRENCH
NON-COHESIVE	70 (REFER NOTE BELOW)	70	60	60
COHESIVE	95	95	90	90

NOTE: SINGLE SIZE COARSE AGGREGATES OF SIZES 7, 10 AND 14mm SHALL BE DEEMED "SELF COMPACTING" AND DO NOT REQUIRE COMPACTION TESTING WHEN USED FOR PIPE EMBEDMENT

21. AS CONSTRUCTED DRAWINGS, ENGINEERING CERTIFICATION, PRESSURE TEST RESULTS, COMPACTION TEST RESULTS AND CCTV AND ASSOCIATED CONSULTANT'S REPORTS MUST BE DELIVERED AND RECEIVED 7 DAYS PRIOR TO AN ON-MAINTENANCE INSPECTION
22. A CCTV INSPECTION SHALL BE CARRIED OUT IN ACCORDANCE WITH 21.8 WSA 02 AND APPENDIX L-SPECIFICATION FOR INTERNAL INSPECTION OF NEWLY CONSTRUCTED OR REHABILITATED SEWERS AND WSA 05. THE CCTV INSPECTION SHALL MEASURE THE GRADE OF THE SEWER USING AN INCLINOMETER FITTED TO THE SCANNER OR OPTICAL 3D SCANNER WHICH IS ACCURATE TO ±1%. THE GRADE SHALL BE DISPLAYED CONTINUOUSLY ON SCREEN DURING PLAYBACK OF CCTV RECORDING.
23. DURING ANY CONSTRUCTION ACTIVITY, AT LEAST ONE PERSON ON SITE MUST HAVE COMPLETED A PIPE LAYING TRAINING COURSE APPROVED BY THE SUPPLIER AND APPROPRIATE TO THE PIPE LINE UNDER CONSTRUCTION. THE TRAINING COURSE MUST HAVE BEEN COMPLETED WITH IN THE LAST 10 YEARS. DOCUMENTARY EVIDENCE TO BE PROVIDED BY THE CONTRACTOR PRIOR TO COMMENCEMENT
24. THE CONSTRUCTION OF THE SEWER RETICULATION WORK SHOWN ON THIS DRAWING MUST BE SUPERVISED BY AN ENGINEER WHO HAS RPEQ REGISTRATION. WORKS NOT COMPLYING WITH THIS REQUIREMENT WILL NOT BE PERMITTED TO CONNECT TO THE SEWER RETICULATION NETWORK
25. CONNECTION OF NEW SEWER MAINS TO THE EXISTING SEWER RETICULATION SYSTEM SHALL BE COMPLETED BY UNITYWATER AT THE DEVELOPER'S COST. ALTERNATIVELY LIVE WORKS MAY BE CARRIED OUT BY THE DEVELOPERS PRIVATE CONTRACTOR UNDER THE SUPERVISION OF UNITYWATER ON AN A&C ACCREDITED CERTIFIER

UNITYWATER AND CONSTRUCTOR LIVE SEWER WORKS

CONSULTING ENGINEERS ARE TO CONTACT UNITYWATER 24 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION TO ARRANGE FOR THIS WORK TO BE CARRIED OUT.
(EXCAVATION, SAFE SHORING & ASSOCIATED WORKS BY CONTRACTOR)

EXCAVATION WORKS CARRIED OUT BY CONSTRUCTORS AT DEPTHS OF 1.5m OR GREATER MUST PROVIDE A 'SAFE WORK PLAN' AS PER WORKPLACE HEALTH AND SAFETY LEGISLATION TO QUU PRIOR TO COMMENCING ANY WORKS.

IT IS THE DEVELOPERS RESPONSIBILITY TO ENSURE ALL LIVE SEWER WORKS ARE COMPLETE BEFORE ALLOWING PRIVATE DRAINAGE TO BE CONNECTED.

No.	DESCRIPTION	DIA SEWER	MH No.	MH/MS TYPE	COVER TYPE	LOT No.	F.S.L.	E.S.L.	I.L.	DEPTH
1a)	THE CONTRACTOR SHALL CONSTRUCT MH AND BENCHING OVER THE EXISTING PIPE;	150 SN8	1 /6	P2	D	LOT 50 FLINDERS STREET	147.029	146.070	144.763	2.266
1b)	UNITYWATER SHALL REMOVE END CAP AND DEMOLISH THE CROWN OF EXISTING PIPE WITHIN THE MH AND MAKE GOOD THE BENCHING AFTER SUCCESSFUL ON MAINTENANCE.									
2a)	THE CONTRACTOR SHALL CONSTRUCT NEW SEWER LINE 1/2 TO 3/2.	150 SN8	N/A	N/A	N/A	LOT 28 CASH STREET	144.609	144.388	143.280	1.329
2b)	FOLLOWING SUCCESSFUL ON MAINTENANCE INSPECTION AND TESTING OF NEW LINE 2, UNITYWATER SHALL CONNECT LINE 2 TO EXISTING STUB FROM 1/2.									



LOCALITY PLAN

N.T.S.

ENVIRONMENTAL NOTES

VEGETATION PROTECTION

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

SOIL

- A. TOPSOIL AND SUBSOIL SHALL BE STOCKPILED SEPARATELY.
- B. CARE SHALL BE TAKEN TO PREVENT SEDIMENT FROM ENTERING THE STORMWATER SYSTEM. THIS MAY INVOLVE PLACING APPROPRIATE SEDIMENT CONTROLS AROUND STOCKPILES.

CREEK CROSSINGS

- A. SILTATION CONTROL MEASURES SHALL BE PLACED DOWNSTREAM OF ANY EXCAVATION WORK.
- B. APPROPRIATE SEDIMENT CONTROLS SHALL BE USED TO PREVENT SEDIMENT FROM ENTERING THE CREEK.
- C. NO SOIL SHOULD BE STOCKPILED WITHIN 5m OF THE CREEK.

REHABILITATION

- A. PREDISTURBANCE SOIL PROFILES AND COMPACTION LEVELS ARE TO BE REINSTATED.
- B. PREDISTURBANCE VEGETATION PATTERNS SHOULD BE RESTORED.

SAFETY

- A. THE DESIGN AND CONSTRUCTION OF THE WORKS SHALL COMPLY WITH ALL QUEENSLAND LEGISLATION

CLEARANCES BETWEEN SEWER MAINS AND OTHER UNDERGROUND SERVICES

UTILITY (Existing Services)	Minimum horizontal clearance (mm)		Minimum Vertical Clearance mm
	New main size NB		
	≤200 mm	>200 mm	
GRAVITY SEWERS ≤300 mm	300	600	150/300
GRAVITY SEWERS <300 mm	600	600	300
PRESSURE AND VACUUM SEWERS	300	600	500
GAS MAINS	300	600	150/300
TELECOMMUNICATIONS CONDUITS & CABLES	300	600	150/300
ELECTRICITY CONDUITS & CABLES	500	1000	225/300
STORMWATER DRAINS	300	600	150/300
WATER MAINS	1000/600	1000/600	500
KERBS	150	600	N/A

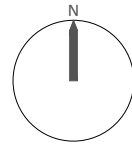
FOR NOTES, VARIATIONS TO CLEARANCES AND ACCEPTABLE REASONS SEE TABLE 5.4 WS03-2002
PART ONE - PLANNING AND DESIGN



The Essential First Step

CONSULTANT: JFP URBAN CONSULTANTS PTY LTD
CONTACT: HAYDN WATSON
TELEPHONE: 0412 802 582

NORTH:



SCALE:

NOT TO SCALE THIS SCALE SHOWN IS ORIGINAL DRAWING SCALE

A1

DO NOT SCALE FROM THIS DRAWING - USE ONLY DIMENSIONS PROVIDED - IF IN DOUBT PLEASE ENQUIRE

APPROVED

FOR AND ON BEHALF OF JFP URBAN CONSULTANTS PTY LTD

T.M. KINNEY
RPEQ 5087

A. FRASER
RPEQ 5691

J. PAPPAS
RPEQ 6086

DESIGNED
CDV

DRAWN
BJ

CHECKED
HW

DATUM: AHD

ISSUE:

DETAILS:

NOTES AMENDED
AMENDMENTS TO COINCIDE WITH STAGE 1 DESIGN
ISSUE FOR OPERATIONAL WORKS APPROVAL

07/04/21

09/03/21

16/06/20

DATE:

INIT:

CDV

WN

BJ

INIT:

SEWERAGE DETAILS PLAN

DFC (PROJECT MANAGEMENT) PTY LTD
'ARCHERS WAY' ESTATE - STAGE 2
AT 22-80 CASH STREET, D'AGUILAR



DETAILS:

PROJECT:

PLAN:

ISSUE:

LOCAL AUTHORITY REF:

COUNCIL REF:

FILE NAME:

SEWERAGE.DWG

M2584E_2

S05

C

MORETON BAY REGIONAL COUNCIL

DA/38032/2019/V3RL

SEWERAGE.DWG

UNITYWATER LIVE WORKS
CONNECT TO EXISTING Ø150 uPVC
LINE. END CAP TO BE REMOVED
AND CROWN OF PIPE CUT AWAY
BY UNITYWATER AS LIVE WORKS
UPON ON MAINTENANCE
ACCEPTANCE. REFER DWG S05

LINE



CONSULTANT: JFP URBAN CONSULTANTS PTY LTD
CONTACT: HAYDN WATSON
TELEPHONE: 0412 802 582



- PLANNERS
- URBAN DESIGNERS
- SURVEYORS
- ENGINEERS
- LANDSCAPE ARCHITECTS

SCALE:


Horizontal 1:1000
Vertical 1:100

A1

THIS SCALE SHOWN IS ORIGINAL DRAWING SCALE

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

0 10 20 30 40 50 (A1) 1:1000

APPROVED 

FOR AND ON BEHALF OF JFP URBAN CONSULTANTS PTY LTD

☐ T. M. KINNEY
RPEQ 5087

☒ A. FRASER
RPEQ 5691

☐ J. PAPPAS
RPEQ 6086

☐ S. MARSH
RPEQ 8068

☐

DESIGNED	CDV	C	LOTS 41 to 49 SEWER AMENDED
DRAWN	BJ	B	AMENDMENTS TO COINCIDE WITH STAGE 1 DESIGN
CHECKED	HW	A	ISSUE FOR OPERATIONAL WORKS APPROVAL
DATE: 14/01/2024	BY: HW	ISSUE: 1	DETAILS:

DFC (PROJECT MANAGEMENT) PTY LTD
'ARCHERS WAY' ESTATE - STAGE 2
AT 22-80 CASH STREET, D'AGUILAR



**DENNIS
FAMILY
CORPORATION**

DETAILS:		
PROJECT:	PLAN:	ISSUE:
M2584E_2	S06	C
LOCAL AUTHORITY REF:		
MORETON BAY REGIONAL COUNCIL		
COUNCIL REF:		
DA/38032/2019/V3RL		
FILE NAME:	SEWERAGE SECTIONS.DWG	



DATUM
PROP. DESCRIPTION PIPE Dia, TYPE, CLASS GRADE (1 IN X) LENGTH EMBEDMENT TYPE JUNCTION INVERT LEVEL
DEPTH TO INVERT BELOW FSL
INVERT LEVEL (IL)
FINISHED SURFACE LEVEL (FSL)
EXISTING SURFACE LEVEL (ESL)
STRUCTURE SETOUT CO-ORDINATES
CHAINAGE (CH) (DISTANCE BETWEEN STRUCTURES)

8

1-6

3-6

6-6

THE DESIGN AND CONSTRUCTION OF THE WORKS SHALL COMPLY WITH ALL QUEENSLAND LEGISLATION. CONTACT THE DIVISION OF WORKPLACE HEALTH AND SAFETY FOR INFORMATION: 1300 362 128.

PROPERTY CONNECTIONS HAVE BEEN DESIGNED TO CONTROL THE REQUIRED SERVICE AREA OF EACH LOT AT A GRADE OF 160 AND A MAXIMUM DEPTH OF PROPERTY CONNECTION AT 1.500m UNLESS OTHERWISE STATED. REFER SEQ-SEW-1104-1 TO SEQ-SEW-1105-1

THE CONSTRUCTOR IS TO NOTIFY THE SUPERVISING ENGINEER OF ANY DISCREPANCIES BETWEEN THE DESIGN PLANS AND THE CONDITIONS ON SITE PRIOR TO COMMENCEMENT OF ANY PIPE LAYING.

ENVIRONMENT PROTECTION MEASURES SHOULD BE IMPLEMENTED PRIOR TO ANY CONSTRUCTION WORK, INCLUDING CLEARING COMMENCING.

LIVE WORKS MUST BE PERFORMED UNDER UNITYWATER SUPERVISION. REFER DRAWING M2584E_2 S05, UNITYWATER AND CONSTRUCTOR LIVE SEWER WORKS INSTRUCTION AND TABLE.

FOR DETAILS AND FURTHER NOTES
REFER TO DWG No. M2584E_2 S05

4/1		1/2		2/2		3/2	
P2 1000	D	'J1'	D	P2 1000	D	'J1'	D
3	1	3	1	3	1	3	1
16.34511399	A	28	8.000	16.75411400	B	33	0.000
16.42011400	A	29	25.000	16.65411396	A	32	76.000
16.49211401	A	30	42.000	16.56711400	A	31	59.000
16.56711400	A	31	59.000	16.48611400	A	34	17.200
16.65411396	A	32	76.000	16.99011396	A	35	34.200
16.75411400	B	33	0.000	15.12811404	SZ	36	51.000

LIVE WORKS BY UNITY WATER 5.000

EXISTING 150 DIA WATERMAIN

24.676m

CONNECT TO EXISTING Ø150 uPVC LINE

STAGE 2 CONSTRUCTION

ROAD

150 SN8 uPVC

1: 50.00

38.166m

TYPE 3

FOOTPATH

150 SN8 PVC-U

1: 22.38

92.804m

TYPE 3

DATUM RL 138.0

STAGE 2 CONSTRUCTION

0.000	E480653.191	14.2450	14.2862	14.1149	14.1080	1.722	14.1140	14.1149
38.166	N7014.736.125	14.4.070	14.4.317	14.1904	14.2988	2.413	14.2988	14.1149
152.646	E480782.796	14.8.459	14.8.789	14.7.134	14.7.154	1.655	14.7.134	14.1149
203.646	E480833.360	152.210	152.505	151.105	151.105	1.400	151.105	14.1149

38.166

E480653.191

14.2450

14.2862

14.1149

14.1080

1.722

14.1140

14.1149

152.646	E480782.796	14.8.459	14.8.789	14.7.134	14.7.154	1.655	14.7.134	14.1149
203.646	E480833.360	152.210	152.505	151.105	151.105	1.400	151.105	14.1149

150 SN8 uPVC

1: 50.00

38.166m

TYPE 3

150 SN8 PVC-U

1: 22.38

92.804m

TYPE 3

DATUM RL 138.0

STAGE 2 CONSTRUCTION

ROAD

150 SN8 uPVC

1: 50.00

38.166m

TYPE 3

FOOTPATH

150 SN8 PVC-U

1: 22.38

92.804m

TYPE 3

DATUM RL 138.0

STAGE 2 CONSTRUCTION

38.166

E480653.191

14.2450

14.2862

14.1149

14.1080

1.722

14.1140

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152.646	E480782.796	14.8.459	14.8.789	14.7.134	14.7.154	1.655	14.7.134	14.1149
203.646	E480833.360	152.210	152.505	151.105	151.105	1.400	151.105	14.1149

150 SN8 uPVC

1: 50.00

38.166m

TYPE 3

150 SN8 PVC-U

1: 22.38

92.804m

TYPE 3

DATUM RL 138.0

STAGE 2 CONSTRUCTION

ROAD

150 SN8 uPVC

1: 50.00

38.166m

TYPE 3

FOOTPATH

150 SN8 PVC-U

1: 22.38

92.804m

TYPE 3

DATUM RL 138.0

STAGE 2 CONSTRUCTION

38.166

E480653.191

14.2450

14.2862

14.1149

14.1080

1.722

14.1140

14.1149

152.646	E480782.796	14.8.459	14.8.789	14.7.134	14.7.154	1.655	14.7.134	14.1149
203.646	E480833.360	152.210	152.505	151.105	151.105	1.400	151.105	14.1149

150 SN8 uPVC

1: 50.00

38.166m

TYPE 3

150 SN8 PVC-U

1: 22.38

92.804m

TYPE 3

DATUM RL 138.0

STAGE 2 CONSTRUCTION

ROAD

150 SN8 uPVC

1: 50.00

38.166m

TYPE 3

FOOTPATH

15

[illegible]

Station	Elevation	Offset	Width	Depth	Material	Notes
0.000	E 480718.576	14.7252	14.6860	1.732	14.6920	15.000
	N7014635.667					
15.250	E 480720.565	14.6982	14.8713	1.703	15.100	15.250
	N7014650.787					

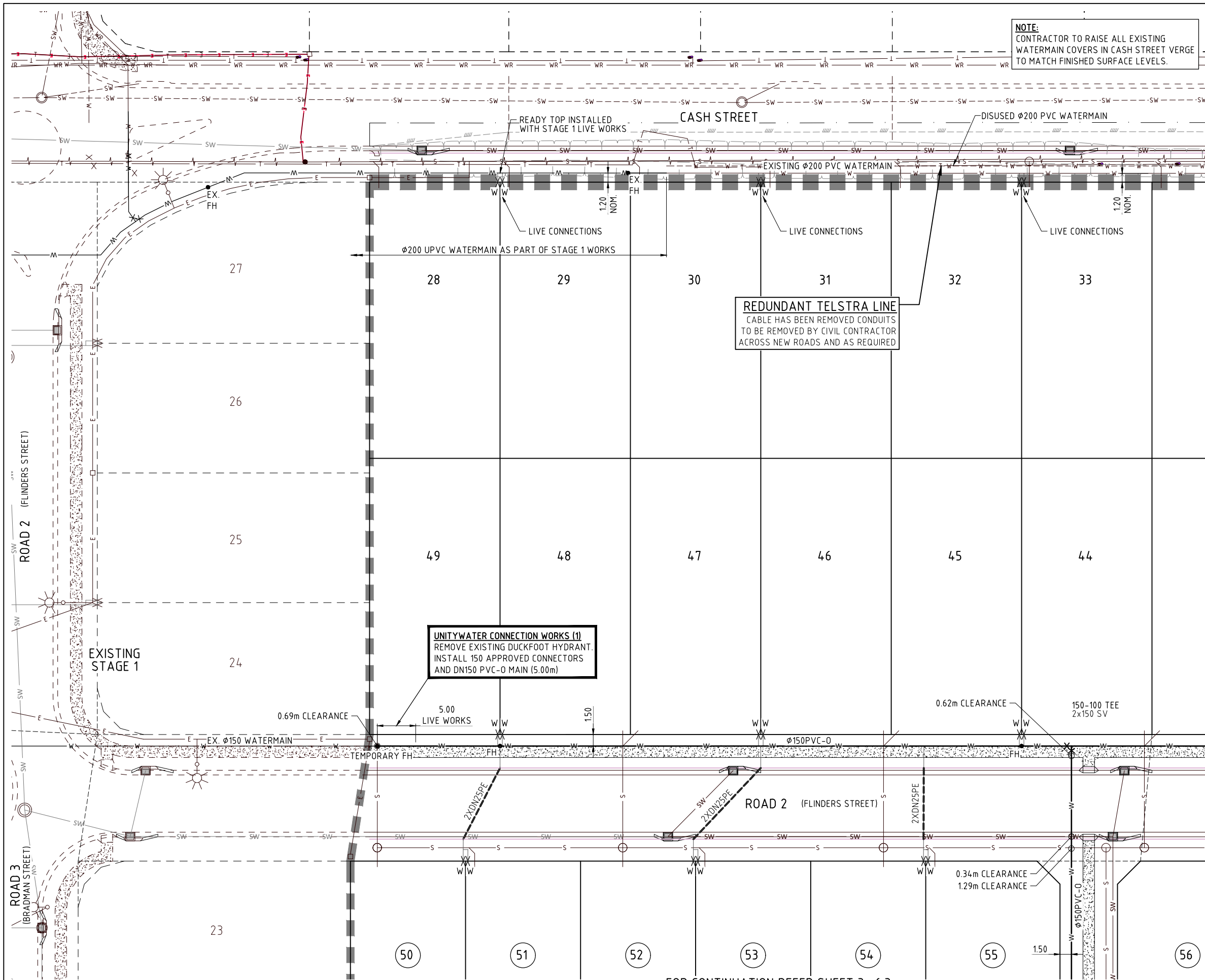
[illegible][illegible]

0.000	E 408019.704	153.909	153.821	152.160	152.220	1.601	152.272	152.372	153.872	153.983	153.817	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372	152.372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TITLE:

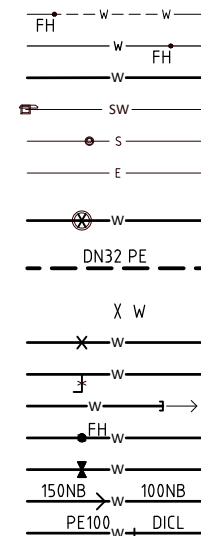


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LEGEND

- DISUSED MAIN
- EXISTING WATER MAIN
- PROPOSED MAIN
- STORMWATER DRAINAGE
- SEWERAGE
- U.G. ELECTRICITY
- ISOLATION VALVE TO REMAIN CLOSED PENDING CLEARANCE OF NEW MAIN
- PRIVATE SERVICE (FOR FUTURE INSTALLATION BY DEVELOPER)
- WATER SERVICE POINT
- ISOLATION VALVE
- SCOUR VALVE
- DEAD END
- FIRE HYDRANT
- TEST/CHLORINATION POINT
- REDUCER
- PIPE MATERIAL CHANGE



SERVICE DETAILS

TYPE	SIZE	LOT NUMBERS
16	32mm	-
16	25mm	50-59, 37-40
16	20mm	28-36, 41-49, 60

THE DESIGN AND CONSTRUCTION OF THE WORKS SHALL COMPLY WITH ALL QUEENSLAND LEGISLATION. CONTACT THE DIVISION OF WORKPLACE HEALTH AND SAFETY FOR INFORMATION: 1300 362 128.

ALL LIVE WORKS ON EXISTING WATER SUPPLY MAIN SHALL BE PERFORMED BY UNITYWATER AT THE DEVELOPER'S EXPENSE

ALL ENVIRONMENTAL PROTECTION MEASURES SHALL BE IMPLEMENTED PRIOR TO ANY CONSTRUCTION WORK, INCLUDING CLEARING COMMENCING

LIVE WATER WORKS

LOT	DESCRIPTION
28	NEW METERED SERVICE
29	NEW METERED SERVICE
30	NEW METERED SERVICE
31	NEW METERED SERVICE
32	NEW METERED SERVICE
33	NEW METERED SERVICE
34	NEW METERED SERVICE
35	NEW METERED SERVICE

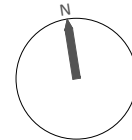
CONSULTANT: JFP URBAN CONSULTANTS PTY LTD
CONTACT: HAYDN WATSON
TELEPHONE: 04 12 802 582



BRISBANE - SUNSHINE COAST - CENTRAL QLD
SUNSHINE COAST
T209, Kon-Tiki Tower 1, 55 Plaza Parade,
Maroochydore Qld 4558
P 07 5450 3900 W www.jfp.com.au
JFP URBAN CONSULTANTS PTY. LTD. A.C.N. 050 414 045

PLANNERS
URBAN DESIGNERS
SURVEYORS
ENGINEERS
LANDSCAPE ARCHITECTS

NORTH:



SCALE:

1:250
A1

THIS SCALE SHOWN IS ORIGINAL DRAWING SCALE
0 2.5 5 7.5 10 12.5 25 Metres
(A1) 1:250
(A3) 1:500

DO NOT SCALE FROM THIS DRAWING - USE ONLY DIMENSIONS PROVIDED - IF IN DOUBT PLEASE ENQUIRE

APPROVED
FOR AND ON BEHALF OF JFP URBAN CONSULTANTS PTY LTD

T.M. KINNEY
RPEQ 5087
S. MARSH
RPEQ 8068
A. FRASER
RPEQ 5691
J. PAPPAS
RPEQ 6086

ISSUE:

DESIGNED
DRAWN
CHECKED
DATE: 09/03/21
16/06/20
BN
BJ
HW

AMENDMENTS TO COINCIDE WITH STAGE 1 DESIGN
ISSUE FOR OPERATIONAL WORKS APPROVAL

TITLE:

WATER RETICULATION LAYOUT PLAN
SHEET 1 of 3

DFC (PROJECT MANAGEMENT) PTY LTD

'ARCHERS WAY' ESTATE - STAGE 2
AT 22-80 CASH STREET, D'AGUILAR

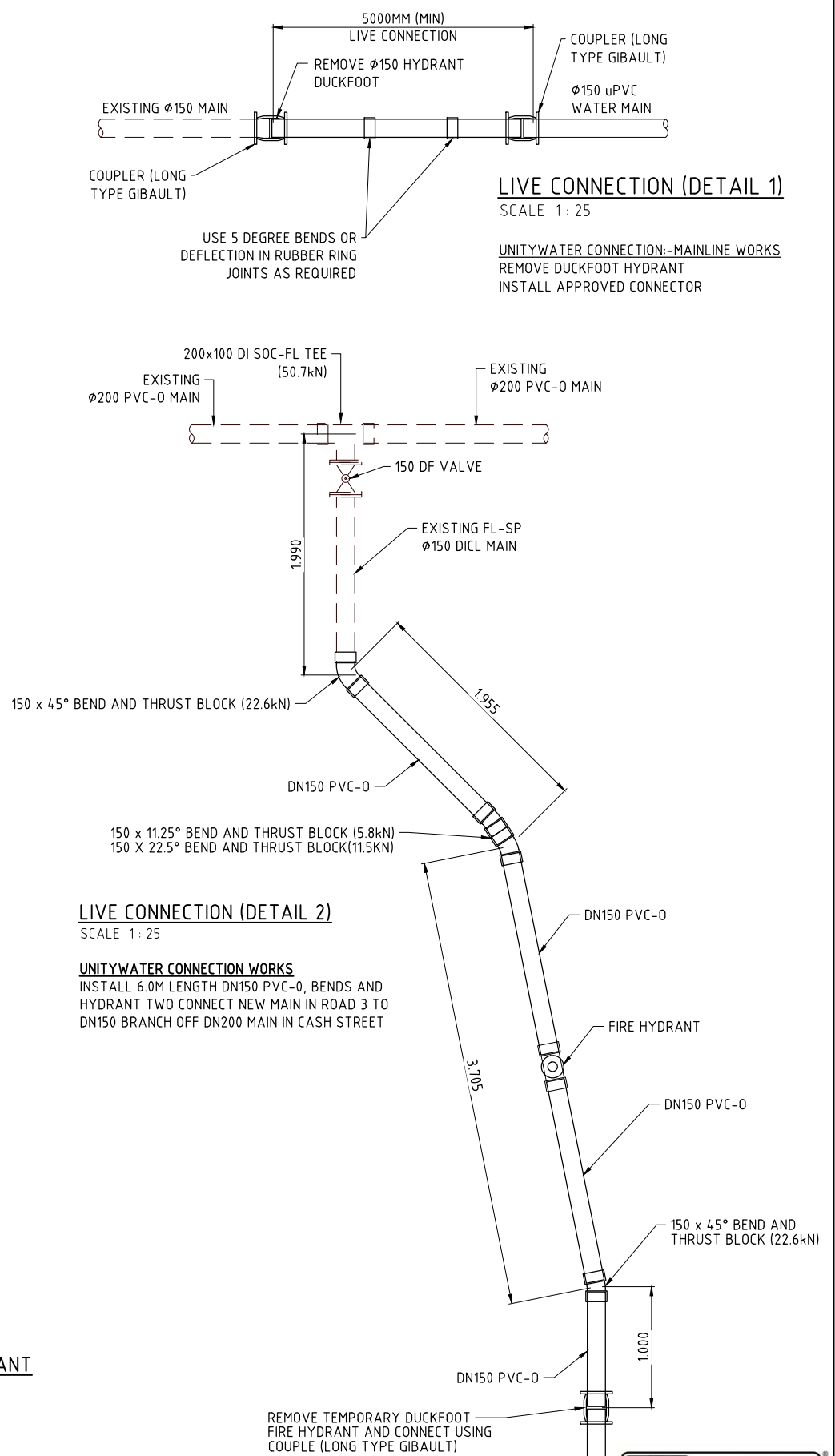
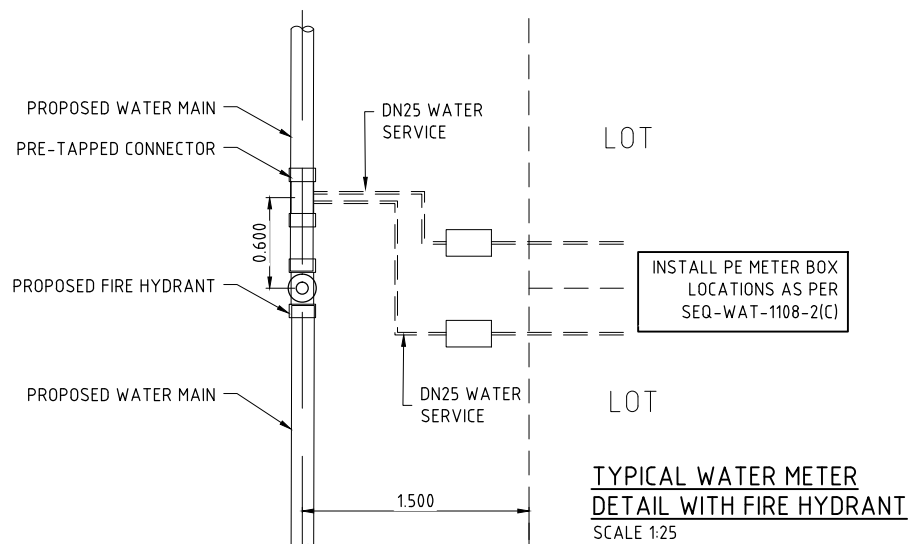
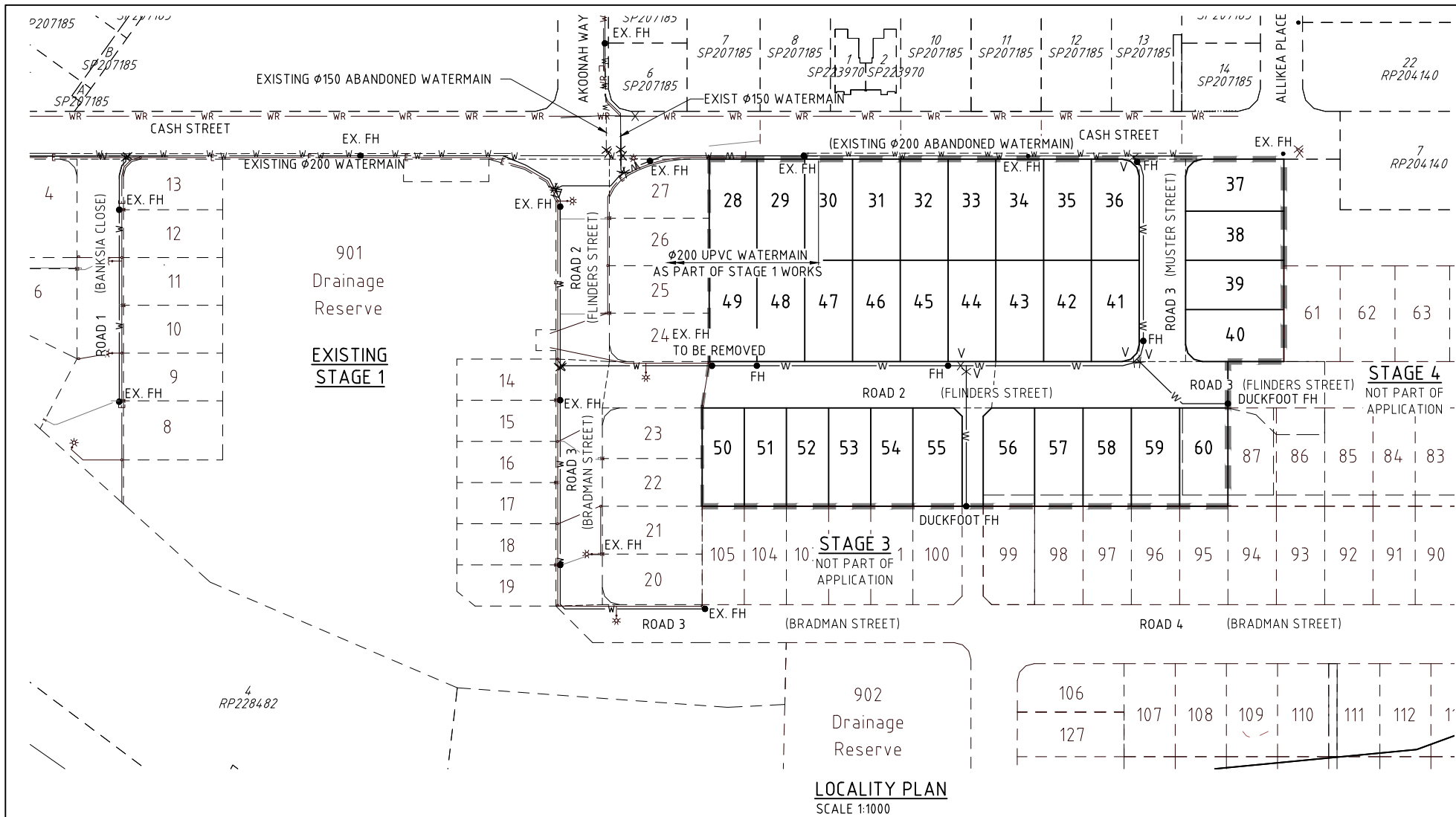
DETAILS:



PROJECT: M2584E_2
PLAN: W01
ISSUE: B
LOCAL AUTHORITY REF: MORETON BAY REGIONAL COUNCIL
COUNCIL REF: DA/38032/2019/V3RL
FILE NAME: WATER.DWG



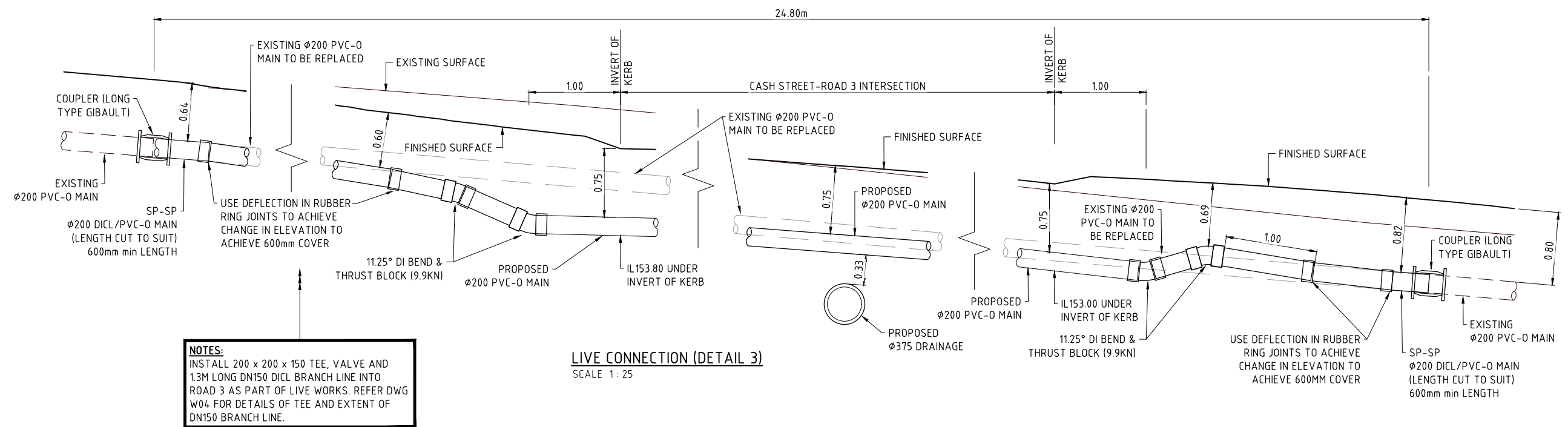
FOR CONTINUATION REFER SHEET 2 of 3





 <p>BRISBANE - SUNSHINE COAST - CENTRAL QLD</p> <p>SUNSHINE COAST</p> <p>T209, Kon-Tiki Tower 1, 55 Plaza Parade, Maroochydore Qld 4558</p> <p>P 07 5450 3900 W www.jfp.com.au</p> <p>JFP URBAN CONSULTANTS PTY. LTD. A.C.N. 050 414 045</p>		<p>PLANNERS</p> <p>URBAN DESIGNERS</p> <p>SURVEYORS</p> <p>ENGINEERS</p> <p>LANDSCAPE ARCHITECTS</p>		<p>NORTH:</p> 		<p>SCALE:</p> <p>1:1000</p> <p>A1</p> <p>THIS SCALE SHOWN IS ORIGINAL DRAWING SCALE</p> <p>0 10 20 30 40 50 100 (A1) 1:1000 (A3) 1:2000</p> <p>DO NOT SCALE FROM THIS DRAWING - USE ONLY DIMENSIONS PROVIDED - IF IN DOUBT PLEASE ENQUIRE</p> <p>APPROVED</p> <p>FOR AND ON BEHALF OF JFP URBAN CONSULTANTS PTY LTD</p> <p>T.M. KINNEY RPEQ 5087</p> <p>A. FRASER RPEQ 5691</p> <p>J. PAPPAS RPEQ 6086</p> <p>S. MARSH RPEQ 8068</p>		<p>ISSUE:</p> <p>AMENDMENTS TO COINCIDE WITH STAGE 1 DESIGN</p> <p>ISSUE FOR OPERATIONAL WORKS APPROVAL</p> <p>09/03/21</p> <p>16/06/20</p> <p>DATE:</p> <p>WN BJ</p> <p>INIT:</p>		<p>TITLE:</p> <p>WATER RETICULATION DETAILS PLAN</p> <p>SHEET 1 of 2</p> <p>DFC (PROJECT MANAGEMENT) PTY LTD</p> <p>'ARCHERS WAY' ESTATE - STAGE 2</p> <p>AT 22-80 CASH STREET, D'AGUILAR</p>		<p>DETAILS:</p> <p>PROJECT:</p> <p>M2584E_2</p> <p>PLAN:</p> <p>W04</p> <p>ISSUE:</p> <p>B</p> <p>LOCAL AUTHORITY REF:</p> <p>MORETON BAY REGIONAL COUNCIL</p> <p>COUNCIL REF:</p> <p>DA/38032/2019/V3RL</p> <p>FILE NAME:</p> <p>WATER.DWG</p>	
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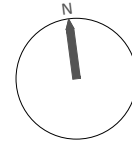
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PLANNERS
URBAN DESIGNERS
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LANDSCAPE ARCHITECTS

NORTH:



SCALE:

1:1000
A1

THIS SCALE SHOWN IS ORIGINAL DRAWING SCALE
0 10 20 30 40 50 100 Metres
(A1) 1:1000
(A3) 1:2000
DO NOT SCALE FROM THIS DRAWING - USE ONLY DIMENSIONS PROVIDED - IF IN DOUBT PLEASE ENQUIRE

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FOR AND ON BEHALF OF JFP URBAN CONSULTANTS PTY LTD

T.M. KINNEY
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RPEQ 5691

J. PAPPAS
RPEQ 6086

DESIGNED CDV

DRAWN BJ

CHECKED HW

DATUM: AHD

ISSUE:

B

A

DETAILS:

AMENDMENTS TO COINCIDE WITH STAGE 1 DESIGN

ISSUE FOR OPERATIONAL WORKS APPROVAL

DATE: 09/03/21

INIT: WN BJ

TITLE:

WATER RETICULATION DETAILS PLAN
SHEET 2 of 2

DFC (PROJECT MANAGEMENT) PTY LTD

'ARCHERS WAY' ESTATE - STAGE 2
AT 22-80 CASH STREET, D'AGUILAR



DETAILS:

PROJECT:

M2584E_2

LOCAL AUTHORITY REF:

MORETON BAY REGIONAL COUNCIL

COUNCIL REF:

DA/38032/2019/V3RL

FILE NAME:

WATER.DWG

PLAN:

W05

ISSUE:

B

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WATER RETICULATION NOTES

1. ALL WORKS AND MATERIALS MUST BE IN ACCORDANCE WITH CURRENT UNITYWATER SPECIFICATIONS:

WATER SUPPLY CODE OF AUSTRALIA (WSA 03-2011 V3.1)

SEQ SERVICE PROVIDERS EDITION VERSION 1.3 (AUGUST 2019)

SEQ WS&S D&C CODE STANDARD DRAWINGS

SEQ WS&S D&C CODE CIVIL IPAM LIST

2. UNLESS NOTED OTHERWISE, WATER MAINS SHALL BE PVC-O PN16, FITTINGS TO BE DI THERMAL BONDED POLYMETRIC COATED PN16.

3. INSTALLATION OF PIPES AND FITTINGS SHALL COMPLY WITH THE FOLLOWING:

- PVC PIPES SHALL BE CUT AND LAID IN ACCORDANCE WITH PVC MANUFACTURERS REQUIREMENTS.

- THE MINIMUM LENGTH OF A PVC PIPE SHALL BE 600mm

- DUCTILE IRON OR CAST IRON SPIGOTS SHALL NOT BE JOINED TO PVC SOCKETS.

- FOR PVC-O PIPE, MINOR DEFLECTION MAY BE ACHIEVED BY CUMULATIVE DEFLECTIONS AT THE JOINT OF ELASTOMERIC RING SEAL JOINTED PIPES. LIMITS OF DEFLECTION TO BE IN ACCORDANCE WITH PIPE MANUFACTURER. TYPICAL DEFLECTION 5° FOR DN150 & DN200, 4° FOR DN200 & DN225, AND 3° FOR DN225 & DN300.

- FBE COATED FLANGES SHALL BE JOINED BY GRADE 316 STAINLESS STEEL BOLTS, NUTS AND WASHERS. IN THIS CONFIGURATION, FLANGES DO NOT NEED TO HAVE CORROSION PROTECTION WRAPPING.

- CURVING OF PVC PIPES IS NOT PERMITTED.

- DISTANCE BETWEEN SOCKETED FITTINGS SHALL BE SEPARATED BY A STRAIGHT LENGTH OF MINIMUM LENGTH OF 600mm.

- EMBEDMENT MATERIAL FOR WATER MAINS SHALL BE 5 OR 7mm NOMINAL SINGLE SIZED AGGREGATE AS PER WSA ps-351, 10mm NOMINAL SINGLE SIZED RECYCLED CONCRETE AGGREGATE AS PER WSA PS-366 OR BEDDING SAND AS PER TABLE G3 OF AS/NZS 2566.2.

- WHERE THE WATER MAIN CROSSES OTHER SERVICES, THE SEPARATION SHALL BE FILLED WITH EMBEDMENT MATERIAL AND COMPACTED.

4. DUCTILE IRON FITTINGS SHALL BE PN16 COATED WITH A FUSION BONDED POLYMERIC COATING IN ACCORDANCE WITH AS/NZS 4158. ALL DUCTILE IRON OR CAST IRON FITTINGS SHALL BE INSTALLED IN A POLYETHYLENE SLEEVE, INCLUDING FITTINGS WITH FUSION BONDED COATINGS. PARTICULAR FITTINGS SUCH AS SLUICE VALVES, HYDRANTS AND PRE-TAPPED PROPERTY SERVICE FITTINGS SHALL BE SUPPLIED WITH AN INTERNAL AND EXTERNAL FUSION BONDED POLYMERIC COATING IN ACCORDANCE WITH AS/NZS 4158.

5. PIPES SHALL BE LAID IN TYPE C EMBEDMENT IN ACCORDANCE WITH STD. DWGS. SEQ-WAT-1200-2C AND 1201-1A UNLESS NOTED OTHERWISE.

6. ALL EXISTING ROAD CROSSINGS WHERE NEW SEWERS ARE TO BE LAID SHALL BE TUNNEL BORED (U.N.O.) IN ACCORDANCE WITH STD DWG SEQ-SEW-1A02-1A & 1A03-1B. IF OPEN TRENCH EXCAVATION IS SPECIFIED, TRENCHES AND BEDDING UNDER OR ALONG ROADS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. DWG. SEQ-WAT-1204-1B. DETECTABLE MARKER TAPE TO BE INSTALLED ABOVE ALL NON-METALLIC PIPES. TYPE L, M, K AND N TO BE ADOPTED UNDER EXISTING ROADS. TYPE L TO BE ADOPTED FOR NEW ROADS WITHOUT LEAN MIX LAYER. ROAD BACKFILL TO BE IN ACCORDANCE WITH STD DWG RS-170F.

7. WHERE DUCTILE IRON PIPE (SCL) IS SPECIFIED, THE PIPES SHALL BE PN35 FLANGE OR RUBBER RING JOINTED WITH POLYURETHANE OR ZN-AL ALLOY AND EPOXY COATED. PE SLEEVING IS REQUIRED ON ALL DI PIPES.

- IN GENERAL, DUCTILE IRON PIPES SHALL NOT BE CUT WITHIN 1.5M OF THE SOCKET

- IN GENERAL, THE MINIMUM LENGTH OF A DUCTILE IRON PIPE SHALL BE 600MM

- FLANGE AND BOLT ARRANGEMENTS TO BE IN ACCORDANCE WITH STANDARD DRAWING NO. SEQ-WAT-1313-1

8. WHERE STEEL PIPE (SCL) IS SPECIFIED, THE NOMINAL DIAMETERS SHALL BE (OD) 114, 168, 219, 257, 273 MM WITH MINIMUM THICKNESSES OF DN100 - 4.8 MM AND >DN100 - 5 MM. PIPES AND FITTINGS SHALL BE MINIMUM 1.6MPA, LINED WITH FUSION BONDED POLYETHYLENE COATING AND ZN/AL METAL SPRAY COATING.

- STEEL PIPES AND FITTING TO BE JOINED IN ACCORDANCE WITH STANDARD DRAWINGS NO. SEQ-WAT-1400-1, 1401-1, 1402-1 AND 1403-1

- ALL WELDING TO BE CARRIED OUT BY A WELDER HAVING QUALIFICATIONS REQUIRED UNDER AS 1554.1, CATEGORY SP.

- STEEL PIPES AND FITTINGS MAY BE CONCRETE ENCASED.

- STEEL PIPELINES TO BE CONCRETE ENCASED DO NOT REQUIRE EXTERNAL COATING. UNCOATED STEEL THAT IS TO BE EXTENDED BEYOND THE THAT IS TO EXTEND BEYOND THE CONCRETE ENCASEMENT SHALL BE FULLY PROTECTED USING ZN/AL METAL SPRAY COATING OR APPROVED HEAT SHRINK POLYETHYLENE SLEEVING AND/OR BITUMASTIC TAPE. PROTECTION SHALL EXTEND FROM AT LEAST 150 MM WITHIN THE CONCRETE ENCASEMENT TO THE POSITION OF FULL PIPE PROTECTION BEYOND ENCASEMENT.

- FLANGE AND BOLT ARRANGEMENTS TO BE IN ACCORDANCE WITH STANDARD DRAWING NO. SEQ-WAT-1313-1. FLANGES TO BE PN16, SEAL COATING FOR DN450 AND LARGER, SINTAKOTE COATING FOR ABOVE GROUND, SINTAPIE LINING OPTION, ZN/AL METAL SPRAY COATING AND FUSION BONDED POLYETHYLENE COATING.

- GASKETS TO BE STANDARD WITH O-RING PN16 MINIMUM, THICKNESS 3MM AT PN16 AND 1.5MM AT PN35. HARDNESS TO COMPLY WITH TABLE 2 FROM WSA 109-2011.

9. WHERE PE PIPE IS SPECIFIED, THE PIPES SHALL BE PN16 PE100 BLUE COLOUR FOR POTABLE (DRINKING) WATER. WATER SERVICE PIPESTO BE BLACK WITH BLUE STRIPS. FOR DIRECTIONAL DRILLING INSTALLATIONS, MINIMUM SDR9 (PN20 PE100) UNLESS SPECIFIED OTHERWISE AND INSTALLED WITH TRACER WIRE.

- PIPES TO BE LAID IN ACCORDANCE WITH PIPA INDUSTRY GUIDLINES

- COIL PIPE PERMITTED UP TO DN125

- ELECTRO-FUSION AND FIELD BUTT WELDING OF PE PIPES SHALL BE CARRIED OUT A SUITABLY QUALIFIED WELDER

- THE MINIMUM ALLOWABLE BEND RADIUS FOR PE100 PN16 IS 15 X PIPE OD AS PER PIPA GUIDELINES POP202

10. STANDARD WATER MAIN ALIGNMENT:-

- FRONT: 1.5M OFFSET FROM PROPERTY BOUNDARY (IN VERGE)

11. MINIMUM PIPE COVERS DEPTHS SHALL BE AS LISTED BELOW:

LOCATION	≤ 200mm NB	> 200mmNB
NON-ROADWAYS	600mm	1000mm
SEALED ROADS	600mm	1000mm
MAJOR ROADWAYS/EMBANKMENT	750mm	1000mm
FREEWAYS	1200mm	1200mm

Partial extract from SEQ WATER SUPPLY CODE V1.3-2019, S7.4.2, TABLE 7.2

- IN A ROAD CARRIAGEWAY, THE DEPTH OF COVER SHALL BE MEASURED FROM THE ROAD SHOULDER OR LIP OF KERB.

- THE MAXIMUM DEPTH TO INVERT SHALL NOT EXCEED 1.5M FOR RETICULATION MAINS.

12. THRUST BLOCKS SHALL BE CONSTRUCTED ON ALL BENDS, TEES, VALVES, TAPERS, DEADENDS, DUCKFOOT HYDRANTS, AND TRANSITIONS TO UNRESTRAINED PIPEWORK IN ACCORDANCE WITH STD DWGS SEQ-WAT-1205-1A, 1206-1B AND 1207-1A.

13. PROPERTY SERVICES SHALL BE PE AND CONSTRUCTED IN ACCORDANCE WITH STD. DWG. SERIES SEQ-WAT-1108-1B,1108-2C, 1108-3C.

- PE WATER SERVICES SHALL HAVE DETECTABLE MARKING TAPE PLACED ABOVE THE PIPE EMBEDMENT.

- FOR PE SYSTEMS, WATER SERVICES SHALL BE CONSTRUCTED TO THE NEW MAINS WITH ELECTROFUSION FITTINGS ONLY. FOR RENEWALS, EITHER ELECTROFUSION OR MECHANICAL TAPPING FITTINGS CAN BE USED.

- WATER SERVICES UP TO DN63 PE LOCATED UNDER EXISTING OR FUTURE ROADWAYS, CONCRETE OR PAVED DRIVEWAYS, FOOTPATHS, BIKEWAYS OR OTHER HARD STAND AREAS SHALL BE INSTALLED IN A SOLVENT WELDED DN100 PVC CONDUIT. CONDUITS SHALL NOT BE INSTALLED IN THE SAME TRENCH AS ELECTRICAL CABLES.

- MINIMUM COVER TO WATER SERVICES IN THE FOOTWAY SHALL BE 300MM AND UNDER ROAD WAYS 600MM MEASURED FROM THE LIP OF KERB.

14. STOP VALVES AND HYDRANTS, INSPECTION BOXES, MARGIN SETS, AND MARKERS SHALL BE INSTALLED IN ACCORDANCE WITH STD. DWGS. SEQ-WAT-1300-1C, 1300-2B, 1301-1C, 1302-1C, 1303-1B,1303-2B, 1304-1B, 1305-1B AND 1306-1C

- STOP VALVES SHALL BE RESILIENT SEATED GATE VALVES

- FOR DICL AND PVC PIPES, STOP VALVES SHALL BE DOUBLE SOCKET TYPE ONLINE, EXCEPT WHERE THE VALVE IS CONNECTED TO A FLANGED BRANCH IN WHICH CASE THE VALVE SHALL BE OF THE FLANGE / SOCKET TYPE

- HYDRANTS SHALL BE SWAB TYPE. 100mm FLANGES, 100mm RISERS AND SPRING HEADS

- HYDRANT SURROUNDS TO BE LEFT 30-50mm PROUD OF TOPSOIL, 10-15mm PROUD OF TURF, OR FLUSH WITH CONCRETE SURFACE

- PAINT VALVE BOXES WHITE AND HYDRANT BOXES YELLOW, INCORPORATING GLASS REFLECTIVE BEADING. DO NOT PAINT CONCRETE SURROUNDS

- RRPMS FOR POTABLE WATER SUPPLY (VALVES YELLOW AND HYDRANTS BLUE) WITH DIRECTIONAL ARROW TO BE INSTALLED ON THE CENTRE LINE OF ALL ROADS UNLESS LINE MARKED. ALTERNATIVELY, RRPMS MINUS DIRECTIONAL ARROW ON THE VALVE / HYDRANT SIDE OF THE MARKER WHICH IS TO BE LOCATED ON THE CENTRE LINE OF THE ROAD UNLESS LINE MARKED

- WATER SERVICE POINTS SHARING A BOUNDARY CORNER WITH AN ELECTRICAL PILLAR SHALL BE A MINIMUM 1M CLEAR OF THE ELECTRICAL PILLAR AND ASSOCIATED CONDUITS.

- HYDRANT MARKER POSTS ARE ONLY REQUIRED IN RURAL RESIDENTIAL AREAS.

- FLANGES TO BE CLASS 16 AND BE IN ACCORDANCE WITH SEQ-WAT-1313/1A. GRUB SCREWS OR SIMILAR TYPE FLANGES ARE NOT ACCEPTABLE IN THE WATER MAIN CONSTRUCTION

15. WHERE THE GRADE OF A WATER MAIN IS EQUAL TO OR GREATER THAN 5%, BULKHEADS OR TRENCH STOPS SHALL BE INSTALLED IN ACCORDANCE WITH STD DWGS 1209-1A & 1210-1A

16. CONNECTION OF NEW WATER MAINS TO THE EXISTING WATER RETICULATION SYSTEM SHALL BE COMPLETED BY UNITYWATER AT THE DEVELOPER'S COST.

17. INSPECTOR MUST BE NOTIFIED BY PHONE AND GIVEN THE OPPORTUNITY TO WITNESS THE FOLLOWING WHERE APPLICABLE :-

• EXPOSE EXISTING WATER MAIN AT CONNECTION POINT PRIOR TO COMMENCEMENT OF LAYING PIPE.ALL UNDER ROAD WPS, TAPPING BANDS AND FITTINGS BEFORE BACKFILLING.

• ALL CONCRETE THRUST BLOCKS BEFORE POURING CONCRETE.

• ALL CONCRETE THRUSTER PIPE AND CONDUITS BEFORE BACKFILLING.

• ALL READYTAT BLOCKS AFTER POURING CONCRETE.

• ALL WATER SERVICE CONNECTION LINES BEFORE BACKFILLING.

• WATER PRESSURE TESTS (UNLESS CARRIED OUT BY NATA CERTIFIED TESTER - HOWEVER UNITYWATER INSPECTOR SHALL STILL BE NOTIFIED WHEN TESTING IS TO BE UNDERTAKEN AND MAY CONDUCT RANDOM INSPECTION OF NATA CERTIFIED TESTING).

18. PRIOR TO THE CONNECTION OF THE NEW MAIN TO EXISTING, THE PIPEWORK SHALL BE PRESSURE TESTED

• WHERE TESTING IS NOT CONDUCTED BY A NATA CERTIFIED TESTING ORGANISATION THE CERTIFYING ENGINEER SHALL BE PRESENT FOR THE TESTING PROCEDURE AND THE UNITYWATER INSPECTOR MUST BE NOTIFIED WITH 3 DAYS PRIOR NOTICE OF THE TEST OCCURRING. (SHALL BE DONE AFTER WATER SERVICES ARE CONNECTED AND ELECTRICAL CONDUITS INSTALLED)ALL DEAD END LINES ARE TO BE TESTED AND CHLORINATED. THIS MAY REQUIRE TEMPORARY HYDRANTS OR TAPPING BANDS. TEMPORARY TAPPING BANDS TO BE CUT OFF WHEN CONNECTION TO LIVE MAIN OCCURS.

• PRELIMINARY PRESSURISE THE MAINS TO 75% OF THE TEST PRESSURE FOR A MINIMUM OF TWELVE (12) HOURS

• APPLY TEST PRESSURE (1200kPa) AT THE HIGHEST POINT OF THE WATER MAIN FOR FOUR (4) HOURS

• IDEALLY THERE SHOULD BE NO PRESSURE LOSS AFTER FOUR (4) HOURS.

19. PRIOR TO THE CONNECTION OF THE NEW MAIN TO THE EXISTING, THE PIPEWORK SHALL BE FLUSHED CHLORINATED IN ACCORDANCE WITH UNITYWATER DOCUMENT PR9032 - PROCEDURE FOR MANAGING WATER QUALITY DURING MAINS COMMISSIONING

20. A WATER METER SUPPLIED AT THE DEVELOPERS COST, IS TO BE INSTALLED AT THE SERVICE POINT OF EACH LOT.

21. THE CONSTRUCTION OF THE WATER RETICULATION WORK SHOWN ON THIS DRAWING MUST BE SUPERVISED BY AN ENGINEER WHO HAS RPQ REGISTRATION. WORKS NOT COMPLYING WITH THIS REQUIREMENT WILL NOT BE PERMITTED TO CONNECT TO THE WATER RETICULATION STEM

22. TRENCH COMPACTION RESULTS TO BE IN ACCORDANCE WITH AS3798 AND MORETON BAY REGIONAL COUNCIL OPERATIONAL WORKS INSPECTION, MAINTENANCE AND BONDING PROCEDURES PLANNING SCHEME POLICY

a) COMPACTION TO TRENCH BOTTOM - FIELD DENSITY 1 PER 40m (IF ORDERED)

b) BACKFILL - FIELD DENSITY 1 PER 40m

23. MINIMUM COMPACTION TO BE IN ACCORDANCE WITH THE FOLLOWING:

MINIMUM COMPACTION OF EMBEDMENT, TRENCH, AND OTHER FILLS

MATERIAL TYPE	MINIMUM VALUE (%)			
	TRAFFICABLE AREAS		NON-TRAFFICABLE AREAS	
	EMBEDMENT	TRENCH	EMBEDMENT	TRENCH
NON-COHESIVE	70 (REFER NOTE BELOW)	70	60	60
COHESIVE	95	95	90	90
NOTE: SINGLE SIZE COARSE AGGREGATES OF SIZES 5, 7, 10 AND 14mm SHALL BE DEEMED "SELF COMPACTING" AND DO NOT REQUIRE COMPACTION TESTING WHEN USED FOR PIPE EMBEDMENT				

FOR ROAD PAVEMENTS THE FOLLOWING COMPACTION SHALL BE ACHIEVED:

- NATURAL SUBGRADE - 100% STANDARD MAXIMUM DRY DENSITY (MDD)
- PAVEMENT UPPER AND LOWER SUB BASE LAYERS - 100% STANDARD MAXIMUM DRY DENSITY (MDD)
- PAVEMENT BASE LAYER - 102% STANDARD MAXIMUM DRY DENSITY (MDD)

24. DURING ANY CONSTRUCTION ACTIVITY, AT LEAST ONE PERSON ON SITE MUST HAVE COMPLETED A PIPE LAYING TRAINING COURSE APPROVED BY THE SUPPLIER AND APPROPRIATE TO THE PIPE LINE UNDER CONSTRUCTION. THE TRAINING COURSE MUST HAVE BEEN COMPLETED WITH IN THE LAST 10 YEARS. DOCUMENTARY EVIDENCE TO BE PROVIDED BY THE CONTRACTOR PRIOR TO COMMENCEMENT

25. AS CONSTRUCTED DRAWINGS, ENGINEERING CERTIFICATION, PRESSURE TEST RESULTS, COMPACTION TEST RESULTS AND ASSOCIATED CONSULTANT'S REPORTS MUST BE DELIVERED AND RECEIVED 7 DAYS PRIOR TO AN ON-MAINTENANCE INSPECTION.

CLEARANCES BETWEEN WATER MAINS AND OTHER UNDERGROUND SERVICES

UTILITY (Existing Services)	Minimum horizontal clearance (mm)		Minimum Vertical Clearance mm
	New main size NB		
	≤200 mm	>200 mm	
WATER MAINS ≤375 mm	300 ³	600	150
WATER MAINS >375 mm	600	600	300
GRAVITY SEWERS ≤DN 300	1000 ⁵ 600	1000 ⁵ 600	500 ⁴
GRAVITY SEWERS >DN 300	1000 ⁵ 600	1000 ⁵ 600	500 ⁴
SEWERS - PRESSURE	1000 ⁵	1000 ⁵	500
SEWERS - VACUUM	300	600	500
GAS MAINS	300 ³	600	500 ⁴
TELECOMMUNICATIONS CONDUITS & CABLES	300 ³	600	300
ELECTRICITY CONDUITS & CABLES	500	1000	500 ^{4&7}
STORMWATER DRAINS ≤300 mm	300 ³	600	150 ⁴
STORMWATER DRAINS >300 mm	300 ³	600	300 ⁴
KERBS	150	600 ⁶	150

FOR NOTES, VARIATIONS TO CLEARANCES AND ACCEPTABLE REASONS SEE TABLE 5.5

Partial extract from SEQ WATER SUPPLY CODE V1.3-2019, S5.12.5.2, TABLE 5.5

ENVIRONMENTAL NOTES

VEGETATION PROTECTION

- TREES LOCATED ALONG THE FOOTPATH SHALL BE, TRANSPLANTED PRIOR TO CONSTRUCTION, OR REPLACED IF DESTROYED.
 - WHEN WORKING WITHIN 4m OF TREES, RUBBER OR HARDWOOD GIRDLES SHOULD BE CONSTRUCTED WITH 1.8m BATTENS CLOSELY SPACED AND ARRANGED VERTICALLY FROM GROUND LEVEL. GIRDLES SHALL BE STRAPPED TO TREES PRIOR TO CONSTRUCTION AND REMAIN UNTIL COMPLETION.
 - TREE ROOTS SHALL BE TUNNELED UNDER, RATHER THAN SEVERED. IF ROOTS ARE SEVERED, THE DAMAGED AREA SHALL BE TREATED WITH A SUITABLE FUNGICIDE. CONTACT RELEVANT COUNCIL ARBORIST FOR FURTHER ADVICE.
 - ANY TREE LOPPING REQUIRED SHOULD BE UNDERTAKEN BY AN APPROVED ARBORIST.
- SOIL**
- TOPSOIL AND SUBSOIL SHALL BE STOCKPILED SEPARATELY.
 - CARE SHALL BE TAKEN TO PREVENT SEDIMENT FROM ENTERING THE STORMWATER SYSTEM. THIS MAY INVOLVE PLACING APPROPRIATE SEDIMENT CONTROLS AROUND STOCKPILES.

CREEK CROSSINGS


- FILTRATION CONTROL MEASURES SHALL BE PLACED DOWNSTREAM OF ANY EXCAVATION WORK.
- APPROPRIATE SEDIMENT CONTROLS SHALL BE USED TO PREVENT SEDIMENT FROM ENTERING THE CREEK.
- NO SOIL SHOULD BE STOCKPILED WITHIN 5m OF THE CREEK.

REHABILITATION

- PREDISTURBANCE SOIL PROFILES AND COMPACTION LEVELS ARE TO BE REINSTATED.
- PREDISTURBANCE VEGETATION PATTERNS SHOULD BE RESTORED.

SAFETY

- THE DESIGN AND CONSTRUCTION OF THE WORKS SHALL COMPLY WITH ALL QUEENSLAND LEGISLATION



BRISBANE - SUNSHINE COAST - CENTRAL QLD
SUNSHINE COAST
T209, Kon-Tiki Tower 1, 55 Plaza Parade,
Maroochydore Qld 4558
P 07 5450 3900 W www.jfp.com.au
JFP URBAN CONSULTANTS PTY. LTD. A.C.N. 050 414 045

PLANNERS

URBAN DESIGNERS


SURVEYORS

ENGINEERS

LANDSCAPE ARCHITECTS

NORTH:

SCALE:
THIS SCALE SHOWN IS ORIGINAL DRAWING SCALE
A1
DO NOT SCALE FROM THIS DRAWING - USE ONLY DIMENSIONS PROVIDED - IF IN DOUBT PLEASE ENQUIRE

APPROVED

FOR AND ON BEHALF OF JFP URBAN CONSULTANTS PTY LTD

☐ T.M'KINNEY
RPEQ 5087

☒ A.FRASER
RPEQ 5691

☐ J.PAPPAS
RPEQ 6086

☐ S.MARSH
RPEQ 8068

☐

ISSUE:
DESIGNED: CDV
DRAWN: BJ
CHECKED: HW
DATUM: AHD

B

A

ISSUE: DETAILS:

AMENDMENTS TO COINCIDE WITH STAGE 1 DESIGN
ISSUE FOR OPERATIONAL WORKS APPROVAL

09/03/21
16/06/20

DATE:

TITLE:
WATER RETICULATION NOTES

DFC (PROJECT MANAGEMENT) PTY LTD

DENNIS FAMILY CORPORATION

'ARCHERS WAY' ESTATE - STAGE 2
AT 22-80 CASH STREET, D'AGUILAR

DETAILS:
PROJECT: M2584E_2
LOCAL AUTHORITY REF: MORETON BAY REGIONAL COUNCIL
COUNCIL REF: DA/38032/2019/V3RL
FILE NAME: WATER.DWG

PLAN: W06

ISSUE: B

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2019/04/2011 IN 1042543 PAGE 20 DESIGN WORKING DRAWINGS WATER