

NAME OF ESTATE		'ARCHERS WAY' ESTATE STAGE 3
SUBDIVIDER		DFC (PROJECT MANAGEMENT) PTY LTD
APPLICATION No.		-
UNITYWATER DELEGATE APPROVAL DATE		-
DRAWING/PLAN No.		-
No. OF ALLOTMENTS		27
AREA IN Ha.		2.529
LENGTH OF SEWERS	Ø100mm uPVC	-
	Ø150mm uPVC	427.083m
	Ø225mm uPVC	-

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	---
EASEMENT (ACCESS)	---
Q100 FLOOD LINE	---

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

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

FIRE ANT MOVEMENT CONTROLS

TO PREVENT THE SPREAD OF FIRE ANTS, THE QUEENSLAND GOVERNMENT HAS IMPLEMENTED CONTROLS THAT APPLY TO INDIVIDUALS AND COMMERCIAL OPERATORS, TO RESTRICT THE MOVEMENT OF MATERIALS THAT COULD CARRY FIRE ANTS INCLUDING SOIL, TURF, POTTED PLANTS, MULCH, BALED HAY OR STRAW, ANIMAL MANURES, MINING OR QUARRY PRODUCTS.

PENALTIES APPLY FOR NON-COMPLIANCE WITH THE MOVEMENT CONTROLS. IF YOU ARE UNSURE OF YOUR OBLIGATIONS UNDER THE BIOSECURITY ACT 2014 CONTACT THE RELEVANT QUEENSLAND STATE GOVERNMENT DEPARTMENT.

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 1500m 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.

FOR DETAILS AND FURTHER NOTES REFER TO DWG No. M2584E_3 S04 - S05

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.

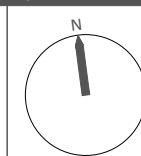
CONSULTANT: JFP URBAN CONSULTANTS PTY LTD
CONTACT: MR. HAYDN WATSON
TELEPHONE: 5450 3900



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PLANNERS
URBAN DESIGNERS
SURVEYORS
ENGINEERS
LANDSCAPE ARCHITECTS

NORTH:



SCALE:

1:500
A1
THIS SCALE SHOWN IS ORIGINAL DRAWING SCALE
0 5 10 15 20 25 30 35 40 45 50 Metres
(A1) 1:500
(A3) 1:1000

DO NOT SCALE FROM THIS DRAWING - USE ONLY DIMENSIONS PROVIDED - IF IN DOUBT PLEASE ENQUIRE	
APPROVED	DESIGNED
CHECKED	DRAWN
DATUM: AHD	ISSUE: DETAILS:

ISSUE:

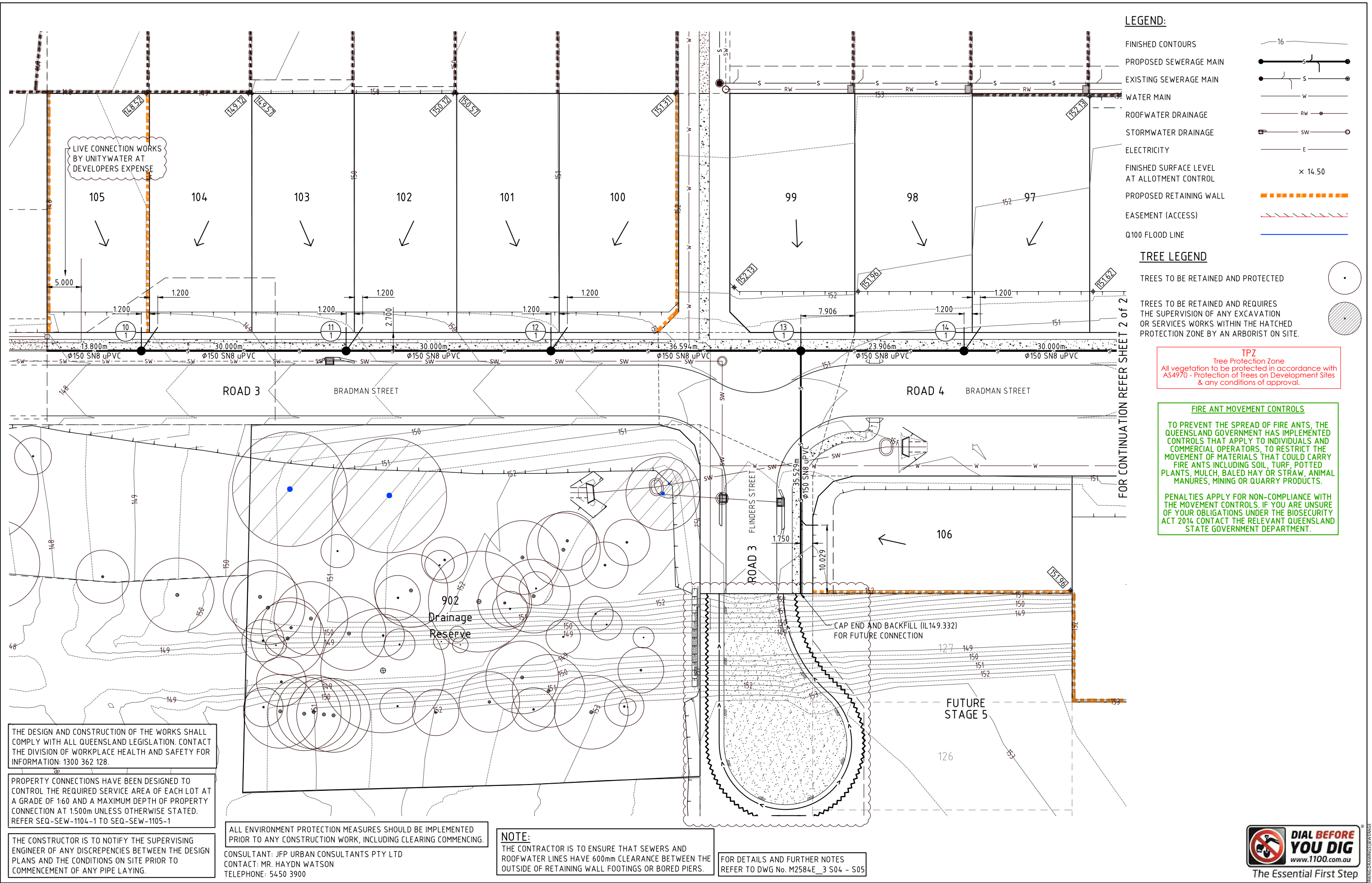
B	RFI AMENDMENTS	28/10/21	CDV
A	ISSUE FOR OPERATIONAL WORKS APPROVAL	16/09/21	CDV

TITLE:

SEWERAGE LAYOUT PLAN
DFC (PROJECT MANAGEMENT PTY LTD)
'ARCHERS WAY' ESTATE - STAGE 3
AT 22-80 CASH STREET, D'AGUILAR



DETAILS:
JOB NO: M2584E_3
PLAN: S01
ISSUE: B
MORETON BAY REGIONAL COUNCIL REF: DA/38032/2019/V3VR
FILE NAME: SEWERAGE.DWG





FOR DETAILS AND FURTHER NOTES
REFER TO DWG No. M2584E_3 S05

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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 (DCL) 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 3 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-1402-1B & 1403-1C. 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 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 DCL FROM MH TO MH.
e. DEEP SEWERS 3M TO 4.5M CLASS PN20 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.
e. 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 1.0M BEYOND ANY EXISTING OR PROPOSED STORMWATER PIPE CROSSINGS. ENDS OF HOUSE DRAIN CONNECTIONS SHALL BE IDENTIFIED BY A 2.0m LONG x 4.0mmØ LENGTH OF ORANGE CONDUIT TAPED TO & PLACED VERTICALLY ABOVE PIPE END
e. HOUSE CONNECTION BRANCHES SHALL BE LOCATED GENERALLY 1.0M TO 1.2M 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 214.2.1 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:-

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.

17. VACUUM TEST ALL MANHOLES IN ACCORDANCE WITH 215 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:-

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 218 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.
26. THE CONSTRUCTOR SHALL VERIFY THE LOCATION AND DEPTH OF EXISTING SERVICES WITH RELEVANT ASSET OWNERS AND AUTHORITIES BEFORE COMMENCING WORKS
27. PRIOR TO COMMENCEMENT OF ANY VARIATION WORKS, THE CONSTRUCTOR MUST FIRST OBTAIN APPROVAL FROM THE REGISTERED MAJOR CONNECTIONS CERTIFIER

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 THE NEW SEWER LINE FROM MH10/1 TO WITHIN 5m OF THE EXISTING SEWER	Ø150 SN8 uPVC	-	-	-	ROAD 3 (BRADMAN STREET)	147.94	147.94	144.29	3.65
1b)	FOLLOWING SUCCESSFUL ON-MAINTENANCE INSPECTION AND TESTING OF THE NEW LINE, UNITYWATER SHALL CARRY OUT LIVE WORKS AND CONNECT THE NEW LINE TO THE EXISTING LINE.									



LOCALITY PLAN
N.T.S.

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CONTACT: MR. HAYDN WATSON
TELEPHONE: 5450 3900

NORTH:

SCALE:

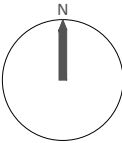
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NOT TO SCALE THIS SCALE SHOWN IS ORIGINAL DRAWING SCALE

A1

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

APPROVED	T. McKINNEY RPEQ 5087	A. FRASER RPEQ 5691	J. PAPPAS RPEQ 6086	DESIGNED	CDV
				DRAWN	WN
				CHECKED	PNH
				DATUM:	AHD
				ISSUE:	DETAILS:

B RFI AMENDMENTS
ISSUE FOR OPERATIONAL WORKS APPROVAL

12/11/21
16/09/21

DATE:

INIT:

DFC (PROJECT MANAGEMENT PTY LTD)

'ARCHERS WAY' ESTATE - STAGE 3
AT 22-80 CASH STREET, D'AGUILAR



DETAILS:
JOB NO:
M2584E_3
PLAN:
S05
ISSUE:
B
MORETON BAY REGIONAL COUNCIL REF:
DA/38032/2019/V3VR
FILE NAME: SEWERAGE.DWG

STRUCTURE No.
COVER TYPE
STRUCTURE TYPE
DROP TYPE
JUNCTION LINE No.
DEPTH TO HC
HC INVERT LEVEL
HC TYPE
HC LOT No
CH. FROM D/S STRUC.

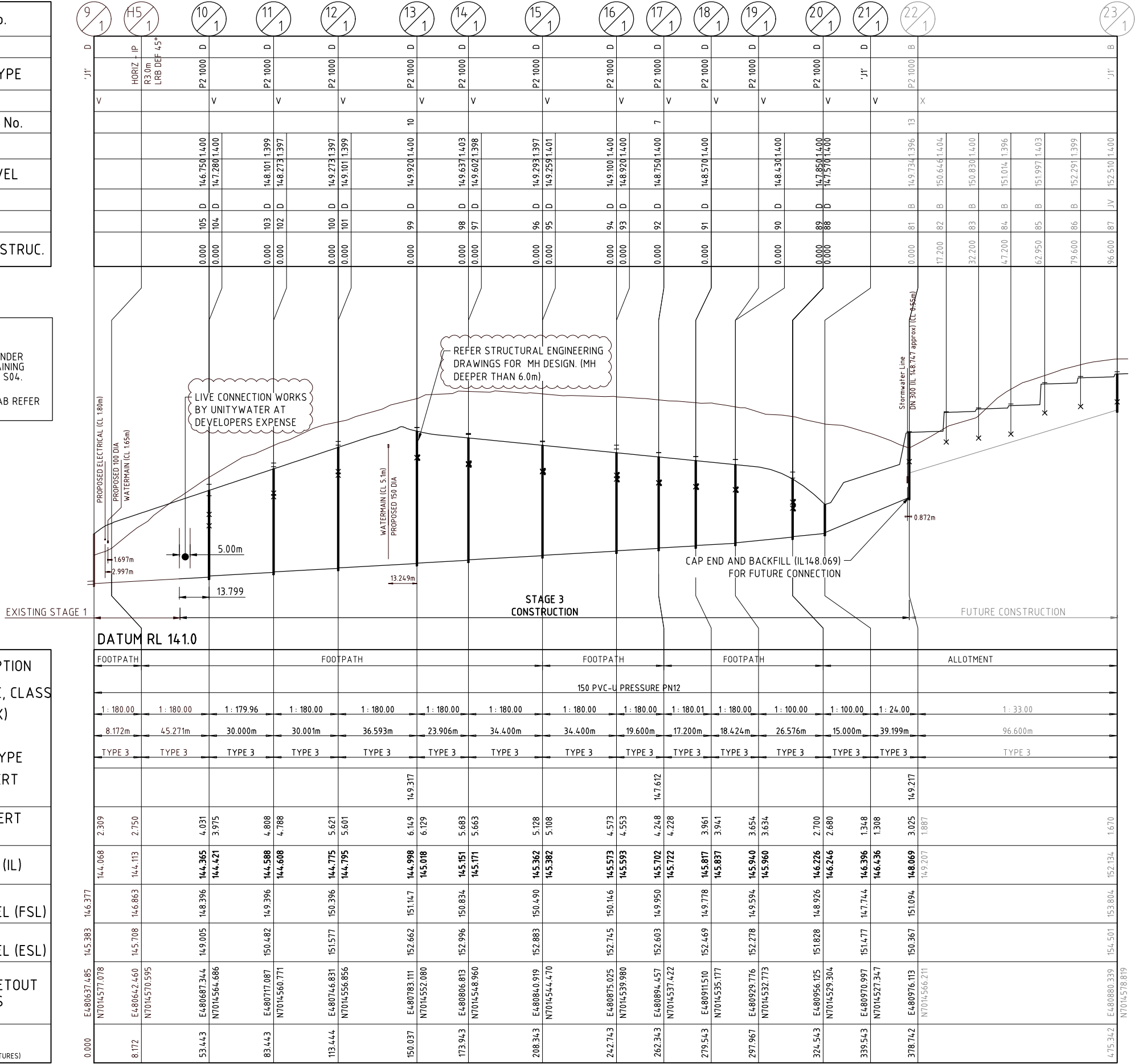
NOTE:

FOR SEWERS CROSSING UNDER CONCRETE SLEEPER RETAINING WALLS REFER M2584E_3 S04.

FOR SEWER BRIDGING SLAB REFER M2584E_3 S04.

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)

LINE



- STRUCTURES
- J1 MAINTENANCE SHAFT
 - P2/P3 MAINTENANCE HOLE
 - LRB LONG RADIUS BEND (3.0m RADIUS)
 - Y JCT 45° JUNCTION
- PIPES
- PN12 uPVC SERIES 12 R.R.J.
 - SN8 uPVC R.R.J.
- HOUSE CONNECTIONS
- A STANDARD CONNECTION
 - B SLOPED CONNECTION
 - JZ 'J'1 MAINTENANCE SHAFT WITH VERTICAL RISER
 - JV 'J'1 MAINTENANCE SHAFT AT BASE CONNECTION
 - V, W, X, Y & Z CONNECTIONS INTO MAINTENANCE STRUCTURES (FOR DROP TYPES REFER SEQ-SEW 1303-1 & 1314-1)

FOR STANDARD DRAWINGS AND NOTES REFER M2584E_3 S05

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

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

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 1.500m UNLESS OTHERWISE STATED. REFER SEQ-SEW-1106-1 TO SEQ-SEW-1106-7

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.

LIVE WORKS MUST BE PERFORMED UNDER UNITYWATER SUPERVISION. REFER DRAWING M2584E_1 S07, UNITYWATER AND CONSTRUCTOR LIVE SEWER WORKS INSTRUCTION AND TABLE.

FOR DETAILS AND FURTHER NOTES REFER TO DWG No. M2584E_3 S04 - S05

NOTE:

225mm THICK WALLS FOR SEWER MANHOLES DEEPER THAN 3.0m.

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

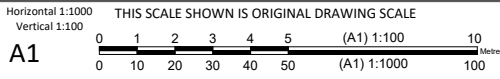


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SCALE:



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

ISSUE:

B
A
RFI AMENDMENTS
ISSUE FOR OPERATIONAL WORKS APPROVAL
DATE: 02/11/21
CDV
CDV
INIT:

TITLE:

SEWERAGE LONGITUDINAL SECTIONS
LINE 1
DFC (PROJECT MANAGEMENT PTY LTD)
'ARCHERS WAY' ESTATE - STAGE 3
AT 22-80 CASH STREET, D'AGUILAR



DETAILS:

JOB NO:
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PLAN:
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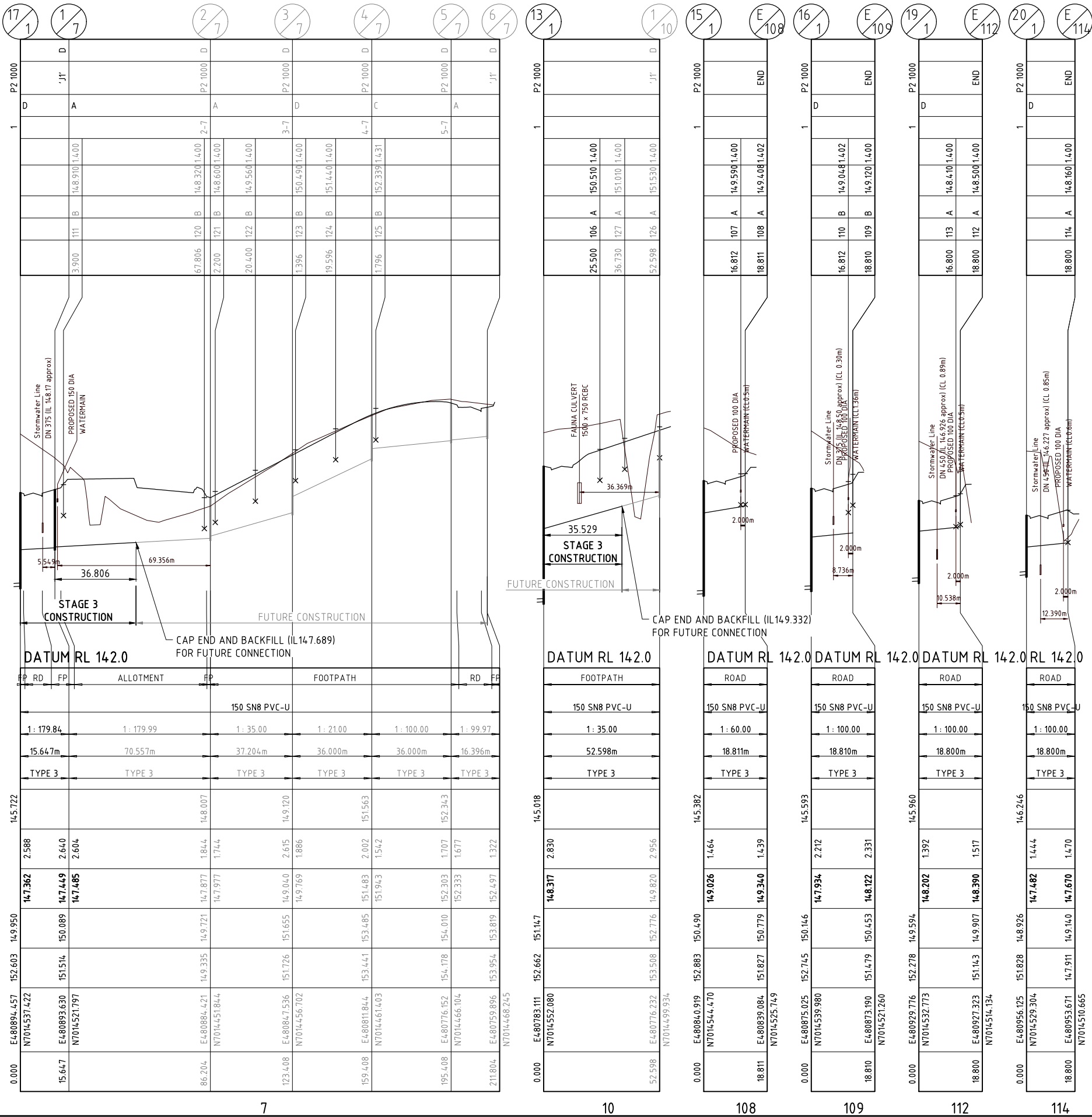
STRUCTURE No.
COVER TYPE
STRUCTURE TYPE
DROP TYPE
JUNCTION LINE No.
DEPTH TO HC
HC INVERT LEVEL
HC TYPE
HC LOT No
CH. FROM D/S STRUC.

NOTE:

FOR SEWERS CROSSING UNDER CONCRETE SLEEPER RETAINING WALLS REFER M2584E_3 S04.

FOR SEWER BRIDGING SLAB REFER M2584E_3 S04.

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)



STRUCTURES	
J1	MAINTENANCE SHAFT
P2/P3	MAINTENANCE HOLE
LRB	LONG RADIUS BEND (3.0m RADIUS)
Y JCT	45° JUNCTION
PIPES	
PN12	uPVC SERIES 12 R.R.J.
SN8	uPVC R.R.J.
HOUSE CONNECTIONS	
A	STANDARD CONNECTION
B	SLOPED CONNECTION
JZ	'J'1 MAINTENANCE SHAFT WITH VERTICAL RISER
JV	'J'1 MAINTENANCE SHAFT AT BASE CONNECTION
V, W, X, Y & Z	CONNECTIONS INTO MAINTENANCE STRUCTURES
(FOR DROP TYPES REFER SEQ-SEW 1303-1 & 1314-1)	

FOR STANDARD DRAWINGS AND NOTES REFER M2584E_3 S05

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

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

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 1500m UNLESS OTHERWISE STATED. REFER SEQ-SEW-1106-1 TO SEQ-SEW-1106-7

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.

LIVE WORKS MUST BE PERFORMED UNDER UNITYWATER SUPERVISION. REFER DRAWING M2584E_1 S07, UNITYWATER AND CONSTRUCTOR LIVE SEWER WORKS INSTRUCTION AND TABLE.

FOR DETAILS AND FURTHER NOTES REFER TO DWG No. M2584E_3 S04 - S05

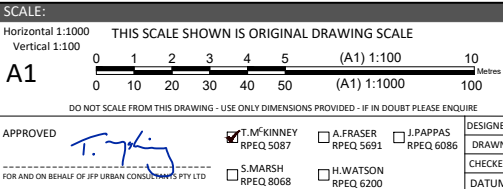
NOTE:
225mm THICK WALLS FOR SEWER MANHOLES DEEPER THAN 3.0m.

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



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SURVEYORS
ENGINEERS
LANDSCAPE ARCHITECTS



ISSUE:

16/09/21

CDV

INIT:

ISSUE FOR OPERATIONAL WORKS APPROVAL

DATUM: AHD

ISSUE: DETAILS:

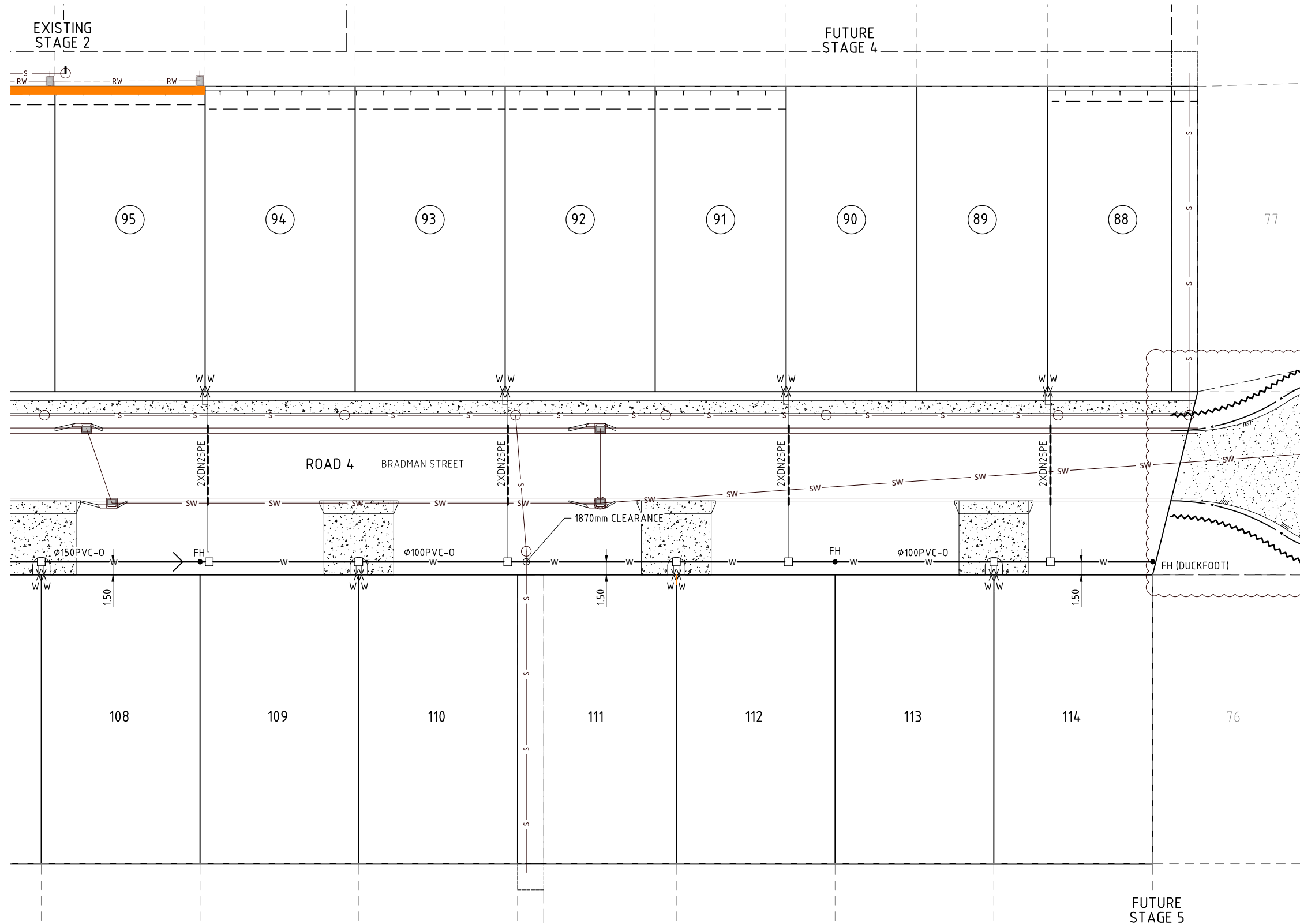
SEWERAGE LONGITUDINAL SECTIONS
LINE 7, 10, 108, 109, 112 & 114
DFC (PROJECT MANAGEMENT PTY LTD)
'ARCHERS WAY' ESTATE - STAGE 3
AT 22-80 CASH STREET, D'AGUILAR



DETAILS:

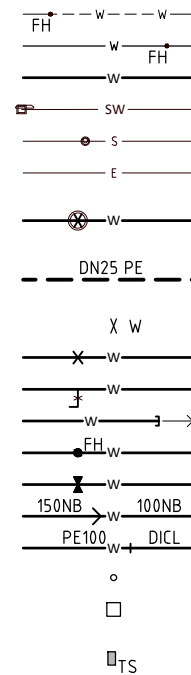
JOB NO: M2584E_3
PLAN: S07
ISSUE: A
MORETON BAY REGIONAL COUNCIL REF: DA/38032/2019/V3VR
FILE NAME: SEWERAGE SECTIONS.DWG

FOR CONTINUATION REFER SHEET 1 of 2



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 SERVICES IN 100Ø CONDUIT uPVC PN9
- WATER SERVICE POINT
- ISOLATION VALVE
- SCOUR VALVE
- DEAD END
- FIRE HYDRANT
- TEST/CHLORINATION POINT
- REDUCER
- PIPE MATERIAL CHANGE
- TAPPING BAND
- READY TAP (PRETAPPED CONNECTOR)
- TRENCHSTOPS



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.

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

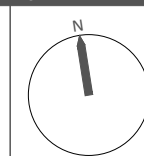
ALL ENVIRONMENTAL PROTECTION MEASURES SHALL BE IMPLEMENTED PRIOR TO ANY CONSTRUCTION WORK, INCLUDING CLEARING COMMENCING

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.

THE CONTRACTOR 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: STORMWATER AND SEWERAGE LINES HAVE BEEN DESIGNED TO ALLOW FOR WATER MAINS TO HAVE 1200mm COVER AT ROAD CROSSINGS UNLESS NOTED OTHERWISE

NORTH:



SCALE:

1:250
A1

THIS SCALE SHOWN IS ORIGINAL DRAWING SCALE
0 2.5 5 7.5 10 12.5 15 17.5 20 22.5 25 Metres
(A1) 1:250
(A3) 1:500

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

APPROVED	DESIGNED	CDV
	WN	WN
CHECKED	PNH	PNH
DATUM: AHD	ISSUE:	DETAILS:

FOR AND ON BEHALF OF JFP URBAN CONSULTANTS PTY LTD

<input checked="" type="checkbox"/> J. McKINNEY RPEQ 5087	<input type="checkbox"/> A. FRASER RPEQ 5691	<input type="checkbox"/> J. PAPPAS RPEQ 6086
<input type="checkbox"/> S. MARSH RPEQ 8068	<input type="checkbox"/> H. WATSON RPEQ 6200	

ISSUE:

B
A

RFI AMENDMENTS
ISSUE FOR OPERATIONAL WORKS APPROVAL

DATE: 28/10/21
16/09/21

CDV
CDV

INIT:

TITLE:

WATER RETICULATION DETAIL PLAN - SHEET 2 OF 2

DFC (PROJECT MANAGEMENT PTY LTD)

'ARCHERS WAY' ESTATE - STAGE 3
AT 22-80 CASH STREET, D'AGUILAR

DETAILS:

JOB NO: M2584E_3
PLAN: W02
ISSUE: B

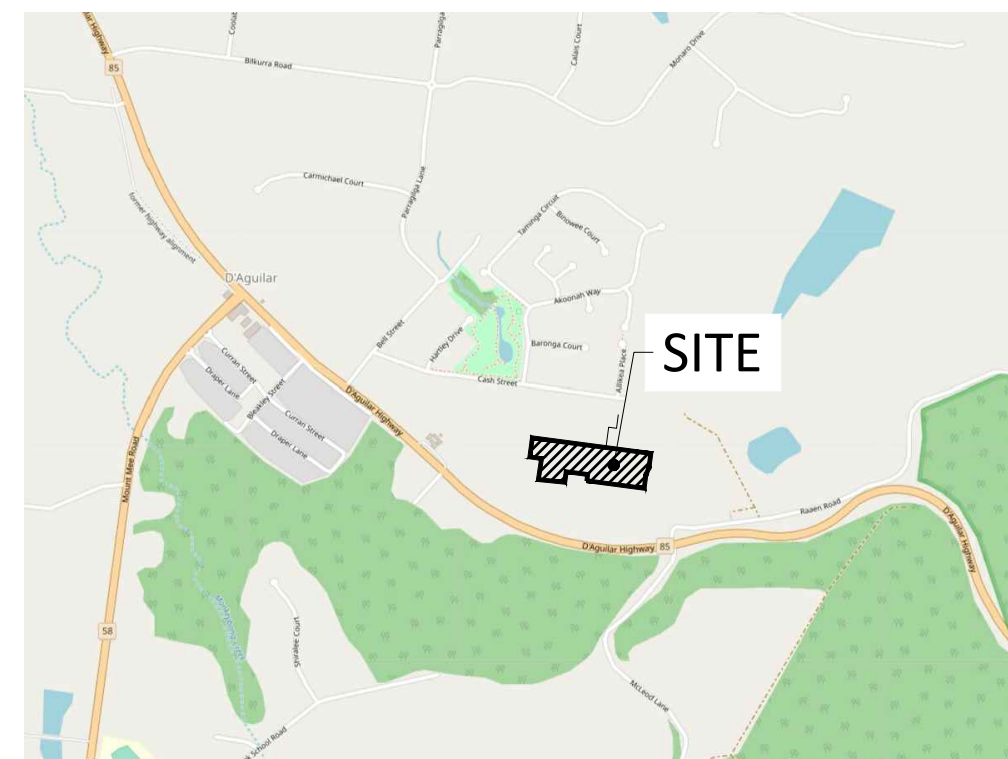
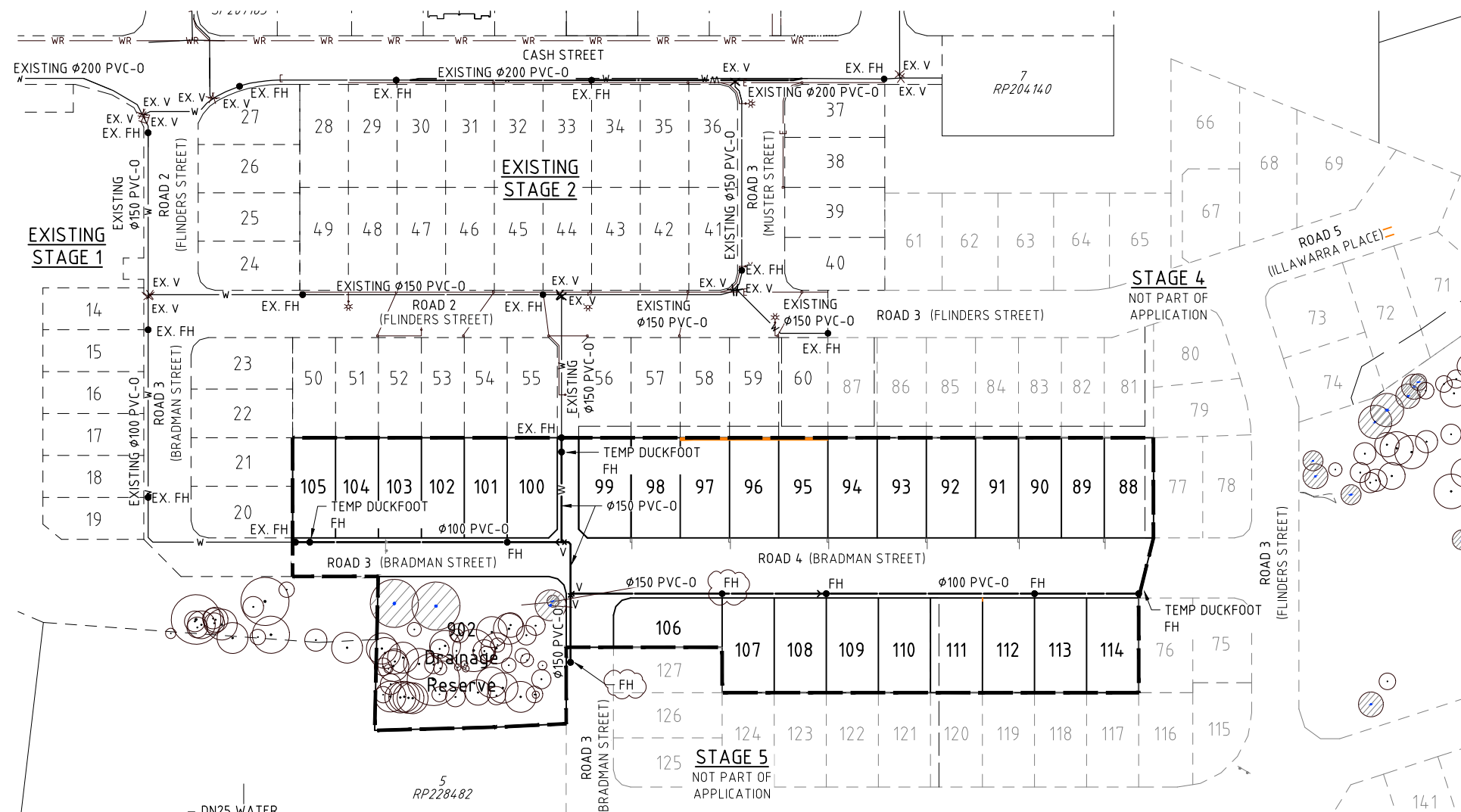
MORETON BAY REGIONAL COUNCIL REF: DA/38032/2019/V3VR
FILE NAME: WATER.DWG



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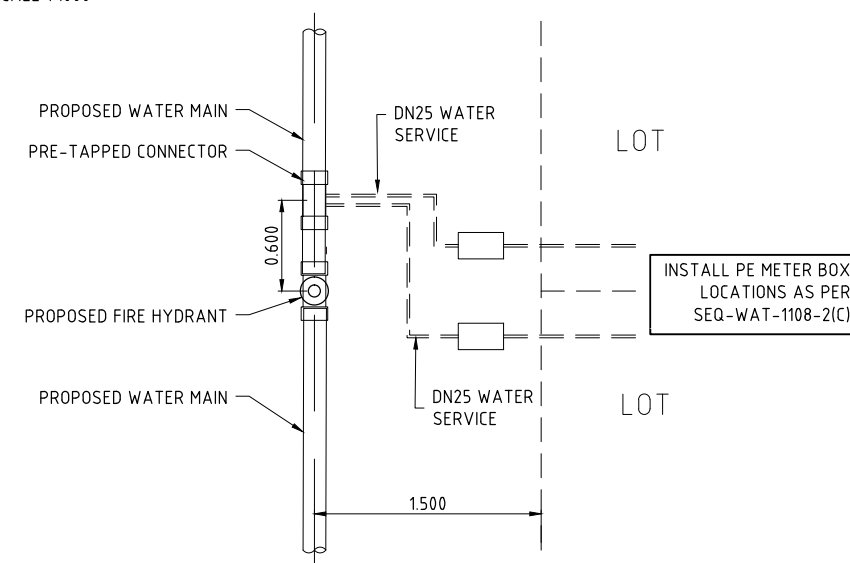
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ENGINEERS
LANDSCAPE ARCHITECTS



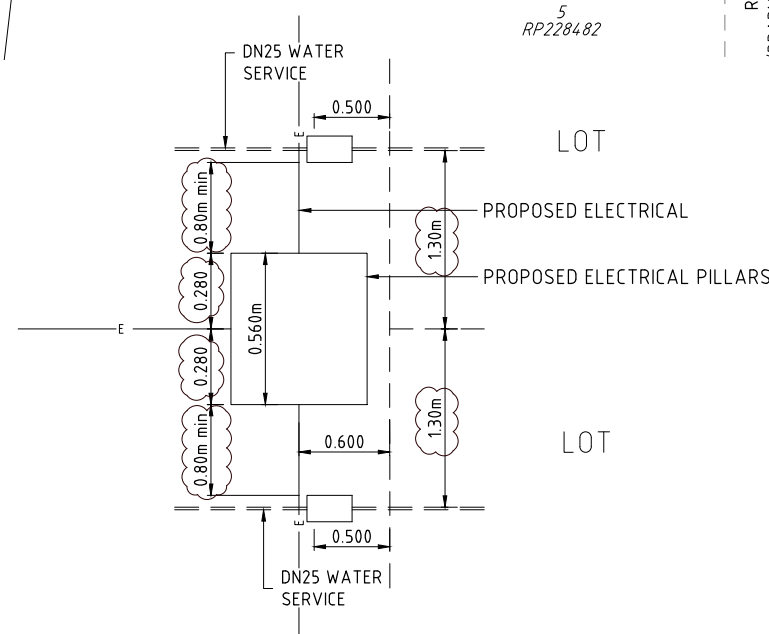


REGIONAL PLAN
N.T.S.

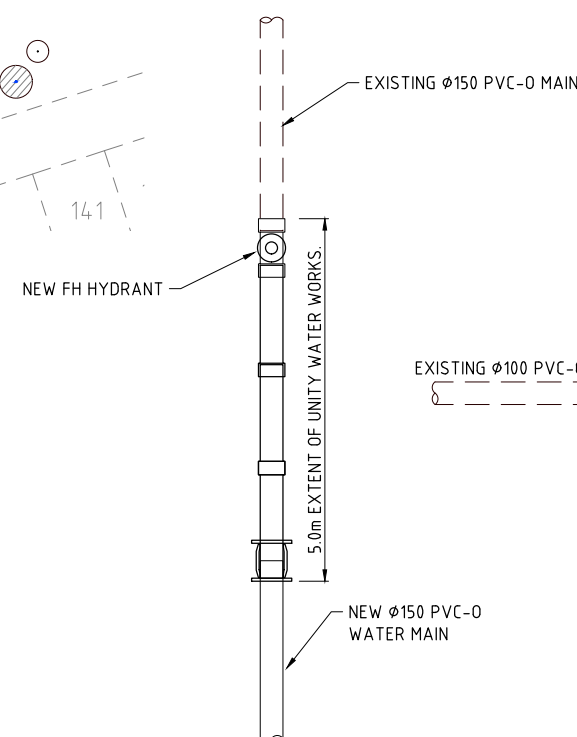
LOCALITY PLAN
SCALE 1:1000



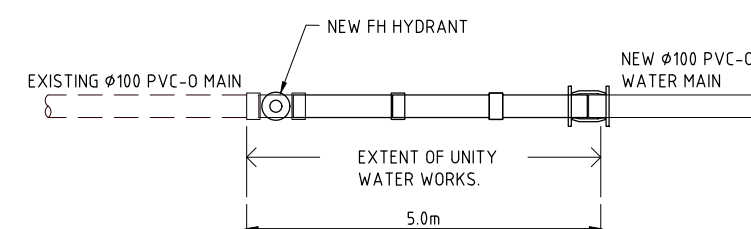
TYPICAL WATER METER
DETAIL WITH FIRE HYDRANT
SCALE 1:25



TYPICAL WATER METER & POTENTIAL
ENERDEX PILLAR LOCATION DETAILS
SCALE 1:25



LIVE CONNECTION (DETAIL 2)
SCALE 1:25



LIVE CONNECTION (DETAIL 1)
SCALE 1:25

UNITYWATER CONNECTION:-MAINLINE WORKS
REMOVE DUCKFOOT HYDRANT
INSTALL APPROVED CONNECTOR
INSTALL NEW FH HYDRANT
INSTALL 5.0m LONG DN100 PVC-0 PIPE

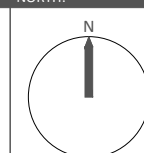
UNITYWATER CONNECTION:-MAINLINE WORKS
REMOVE DUCKFOOT HYDRANT
INSTALL APPROVED CONNECTOR
INSTALL NEW FH HYDRANT
INSTALL 5.0m LONG DN150 PVC-0 PIPE

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

THE CONTRACTOR 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.

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.

NORTH:



SCALE:

1:500
A1

THIS SCALE SHOWN IS ORIGINAL DRAWING SCALE
0 5 10 15 20 25 30 35 40 45 50 Metres
(A1) 1:500
(A3) 1:1000

ISSUE:

RFI AMENDMENTS
ISSUE FOR OPERATIONAL WORKS APPROVAL

DATE: 02/11/21

CDV

INIT:

DATE: 16/09/21

CDV

INIT:

TITLE:

WATER RETICULATION DETAILS PLAN

DFC (PROJECT MANAGEMENT PTY LTD)

'ARCHERS WAY' ESTATE - STAGE 3
AT 22-80 CASH STREET, D'AGUILAR



DETAILS:

JOB NO:

M2584E_3

PLAN:

W03

ISSUE:

B

DATE:

FILE NAME: WATER.DWG



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APPROVED
FOR AND ON BEHALF OF JFP URBAN CONSULTANTS PTY LTD
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DATE: 16/09/21

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-0 PN16, FITTINGS TO BE DI THERMAL BONDED POLYMETRIC COATED PN35.

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-0 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 SLUCE 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 WATERMAINS ARE TO BE LAID SHALL BE TUNNEL BORED (U.N.O.) IN ACCORDANCE WITH STD DWG SEQ-WAT-1212-1B & 1214-1B. 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, SINTAPIPE 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 15MM 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 GUIDELINES
- 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 RPEQ 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.

26. THE CONSTRUCTOR SHALL VERIFY THE LOCATION AND DEPTH OF EXISTING SERVICES WITH RELEVANT ASSET OWNERS AND AUTHORITIES BEFORE COMMENCING WORKS

27. PRIOR TO COMMENCEMENT OF ANY VARIATION WORKS, THE CONSTRUCTOR MUST FIRST OBTAIN APPROVAL FROM THE REGISTERED MAJOR CONNECTIONS CERTIFIER

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

- 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. FILTRATION 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

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

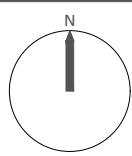


BRISBANE - SUNSHINE COAST - CENTRAL QLD

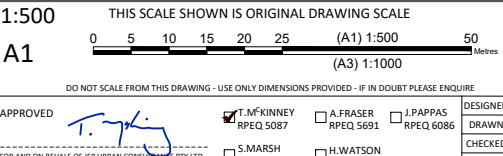
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PLANNERS
URBAN DESIGNERS
SURVEYORS
ENGINEERS
LANDSCAPE ARCHITECTS

NORTH:



SCALE:



ISSUE:

A

ISSUE FOR OPERATIONAL WORKS APPROVAL

DATE: 16/09/21


INIT: CDV

TITLE:

WATER RETICULATION NOTES

DFC (PROJECT MANAGEMENT PTY LTD)

'ARCHERS WAY' ESTATE - STAGE 3
AT 22-80 CASH STREET, D'AGUILAR



DETAILS:

JOB NO: M2584E_3

PLAN: W04

ISSUE: A

MORETON BAY REGIONAL COUNCIL REF: DA/38032/2019/V3VR

FILE NAME: WATER.DWG