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New Work (W	rite in appropriate and accep	Drinking Main	Non-Drinking Main	
Size (DN)	Туре	Class	Length	Length
150	PVC-O or PVC-M	16	269m	268m
100	PVC-O or PVC-M	16	63m	75m
125	PE100	16	9m	10m
63	PE100	16		56m
50	PE100	16	32m	
40	PE100	16	32m	
25	PE100	16	Property Services	Property Services

TABLE 2. Pipe Material Schedule

> MATERIAL PVC-M PVC-0

Main Size

Location Falo

Reference	MATERIAL	Reference
WSA-PS-209	PE (retic & submain)	WSA-PS-207
WSA-PS-210	PE (property services)	WSA-PS-215

TABLE 3. Hydrant & Washout Schedule

Fitting Type	Ownership	Location	Street	Location
WASHOUT	NDW - GWW	End of Line	GOODENIA AVE	2m E of WBL Lot 2448
WASHOUT	DW	In Line	GOODENIA AVE	4.5m E of WBL Lot 2448
HYDRANT	NDW - Council	In Line	GOODENIA AVE	5m E of WBL Lot 2445
HYDRANT	DW	In Line	GOODENIA AVE	7.5m E of WBL Lot 2445
HYDRANT	NDW - Council	In Line	SPRINGWOOD CRT	3m S of NBL Lot 2450
HYDRANT	DW	In Line	SPRINGWOOD CRT	5m N of SBL Lot 2450
FLUSHING BOX	NDW - GWW	End of Line	SPRINGWOOD CRT	7m N of SBL of Lot 2459
WASHOUT	NDW - GWW	End of Line	FIRECREST ROAD	3.5m S of NBL Lot 2438
WASHOUT	DW	End of Line	FIRECREST ROAD	1m S of NBL Lot 2438
HYDRANT	NDW - Council	In Line	FIRECREST ROAD	6m N of SBL Lot 2438
HYDRANT	DW	In Line	FIRECREST ROAD	3.5m N of SBL Lot 2438
HYDRANT	NDW - Council	In Line	ISON ROAD	3.5m N of SBL Cnr Lot
HYDRANT	DW	In Line	ISON ROAD	1m N of SBL Cnr Lot
WASHOUT	NDW - GWW	End of Line	ISON ROAD	3.5m S of NBL of Cnr Lot
WASHOUT	DW	End of Line	ISON ROAD	1m N of NBL of Cnr Lot

TABLE 4. Curved Pipe & Deflection Schedule (Produce in accordance with MRWA-W-212)

Method	Offset / Radius (m)	Total Pipe Length (m)	Pipe Lengths (m)
5 x 6° SOC Bends	100m radius	60	12 x 5m

TABLE 5. Service Alignment Schedule (offsets in m)								
Location	Water	ND-Water	Gas	NBN	Elec	Poles	BOK	
ISON ROAD (SERVICE ROAD)	3.65 W	3.2 W	2.75 W	4.25 E	4.75 E	5.05 E	5.70 W	
GOODENIA AVENUE	2.65 N	2.2 N	1.75 N	1.75 S	2.05 S	3.05 S	3.60 N	
SPRINGWOOD CRT	2.55 W	2.15 W	1.75 W	1.75 E	2.05 E	3.05 E	3.60 W	
FIRECREST ROAD	2.55 E	2.15 E	1.75 E	1.75 W	2.05 W	3.05 W	3.6 E	

TABLE 6. 1	hrust Restraint Scheo	tule			
Location	Туре	Thrust		Area (m ²), or W(m) x Y(m)	No. Locations
А	IN LINE	2 x DN150 VALVES	50	1.16 (tot)	2
В	PLAIN	2 x DN150 x DN100 TEES	50	0.56 (tot)	1
С	PLAIN	2 x DN100 WASHOUTS	50	0.56 (tot)	1
D	IN LINE	2 x (DN100 VALVES + PE THERMAL SHRINKAGE)	50	0.80 (tot)	1
E	CANTILEVERED	2 x DN150 VALVES	100	1.6 x 1.5	1
F	PLAIN	2 x DN150 WASHOUTS	100	0.56 (tot)	3
G	IN LINE	1 x DN100 TAPER + VALVE	50	0.30 (tot)	2

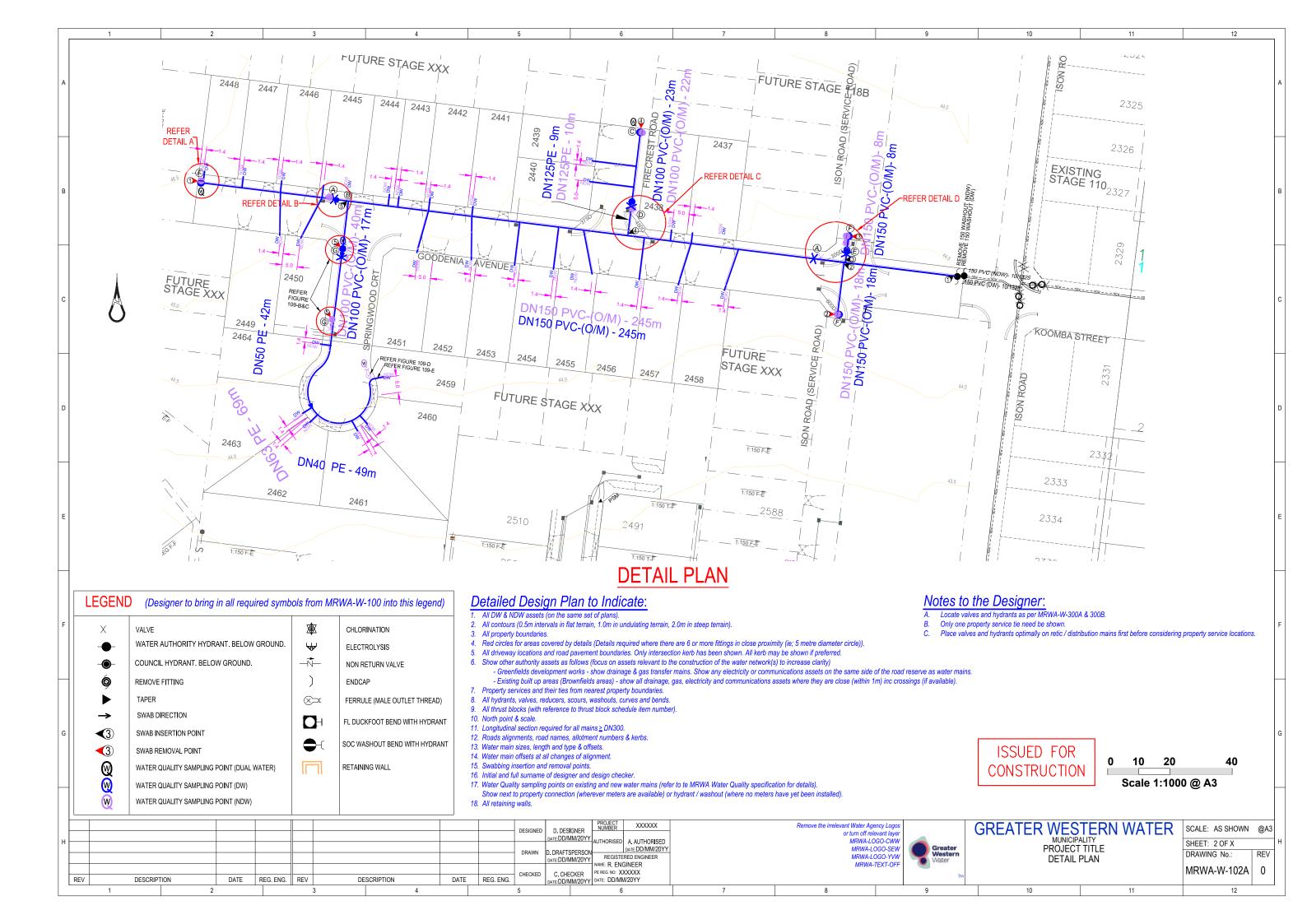
TABLE 7. Vertical Clearances			
Existing or proposed	Minimum vertical	Existing or proposed	Minimum vertical
Service	clearance (mm)	Service	clearance (mm)
Water mains ≤ DN375	150	Electricity conduits and cables	225
Water mains >DN375	300	Stormwater drains & pits	150
Gas mains	150	Sewers - gravity	500
Teleco conduits and cables	150	Sewers - pressure & vacuum	300

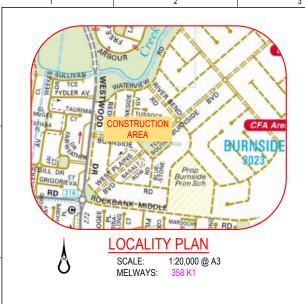
- Vertical clearance between water mains shall depend on the larger main diameter.

- Water mains shall cross over sewers and drains unless shown otherwise.

- Maintain additional clearance from High Voltage electrical cables to allow for a protective barrier and marking. (The designer shall contact the power utility and specify HV cable clearances and protective barrier requirements in the design)

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Schedule 8: Drawing Schedule

Drawing No.	Sheet No.	Title
XXXXXX-01	1	Locality Plan, Schedules & Notes
XXXXXX-02	2	Detail Plan
XXXXXX-03	3	Detail Plan
XXXXXX-04	4	Long Section Sheet 1
XXXXXX-05	5	Long Section Sheet 2
XXXXXX-06	6	Construction Details

.XREF Files\DBYD.bmp

WARNING

BEWARE OF UNDERGROUND SERVICES THE LOCATION OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.

NOTES TO THE DESIGNER:

- Magenta text is example text only and should be written over in black by the Consultant. It is not part of the design template.
- 2. Bold blue italics is instructional text for the Consultant's consideration and should be removed from desig
- 3. All design plans shall be at the given scale on A3 sheets.
- 4. This template describes the minimum requirement. Additional information should be provided as required.
- 5. With design submissions, the Designer is required to supply the relevant Water Agency with the following;
- The current copy of the Plan of Subdivision with Building Envelopes indicated.
- All Geo-technical information collected.
- Project Specific Backfill Specification(s).
- Any structural computations.
- 6. Use other template sheets as required to provide further notes or schedules. 7. Amended sewerage design drawings shall be submitted to the
- Water Agency with a new version number and a summary phrase in the revision panel footer. The Design amendment can be presented using one or a combination of the following methods:
- Cross out original text or lines that are no longer included and replaced with revised text or lines;
- Show text changes in a different colour or font;
- Show line and drawing changes with a different coloured or different weight line;
- Surround text or drawing changes in a cloud or bubble.
 Reference to a Water Agency Audit Report is not acceptable
- as an amendment description in the revision panel footer.

General Notes:

- Only contractors accredited by Greater Western Water (enter the Water Agency) to SC1 and SC7 (enter the categories of work required for this project) shall be eligible to construct these works
- Only products approved and catalogued by the Water Agency 2 shall be used.
- 3 Works must be to constructed according to the MRWA Sewerage Standards and MRWA edition of the WSAA Sewerage code of Australia WSA 02-2014-3.1.
- 4. The design consultant is responsible for the design and coordination of the works. Any problem arising during construction shall be directed to the consultant.

Survey, Set Out and Asset Recording

- All contours and levels are in metres to the Australian Height 5 Datum (A.H.D.) MGAXXX. Nominate whether MGA94 or MGA2020 has been used.
- 6 All co-ordinates shown are to Map Grid of Australia (MGA).
- Chainages shown on detail plans are discontinuous at maintenance structures
- Chainages shown on long section sheets are continuous. Coordinates are to sewer line intersection point unless otherwise 8 shown.
- 9 Before commencement of work, the Contractor must complete a level check between all TBM's to verify level values.
- 10. TBM's and control points are to be maintained and protected at all times during construction.
- Should any marks be disturbed, the contractor will immediately notify the consultant to arrange re-instatement at the contractors expense.

Property Connections

- 11. Number of lots to be sewered: 48 lots (enter number of lots in ment design
- 12. All property connections to be DN100 unless otherwise indicated. 13. Branch tie distance shown on detail plans are from approved subdivision survey pegs. Branch ties for future lots are shown as a chainage. (Ch) Distance is from the downstream sewer structure.
- 14. Invert level of the property connection point is shown opposite the branch position.
- 15. Property Connections requiring Boundary Traps will be designated with "BT" at the end of the Property Connection Type description.

16. Detectable markers shall be installed above all bends which are not directly connected to Maintenance Structures. Refer Figure 104R-R

Earthworks and Retaining Walls:

17. In areas subject to earthworks, construction of sewers shall not commence until earthworks has been completed unless written approval has been given by the Water Agency.

Embedment

18. Embedment shall be Type A (refer MRWA-S-202) unless otherwise specified on the Longitudinal section. (specify non standard embedment on the long sections)

Backfill

- accordance with the Water Agency adopted version of MRWA

- practical completion / acceptance of works.
- 22. The Contractor is required to undertake all testing of fill compaction in accordance with the Water Agency adopted version

23. Prior to commencement of works on site, the Contractor must ensure that all matters relating to the Occupational Health and Safety Act 2004 and Occupational Health and Safety regulations

Work on Live Sewers:

- 24. All works on live sewers must be carried out by a Water Agency accredited contractor.
- 25. All existing sewers must be plugged in accordance with Water Agency requirements to stop gas emissions prior to any connections being made.
- 26. To enable connections to live assets or any work on live assets, the contractor shall submit the appropriate forms to the Superintendent at least 3 working days prior to any works on live sewers.
- 27. The Contractor is not permitted to break into an existing live pipeline, enter a live sewer or remove the cover to a live maintenance structure unless authorised by the Water Agency.

Testing:

28. The Contractor is to give a minimum of two (2) days notice to the superintendent and Water Agency prior to the testing being undertaken. Testing is to be undertaken in the presence of superintendent.

Cultural Heritage Requirements

- 29. The contractor is to keep a copy of the approved cultural heritage management plan on site at all times during works.
- (insert any cultural heritage requirements particular to the project. If non are applicable remove)

Environmental Management Plan:

- 30. On commencement of construction works the contractor must comply with the recommendations of the EPA publication "Construction Techniques for Sediment Pollution Control" (publication no 275 1991).
- 31. Prior to the commencement of work, the contractor is to submit a site environmental management plan to Melbourne Water. (if applicable because Melbourne Water assets or water ways are involved in the project.)
- 32. All trees and vegetation are to be protected unless otherwise indicated for removal The extent of any vegetation removal shall be confirmed on site
- with the Superintendent and local council prior to commencement, and in accordance with any planning permits. Any removal shall be documented.
- 33. All areas containing creek vegetation, trees and revegetated areas near the construction zone are to be fenced off during the works with secure and highly visible material such as para-webbing fencina.
- 34. Ensure all machinery, equipment and/or footwear entering the site is weed and pathogen free.

Schedule 6: Maintenance Holes

Schedule 6: N	laintenance Holes													
Maintenance Hole ID	MH Type (Any /Plastic / Made to Order)	MH Top Type (Conical/Flat)	Cover Class	Internal Diameter (mm)	Min. Wall Thickness (if Concrete)	Depth Lowest Invert	Drops	Ladder (L) Step Irons (S) Landing (Ld)	Corrosion Protection	Shaft Re-infor cement	Comments (Offsets / Details)	Easting, or X co-ordinate	Northing, or Y co-ordinate	
Ex KCW17	Concrete	Flat Top	D	1800	225	5660	-	L	Ex PVC liner	-	Refer M.H. Base Detail	-	-	
Ex ROC2-25	Concrete	Conical Top	В	1050	150	3370	1 x DN150	S	-	-	Connect Ex 150 Stub	-	-	
Ex ROC2-43	Concrete	Conical Top	В	1050	150	2900		S	-	-	Connect Ex 150 Stub	-	-	
DJB1	Made to Order	Flat Top	В	1500	225	5150	1 x DN450	L or S	-	-	Refer M.H. Base Detail	301878.86	5820362.42	
DJB2	Made to Order	Flat Top	В	1500	225	2505	1 x DN100	L or S	-	-	Refer M.H. Base Detail	301875.72	5820346.45	
DJB3	Made to Order	Flat Top	В	1500	225	3512	1 x DN150	L or S	-	-	Refer MH. Base Detail	-	-	
DJB4	Made to Order	Any	В	1200	150	3360	-	L or S	-	-	-	301979.27	5820397.46	
Structure Typ Quantity	later Seals, Bound e Boundary Tra 0	• •		Syphons D	3. Co. 4. Co	rrosion F -ordinate	Protection- s required		or one of Ta ed where its	position c	options. annot be established not parallel with a titi	using		_
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Structure Type	Boundary Trap	Water Seals	Syphons
Quantity	0	1	0

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Schedule 1. New Fi				
Pipe Size	Pipe Type	Length (m)	Pipe Class	Standard
DN100	UPVC-DWV	NA	SN10	WSA PS 230
DN150	UPVC-DWV	483.3	SN8	WSA PS 230
DN300	UPVC-DWV	171.9	SN8	WSA PS 230

Schedule 2: Property Connections

Connection Type	Type 1a	Type 1b	Type 2	Type 4a	Type 4b	Type S		Type B	Type 4B	Jump Up Type F Couplings (TY2 or 4)
Quantities	6	4	24	0	2	5	0	1	0	8

Schedule 3: Road Reserve Service Offsets (m) and Locations:

Street	Gas	5	Wa	ter	ND	N	Con	nms	Ele	С.	Light	ing
Belvedere Crescent (Part 1)	W	2.25	W	3.15	W	2.65	Е	4.00	Е	4.75	1.00	BOK
Belvedere Crescent (Part 2)	W	2.25	W	3.15	W	2.65	Е	1.85	Е	2.60	1.00	BOK
Belvedere Crescent (E-W)	S	2.25	S	3.15	S	2.65	Ν	0.50	Ν	1.25	1.00	BOK
Carmine Circuit (N-S)	Е	2.25	Е	3.15	Е	2.65	W	0.50	W	1.25	1.00	BOK
Carmine Circuit (E-W)	Ν	2.25	Ν	3.15	Ν	2.65	S	1.85	S	2.60	1.00	BOK
Kruse Place	S	2.00	S	2.90	S	2.40	Ν	0.50	Ν	1.25	1.00	BOK

Maintenance Structure ID	Type - (IS/MS/MC)	Cover Class	Depth to Invert (mm)	Shaft Connections	Easting, or X co-ordinate	Northing, or Y co-ordinate
DJB1	MC	D	1778	-	-	-
DJB4	MC	В	3030	-	-	-
DJB2-1	MS	В	1350	-	-	-
DJB2-2	MS	В	1585	-	-	-
DJB2-2IS	IS	В	1444	-	-	-
DJB3-IS	IS	В	1080	-	-	-
ROC2-43-IS	IS	В	1740	1 x DN100	-	-
ROC2-44ISX	IS	В	1170	-	-	-
ROC2-44	MS	В	1614	1 x DN100	-	-
ROC2-44ISY	IS	В	1040	-	-	-

Schedule 5: Water Agency Granted Dispensations

ID	Location	Asset / Feat
1	DJB1	Drop pipe
2	DN450 sewer	Offset in Rd

- of the MRWA Backfill Specification 04-03.

2017, have been and will be complied with.

19. Selection and compaction of trench backfill material shall be in specification no 04-03. 20. Refer to Longitudinal Section drawings for backfill requirements.

ompaction Testing

21. Test results shall be provided to the Superintendent prior to

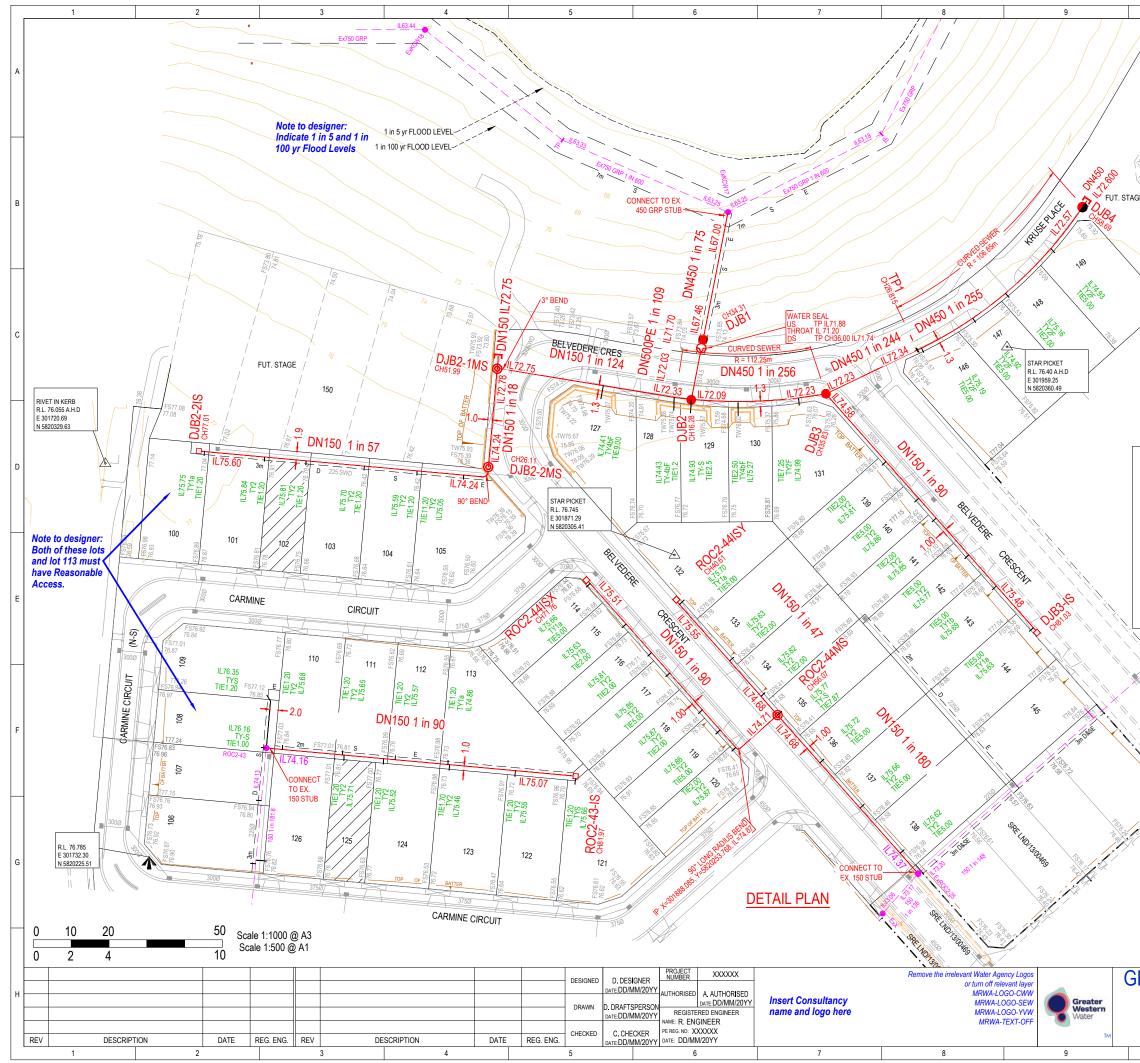
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Schedule 4: Maintenance Structures (other than Maintenance Holes)

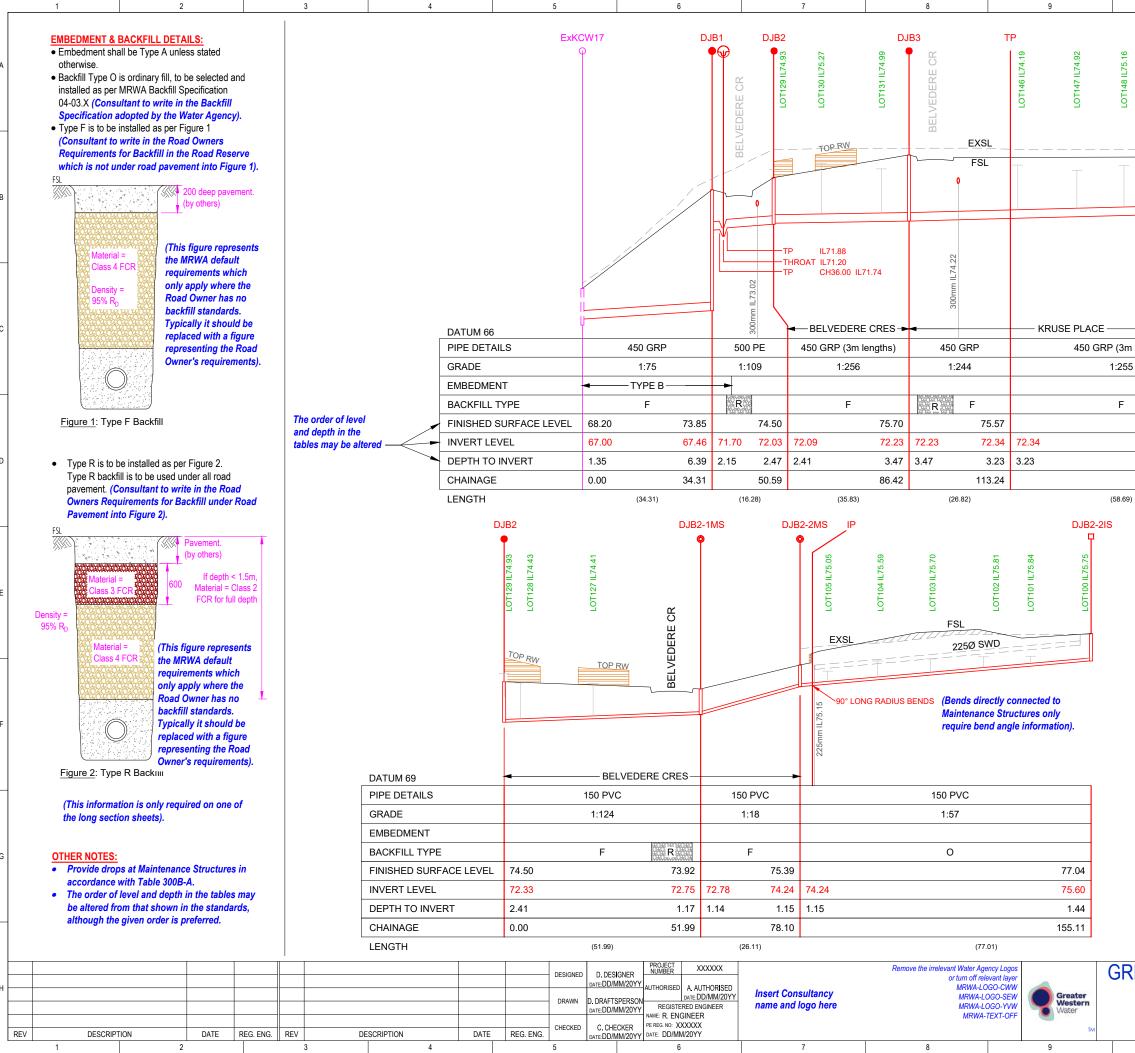
Inspection Shafts (IS), Maintenance Shafts (MS) and Maintenance Chambers (MC);

- Co-ordinates required for an MS or MC where its position cannot be established using connecting sewer offsets and chainages (eg: sewer(s) is/are not parallel with a title boundary). Otherwise co-ordinates optional. • Easting and Northing to the nominated AMG or X-Y co-ordinates to a nominated Base Point are acceptable. Add an additional comments column to the schedule if comments are required.

e	Description of Dispensation Accepted
	Butt Welded PE drop pipe to be constructed to geometry of Fig 311-E
	1.3m offset under 1.6m wide footpath



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	 MAINTEN MAINTEN INSPECTION BURIED JU 	ANCE HOLE (MH) NANCE CHAMBER ANCE SHAFT (MS ON SHAFT (IS) UMP UP ON OPENING (IO)		AUGESS LUTS	A
E	PIPE STUE VERTICAL RETAININ ROCK RE Services othe	3 . BEND G WALL TAINING WALL r than Drainage n		- GAS MAINS - ELECTRICAL CABLES	в
Test.	RE GR MA OR BL GR GR GR	EEN 94 PRC GENTA 210 EXIS ANGE 32 RET ACK 0.13 STA No, ACK 0.35 PRC EXIS EY 252 EXIS EY 252 KER BOU EY 252	DPERTY CC STING SEW AINING WA GE LOT, RC ROAD NAM DPERTY CC STING LOT RBS, FOOTF JNDARIES I AINAGE & O		С
FS = Finishe IL = Invert L TW = Top of (Levels Surface EP = End of TP = Tanger IP = Interse TY = Propert F = Tall jun BT = Bounda (indicat	Retaining Wall with no Prefix are be Levels) Pipe nt Point ction Point ty Connection Typ np up Property Co	e TY2E how show the second state of the secon	 a (no jump b (no jump c) (no jump c) (jump up a (offset jump b) (offset jump b) (offset jump c) (offset jump c) (offset jump c) (no jump c) (TY2 with aF (TY4a with bF (TY4b with 	EVICE TYPES up & 45° junction fitting) up & 60° junction fitting) adjacent to main) np up & 45° junction fitting) np up & 60° junction fitting) np up connected to shaft) np up connected to base) up & connected to base) up & connected to shaft) n tall jump up fittings) th tall jump up fittings) th tall jump up fittings)	E
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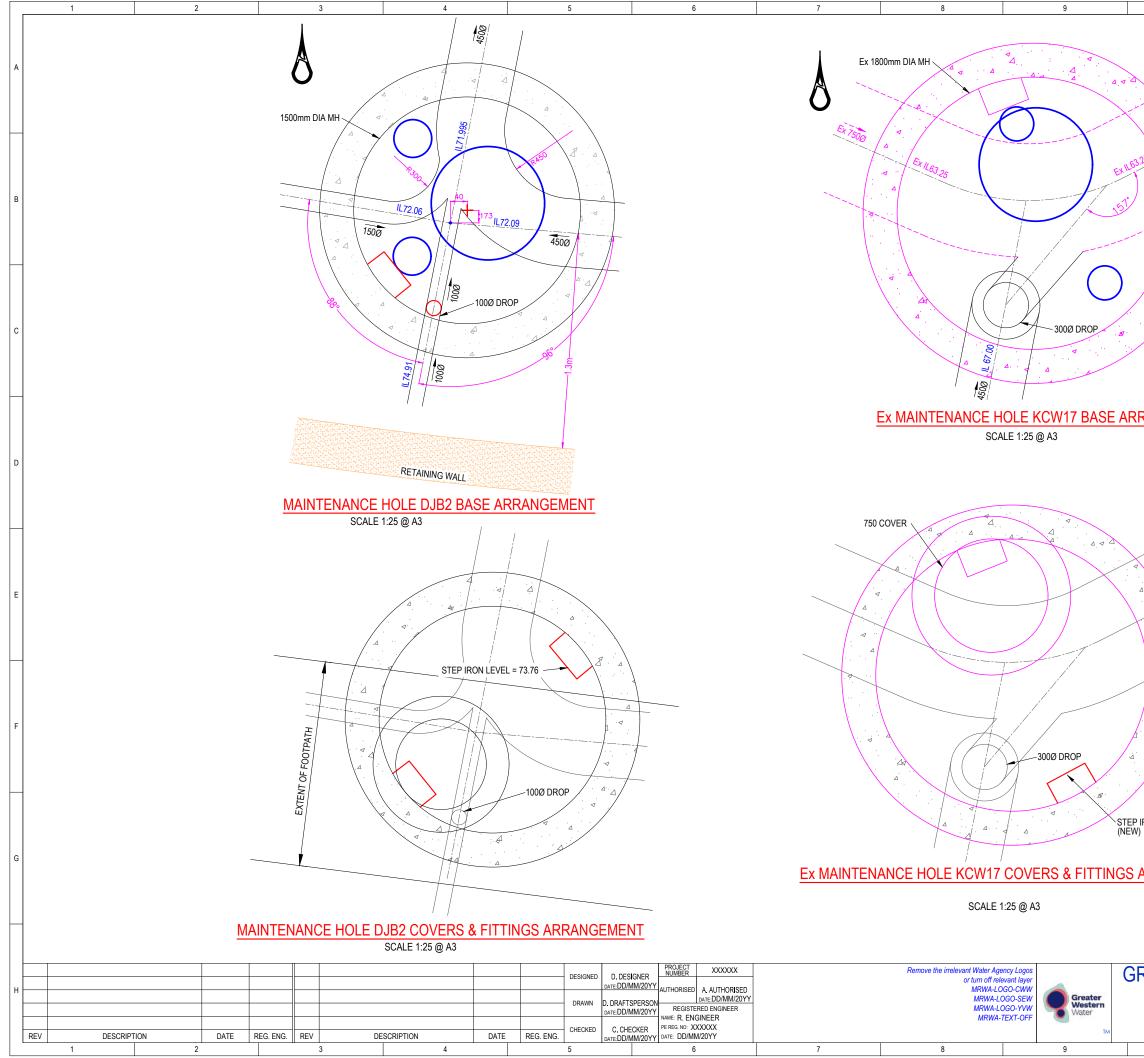
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	DATUM 70 PIPE DETAILS GRADE EMBEDMENT BACKFILL TYPE FINISHED SURFACE LEVEL INVERT LEVEL	● 28 59 52711 555110 ■ BELVEDERE CR 150 PVC 1:47 F 76.41 74.68	RES 76.59	DATUM 69 PIPE DETAILS GRADE EMBEDMENT BACKFILL TYPE FINISHED SURFACE LEVEL INVERT LEVEL	DJB3	RE CRES VC 0 76.5 75.4		(13.89)	COLOUR LEGEND RED 10 SEWERAGE GREN 94 PROPERTY BLACK 0.35 FINISHED S PROPERTY MAGENTA 210 EXISTING S GREY 252 DRAINAGE ORANGE 32 RETAINING GREY 252 CUT & FIL ISSUEE CONSTR FILL SHOWN AS FOLLOWS: [TENDERS SHOULD BE PREP EARTHWORKS SHOWN SHAL PRIOR TO THE COMMENCEM 0 0 10 20 0 2 4	CONNECTION TEXT URFACE, CONNECTION PIPES EWERAGE WALLS L (EARTHWORKS) D FOR UCTION ARED ON THE BASIS THAT DED SHOULD BE COMPLETED ENT OF WORKS. 50
	DATUM 70 PIPE DETAILS GRADE EMBEDMENT BACKFILL TYPE FINISHED SURFACE LEVEL INVERT LEVEL DEPTH TO INVERT	 BELVEDERE CR BELVEDERE CR 1:47 F 76.41 74.68 1.73 	RES 76.59 75.55 1.04	DATUM 69 PIPE DETAILS GRADE EMBEDMENT BACKFILL TYPE FINISHED SURFACE LEVEL INVERT LEVEL DEPTH TO INVERT	DJB3 Big211061107 EXSL FSL BELVEDE 150 P 1:9 FS.70 74.58 1.12	D RE CRES VC 0 76.5 75.4 1.1		(13.89)	COLOUR LEGEND RED 10 SEWERAGE GREEN 94 PROPERTY BLACK 0.35 FINISHED S PROPERTY MAGENTA 210 EXISTING S GREY 252 DRAINAGE ORANGE 32 RETAINING GREY 252 CUT & FIL ISSUEE CONSTR FILL SHOWN AS FOLLOWS: [TENDERS SHOULD BE PREPP EARTHWORKS SHOWN SHAE PRIOR TO THE COMMENCEM 0 0 10 20	CONNECTION TEXT URFACE, CONNECTION PIPES EWERAGE WALLS L (EARTHWORKS) D FOR UCTION ARED ON THE BASIS THAT DED SHOULD BE COMPLETED ENT OF WORKS. 50
	DATUM 70 PIPE DETAILS GRADE EMBEDMENT BACKFILL TYPE FINISHED SURFACE LEVEL INVERT LEVEL DEPTH TO INVERT CHAINAGE	BELVEDERE CR 150 PVC 1:47 F 76.41 74.68 1.73 0.00	RES 76.59	DATUM 69 PIPE DETAILS GRADE EMBEDMENT BACKFILL TYPE FINISHED SURFACE LEVEL INVERT LEVEL DEPTH TO INVERT CHAINAGE	DJB3 EXSL FSL BELVEDE 150 P 1:9 75.70 74.58 1.12 0.00	D RE CRES VC 0 76.5 75.4 1.1 81.0		(13.89)	COLOUR LEGEND RED 10 SEWERAGE GREN 94 PROPERTY BLACK 0.35 FINISHED S PROPERTY MAGENTA 210 EXISTING S GREY 252 DRAINAGE ORANGE 32 RETAINING GREY 252 CUT & FIL ISSUEE CONSTR FILL SHOWN AS FOLLOWS: [TENDERS SHOULD BE PREP EARTHWORKS SHOWN SHAL PRIOR TO THE COMMENCEM 0 0 10 20 0 2 4	CONNECTION TEXT URFACE, CONNECTION PIPES EWERAGE WALLS L (EARTHWORKS) D FOR UCTION ARED ON THE BASIS THAT DED SHOULD BE COMPLETED ENT OF WORKS. 50
	DATUM 70 PIPE DETAILS GRADE EMBEDMENT BACKFILL TYPE FINISHED SURFACE LEVEL INVERT LEVEL DEPTH TO INVERT	 BELVEDERE CR BELVEDERE CR 1:47 F 76.41 74.68 1.73 	RES 76.59 75.55 1.04	DATUM 69 PIPE DETAILS GRADE EMBEDMENT BACKFILL TYPE FINISHED SURFACE LEVEL INVERT LEVEL DEPTH TO INVERT CHAINAGE LENGTH	DJB3 EXSL FSL BELVEDE 150 P 1:9 75.70 74.58 1.12 0.00 (810	D RE CRES V/C 0 76.5 75.4 1.1 81.0 3)			COLOUR LEGEND RED 10 SEWERAGE GREN 94 PROPERTY BLACK 0.35 FINISHED S PROPERTY MAGENTA 210 EXISTING S GREY 252 DRAINAGE ORANGE 32 ORANGE 32 RETAINING GREY 252 CUT & FIL ISSUED FILL SHOWN AS FOLLOWS: [TENDERS SHOULD BE PREP EARTHWORKS SHOWN SHAD PRIOR TO THE COMMENCEM 0 10 20 0 10 20 0 2 4 Scale H 1:1000 10 10 10	CONNECTION TEXT URFACE, CONNECTION PIPES EWERAGE WALLS L (EARTHWORKS) D FOR UCTION ARED ON THE BASIS THAT DED SHOULD BE COMPLETED ENT OF WORKS. 50 10 V 1:200 @ A3
	DATUM 70 PIPE DETAILS GRADE EMBEDMENT BACKFILL TYPE FINISHED SURFACE LEVEL INVERT LEVEL DEPTH TO INVERT CHAINAGE	BELVEDERE CR 150 PVC 1:47 F 76.41 74.68 1.73 0.00	ROC2-44ISY	DATUM 69 PIPE DETAILS GRADE EMBEDMENT BACKFILL TYPE FINISHED SURFACE LEVEL INVERT LEVEL DEPTH TO INVERT CHAINAGE LENGTH	DJB3 EXSL FSL BELVEDE 150 P 1:9 75.70 74.58 1.12 0.00 (810	S8 11 S7 S8 11 S1 S6 76 5 75 4 1 1 S1		TER WE	COLOUR LEGEND RED 10 SEWERAGE GREEN 94 PROPERTY BLACK 0.35 FINISHED S PROPERTY MAGENTA 210 EXISTING S GREY 252 DRAINAGE ORANGE 32 RETAINING GREY 252 CUT & FIL ISSUED CONSTR FILL SHOWN AS FOLLOWS: [TENDERS SHOULD BE PREP/ EARTHWORKS SHOWN SHAD PRIOR TO THE COMMENCEM 0 10 20 0 2 4 Scale H 1:1000	CONNECTION TEXT URFACE, CONNECTION PIPES EWERAGE WALLS L (EARTHWORKS) DFOR UCTION ARED ON THE BASIS THAT DED SHOULD BE COMPLETED ENT OF WORKS. 50 10 V 1:200 @ A3
	DATUM 70 PIPE DETAILS GRADE EMBEDMENT BACKFILL TYPE FINISHED SURFACE LEVEL INVERT LEVEL DEPTH TO INVERT CHAINAGE	BELVEDERE CR 150 PVC 1:47 F 76.41 74.68 1.73 0.00	ROC2-44ISY	DATUM 69 PIPE DETAILS GRADE EMBEDMENT BACKFILL TYPE FINISHED SURFACE LEVEL INVERT LEVEL DEPTH TO INVERT CHAINAGE LENGTH GNER MUZOYY AUTHORISED A AUTHORISED	DJB3	D RE CRES VC 0 76.5 75.4 1.1 81.0 3) evant Water Agency Logos or tum off relevant layer MRWA-LOGO-CWW MRWA-LOGO-SEW	COL144117202	TER WE	COLOUR LEGEND RED 10 SEWERAGE GREEN 94 PROPERTY BLACK 0.35 FINISHED S PROPERTY MAGENTA 210 EXISTING S GREY 252 DRAINAGE ORANGE 32 ORANGE 32 RETAINING GREY 252 CUT & FIL SHOULD BE PREP EXTHWORKS SHOWLD BE PREP EARTHWORKS SHOWLD BE PREP PRIOR TO THE COMMENCEM 0 10 20 0 10 20 0 2 4 Scale H 1:1000	CONNECTION TEXT URFACE, CONNECTION PIPES EWERAGE WALLS L (EARTHWORKS) D FOR UCTION ARED ON THE BASIS THAT DED SHOULD BE COMPLETED ENT OF WORKS. 50 10 V 1:200 @ A3
Image: state stat	DATUM 70 PIPE DETAILS GRADE EMBEDMENT BACKFILL TYPE FINISHED SURFACE LEVEL INVERT LEVEL DEPTH TO INVERT CHAINAGE LENGTH	BELVEDERE CR 150 PVC 1:47 F 76.41 74.68 1.73 0.00	RCC2-44ISY	DATUM 69 PIPE DETAILS GRADE EMBEDMENT BACKFILL TYPE FINISHED SURFACE LEVEL INVERT LEVEL DEPTH TO INVERT CHAINAGE LENGTH GNER MUZOYY AUTHORISED A AUTHORISED	DJB3 EXSL FSL BELVEDE 150 P 1:9 75.70 74.58 1.12 0.00 (810	D RE CRES V/C 0 76.5 75.4 1.1 81.0 3) evant Water Agency Logos or tum off relevant layer MRWAL-AGO-CWW	COL144117202		COLOUR LEGEND RED 10 SEWERAGE GREN 94 PROPERTY BLACK 0.35 FINISHED S PROPERTY EXISTING S GREY 252 DRAINAGE ORANGE 32 RETAINING GREY 252 CUT & FIL ISSUEE FILL SHOWN AS FOLLOWS: FILL SHOWN AS FOLLOWS: ENDERS SHOULD BE PREP EARTHWORKS SHOWN SHAD PRIOR TO THE COMMENCEM 0 10 20 0 2 4 Scale H 1:1000	CONNECTION TEXT URFACE, CONNECTION PIPES EWERAGE WALLS L (EARTHWORKS) DFOR UCTION ARED ON THE BASIS THAT DED SHOULD BE COMPLETED ENT OF WORKS. 50 10 V 1:200 @ A3



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<u>RRANGEMENT</u>		D
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P IRON LEVEL = 65.78 W)	ISSUED CONSTRL	
ARRANGEMENT	Note to the Designer: Maintenance Holes D would ordinarily requi Design as per MRWA- not been included in t	re a Detailed S-308. They have
REATER WES	TITLE ON DETAILS	SCALE: AS SHOWN @A3 SHEET: 5 OF 6 DRAWING No.: REV MRWA-S-101D 0
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	1 2			3	4		~1/0/4	5		6		7	8	9	
	SYMBOLS LEGEND						450	ECT TO EX GRP STUB				- ///			
	MAINTENANCE HOLE (MH)		AINTENAN(H), Cover c					TUB.	Kown			1 SAR			
A	MAINTENANCE CHAMBER (MC)		er black seg						163.25		II 63.	18			
	MAINTENANCE SHAFT (MS)	(Fo	or MHs with	h no				450110	5 8 1 -	Ex750 GRP 1 IN 600		E -	-0-		
	☐ INSPECTION SHAFT (IS)	de	tailed desi	gn)				J.S.	-7m	S E					
	• BURIED JUMP UP		REASON				8	S	11	Notes to the Des	signer:				
	 INSPECTION OPENING (IO) 	AC	CESS LOT	S		15:24 S	1 0	1/	15	Aerial photogra	oh inclus	ion in the design plan is o	optional and		
	😡 WATER SEAL	-w- w/	ATER MAIN	IS			10 5	11		should only be a	ncluded i	where it improves interpr and line work can be cle	retation of the		
	E PIPE STUB	-G- GA	AS MAINS			× S	St. St.	1-5°	1 31	uesign and whe		and line work can be cie			
	VERTICAL BEND	-E- EL	ECTRICAL	CABLES				CH34	B1						
	RETAINING WALL		DMMS CAB	LES		H N	X	Chin	- Twar		and the second	State State	ų į		
	ROCK RETAINING WALL	-D- DR	RAINAGE					REVED	SEIN	SEAL CH26	1	THER	DN450 00		
	Services other than Drainage need on	ly be show	wn where t	hey			LT2	450 1	25m Th	6.815	· · · · ·	CURVED SEVIL	RUSE PLACE DN435600 CONNUL		
	have a non-standard alignment which	will impac	ct construc	tion		CONTINUED SHEET XX	5.09	1723	in 256	CH36.00 1171		K	RUSE PLACE DI450 RUSE PLACE DI550 RUSE RUSE RUSE RUSE RUSE RUSE RUSE RUSE		
	PROPERTY SERVICE TYPES					O BE	XIA	L		DN450 1 in 244	0N450 1	in 255	CO Se Se		
	TY1a (no jump up & 45° junction fitting)					1 1	09 1	1	12.23 ILT	.23	JN430 1	11 200	149		
	TY1b (no jump up & 60° junction fitting)					117493 11755 11255	130	F			10	6 6 75 m 110	149		
	TY2 (jump up adjacent to main)					The second	1840	/	4.5	3000 176.57	-1 -5	5 147 5 148	135		
	TY4a (offset jump up & 45° junction fittin					/	EL S	V4 .	0123 3		146		THE S. DO		
C	TY4b (offset jump up & 60° junction fittin TY4S (offset jump up connected to shaf					20	16	200	Chr. B		IL 75.19 TY2F TIE5.00	INPE / NO .			
	TY4B (offset jump up connected to base	e)				-	1891	1.	37 -		.00 ^F .19	STAR PICKET	76.27		
	TYB (no jump up & connected to base)					MCY	2/3		c < 76.49		1000				
	TYS (no jump up & connected to shaft))								ETAIL PLAN		CON	ITINUED SHEET XX		
\square	TY2F (TY2 with tall jump up fittings)								5	CALE 1:500 @ A1					
	TY4aF (TY4a with tall jump up fittings)				-					20		JB3 T			DIDA
	TY4bF (TY4b with tall jump up fittings)				E	xKCW17		DJ	B1 DJ				rp		DJB4
	TY4SF (TY4S with tall jump up fittings) TY4BF (TY4B with tall jump up fittings)					Ť			Ψ	.74.93	.74.96	К К	74.192	.74.93	Ť
D									ц	LOT129 IL74.93 LOT130 IL75.27	LOT131 IL74.99	ERE	LOT146 IL74.19 LOT147 IL74.92 LOT148 IL75.16	LOT149 IL74.93	
	ABBREVIATIONS LEGEND								BELVEDERE CR	ГОТ	LOT	BELVEDERE	год Год	ГОТ	
	FS = Finished Surface Level								DEF						
	IL = Invert Level								LVE						
	TW = Top of Retaining Wall								B	TOP RW		EXSL			
	(Levels with no Prefix are Existing Surface Levels)								/			FSL			-1
	EP = End of Pipe											TOL	\top \top \top		
	TP = Tangent Point							1							
E	IP = Intersection Point						/	i /	0						_
	TY = Property Connection Type F = Tall jump up Property Connection														T
	BT = Boundary Trap Lot														
	(indicate Boundary Trap Lots after									TP IL71.88					
	TY, eg: TY4S- BT)														
						<i></i>			300mm IL73.02			74.22			
						n U						300mm IL 74.22			
									300m	\backslash		300rr			
				-	DATUM 66					BELVEDERE (CRES -	4	KRUSE PLACE		>
	RED 10 SEWERAGE (NEW) IN GREEN 94 PROPERTY CONNEC				PIPE DETAILS		450 GRP		500 PE	450 GRP (3m ler	gths)	450 GRP	450 GRP (3m lengt	ns)	
	MAGENTA 210 EXISTING SEWERAG		.		GRADE		1:75		1:109	1:256		1:244	1:255		
	ORANGE 32 RETAINING WALLS			-	EMBEDMENT		- TYPE B		-						-
	BLACK 0.13 STAGE LOT, ROAD B			ŀ		_	F		R	F		R F	F		-
	No, ROAD NAMES, EA BLACK 0.35 PROPERTY CONNEC			-	BACKFILL TYPE		г		032032032			1226. mc 2223	F		_
	GREY 252 EXISTING LOT & ROA				FINISHED SURFACE LEVEL	68.20		73.85	74.		75.70	75.57		75.60	_
	GREY 252 KERBS, FOOTPATHS	, DRIVEWA	AYS,		INVERT LEVEL	67.00		67.46	71.70 72.	03 72.09	72.23	72.23 72.34	72.34	72.57	7
	BOUNDARIES LEVELS				DEPTH TO INVERT	1.20		6.39	2.15 2.4	7 2.41	3.47	3.47 3.23	3.23	3.03	3
G	GREY 252 DRAINAGE & OTHER COLOUR 42 CONTOURS (1.0m INT			-	CHAINAGE	0.00		34.31	50.5		86.42	113.24		171.93	3
					LENGTH		(34.31)		(16.28)	(35.83)		(26.82)	(58.69)		
							(10.71)		(10.20)	(30.03)		(20.02)	(50.03)		
										LONGITUDINA	L SEC	TION			
H										SCALE 1:500 @ A1					
										SCALE 1:100 @ A					
								DESIGNED		PROJECT XXXXXX			Remove the irrelevant Water Agency Logos or turn off relevant layer		GRE
н				+			+ +		DATE:DD/MM/20YY	AUTHORISED A. AUTHORISED	Incort	Consultancy	MRWA-LOGO-CWW	Greater	
				+			+	DRAWN	D. DRAFTSPERSON DATE:DD/MM/20YY	DATE:DD/MM/20YY REGISTERED ENGINEER	name	and logo here	MRWA-LOGO-SEW MRWA-LOGO-YVW	Western	
								CHECKED		NAME: R. ENGINEER PE REG. NO: XXXXXX			MRWA-TEXT-OFF	Auguer Auguer	
R	EV DESCRIPTION	DATE	REG. ENG.		DESCRIPTION	DATE	REG. ENG.		DATE:DD/MM/20YY	DATE: DD/MM/20YY	1		1	TM	4
	1 2			3	4			5		6		7	8	9	

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<u>Noi</u> •	tes to the Designe While this templa as Branch Sewers may also be useo Section(s) can fit Trench sections a	<u>r:</u> te is primarily intende	onnection projects w -S-101B a	ar asset projects such Is are not included, it /here Plan and Long	A
					В
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				SUED FOR STRUCTION	E
	HIC	A.G. WARNING BH PRESSURE OIL INE IN THE VICINITY	wi	BEFORE OUDIG ww.byda.com.au WARNING ABNORMAL VOLTAGES DETECTED	F
	THE LOC ONLY AND GUARAN	G and ABNORMAL V WA BEWARE OF UNDE ATION OF UNDERGROU THEIR EXACT POSITIO	RNING RGROUNI IND SERVI N SHOULD	CES ARE APPROXIMATE BE PROVEN ON SITE. NO SERVICES ARE SHOWN.	G
REAT	0	1 2 TERN WAT	ER	23 H (1:500 @ A1) 5 V (1:100 @ A1) SCALE: AS SHOWN @A3 SHEET: 6 OF 6 DRAWING No.: REV MRWA-S-102 0 0	H
	10	11		12	