NOTES:

CONTINUED FROM 4005-30002-01.

9. PIPE:
   - ALL PVC PIPE SHALL BE SERIES 2, PN16, RRJ UNLESS STATED OTHERWISE.
   - PIPE COLOUR SHALL BE:
     DRINKING WATER - BLUE (OR BLACK WITH BLUE STRIPES - PE).
     NON DRINKING WATER - LILAC (OR BLACK WITH LILAC STRIPES - PE).

10. PIPE INSTALLATION:
    SHALL BE IN ACCORDANCE WITH:
    - SA WATER WSCM DRAWINGS & CONSTRUCTION DOCUMENTATION.
    - THE APPROVED DESIGN DRAWINGS,

    APPROVAL OF THE SA WATER REPRESENTATIVE SHALL BE SOUGHT FOR DEVIATION FROM THIS REQUIREMENT.

11. PIPE INSTALLATION DURING HIGH TEMPERATURES:
    CONSTRUCTION DURING PERIODS OF HIGH TEMPERATURE WILL REQUIRE SPECIAL PRECAUTIONS TO MINIMISE PIPE EXPANSION ISSUES PRIOR TO BACKFILL. ALL CONTROL TECHNIQUES SHALL BE APPROVED BY THE SA WATER REPRESENTATIVE PRIOR TO IMPLEMENTATION.
    PVC:
    - PIPES SHALL NOT BE LAID AND BACKFILLED WHILE THE AMBIENT TEMPERATURE ADJACENT TO THE PIPE IS MORE THAN 35 °C.
    - UPON THE TEMPERATURE FALLING BELOW 35 °C, ALL JOINTS SHALL BE INSPECTED, AND IF NECESSARY, HOMED AGAIN PRIOR TO PLACEMENT OF ANY EMBEDMENT & TRENCH FILL MATERIAL.

    PE:
    - PE PIPES SHALL NOT BE LAID AND BACKFILLED IF THE AMBIENT TEMPERATURE ADJACENT TO THE PIPE FALLS OUTSIDE THE RANGE 12 - 27 °C.
    - DUE TO PIPE EXPANSION DURING HOT TEMPERATURES, FOR EVERY METRE OF MEASURED PIPE, THE ADDITIONAL CUT LENGTH SHALL BE A MINIMUM OF 0.18 mm / m / °C ABOVE 12°C.

12. VALVES:
    - ALL STOP/ GATE VALVES SHALL HAVE A SQUARE DRIVE AND BE CLOCKWISE CLOSING. THE SPINDLE CAP SHALL HAVE A RED DOT (INDICATING CLOCKWISE CLOSING).
    - WITHIN NON DRINKING WATER SYSTEMS THE SPINDLE CAP AND VALVE DOME SHALL BE COLOURED LILAC.

13. THRUST BLOCKS:
    - REFER WSCM SECTION 3.
    - ALL CONCRETE SHALL BE MINIMUM GRADE 25.
    - THE THRUST AREA OF ALL THRUST BLOCKS SHALL BE CAST AGAINST A CLEAN FACE OF UNDISTURBED NATURAL SOIL.
    - THRUST BLOCKS SHALL NOT INTERFERE WITH OTHER SERVICES.
    - TIMBER AND PLASTIC BLOCKS ARE NOT AN APPROVED METHOD OF PERMANENT THRUST RESTRAINT. HOWEVER, THEY BE MAY BE USED FOR THE PURPOSE OF TEMPORARY THRUST RESTRAINT.

14. PROPERTY CONNECTIONS:
    - ALL CONNECTIONS SHALL BE CONSTRUCTED IN ACCORDANCE WITH WSCM SECTION 6 DRAWINGS.

15. PE WELDING:
    - WELDING SHALL ONLY BE UNDERTAKEN BY PERSONS WHO HAVE THE APPROPRIATE QUALIFICATION FOR THE TASK:
      - BUTT WELD, PMBWELD301B
      - ELECTRO FUSION, PMBWELD302B.

16. WRAPPING OF BELOW GROUND FITTINGS AND COMPONENTS:
    ALL BELOW GROUND, BARE STEEL FITTINGS, BOLTS AND SCRATCHED PIPES SHALL BE PROTECTED WITH EITHER:
    - PETROLATUM TAPE SYSTEM OR BITUMEN MASTIC TAPE SYSTEM IN ACCORDANCE WITH TS 18.

17. BORED PIPE DESIGN & INSTALLATION OF NEW PIPES USING DRILLING OR MICRO TUNNELLING:
    - SA WATER REQUIRES A DESIGN DRAWING FOR ALL BORED INSTALLATIMONS.
      SHOULD THE ORIGINAL DESIGN BE FOR INSTALLATION BY EXCAVATION AND BE AMENDED FOR THE BORE, THE CONSULTANT SHALL RESUBMIT AN AMENDED DESIGN SHOWING AMENDMENT AND DEPTHS FOR ASSESSMENT.
    - THE DRAWING/S FOR THE BORE SHALL BE APPROVED PRIOR TO COMMENCEMENT OF ANY WORK. REFER BELOW FOR DESIGN REQUIREMENTS.
    - THE PIPE ALIGNMENT AND A LONGITUDINAL SECTION SHALL BE SHOWN WITH MINIMUM / MAXIMUM COVER, ALL FITTINGS, CHAINAGES, BEND ANGLES, ANCHOR BLOCKS ETC SPECIFIED ON THE DRAWINGS.
    - ANY DEVIATION FROM THE APPROVED DESIGN (DEPTH OR ALIGNMENT) SHALL BE SUBMITTED TO THE SA WATER REPRESENTATIVE FOR APPROVAL.
    - THE LOCATION OF ANCHOR BLOCKS SHALL BE SUFFICIENTLY CLEAR OF ANY EXCAVATED AREA FOR A BORE PIT FOR LOCATION OF THE BLOCK IN UNDISTURBED SOIL.
    - A VALVE SHALL BE LOCATED EACH SIDE OF THE BORE. A HYDRANT SHALL BE LOCATED ON THE HIGH SIDE.
    - THE DESIGNER/ CONTRACTOR SHALL CONFIRM WITH THE ROAD/ RAIL/ LOCAL AUTHORITY THE REQUIREMENT FOR A SLEEVE PIPE AND REQUIRED PIPE DEPTH.
    - CONCRETE ENCASEMENT OF THE PIPE IS NOT APPROVED.
    - BUTT WELDED PE IS APPROVED UP TO DN250. SHOULD A LARGER DIAMETER PE BE CONSIDERED FOR THE PROJECT, SPECIFIC APPROVAL FROM THE SA WATER REPRESENTATIVE WILL BE REQUIRED FOR THE PIPE SIZE AND FABRICATION METHOD.
    - FULLY WELDED MSCL OR DICL (RRJ OR FLANGED) MAIN MAY BE PERMITTED PROVIDED THERE IS A MAXIMUM OF ONE PIPE JOINT UNDER THE STRUCTURE BEING CROSSED.
    - ALL STEEL PIPEWORK SHALL BE FABRICATED AND PROTECTED IN ACCORDANCE WITH SA WATER REQUIREMENTS.
    - THE SLEEVE SHALL BE GRP, BUTT WELDED PE OR STEEL OF A PN RATING APPROPRIATE TO THE GROUND CONDITIONS. A STEEL SLEEVE SHALL REQUIRE CATHODIC PROTECTION.
    - PIPE SPACERS SHALL BE UTILISED WITHIN THE SLEEVE PIPE.
    - WHERE BORE HOLE ANNULUS > 50, SLEEVE VOID SHALL BE GROUTED WITH A FLOWABLE GROUT, (EG. LIQUAFILL OR BENTONITE).
    - ENSURE GROUTING PRESSURES DO NOT EXCEED THE BUCKLING CAPABILITY OF THE PIPE WHEN EMPTY.
    - ONLY A SA WATER APPROVED CONTRACTOR CAN UNDERTAKE THE BORE. THE NAME OF THE CONTRACTOR SHALL BE SUBMITTED TO THE SA WATER REPRESENTATIVE FOR APPROVAL PRIOR TO COMMENCEMENT. SA WATER RESERVES THE RIGHT TO REJECT THE NOMINATED CONTRACTOR.

TABLE 4

WATER PIPE / BORED ENCASING SIZES					
WATER PIPE (DN)	100	150	225	300	375
BORED ENCASING PIPE MIN (DN)	300	375	425	500	575

18. NON DRINKING CONNECTION AND WATER METER INSTALLATIONS
    - NON DRINKING WATER MAINS TAPPING AND CONNECTION PIPE SHALL BE LAID IN ACCORDANCE WITH WSCM SECTION 6.
    - ALL MATERIALS SHALL COMPLY WITH TS 0503.
    - FOR ALL NDW PE CONNECTION PIPE, METALLIC LOCATION TAPE SHALL BE PLACED IN THE TRENCH APPROXIMATELY 150 ABOVE THE PIPE.
    - FOR NDW METER INSTALLATION DETAILS REFER WSCM DRAWINGS 4005-30008-09 TO 4005-30008-12.
    - ALL METER INSTALLATIONS (WATER METER AND FITTINGS) SHALL BE PAINTED LILAC P23 (AS2700).

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REVISION PANEL

REV	DATE	DRN	DETAILS	APR
2	10/11/16	PC	NOTE 18 ADDED	
1	31/03/16	MS	2016 STANDARDS REVIEW	TG

CURRENT REV 16/12/16
AUTHORISED: T. GALEK
SIGNATURE: T. Galek

DESIGN PANEL

DESIGNED:	28/09/15	AUTHORISED:	31/06/16
	RJP		T.GALEK
DRAWN:	16/11/15	SIGNATURE:	
	MS		ORIGINAL SIGNED
REVIEWED:	21/03/16		
	TG		

Government of South Australia
SA Water

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SA WATER STANDARD DRAWINGS
WATER SUPPLY CONSTRUCTION MANUAL
GENERAL NOTES
SHEET 2 OF 3

A3 SHT SIZE | 2 REVISION
TOTAL SHEETS: 3
SUPERSEDES:
DRAWING NUMBER
4005-30002-02
PREFIX NUMBER SHEET