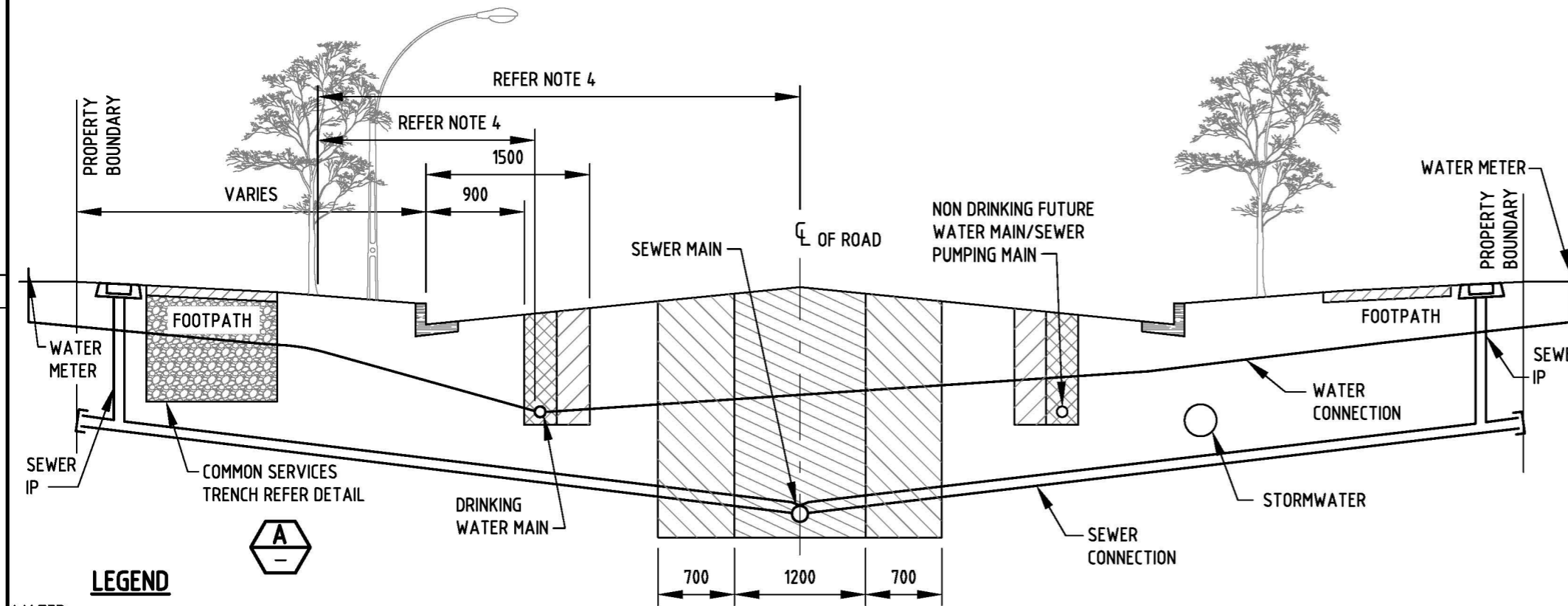
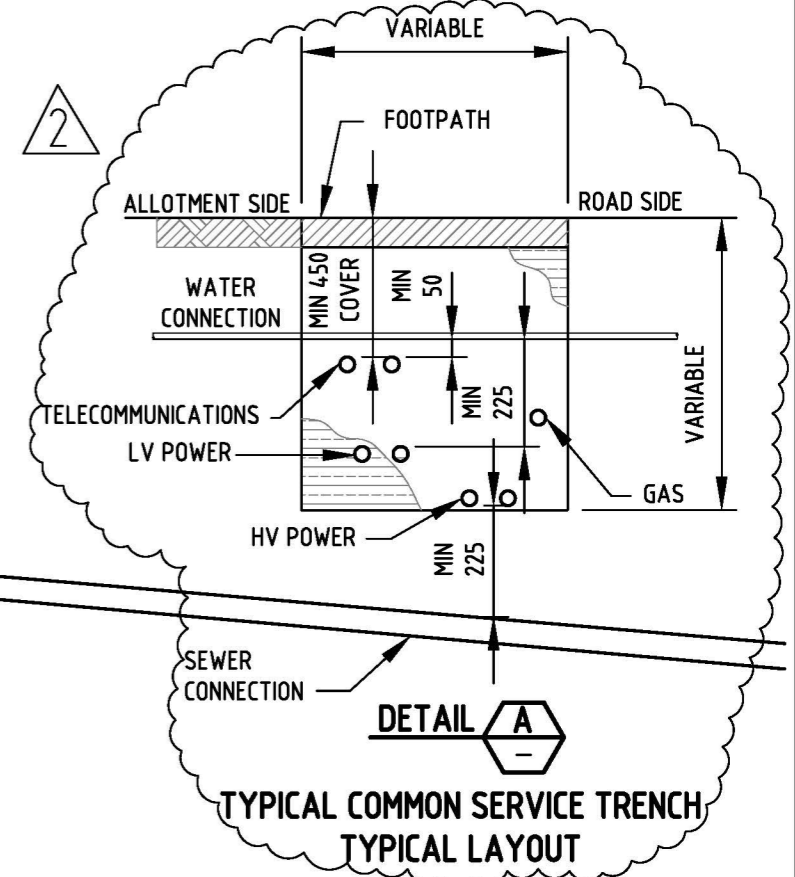


NARROW ROAD WITH SINGLE FOOTPATH



CONVENTIONAL ROAD WITH DOUBLE FOOTPATH

- LEGEND**
- WATER
 - BAND WIDTH FOR WATER MAINS
 - ADDITIONAL BAND WIDTH FOR WATER MAINS IN WIDER CARRIAGEWAYS (7.0M AND GREATER) TO INCREASE CLEARANCE FROM KERB FACE
 - SEWER
 - BAND WIDTH FOR SEWER MAINS
 - ADDITIONAL BAND WIDTH FOR SEWER MAINS IN WIDER CARRIAGEWAYS (ACCESS CHAMBERS MAY EXTEND INTO THIS BAND)



TYPICAL COMMON SERVICE TRENCH TYPICAL LAYOUT

REFER CONSULTANT DESIGN DRAWINGS FOR ARRANGEMENT FOR EACH DEVELOPMENT

NOTES:

1. REFER 4005-30002-01 TO 4005-30002-04 FOR GENERAL NOTES AND DESIGN GUIDELINES.
2. THIS DRAWING SHOULD BE CONSIDERED TOGETHER WITH THE 'SERVICES IN STREET CODE'.
3. THE OPTION OF LOCATING THE NON DRINKING WATER PIPE ON THE SAME SIDE OF THE ROAD AS THE DRINKING WATER PIPE IS ONLY PERMITTED WHERE THE NON DRINKING WATER PIPE IS AN SA WATER ASSET.
4. COMMON SERVICES TRENCH ARRANGEMENT VARIABLE. REFER CONSULTANT DESIGN DRAWINGS FOR DETAIL.
5. THE DESIGNER SHOULD ENSURE THAT THE MINIMUM VERTICAL CLEARANCE BETWEEN ELECTRICAL CABLES IN THE CST AND THE SEWER CONNECTION IS ACHIEVED. THE LEVEL OF THE ELECTRICAL CABLES MAY IMPACT THE CONNECTION DEPTH AND SEWER MAIN INVERT LEVEL.
6. REFER WSA 03 - 2011, TABLE 5.5 FOR MINIMUM HORIZONTAL AND VERTICAL CLEARANCE REQUIREMENTS FROM WATER INFRASTRUCTURE.
7. FOR THE SEPARATION DISTANCE BETWEEN TREES AND CONNECTIONS REFER 4005-30004-04.
8. ALL DIMENSIONS IN MILLIMETRES.

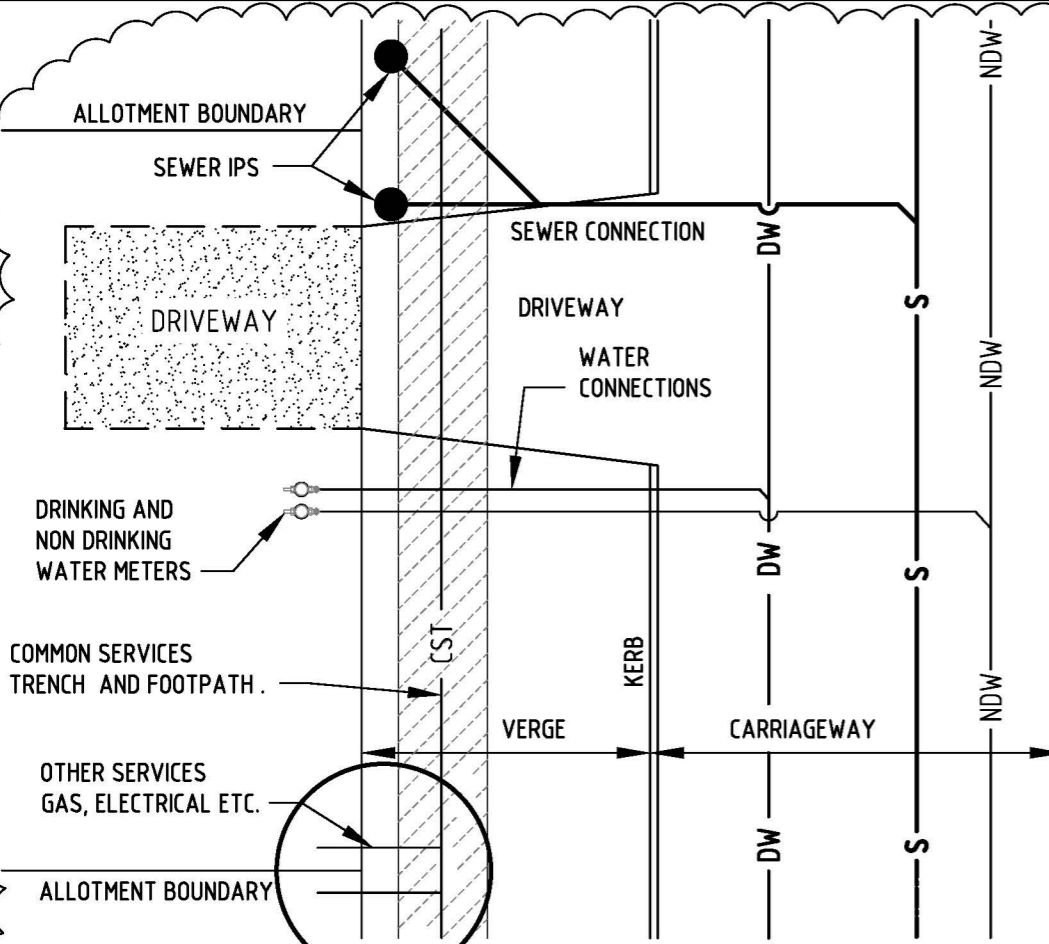
REVISION PANEL				
REV	DATE	DRN	DETAILS	APR
2	22/09/17	RP	DETAIL A AND NOTES REVISED. DETAIL B REMOVED.	TG
1	31/03/16	MS	2016 STANDARDS REVIEW	TG

DESIGN PANEL	
DESIGNED: 28/09/2015 RJP	AUTHORISED: 31/03/16 T.GALEK
DRAWN: 16/11/2015 MS	SIGNATURE:
REVIEWED: 21/03/2016 TG	ORIGINAL SIGNED

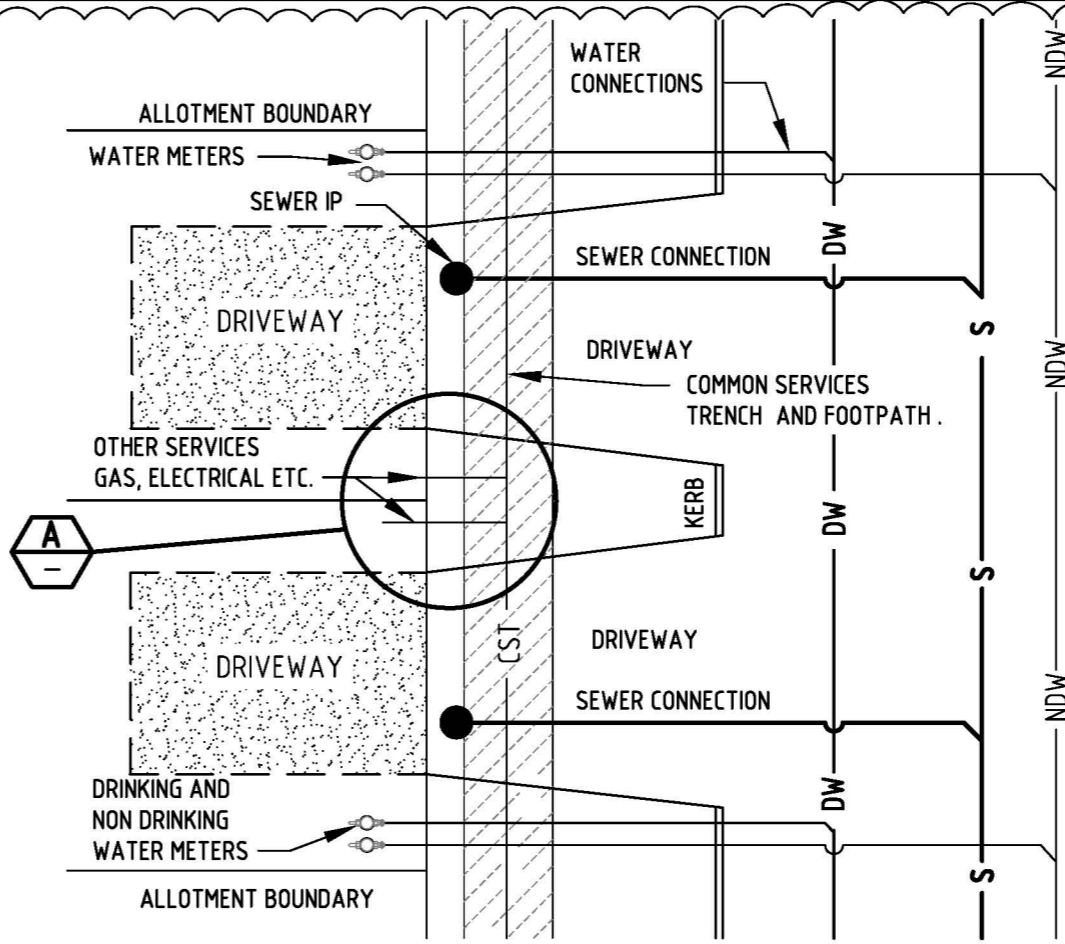
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SA WATER STANDARD DRAWINGS
WATER SUPPLY CONSTRUCTION MANUAL
ALLOCATION OF SPACE FOR SERVICES IN
NEW LAND DIVISIONS
TYPICAL STREET LAYOUT

A3	2
SHT SIZE	REVISION
TOTAL SHEETS:	
SUPERSEDES: 91-0084-01 (D1)	
DRAWING NUMBER	
4005-30004-01	
PREFIX	NUMBER SHEET

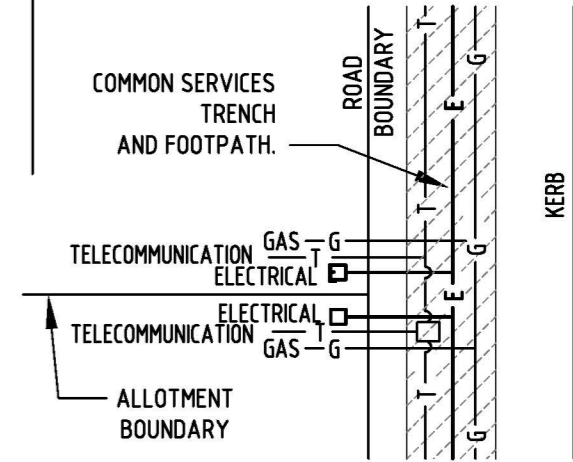


ALLOTMENT WIDTH > 8 METRES



ALLOTMENT WIDTH < 8 METRES

TYPICAL CONNECTION LAYOUTS
NTS



DETAIL A

CST CONNECTIONS
TYPICAL LAYOUT

CONNECTIONS POSITIONS SUMMARY		
LOT WIDTH	DRINKING AND NON DRINKING WATER	SEWER
GENERAL	STANDARD CONNECTION POSITIONS AS SHOWN. THE STANDARD WATER METER ASSEMBLY IS ABOVE GROUND. SA WATER APPROVAL IS REQUIRED FOR: • AN ALTERNATIVE LOCATION • USE OF THE NO. 2 METER BOX IN LIEU OF THE ABOVE GROUND LOCATION. FOR LOCATION OF NON DRINKING WATER CONNECTION REFER 4005-30004-03, NOTE 6.	STANDARD POSITIONS REFER 4005-30004-03 AND SCM, SECTION 6. • BOTH THE 'Y' & SINGLE CONNECTIONS ARE STANDARD. • SINGLE CONNECTIONS SHALL BE ON LOW SIDE OF ALLOTMENT UNLESS IT IS IMPRACTICAL. • OBSTRUCTIONS OR EXISTING DRAINS MAY REQUIRE AN ALTERNATIVE LOCATION TO THE STANDARD. • FOR NON STANDARD POSITION, DETAILS SHALL BE PROVIDED TO SA WATER REPRESENTATIVE FOR APPROVAL.
> 8 METRES	CENTRAL, (APPROXIMATE MIDDLE OF THE ALLOTMENT).	ADJACENT SIDE BOUNDARY 'GENERALLY Y' CONNECTION
< 8 METRES	ADJACENT SIDE BOUNDARY (OPPOSITE BOUNDARY TO GAS, ELECTRICAL ETC). EXTERNAL TO DRIVEWAY LIMITS.	'Y' CONNECTION GENERALLY USED WHERE SINGLE WATER CONNECTION. SINGLE SEWER CONNECTION USED WHERE DUAL WATER CONNECTIONS. CAN BE WITHIN DRIVEWAY.
< 5 METRES	ADJACENT SIDE BOUNDARY (OPPOSITE BOUNDARY TO GAS, ELECTRICAL ETC). EXTERNAL TO DRIVEWAY LIMITS. WHERE SPACE IS LIMITED AND COMPLIANCE WITH THIS REQUIREMENT IS DIFFICULT THE CONSULTANT SHALL ENGAGE WITH SA WATER TO AGREE ON A PERMISSIBLE LOCATION. 400 DIMENSION FROM SIDE BOUNDARY MAY BE REDUCED TO 200 WHERE JUSTIFIED.	LOCATION CAN BE VARIABLE ALONG FRONT BOUNDARY. CAN BE WITHIN DRIVEWAY.

NOTES:

- REFER 4005-30002-01 TO 4005-30002-04 FOR GENERAL NOTES.
- REFER 4005-30004-01 TO 4005-30004-04 FOR DETAILS OF THE STANDARD 'DEFAULT' SA WATER MAIN AND CONNECTION POSITIONS INCLUDING DIMENSIONS FROM BOUNDARIES.
- REFER WSCM SECTION 6 AND SCM SECTION 6 FOR GENERAL CONNECTIONS REQUIREMENTS.
- REFER THE DESIGN DRAWINGS FOR DESIGNED LOCATIONS OF THE CONNECTIONS.

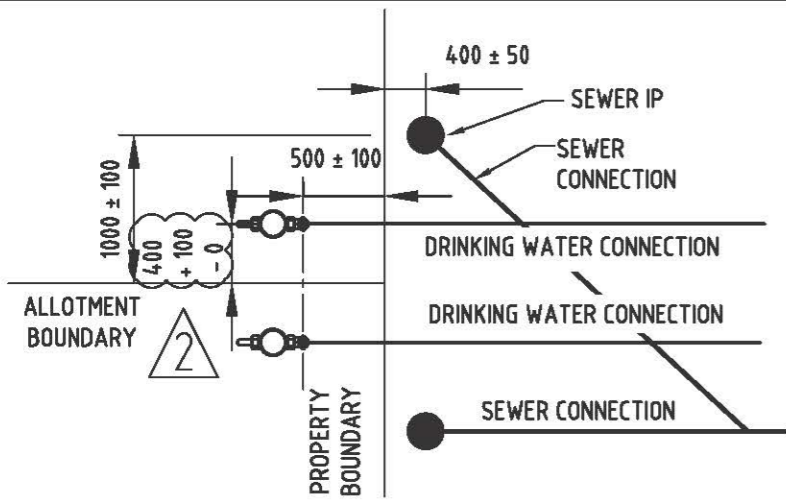
REVISION PANEL			
REV	DATE	DRN	DETAILS
2	22/09/17	RP	NEW INFORMATION PROVIDED
1	31/03/16	MS	2016 STANDARDS REVIEW

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

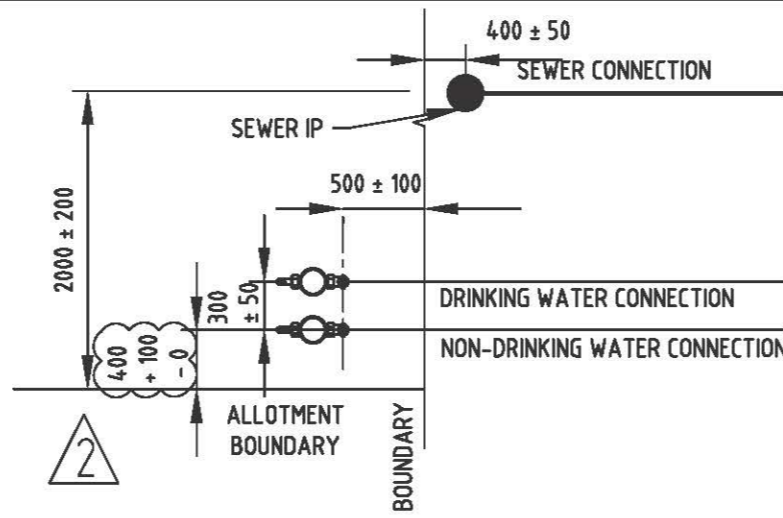
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SA WATER STANDARD DRAWINGS
 WATER SUPPLY CONSTRUCTION MANUAL
 ALLOCATION OF SPACE FOR SERVICES
 IN NEW LAND DIVISIONS
STANDARD CONNECTION LAYOUT SHEET 1

A3	2
SHT SIZE	REVISION
TOTAL SHEETS:	
SUPERSEDES: D4, D5	
DRAWING NUMBER	
4005-30004-02	
PREFIX	NUMBER SHEET

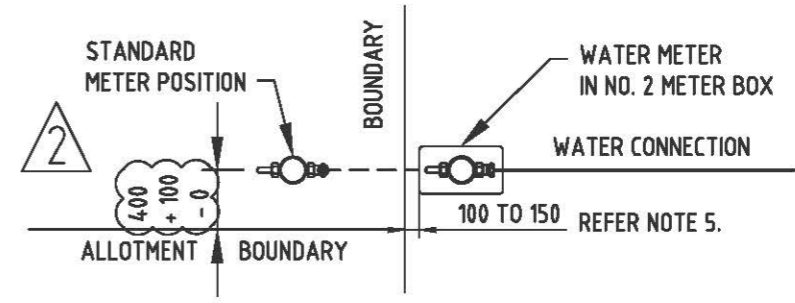


SINGLE WATER CONNECTION



DUAL WATER CONNECTIONS

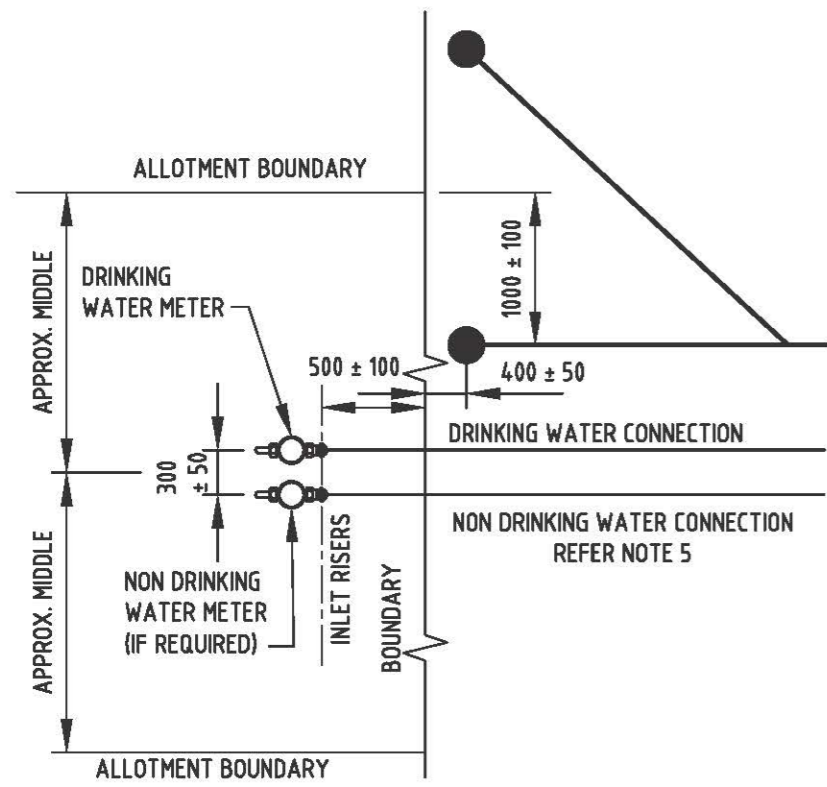
STANDARD CONNECTIONS LAYOUT FOR ALLOTMENTS < 8 m WIDE
NO PIT OR PILLAR ADJACENT SIDE BOUNDARY



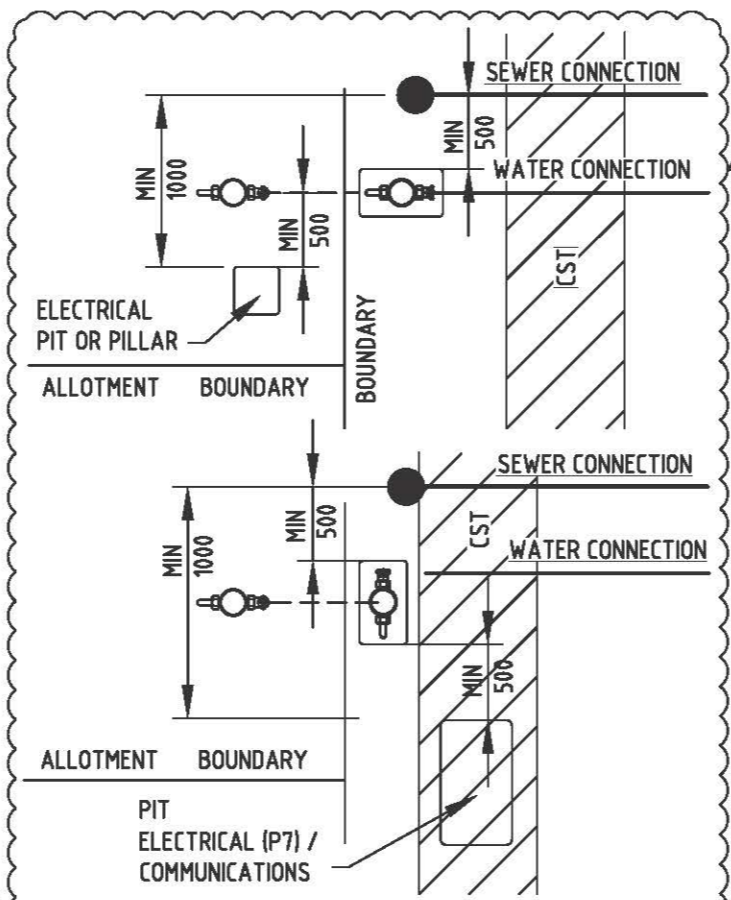
POSITION OF NO. 2 METER BOX (WHEN APPROVED)

NOTES:

- REFER 4005-30002-01 TO 4005-30002-04 FOR GENERAL NOTES AND DESIGN CONSIDERATIONS.
- REFER 4005-30004-01 TO 4005-30004-04 FOR DETAILS OF THE STANDARD 'DEFAULT' SA WATER MAIN AND CONNECTION POSITIONS INCLUDING DIMENSIONS FROM BOUNDARIES.
- REFER WSCM SECTION 6 AND SCM SECTION 6 FOR GENERAL CONNECTIONS REQUIREMENTS.
- REFER THE DESIGN DRAWINGS FOR DESIGNED LOCATIONS OF THE CONNECTIONS.
- WHERE THE NO. 2 METER BOX IS PROPOSED AS AN ALTERNATIVE TO THE ABOVE GROUND METER POSITION, SPECIFIC APPROVAL IS REQUIRED. THE CONSULTANT IS REQUIRED TO PROVIDE APPROPRIATE DETAIL ON THE DESIGN DRAWINGS TO ENABLE SA WATER TO ASSESS THE JUSTIFICATION OF THIS OPTION.
- NON DRINKING WATER CONNECTION & METER **SHALL BE POSITIONED TO THE LEFT OF DRINKING WATER CONNECTION** WHEN VIEWED FROM ROADWAY.
- FOR DUAL RETICULATION SYSTEMS (DRINKING WATER & NON DRINKING WATER) THE LOCATIONS AND CLEARANCES SHOWN ON THIS DRAWING SHALL BE ADHERED TO REGARDLESS OF WHETHER THE NON DRINKING WATER SYSTEM SCHEME IS SA WATER OR PRIVATELY OPERATED.
- WHERE POSITIONAL TOLERANCES (+/-) ARE SHOWN, THE TOLERANCE ALLOWS FOR CONSTRUCTION DIFFICULTIES ASSOCIATED WITH THE FINISHED POSITION OF THE CONNECTION OR METER. THE TOLERANCE SHALL NOT BE UTILISED BY THE DESIGNER.
- A TOLERANCE OF - 0 **SHALL DESIGNATE THE PIPE OR METER SHALL NOT BE CLOSER TO THE BOUNDARY THAN THE SPECIFIED OFFSET.**
- WHERE A PIT OR PILLAR IS REQUIRED ADJACENT THE SIDE BOUNDARY, CLEARANCE TO THE SA WATER CONNECTIONS SHALL BE IN ACCORDANCE WITH THIS DRAWING.
- PIT CLEARANCES SHALL GENERALLY BE - WATER 500 ; SEWER 1000. WHERE THERE IS BOTH WATER AND SEWER TOGETHER, 500 CLEARANCE FROM THE NO 2 BOX SHALL BE THE OVERRIDING MEASUREMENT.
- A PIT, PILLAR OR ELECTRICAL CONDUIT **SHALL NOT BE DESIGNED WITHIN THE LIMITS OF A 'Y' SEWER CONNECTION. IN SUCH AN INSTANCE SINGLE CONNECTIONS SHALL BE REQUIRED.**
- SHOULD THE WATER DESIGN PRECEDE THE ELECTRICAL DESIGN, AND A DESIGNED PIT OR PILLAR IMPACT A CONSTRUCTED WATER CONNECTION, **A NEW WATER CONNECTION SHALL BE CONSTRUCTED. THE RELOCATION SHALL COMPLY WITH THE CLEARANCES SHOWN HEREIN AND SHALL INCLUDE A NEW TAPPING OFF THE WATER MAIN.** REQUIREMENTS SHALL BE:
 - A NEW TAPPING SADDLE BEING INSTALLED ON THE NEW WATER MAIN WITH THE MINIMUM SPACING BETWEEN FITTINGS BEING COMPLIANT WITH 4005-30006-01.
 - THE OFFTAKE ON THE DISUSED PRETAPPED CONNECTOR OR TAPPING SADDLE SHALL BE PLUGGED,
 - THE AS CONSTRUCTED DRAWING SHALL BE UPDATED TO DESIGNATE THE RELOCATED OFFTAKE CHAINAGE.
- WHERE THE CST IS IN CLOSE PROXIMITY OF THE FRONT BOUNDARY, THE NO 2 METER BOX SHALL BE ROTATED 90°.
- WHERE THERE IS DUAL RETICULATION SYSTEMS (AND TWO BOXES), THE DESIGNER SHALL TAKE INTO CONSIDERATION ADDITIONAL SPACE REQUIRED TO ACCOMMODATE THE BOXES IN THE DIFFERENT ORIENTATION.
- ALL DIMENSIONS IN MILLIMETRES.
- ALL ILLUSTRATIONS NOT TO SCALE.




STANDARD CONNECTIONS LAYOUT FOR ALLOTMENTS > 8m WIDE
NOTE: A SINGLE WATER CONNECTION SHALL BE IN THE APPROXIMATE MIDDLE POSITION



CLEARANCES - PITS ADJACENT CONNECTIONS (RESULTING IN NON-STANDARD POSITIONS)

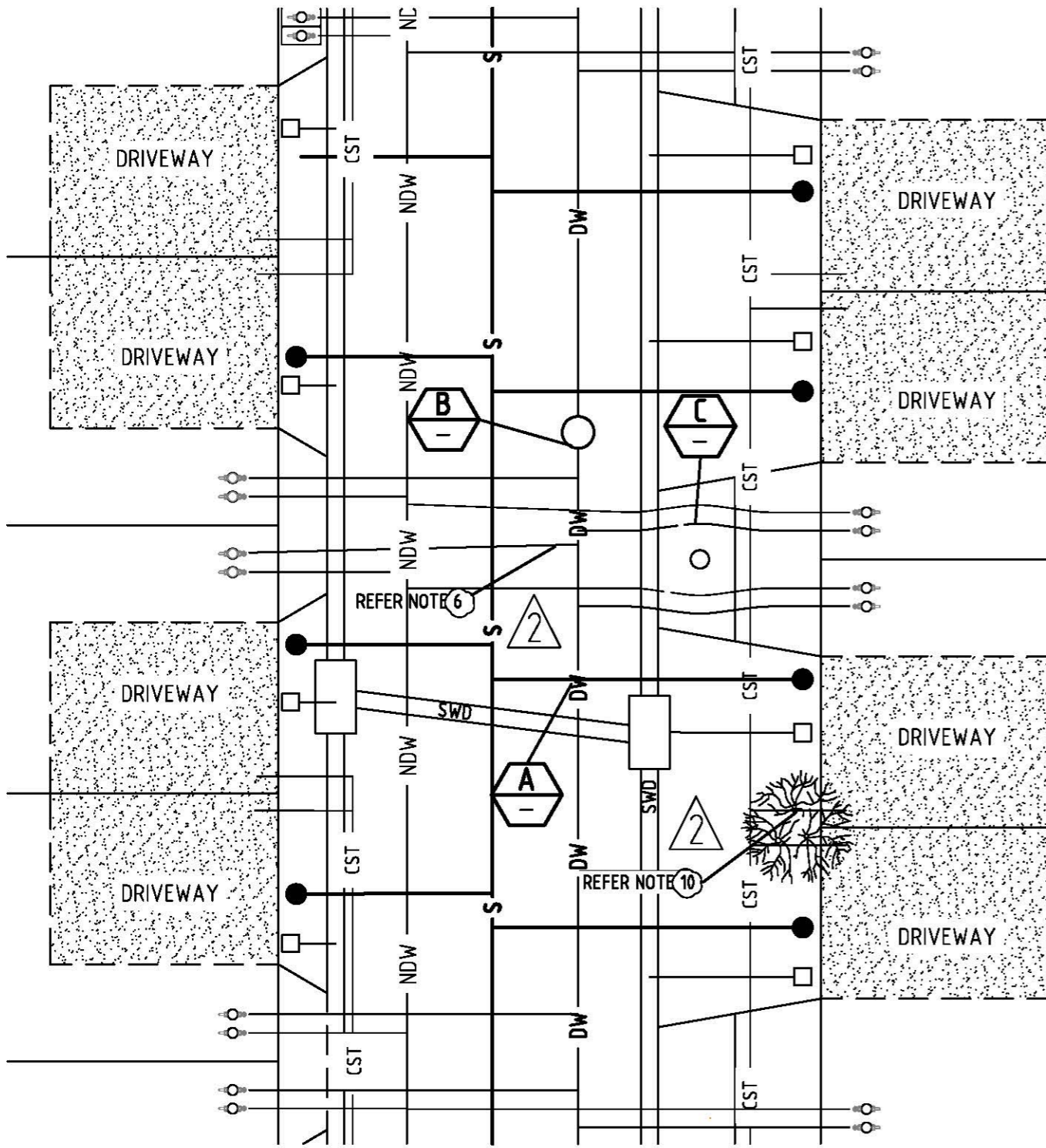
REVISION PANEL				
REV	DATE	DRN	DETAILS	APR
3	09/07/18	RP	NOTES 9 - 14 & PITS CLEARANCES ADDED.	MA
2	22/09/17	RP	LAYOUTS COMBINED TO SAME DRAWING	TG
1	31/03/16	MS	2016 STANDARDS REVIEW	TG

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

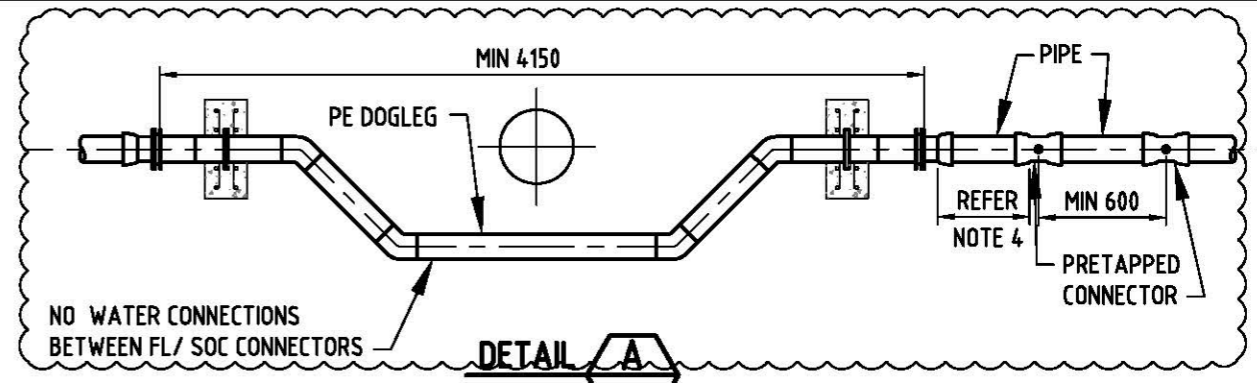

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SA WATER STANDARD DRAWINGS
WATER SUPPLY CONSTRUCTION MANUAL
 ALLOCATION OF SPACE FOR
SERVICES IN LAND DIVISIONS
STANDARD CONNECTION LAYOUT SHEET 2

A3	3
SHT SIZE	REVISION
TOTAL SHEETS: 4	
SUPERSEDES:	
DRAWING NUMBER	
4005-30004-03	
PREFIX	NUMBER SHEET



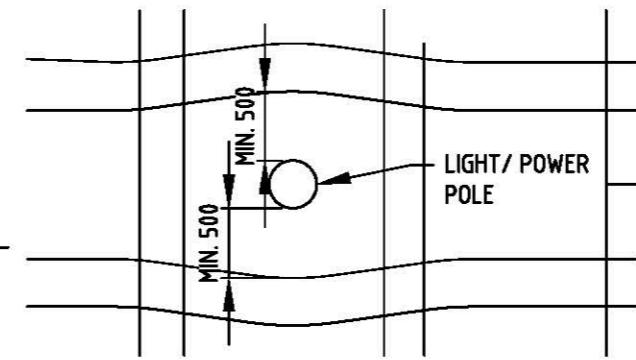
TYPICAL SERVICING ARRANGEMENT



DETAIL A
NTS

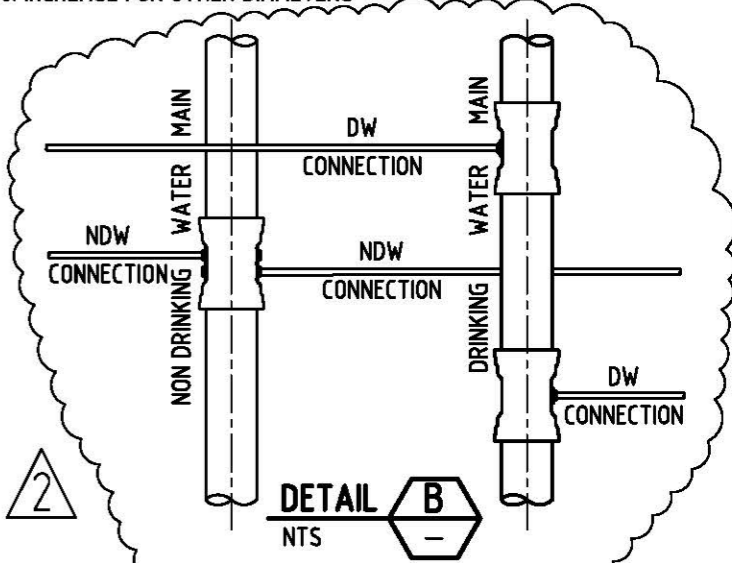
DOGLEG WITH PRETAPPED CONNECTOR

NOTE: LENGTHS BASED UPON DN 100. INCREASE FOR OTHER DIAMETERS



DETAIL C
NTS

CONNECTIONS ADJACENT POLE



DETAIL B
NTS

DUAL SYSTEM CONNECTIONS

REFER NOTE 7

NOTES:

1. REFER 4005-30002-01 TO 4005-30002-04 FOR GENERAL NOTES.
2. REFER 4005-30004-01 TO 4005-30004-04 FOR DETAILS OF THE STANDARD 'DEFAULT' SA WATER MAIN AND CONNECTION POSITIONS INCLUDING DIMENSIONS FROM BOUNDARIES.
3. REFER WSCM SECTION 6 AND SCM SECTION 6 FOR GENERAL CONNECTIONS REQUIREMENTS.
4. REFER 4005-30002-02, TABLE 1 FOR MINIMUM PIPE LENGTH.
5. REFER THE DESIGN DRAWINGS FOR DESIGNED LOCATIONS OF THE CONNECTIONS.
6. CONNECTIONS SHALL BE PERPENDICULAR TO THE WATER MAIN ± 5°. REFER 4005-30002-03, NOTE 2.
7. FOR DUAL RETICULATION SYSTEMS THE CONNECTION PIPES FOR THE DIFFERENT SYSTEMS SHALL NOT CROSS.
8. WHERE A DOGLEG IS NOT USED FOR AN AUTHORITY PIPE CROSSING REFER 4005-30002-01, TABLE 2 FOR MINIMUM PIPE COVER.
9. THE MINIMUM SEPARATION DISTANCE BETWEEN A LIGHT/ POWER POLE AND WATER CONNECTION PIPE SHALL BE ADHERED TO IN ALL CIRCUMSTANCES. REFER DETAIL C.
10. FOR THE SEPARATION DISTANCE BETWEEN TREES AND SEWER CONNECTIONS REFER WATER INDUSTRY REGULATIONS 2012, PART 4.
3500 (SCHEDULE 3 TREES)
2000 (SCHEDULE 2 TREES)
REFER SCHEDULES FOR TREE SPECIES.
WATER CONNECTIONS DISTANCE SHALL BE 1000.
11. THE CONSULTANT DESIGN DRAWINGS SHALL INCLUDE THE LOCATION OF ALL TREES TOGETHER WITH A NOTE CONFIRMING THE TREE SCHEDULE.
12. ALL DIMENSIONS IN MILLIMETRES.

REVISION PANEL			
REV	DATE	DRN	DETAILS
2	02/08/18	RP	CHANGES AS SHOWN
1	22/09/17	RP	NEW DRAWING

DESIGN PANEL			
DESIGNED:	31/08/17	AUTHORISED:	05/10/17
RJP		T. GALEK	
DRAWN:	31/08/17	SIGNATURE:	
RP			
REVIEWED:	31/08/17	ORIGINAL SIGNED	
TG			

SA WATER STANDARD DRAWINGS
WATER SUPPLY CONSTRUCTION MANUAL
ALLOCATION OF SPACE
FOR SERVICES IN LAND DIVISIONS
DESIGN DRAWING CONSIDERATIONS

A3	2
SHT SIZE	REVISION
TOTAL SHEETS: 4	
SUPERSEDES:	
DRAWING NUMBER	
4005-30004-04	
PREFIX	NUMBER SHEET