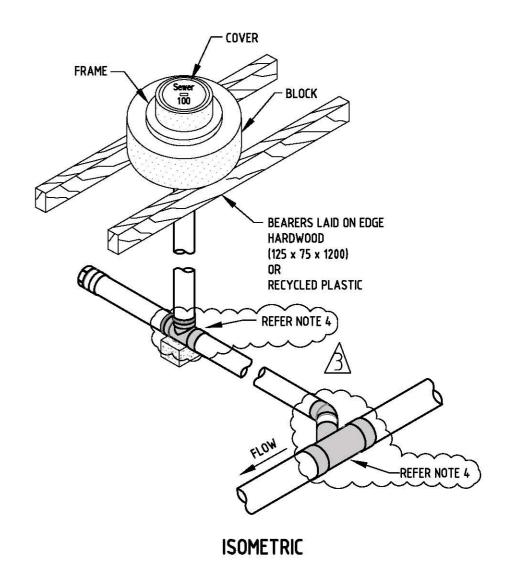


ELEVATION

TABLE 1

| INSPECTION POIN | T DEPTH TABLE | |
|----------------------------|---------------|------|
| CATEGORY | MIN | MAX |
| RESIDENTIAL (ROAD RESERVE) | 1400 | 2600 |
| RESIDENTIAL (EASEMENT) | 800 | 2600 |
| INDUSTRIAL / COMMERCIAL | 1400 | 3500 |

| COVER & FRAME FINISHED TOLERANCE | |
|---|---------------------|
| LOCATION | TOLERANCE |
| WITHIN ROAD RESERVE, FOOTPATH, DRIVEWAY, VERGE AREAS ETC. | + 10 HIGH -5 LOW |
| WITHIN PRIVATE PROPERTY, SEALED AND TRAFFICABLE AREAS SUBJECT TO VEHICLE OR PEDESTRIAN TRAFFIC | + 15 HIGH -5 LOW |
| WITHIN PRIVATE PROPERTY, UNSEALED AREAS,(E.G. GARDEN ETC.) SUBJECT TO OCCASIONAL TRAFFIC (VEHICLE OR PEDESTRIAN) | + 20 HIGH -5 LOW |



NOTES:

<u>3</u>\

- 1. REFER 4005-20002-01 TO 4005-20002-03 FOR GENERAL NOTES.
- 2. REFER 4005-20006-03 FOR TYPICAL SEWER CONNECTION DETAILS.
- 3. DURING COMPACTION OF THE CONCRETE BLOCK, THE COVER & FRAME SHALL BE REMOVED.
 THE CONTRACTOR SHALL ENSURE THE BLOCK DOES NOT MOVE TO IMPEDE FUTURE ACCESS
 TO THE THREADED CAP.

. (ALL FITTINGS IDENTIFIED BY SHADING SHALL BE A 'REINFORCED' FITTING. REFER TS 0502 (3.2.1.1.

- 5. REFER SECTION 6 FOR MORE ALTERNATIVES TO THE STANDARD CONNECTION ASSEMBLY.
- 6. WHERE THE CONNECTION DEPTH DOES NOT COMPLY WITH TABLE 1, SPECIFIC APPROVAL IS REQUIRED. THE CONSULTANT SHALL PROVIDE APPROPRIATE DETAIL ON THE DESIGN DRAWINGS TO ENABLE SA WATER TO ASSESS THE OPTION.
- 7. ALL DIMENSIONS IN MILLIMETRES.

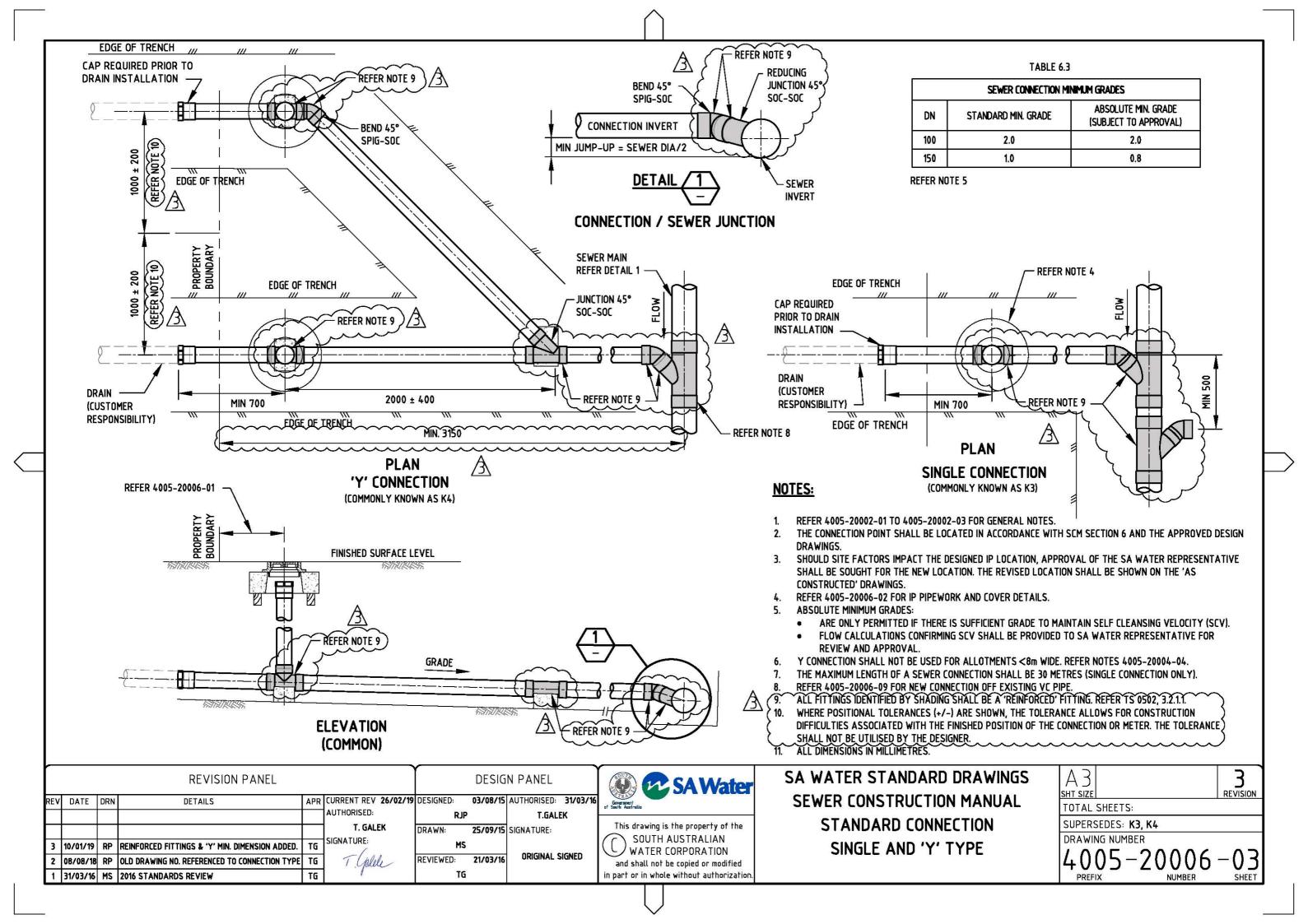
| | REVISION PANEL | | | | | DESIGN PANEL | | | |
|-----|----------------|-----|---|-----|----------------------|--------------|----------|----------------------|--|
| REV | DATE | DRN | DETAILS | APR | CURRENT REV 26/02/19 | DESIGNED: | 03/08/15 | AUTHORISED: 31/03/16 | |
| | | | | | AUTHORISED: | RJP | | T.GALEK | |
| | | | | | T. GALEK | DRAWN: | 25/09/15 | SIGNATURE: | |
| 3 | 10/01/19 | PH | REINFORCED FITTINGS CHANGES WHERE INDICATED | TG | SIGNATURE: | MS | | | |
| 2 | 08/08/18 | RP | TABLE 2 ADDED; TABLE 1 AMENDED | TG | T. Cplele | REVIEWED: | 21/03/16 | ORIGINAL SIGNED | |
| 1 | 31/03/16 | MS | 2016 STANDARDS REVIEW | TG | / | TG | | | |

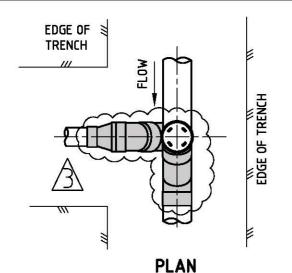


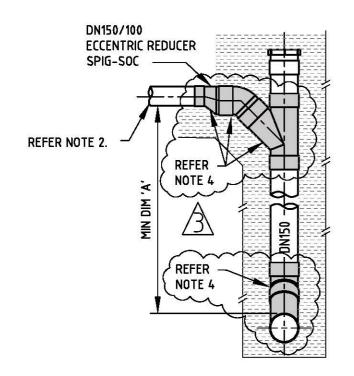
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SA WATER STANDARD DRAWINGS
SEWER CONSTRUCTION MANUAL
INSPECTION POINT
TYPICAL DETAILS

| 3 SIZE | | | 3 REVISI | ON |
|-----------|----------------------|--|--|--|
| AL SHEET | S: G | | | |
| ERSEDES: | 94-0164 | -02 (K2) | | |
| WING NUM | 1BER | | | |
| 005 | -20 | 006 | -0 | 2 |
| | AL SHEET ERSEDES: | AL SHEETS: G ERSEDES: 94-0164 WING NUMBER $005-20$ | AL SHEETS: G ERSEDES: 94-0164-02 (K2) WING NUMBER 005-2006 | AL SHEETS: G ERSEDES: 94-0164-02 (K2) WING NUMBER 005-2006-0 |





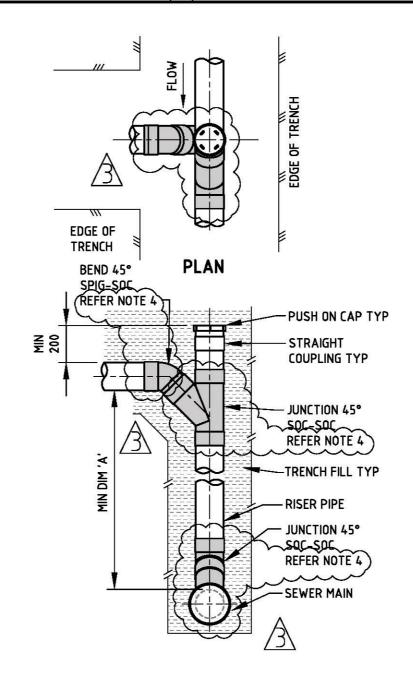


ELEVATION

RISER FOR DN 100 SINGLE CONNECTION

(COMMONLY KNOWN AS K5)

| DROP DIMENSIONS | | | | | | |
|-----------------|---------|---------|--|--|--|--|
| DN | MIN 'A' | MIN 'B' | | | | |
| 100 | 600 | 450 | | | | |
| 150 | 600 | 450 | | | | |

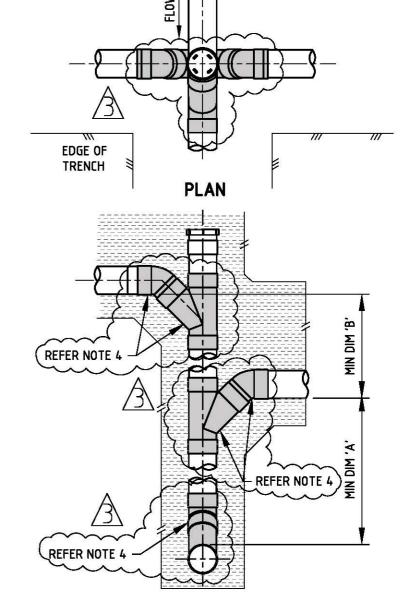


ELEVATION

RISER FOR DN 150 SINGLE CONNECTION

(COMMONLY KNOWN AS K5)

NOTES:



ELEVATION

RISER FOR DUAL CONNECTION

(COMMONLY KNOWN AS K5)

- REFER 4005-20002-01 TO 4005-20002-03 FOR GENERAL NOTES.
- REFER 4005-20006-03 FOR TYPICAL SEWER CONNECTION DETAILS.
- REFER SECTION 6 FOR MORE ALTERNATIVES TO THE STANDARD CONNECTION ASSEMBLY. ALL FITTINGS IDENTIFIED BY SHADING SHALL BE A REINFORCED FITTING. REFER TS 0502, 3.2.1.1.

 ALL DIMENSIONS IN MILLIMETRES.

| | | | REVISION PANEL | | | | DESIG | N PANEL |
|-----|----------|-----|---|-----|----------------------|-----------|----------|----------------------|
| REV | DATE | DRN | DETAILS | APR | CURRENT REV 26/02/19 | DESIGNED: | 03/08/16 | AUTHORISED: 31/03/10 |
| | | | | | AUTHORISED: | RJP | | T.GALEK |
| | | | | | T. GALEK | DRAWN: | 25/09/15 | SIGNATURE: |
| 3 | 10/01/19 | RP | REINFORCED FITTINGS ADDED WHERE INDICATED | | SIGNATURE: | MS | | |
| 2 | 08/08/18 | RP | OLD DRAWING NO ADDED TO CONNECTION TYPE | TG | T. Cplele | REVIEWED: | 21/03/16 | ORIGINAL SIGNED |
| 1 | 31/03/16 | MS | 2016 STANDARDS REVIEW | TG | 1 | TG | | |

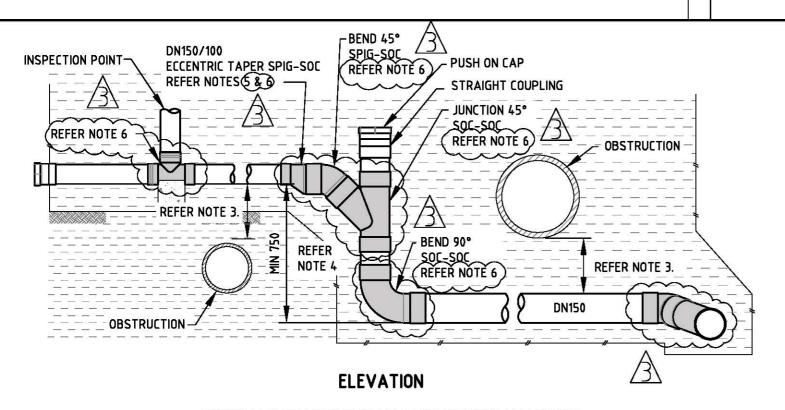


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| | 250 |
|-----------------------------|---------------|
| A3 | 3 REVISION |
| TOTAL SHEETS: T. GALEK | |
| SUPERSEDES: 94-0164-05 (K5) | |
| DRAWING NUMBER | |
| 4005-20006 | -04 |

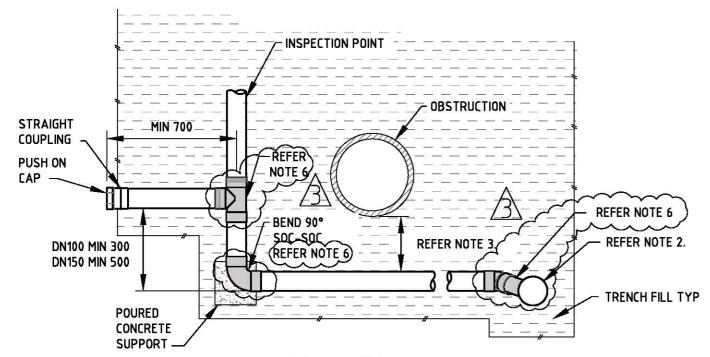
EDGE OF

TRENCH



DOUBLE OBSTRUCTION WITH INTERMEDIATE RISER

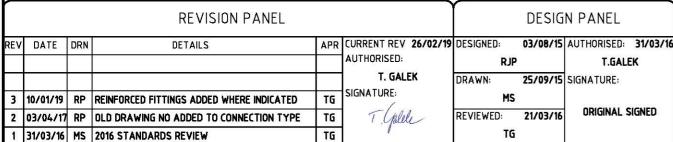
(COMMONLY KNOWN AS K7)



ELEVATION

SINGLE OBSTRUCTION

(COMMONLY KNOWN AS K6)





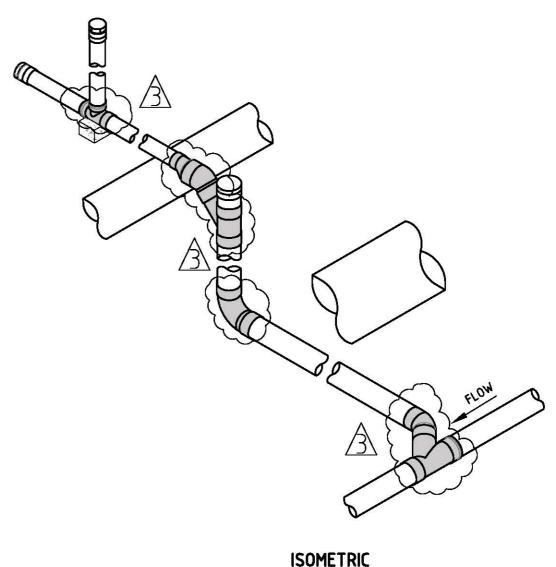
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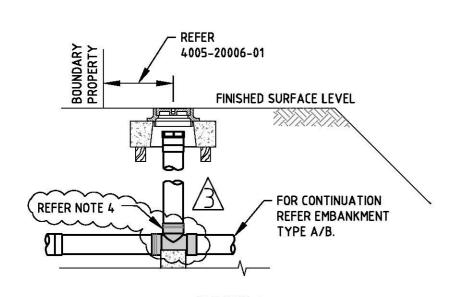
- 1. REFER 4005-20002-01 TO 4005-20002-03 FOR GENERAL NOTES.
- 2. REFER 4005-20006-03 FOR TYPICAL SEWER CONNECTION DETAILS.
- 3. REFER WSA02 TABLE 5.4 FOR MINIMUM CLEARANCE DIMENSION FROM OBSTRUCTION.
- 4. AN INTERMEDIATE RISER SHALL ONLY BE USED WHERE OBSTRUCTIONS PRECLUDE THE USE OF A STANDARD CONNECTION. THE USE OF AN INTERMEDIATE RISER SHALL BE APPROVED BY THE SA WATER REPRESENTATIVE.
- FOR A DN150 CONNECTION USING THE INTERMEDIATE RISER OPTION, THE ECCENTRIC TAPER IS NOT REQUIRED.
- 6. ALL FITTINGS IDENTIFIED BY SHADING SHALL BE A 'REINFORCED' FITTING. REFER TS 0502
 3,2.1,1.
- 7. ALL DIMENSIONS IN MILLIMETRES.

SA WATER STANDARD DRAWINGS
SEWER CONSTRUCTION MANUAL
PROPERTY CONNECTION
WITH INTERMEDIATE RISER

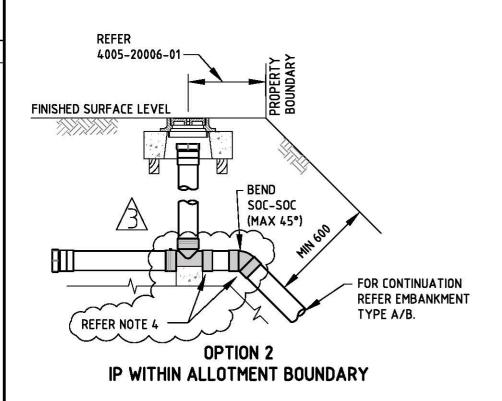
NOTES:

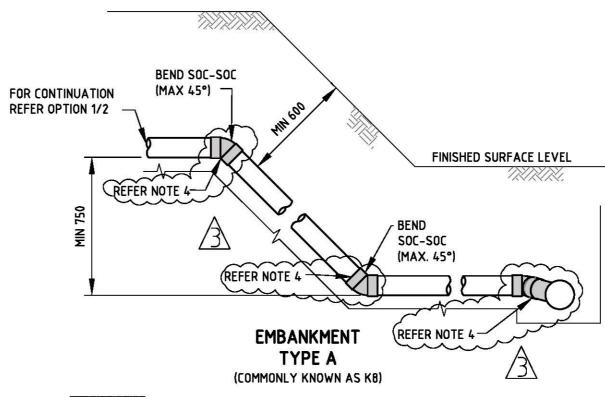
| | 2188 |
|--------------------|---------------|
| A3 | 3 REVISION |
| TOTAL SHEETS: | |
| SUPERSEDES: K6, K7 | |
| DRAWING NUMBER | |
| 4005-20006 | -05 |

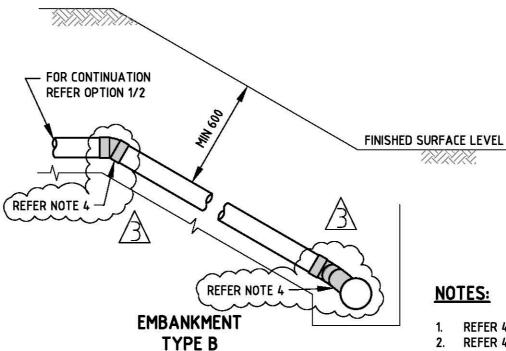




OPTION 1
IP OUTSIDE PROPERTY BOUNDARY







- REFER 4005-20002-01 TO 4005-20002-03 FOR GENERAL NOTES.
- REFER 4005-20006-03 FOR TYPICAL SEWER CONNECTION DETAILS.
- 3. SHOULD SITE CONDITIONS REQUIRE MODIFICATION TO THE STANDARD ARRANGEMENTS DISPLAYED, APPROVAL SHALL BE SOUGHT FROM THE SA WATER REPRESENTATIVE PRIOR TO ANY WORK BEING



5. ALL DIMENSIONS IN MILLIMETRES

| | REVISION PANEL | | | | | DESIGN PANEL | | | |
|-----|----------------|-----|---|-----|----------------------|--------------|----------|----------------------|--|
| REV | DATE | DRN | DETAILS | APR | CURRENT REV 26/02/19 | DESIGNED: | 03/08/15 | AUTHORISED: 31/03/16 | |
| | 7 | | | | AUTHORISED: | RJP | | T.GALEK | |
| | | | | | T. GALEK | DRAWN: | 25/09/15 | SIGNATURE: | |
| 3 | 10/01/19 | PH | REINFORCED FITTINGS ADDED WHERE INDICATED | TG | SIGNATURE: | MS | | | |
| 2 | 03/04/17 | RP | OLD DRAWING NO. ADDED TO CONNECTION TYPE | TG | T. Calele | REVIEWED: | 21/03/16 | ORIGINAL SIGNED | |
| 1 | 31/03/16 | MS | 2016 STANDARDS REVIEW | TG | | TG | | | |

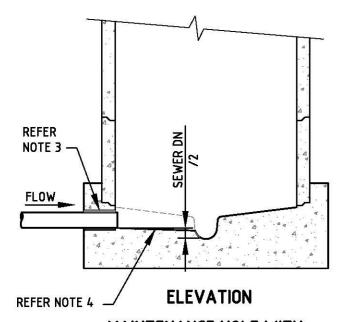
| SA Water | \$0U7.8 | CA VAlatan |
|----------|----------------------------------|------------|
| | Government of South Australia | 3A Water |

(COMMONLY KNOWN AS K8)

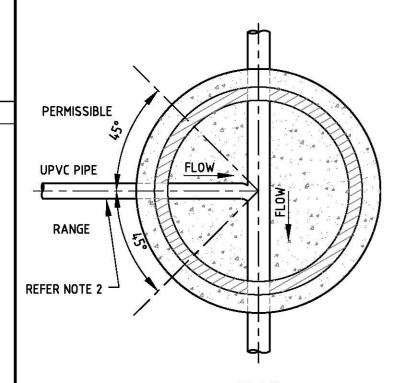
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SA WATER STANDARD DRAWINGS SEWER CONSTRUCTION MANUAL PROPERTY CONNECTIONS THROUGH EMBANKMENT

| | 280 |
|-----------------------------|---------------|
| A3 sht size | 3 REVISION |
| TOTAL SHEETS: | |
| SUPERSEDES: 94-0164-09 (K8) | |
| DRAWING NUMBER | |
| 4005-20006 | -06 |

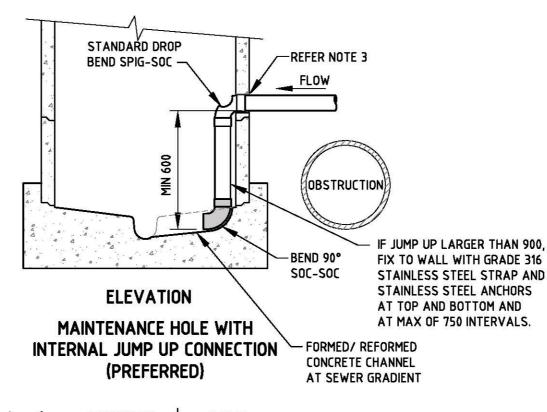


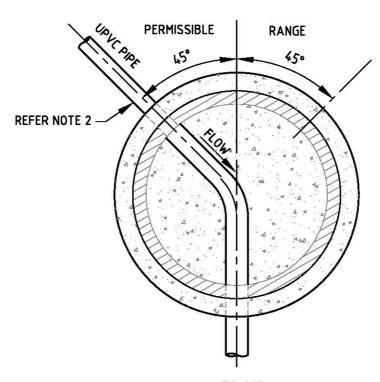
MAINTENANCE HOLE WITH **SEWER CONNECTION** AT INVERT LEVEL



PLAN CONNECTION LEFT/ RIGHT INTO MAINTENANCE HOLE

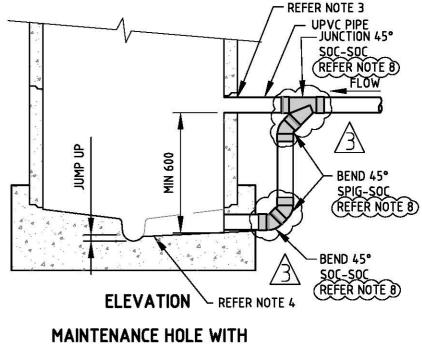
(COMMONLY KNOWN AS K9)





PLAN CONNECTION AHEAD INTO MAINTENANCE HOLE

(COMMONLY KNOWN AS K10)



EXTERNAL JUMP UP CONNECTION (SUBJECT TO APPROVAL)

NOTES:

- REFER 4005-20002-01 TO 4005-20002-03 FOR GENERAL NOTES.
- CONNECTIONS INTO A MAINTENANCE HOLE CAN BE AHEAD. LEFT OR RIGHT SIDE. THE PIPE ANGLE SHALL BE WITHIN THE PERMISSIBLE RANGE AS SHOWN.
- REFER 4005-20005-03 FOR MAINTENANCE HOLE TYPICAL PRECAST STRUCTURE ASSEMBLY DETAILS AND CORING/ REMEDIATION OF THE PIPE THROUGH THE WALL.
- CONNECTION CHANNELS AND BENCHING SHALL BE SIMILARLY CONSTRUCTED TO SEWER CHANNEL AND BENCHING. REFER 4005-20005-06.
- FOR JUMP UP CONNECTIONS, THE INTERNAL JUMP UP IS THE PREFERRED OPTION. FOR USE OF THE EXTERNAL OPTION APPROVAL FROM THE SA WATER REPRESENTATIVE SHALL BE SOUGHT.
- FOR STEEP SEWER GRADIENTS, USE ADDITIONAL BEND(S) TO ENSURE JUMP UP REMAINS
- MAXIMUM OF 2 INTERNAL JUMP-UPS PER MAINTENANCE HOLE SHALL BE PERMITTED.

 ALL FITTINGS IDENTIFIED BY SHADING SHALL BE A 'REINFORCED' FITTING. REFER TS 0502, 3.2.1.1)

 ALL DIMENSIONS IN MILLIMETRES.

| | | | REVISION PANEL | | | | DESIG | N PANEL |
|-----|----------|-----|--|-----|----------------------|-----------|----------|----------------------|
| ₹EV | DATE | DRN | DETAILS | APR | CURRENT REV 26/02/19 | DESIGNED: | 03/08/15 | AUTHORISED: 31/03/16 |
| | | | | | AUTHORISED: | RJP | | T.GALEK |
| | | | | | T. GALEK | DRAWN: | 25/09/15 | SIGNATURE: |
| 3 | 10/01/19 | PH | REINFORCED FITTINGS ADDED WHERE INDICATED | TG | SIGNATURE: | MS | | |
| 2 | 03/04/17 | RJP | CONNECTION AT INVERT AND ANGLE RANGE ADDED | TG | T. Cplele | REVIEWED: | 21/03/16 | ORIGINAL SIGNED |
| 1 | 31/03/16 | MS | 2016 STANDARDS REVIEW | TG | / | TG | | |

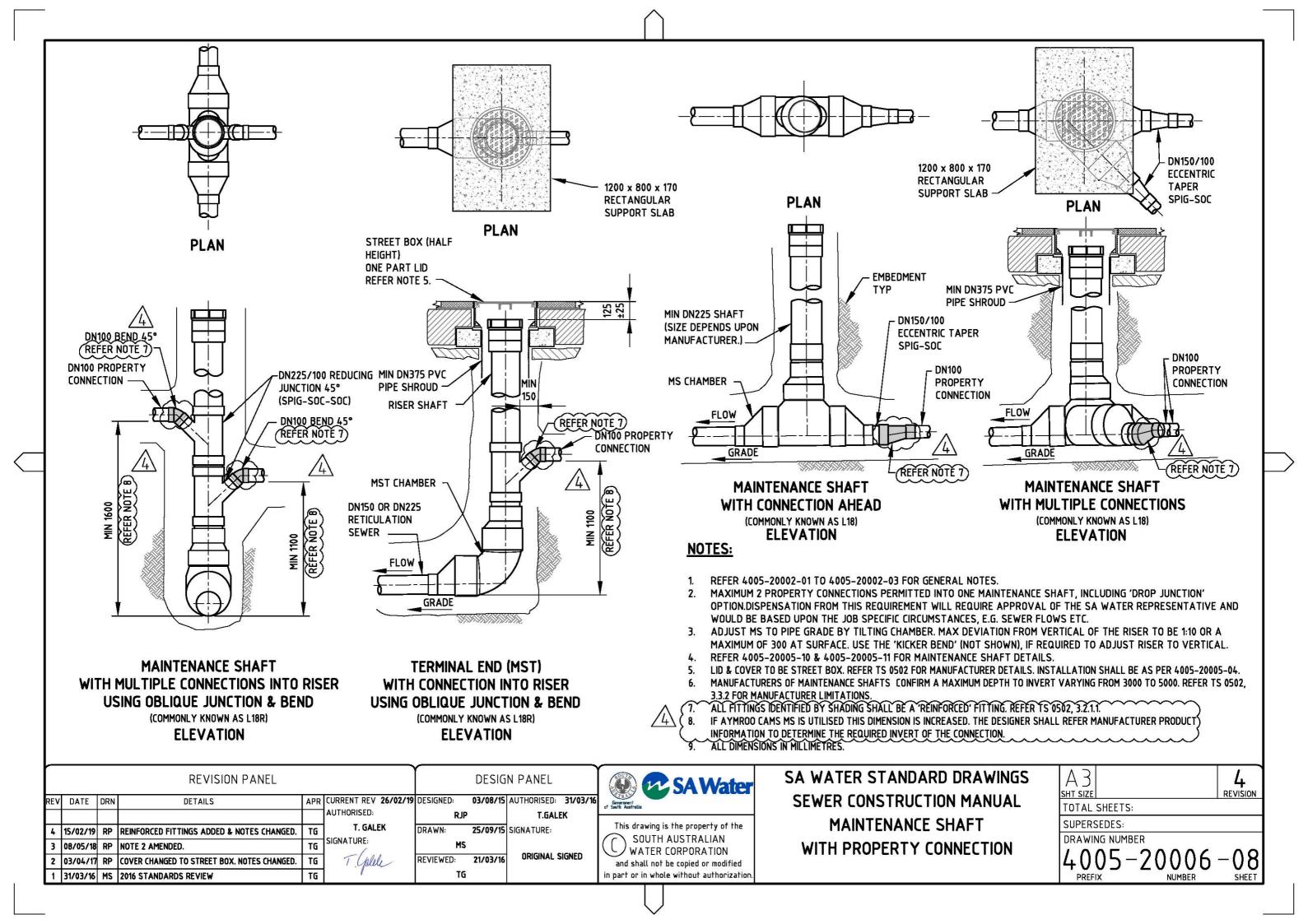


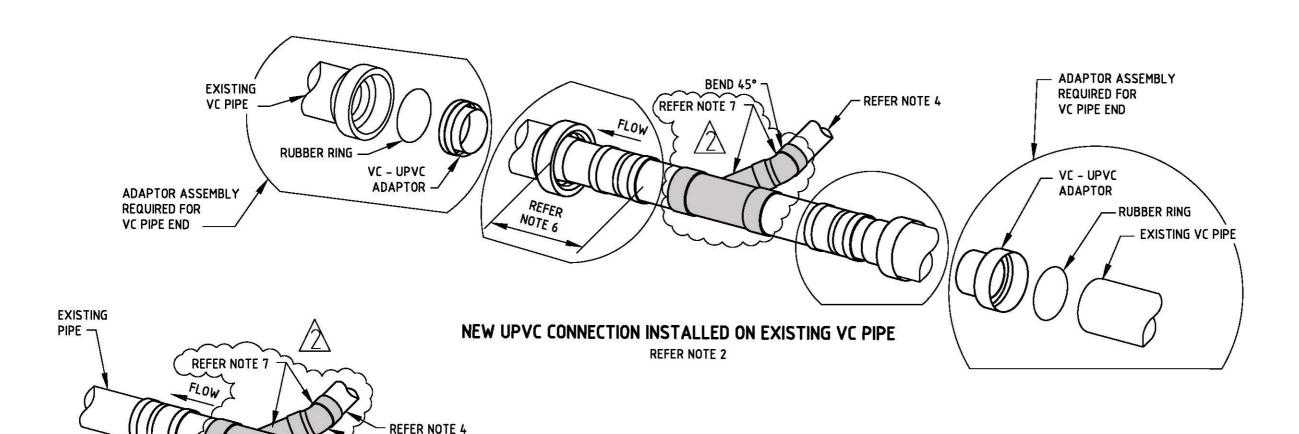
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SA WATER STANDARD DRAWINGS **SEWER CONSTRUCTION MANUAL** PROPERTY CONNECTIONS INTO MAINTENANCE HOLE **OPTIONS**

| A3 SHT SIZE | 3 REVISION |
|---------------------|---------------|
| TOTAL SHEETS: | |
| SUPERSEDES: K9, K10 | |
| DRAWING NUMBER | |
| 4005-20006 | -07 |





NOTES:

- REFER 4005-20002-01 TO 4005-20002-03FOR GENERAL NOTES.
- 2. THE VC PIPE ARRANGEMENT IS SIMILAR TO THE UPVC ARRANGEMENT WITH AN ADAPTOR AT EACH END.

NEW UPVC CONNECTION

INSTALLED ON EXISTING UPVC PIPE

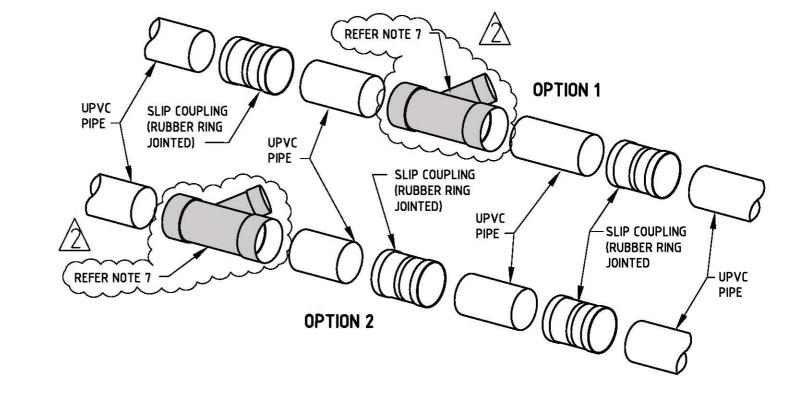
3. THE USE OF 2 SLIP COUPLINGS ALLOWS THE PRE-ASSEMBLED ARRANGEMENT TO BE FITTED WITH A MINIMUM OF END CLEARANCE/ DISCONTINUITY. ALTERNATIVES FOR POSITION OF COUPLINGS ARE DISPLAYED IN OPTIONS 1 & 2.

BEND 45°

EXISTING PIPE

- 4. REFER SECTION 6 FOR CONNECTION CONSTRUCTION.
- 5. FOR TRUNK SEWERS, TEMPORARY ISOLATION OR DIVERSION OF FLOWS MAY BE NECESSARY DURING LIVE INSTALLATIONS. METHOD FOR UNDERTAKING WORK SHALL BE APPROVED BY THE SA WATER REPRESENTATIVE PRIOR TO COMMENCEMENT.
- THE USE OF AN ALTERNATIVE ADAPTOR SYSTEM SHALL BE APPROVED BY THE SA WATER REPRESENTATIVE.

7. ALL FITTINGS IDENTIFIED BY SHADING SHALL BE A 'REINFORCED' FITTING. REFER TS 0502, 3.2.1.1)



| | REVISION PANEL | | | | | DESIGN PANEL | | | |
|-----|----------------|-----|---|-----|----------------------|--------------|----------|-------------------------|---------|
| REV | DATE | DRN | DETAILS | APR | CURRENT REV 26/02/19 | DESIGNED: | 03/08/15 | AUTHORISED: | 31/03/1 |
| | V | | | | AUTHORISED: | RJP | | T.GAL | EK |
| | | | | | T. GALEK | DRAWN: | 25/09/15 | SIGNATURE: | |
| | | | | | SIGNATURE: | MS | | Table Company (Company) | |
| 2 | 10/01/19 | RP | REINFORCED FITTINGS ADDED WHERE INDICATED | TG | T. Cplele | REVIEWED: | 21/03/16 | ORIGINAL | SIGNED |
| 1 | 31/03/16 | MS | 2016 STANDARDS REVIEW | TG | / | TG | | | |



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SA WATER STANDARD DRAWINGS
SEWER CONSTRUCTION MANUAL
UPVC FITTINGS
FOR CONNECTION FROM EXISTING
UPVC & VC SEWERS

| | | 210 |
|---|----------------------|---------------|
| | A3 | 2 REVISION |
| | TOTAL SHEETS: | |
| | SUPERSEDES: K13, K14 | |
| | DRAWING NUMBER | SI-VO PRIN |
| | 4005-20006 | -09 |
| _ | PREFIX NUMBER | SHEET |
| | | |