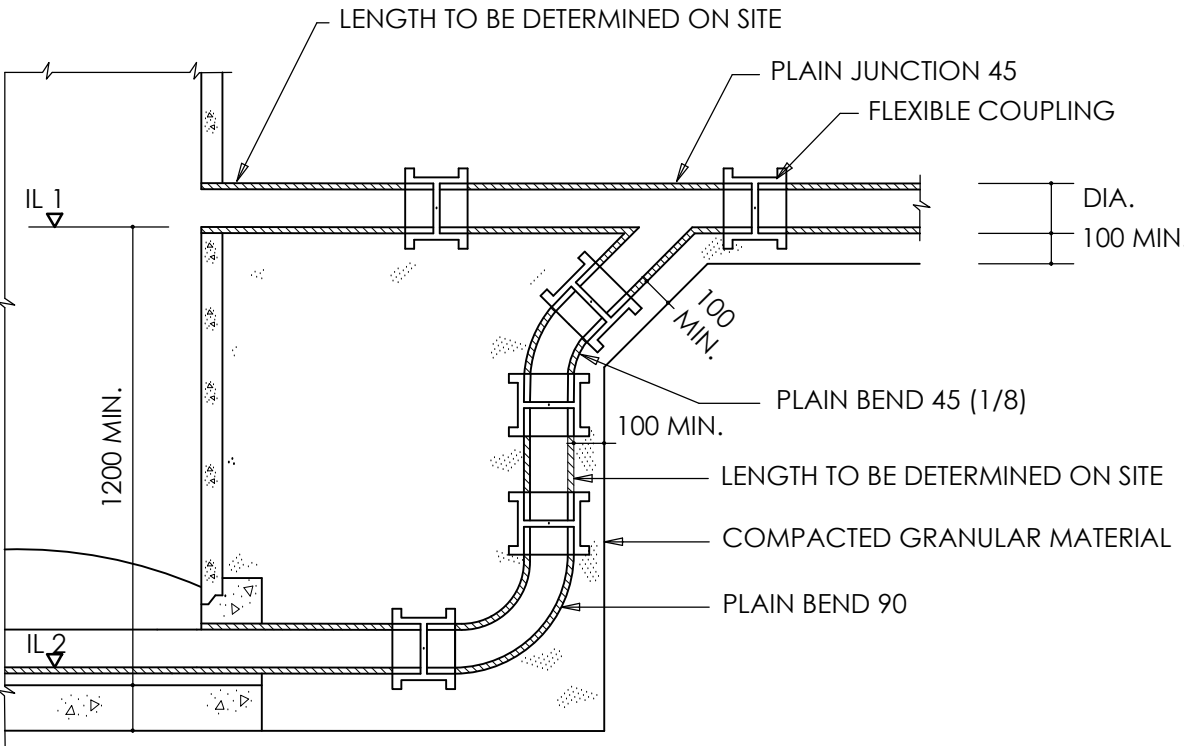
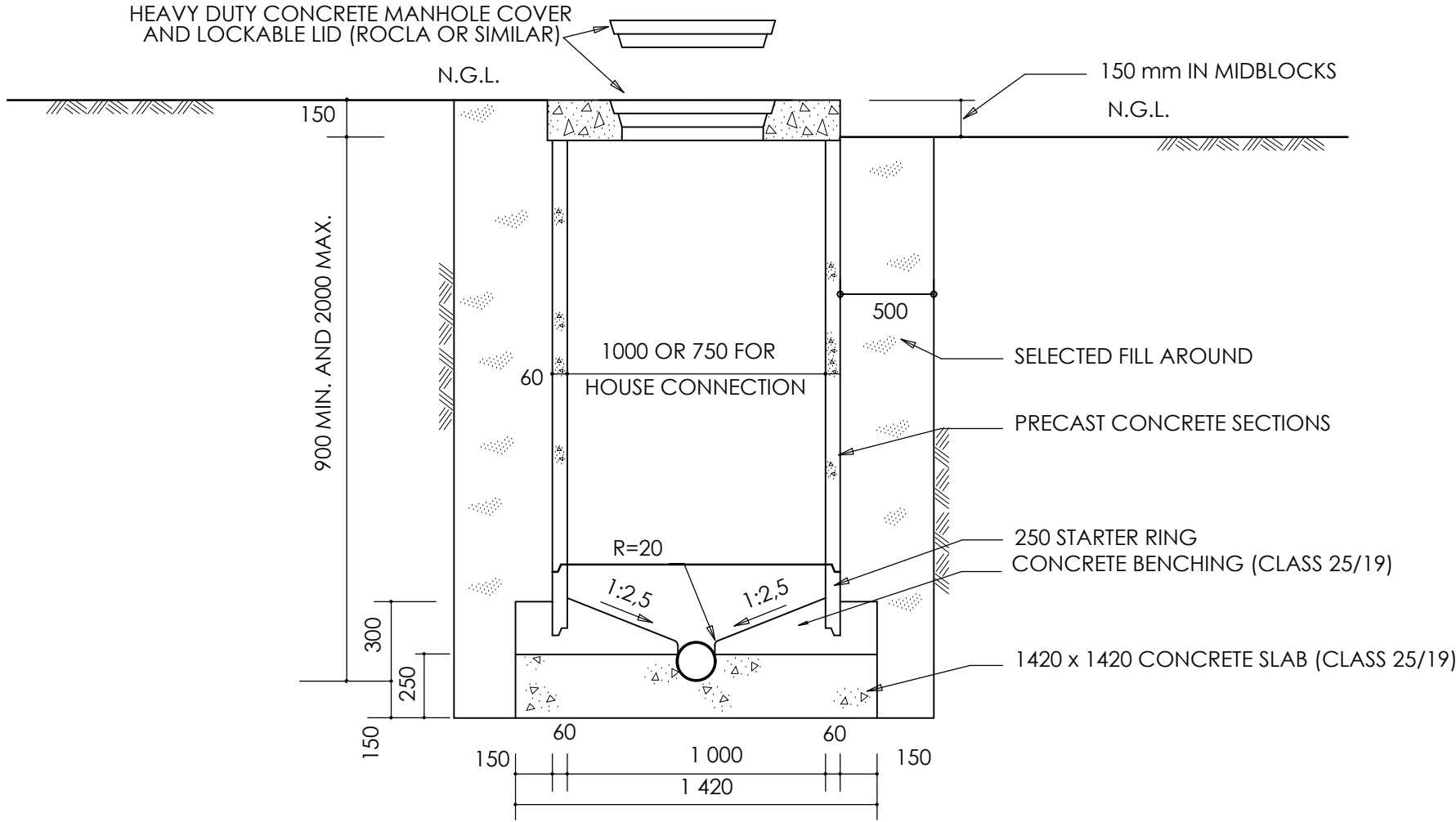
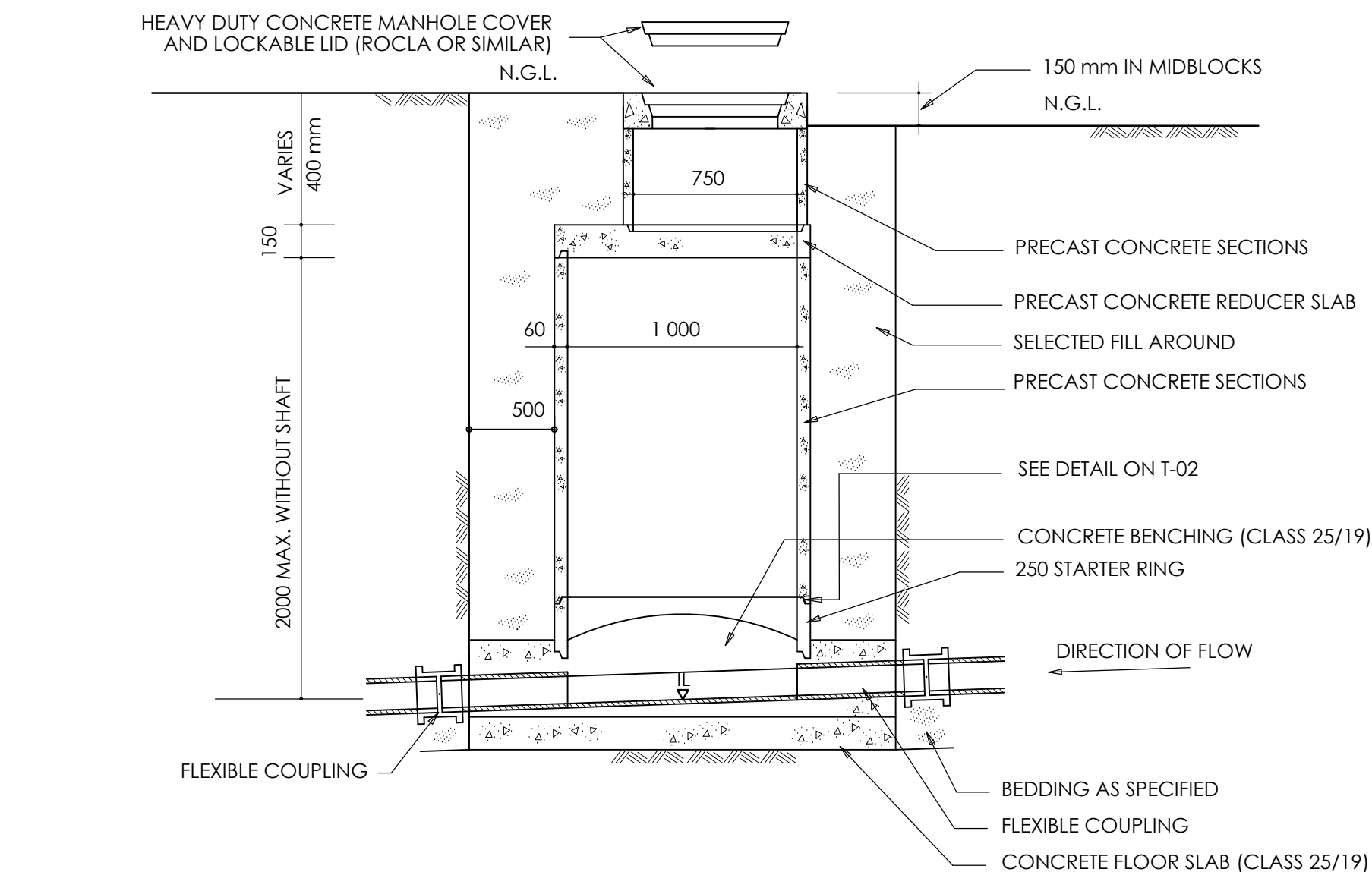
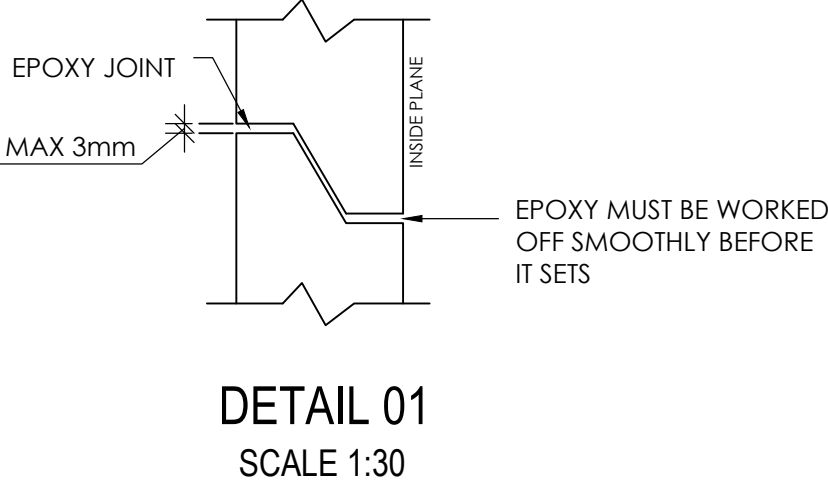


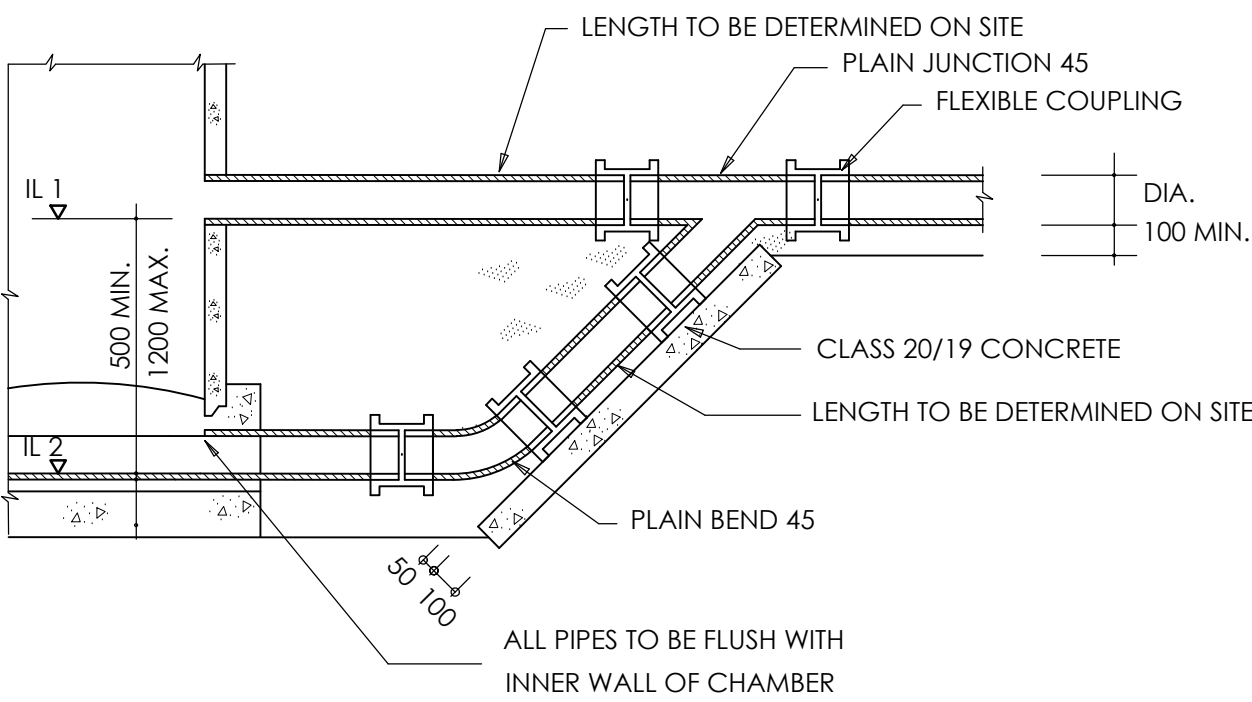
MANHOLE COVERS (S.A.N.S. 558/1965)	
POSITION OF MANHOLE	TYPE OF COVER
ROAD SURFACE	S.A.N.S. TYPE 2A, 190 kg.
ROAD RESERVE	S.A.N.S. TYPE 4, 82 kg.
ERF	S.A.N.S. TYPE 4, 82 kg.
GENERAL	FOR SEWER 300dia. AND LARGER ONLY S.A.N.S. TYPE 2A MANHOLE COVERS SHOULD BE USED.



SECTION ELEVATION ALONG  
CENTER OF MAIN SEWER  
SCALE 1:20

SECTION ELEVATION AT RIGHT  
ANGLES TO MAIN SEWER  
SCALE 1:20

MANHOLE WITH HIGH INLET VERTICAL DROP TYPE  
SCALE 1:20



MANHOLE WITH HIGH INLET RAMP TYPE  
SCALE 1:20

- NOTES:
  - 1. uPVC SEWER PIPES : PIPES IN LENGTHS OF 6 m EACH AND AT ONE END SUPPLIED WITH A FLEXIBLE MECHANICAL COUPLING, PIPES AND FITTINGS TO COMPLY WITH SANS 791.
  - 2. FLEXIBLE JOINTS :
    - a. RUBBER RINGS COMPLYING WITH PART 1 OF SANS 974 TO BE USED FOR FLEXIBLE JOINTS.
    - b. FLEXIBLE JOINTS TO BE TIGHT WITH NO SIGNS OF LEAKAGE WHEN TESTED ACCORDING TO SUBCLAUSE 4.4 OF SECTION LD OF PART 3 OF SANS 1200.
  - 3. FIELD TESTS :
    - a. AIR TESTS ACCORDING TO CLAUSE 7.2 OF SANS 1200 LD MUST BE CARRIED OUT BETWEEN MANHOLES DURING THE FOLLOWING PHASES OF CONSTRUCTION :
      - AFTER THE PIPES HAVE BEEN LAID.
      - AFTER THE INITIAL BACKFILLING HAS BEEN COMPLETED.
    - b. THE AIR TEST IS ONLY AN INDICATION OF ACCEPTANCE OF A COMPLETED PORTION OF THE LINE AND IN ANY DISPUTE ARISING THE OUTCOME OF A WATER TEST WILL BE BINDING.
  - 4. TRENCHES :
    - a. EXCAVATION AND BACKFILLING OF TRENCHES TO COMPLY WITH SANS 1200 DB.
    - b. BEDDING OF PIPES TO COMPLY WITH SANS 1200 LB.
    - c. SEWERS TO BE PROTECTED AT ROAD CROSSINGS AS SHOWN ON THE TYPICAL PLAN FOR PIPE BEDDINGS.
    - d. THE INFLOW OF STORMWATER IS TO BE PROHIBITED.
  - 5. MANHOLES AND FITTINGS :
    - a. ALL CONCRETE, BENCHING AND SEALERS SHALL COMPLY WITH SANS 1200 GA OR SANS 1200 AS APPLICABLE.
    - b. PRECAST CONCRETE SECTIONS TO COMPLY WITH SANS 1294.
    - c. CLASSES OF CONCRETE :
      - PRECAST CONCRETE SECTIONS - 30/19
      - ALL OTHER CONCRETE - 25/19.
    - d. CHANNELS IN MANHOLES TO BE LAID IN THE WET CONCRETE FLOOR AND THE FIRST PRECAST CONCRETE SECTION TO BE PLACED AND THE BENCHING COMPLETED WITHIN 24 HOURS AFTER CASTING THE CONCRETE FLOOR.
    - e. NO DRIERS WILL BE PERMITTED FOR THE BENCHING.
    - f. BENCHING TO BE STEEL TOWELED TO A SMOOTH FINISH.
    - g. STEP IRONS SHALL NOT BE INSTALLED IN MANHOLES.
    - h. BRICK MANHOLES TO BE BUILT WITH ENGINEERING CLASS 1 BRICKS ONLY.
    - i. MORTAR TO BE 1:3 CEMENT:SAND MIX AND JOINTS TO BE FINISHED FLUSH WITH FACE OF BRICKWORK.
    - j. NO CEMENT BRICKS OR PLASTERING WILL BE ALLOWED.
- GENERAL NOTES:
  - 1. CONCRETE FOR MANHOLE TO BE OF DOLOMITIC ORIGIN.
  - 2. MID BLOCK SEWER: TOP OF FRAME TO BE 150mm ABOVE NATURAL GROUND LEVEL AND ENCIRCLED WITH GRAVEL.
  - 3. GRAVEL PAVEMENTS:
    - a. TOP OF FRAME TO BE 50mm ABOVE FINISHED PAVEMENT LEVEL.
    - b. IF THE PAVEMENT LEVEL IS UNFINISHED, TOP OF FRAME LEVEL TO BE DETERMINED BY THE ENGINEER.
  - 4. CONCRETE SECTIONS TO BE ADHESED WITH AN EPOXY - SILICA MIXTURE. (TO BE APPROVED BY ENGINEER PRIOR TO ADHESION).
  - 5. FACTORY MANUFACTURED MANHOLE SECTIONS TO COMPLY WITH S.A.N.S. 1294.
  - 6. THE CASTING OF MANHOLE FRAMES AT SLANTING SIDE WALKS ONLY TO BE BUILT WITH THE WRITTEN CONSENT OF THE TOWN ENGINEER.
  - 7. EXCESSIVE EXCAVATIONS MAY ONLY BE BACKFILLED WITH THE CONSENT OF THE ENGINEER WITH CLASS 20/19 CONCRETE OR APPROPRIATE MATERIAL APPROVED BY THE ENGINEER.
  - 8. NO PART OF THE MANHOLE MAY BE FINISHED OFF WITH CEMENT SLUDGE OR MORTAR.
  - 9. MANHOLE COVERS/FRAMES TO BE ADJUSTED ACCORDING TO FINAL PAVED LEVELS PLUS 50mm.
- FOR TENDER