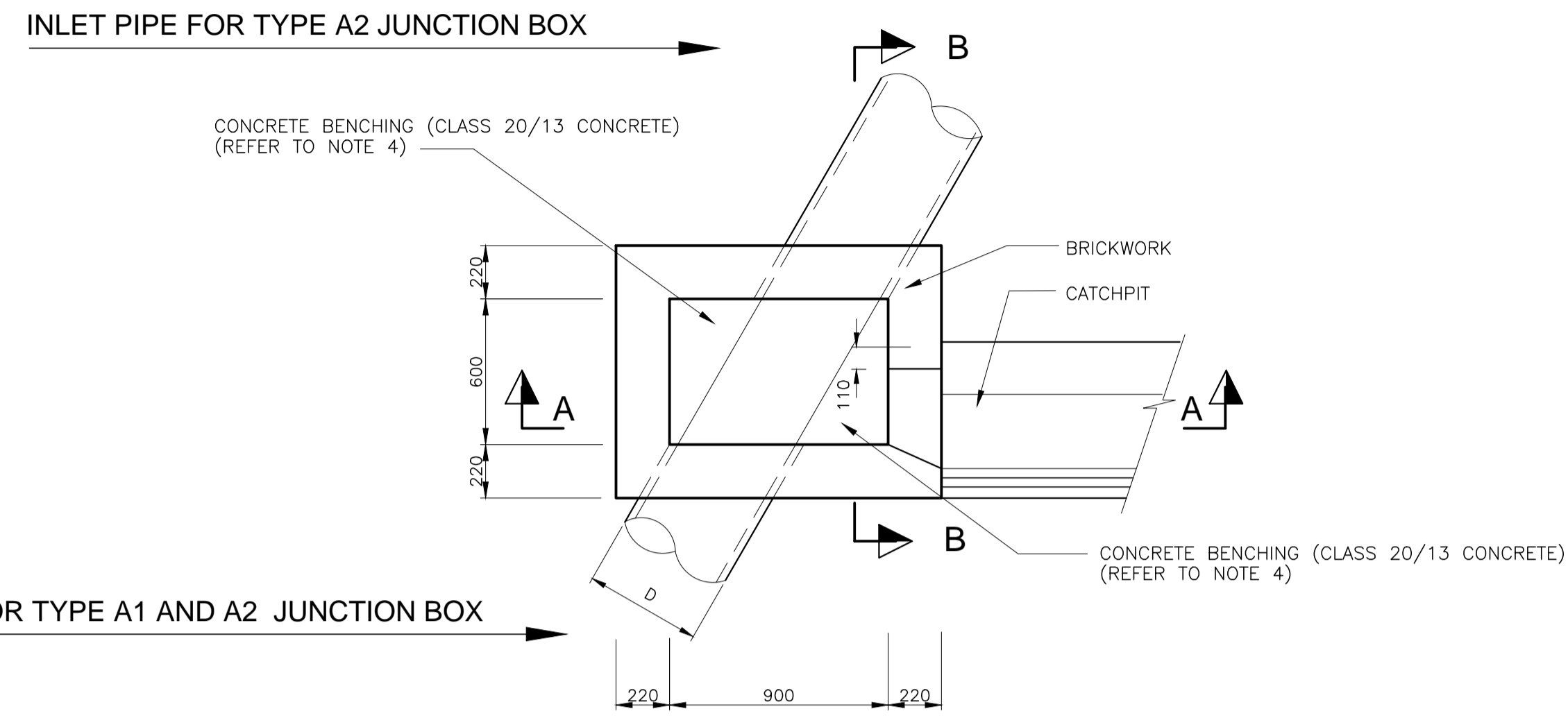
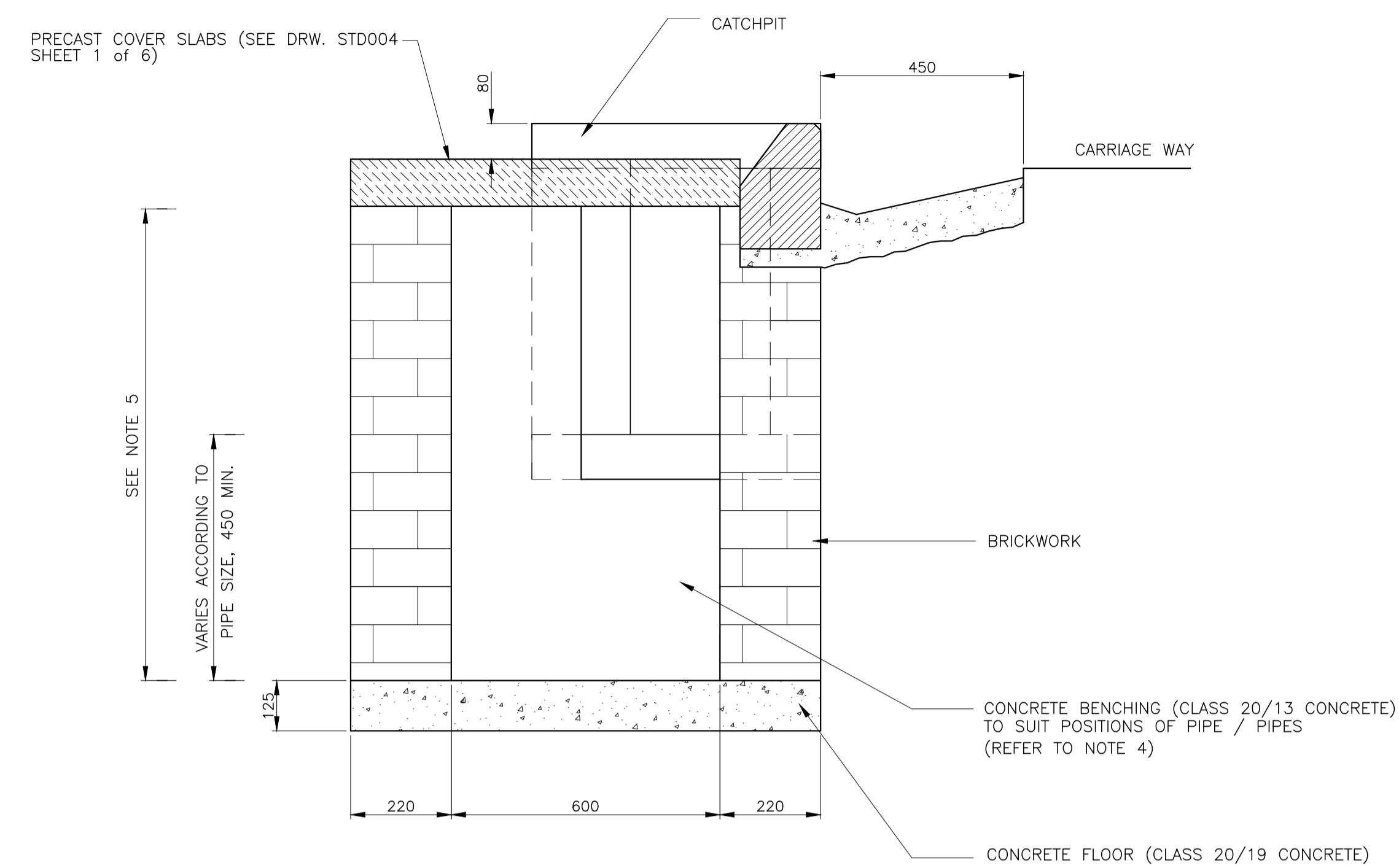


NOTES AND SPECIFICATIONS

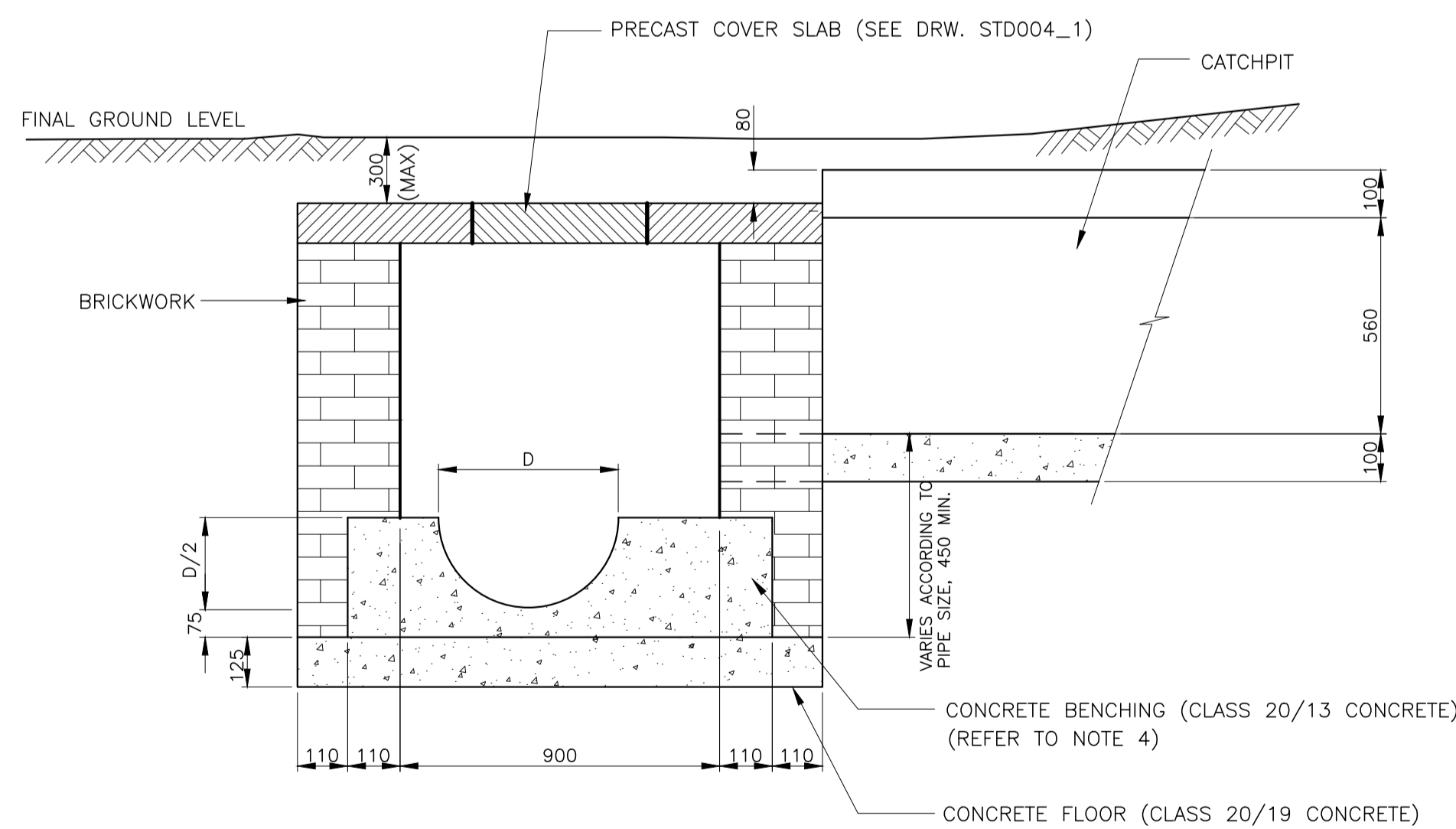
1. All stormwater pipes to be laid soffit to soffit
2. Minimum pipe diameter of pipes is 450mm.
3. Maximum angle between adjoining pipes is 60°.
4. Where a pipe wall is at least 75mm from the nearest junction box wall, the concrete benching can be started adjacent to the double brick wall.
5. Where the total depth of the junction box (invert level to finished ground level) exceeds 2,0m a structural design must be submitted by a professional engineer.
6. All bricks shall comply with SANS 227 and shall be engineering units of class FBS (face brick standard) with a nominal compressive strength of 12 MPA.
7. Also refer to Section 502 of the Standard Specifications for Municipal Civil Engineering Works, 3rd Edition, 2005.



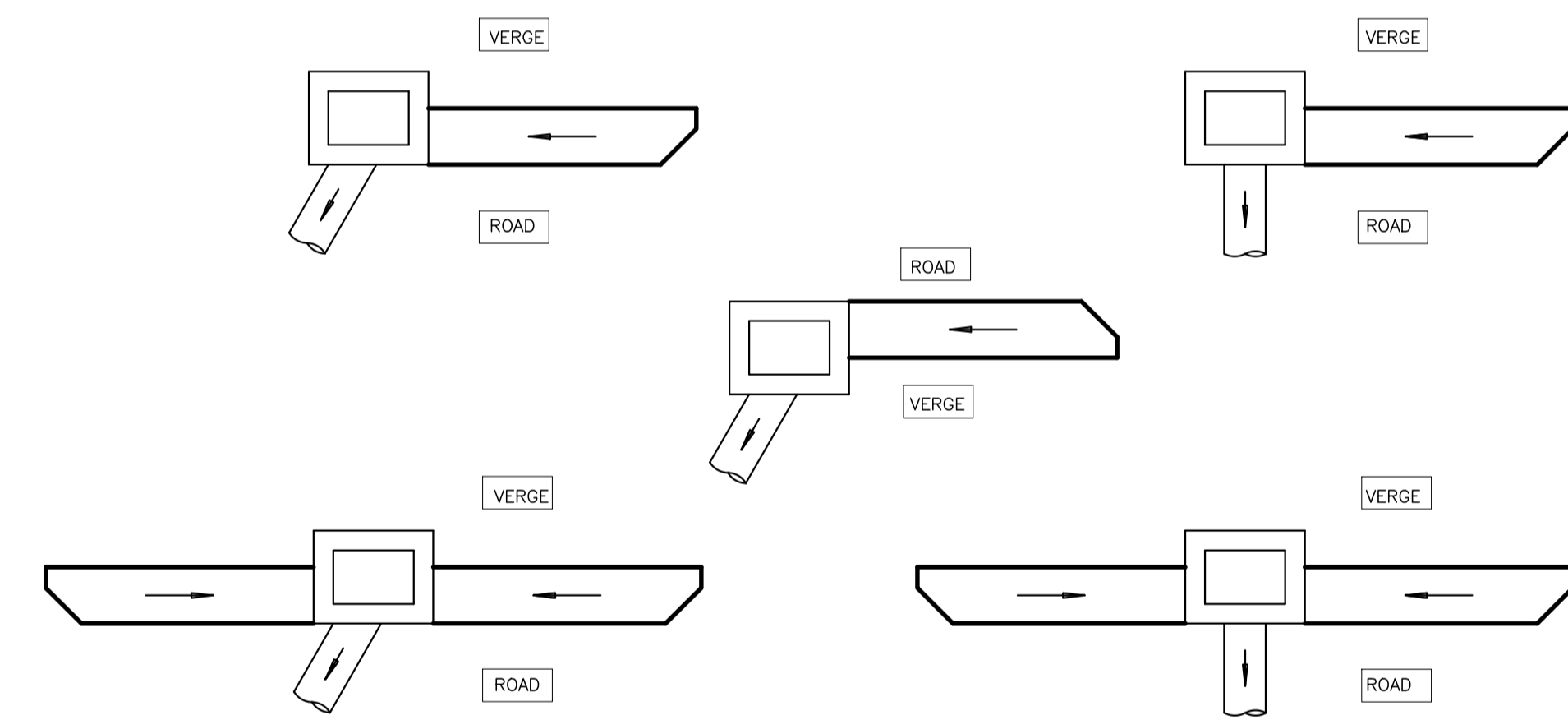
PLAN OF TYPE A JUNCTION BOX (WITHOUT COVER SLAB)



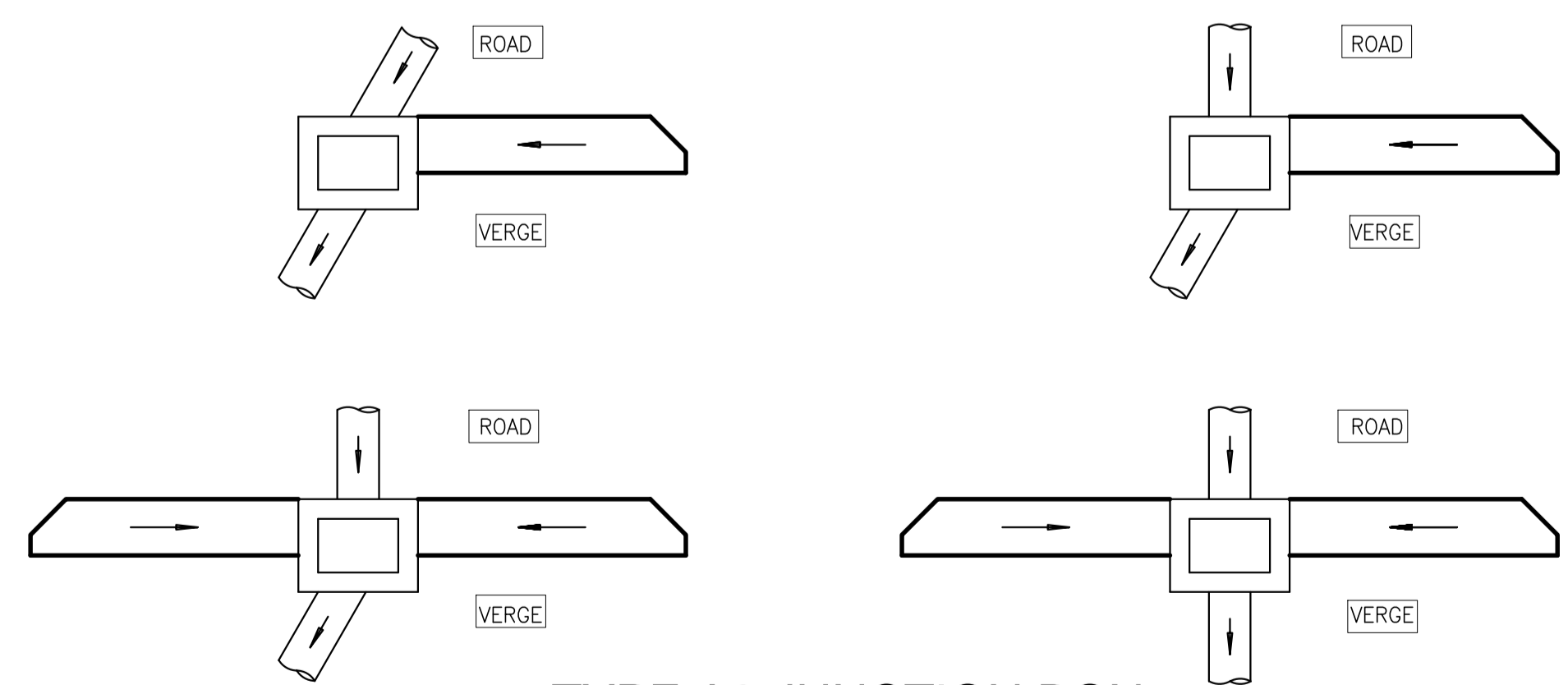
SECTION B-B  
(CONCRETE BENCHING NOT SHOWN)



SECTION A-A  
(INLET / OUTLET PIPES NOT SHOWN)



TYPE A1 JUNCTION BOX



TYPE A2 JUNCTION BOX

| AMENDMENTS |      |          |             |      |
|------------|------|----------|-------------|------|
| NR.        | DATE | APPROVED | DESCRIPTION | PAR. |
|            |      |          |             |      |
|            |      |          |             |      |
|            |      |          |             |      |

|   |  |
|---|--|
| DESIGNED<br>J.G. JANSEN VAN VUUREN Pr.Tech. | DRAWN<br>S. AUDIE  |
| DESIGN CHECKED BY<br>P. A. ODENDAAL Pr.Eng. | INFRASTRUCTURE TECHNICAL INFORMATION MANAGEMENT<br>D.J. CHALMERS |

| PROJECT STATUS                        |                                       |   |  |
|---------------------------------------|---------------------------------------|---|--|
| <input type="radio"/> CONCEPT DRAWING | <input type="radio"/> TENDERS DRAWING | <input type="radio"/> APPROVED FOR CONSTRUCTION DRAWING | <input type="radio"/> AS BUILT DRAWING |

|                                      |                      |                       |      |
|--------------------------------------|----------------------|-----------------------|------|
| PROJECT ENGINEER (CONSULTANT)        | INITIALS AND SURNAME | SIGNATURE AND Pr. No. | DATE |
| INSPECTOR OF WORKS (CITY OF TSHWANE) | INITIALS AND SURNAME | SIGNATURE AND Pr. No. | DATE |

|                   |  |
|-------------------|--|
| CONSULTANT DETAIL |  |
|                   |  |

**CITY OF TSHWANE**  
ROADS AND TRANSPORT DEPARTMENT

Mr P. I. Letonkane  
DIRECTOR

Ms. L. V. Kegakhe-Piki  
EXECUTIVE DIRECTOR

P.O. BOX 1409  
PRETORIA 0001

LOCATION OF PROJECT:

**TYPICAL STANDARD DETAILS**

DESCRIPTION OF PROJECT:

**JUNCTION BOX AND MANHOLE DETAILS: TYPE A JUNCTION BOX**

|  |                            |
|--|----------------------------|
| ROADS AND STORMWATER<br>For Internal Approval                  |                            |
| DIRECTOR: INFRASTRUCTURE PROVISION                             | SIGNATURE _____ DATE _____ |
| DIRECTOR: INFRASTRUCTURE CONSTRUCTION (PROJECT) MANAGEMENT     | SIGNATURE _____ DATE _____ |
| DIRECTOR: INFRASTRUCTURE ASSET MANAGEMENT                      | SIGNATURE _____ DATE _____ |
| DIRECTOR: TRANSPORT INFRASTRUCTURE PLANNING                    | SIGNATURE _____ DATE _____ |
| DIRECTOR: INTELLIGENT TRANSPORT SYSTEM AND TRAFFIC ENGINEERING | SIGNATURE _____ DATE _____ |
| DIRECTOR: INFRASTRUCTURE MAINTENANCE MANAGEMENT (IMM)          | SIGNATURE _____ DATE _____ |

|                           |                  |
|---------------------------|------------------|
| CONTRACT NO.:             | PROJECT NO.:     |
| DATE: MAY 2013            | SCALE: AS SHOWN  |
| DRAWING NO. <b>STD004</b> | SHEET NO. 2 OF 7 |
| ORIGINAL PAPER SIZE: A1   | REVISION         |

