
UNIVERSITI SAINS MALAYSIA

Peperiksaan Semester Kedua
Sidang Akademik 2005/2006

April-Mei 2006

RQK 337 – Ukur Bahan 2

Masa: 2 jam

Sila pastikan bahawa kertas peperiksaan ini mengandungi **LAPAN** muka surat yang tercetak sebelum anda memulakan peperiksaan ini.

Kaedah pengukuran perlu berdasarkan kepada prinsip-prinsip dalam Kaedah Ukuran Standard bagi Kerja Bangunan Edisi Kedua (SMM2).

Jawab **SEMUA** soalan.

...2/-

- 2 -

1. Ukurkan item-item berikut yang berkaitan dengan kerja retikulasi air seperti yang ditunjukkan dalam **lukisan RA/1, RA/2 dan RA/3**.
 - (a) paip air termasuk kerja pengorekkan
 - (b) *sluice valve*
 - (c) *pre-cast concrete chamber (sluice valve)*
 - (d) pili bomba
 - (e) kerja ujian dan penyambungan yang berkaitan

(25 markah)

2. Ukurkan kerja-kerja jalan untuk tempat letak kereta seperti yang ditunjukkan di dalam **Lukisan J**.

(25 markah)

3. Ukurkan semua item yang berkenaan untuk kerja cerucuk dan kerja tepi cerucuk seperti yang ditunjukkan dalam **Lukisan No. CR/1 dan CR/2**.

(25 markah)

4. Salah satu tugas seorang jurukur bahan ialah penyiapan kontrak dokumen untuk projek-projek pembinaan samada daripada pihak klien kepada kontraktor utama ataupun pihak kontraktor utama kepada sub kontraktor.
 - (a) Bincangkan kepentingan sesebuah kontrak dokumen di dalam projek pembinaan

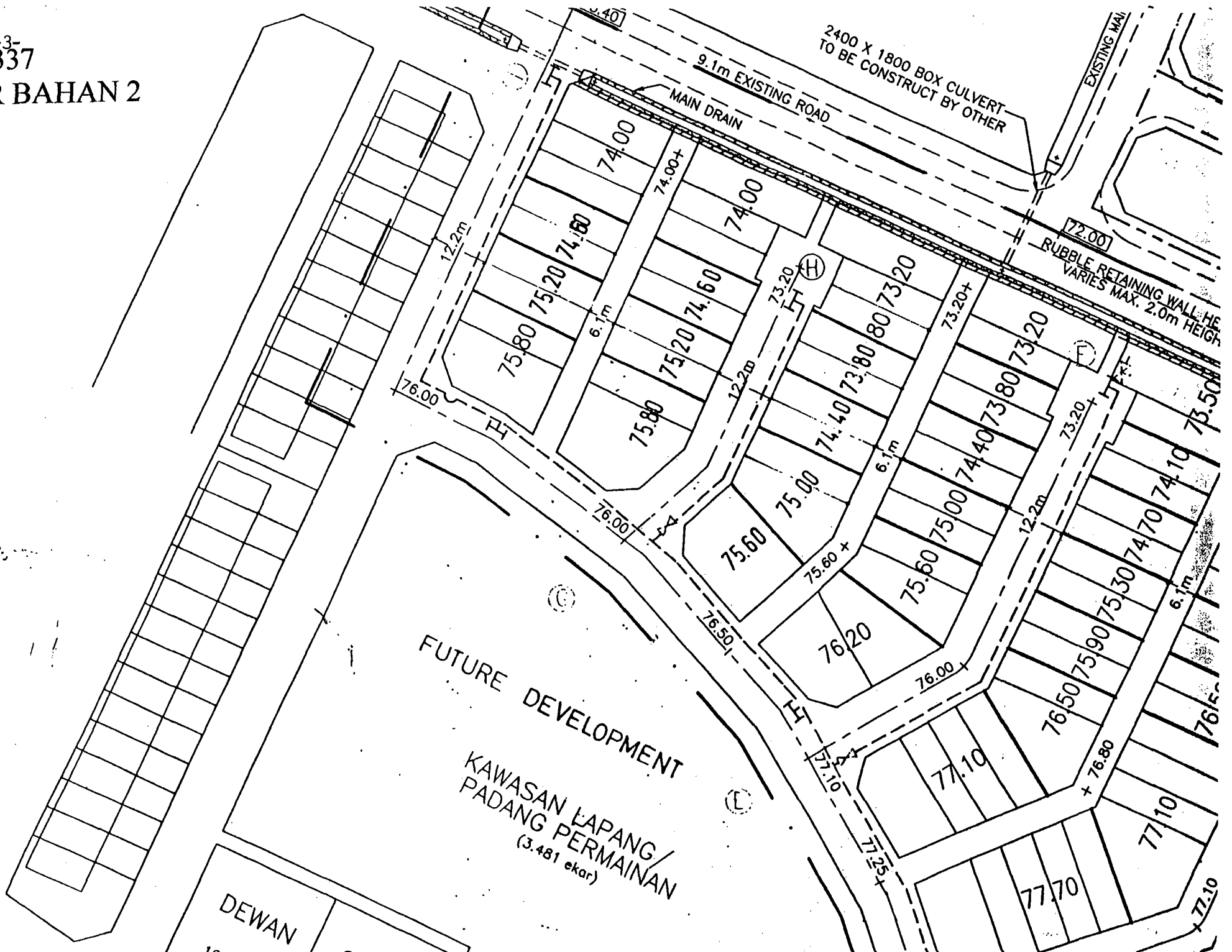
(4 markah)

 - (b) Bincangkan komponen-komponen yang membentuk kontrak dokumen dan kepentingan mereka.

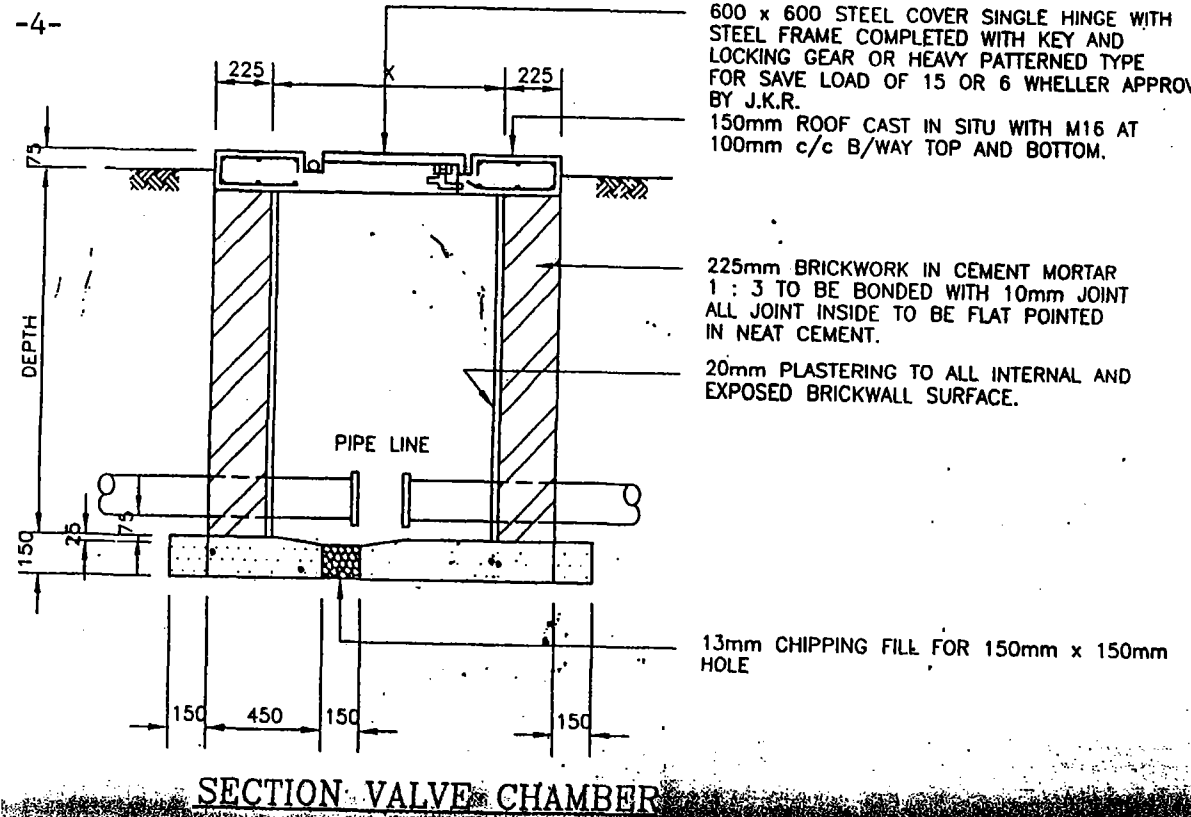
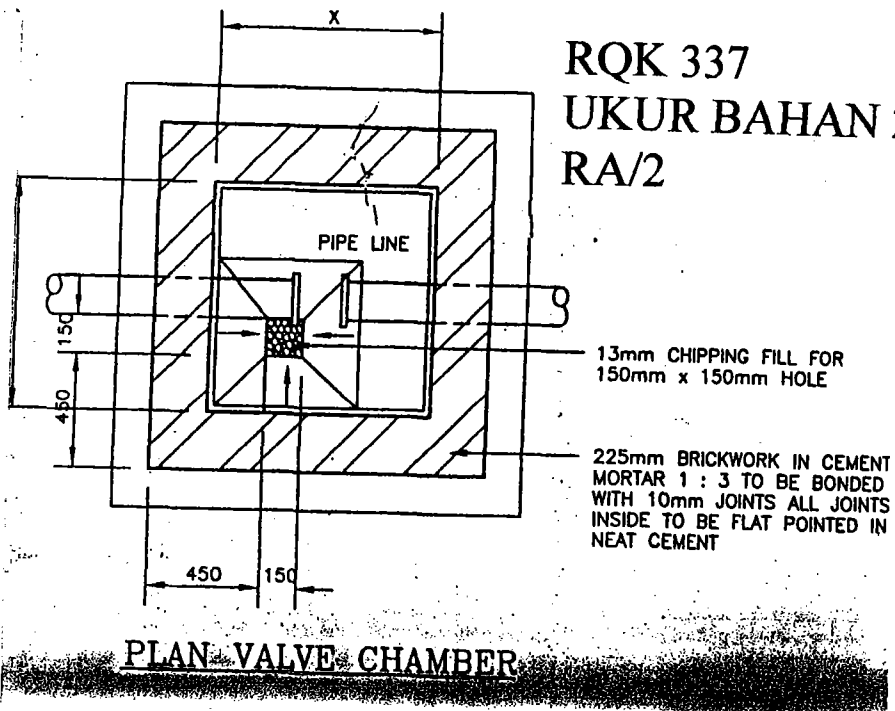
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UKUR BAHAN 2
RA/1

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RQK 337
UKUR BAHAN 2
RA/2



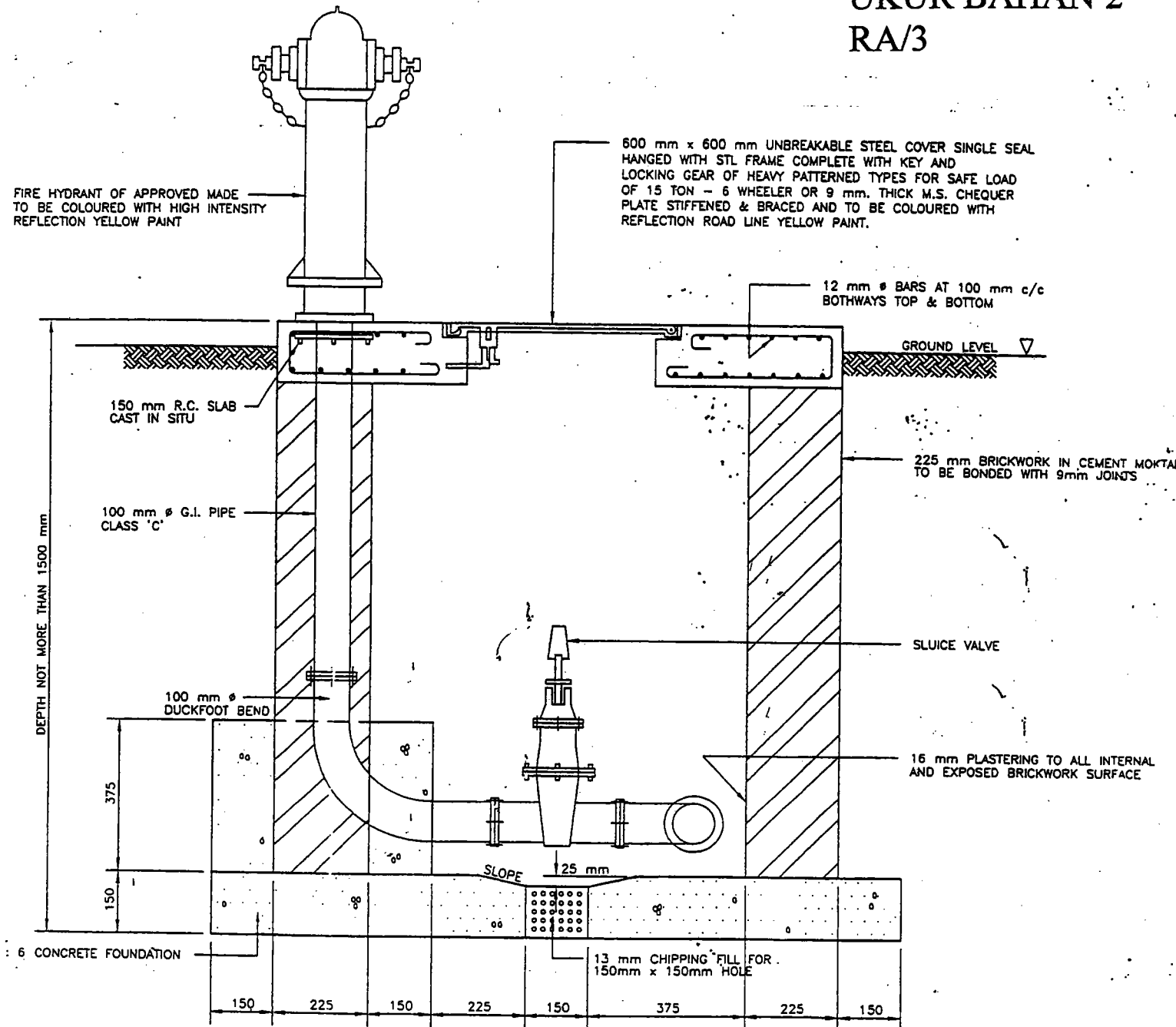
NOTES : -

1. MINIMUM COVER OVER PIPE TO BE 915 mm TO 1524 mm.
2. ANCHOR BLOCKS TO BE PROVIDED AT ALL BENDS, TEES AND STOP ENDS.
3. ALL PIPES SHALL BE OF HDPE (CLASS PN 10) FROM APPROVED MAIN JUNCTION.
4. CAST IRON PIPE SHALL CONFORM TO BS 78 FOR VERTICALLY CAST OR BS 1211 CENTRIFUGALLY CAST.
5. WATER RETICULATION MAIN FOR COMMERCIAL & INDUSTRIAL AREA (INCLUSIVE OF SHOPHOUSE) SHALL BE OF CLASS 'C' CEMENT LINED STEEL PIPE.
6. STEEL PIPE SHALL CONFORM TO BS 534 LINED INTERNALLY WITH 5/8" THK CEMENT MORTAR.
7. EXPOSED STEEL PIPE SHALL BE COATED WITH 2 COATS OF ZINC CHROMATE AND 2 COATS OF AL.PAINT.
8. BURRIED STEEL PIPE SHALL BE WRAPPED WITH BITUMENT FELT.
9. SLUICE VALVE SHALL BE OF CLASS ONE TYPE TO BS 5163 AND SHALL BE CLOSED END PRESSURE TESTED TO 300' OF WATER.
10. AIR VALVE SHALL 2" DOUBLE ORIFICE AIR VALVE INCORPORATING SCREW DOWN ISOLATING VALVE.
11. FIRE HYDRANT SHALL BE OF PILLAR TYPE TO BE 750 WITH BRONZE SPINDLEGUN METAL, INTERNAL VALVE SEAT, RING AND SCREW OUTLET OF 2 1/2" (63.5).
12. ALL FITTINGS SHALL CONFORM TO B.S 10 1996.
13. EXACT LOCATION OF AIR VALVE AND SCOUR VALVE SHALL BE DECIDED ON SITE.
14. NORMAL LOCATION OF WATER PIPELINE IS 915 mm AWAY FROM THE OUTER EDGE TO THE ROAD SIDE DRAIN AS SHOWN IN THE ROAD RESERVE SECTION.
15. IF NO ROAD SIDE DRAIN, THE WATER PIPELINE SHOULD BE LOCATED 915 mm AWAY FROM THE EDGE OF ROAD PAVEMENT AS SHOWN 'Y' IN THE ROAD RESERVE SECTION.
16. ALL OTHER REQUIREMENT & SPECIFICATION STIPULATED IN THE JBA APPROVAL LETTER SHALL ALSO BE ADHERED TO IN FULL.

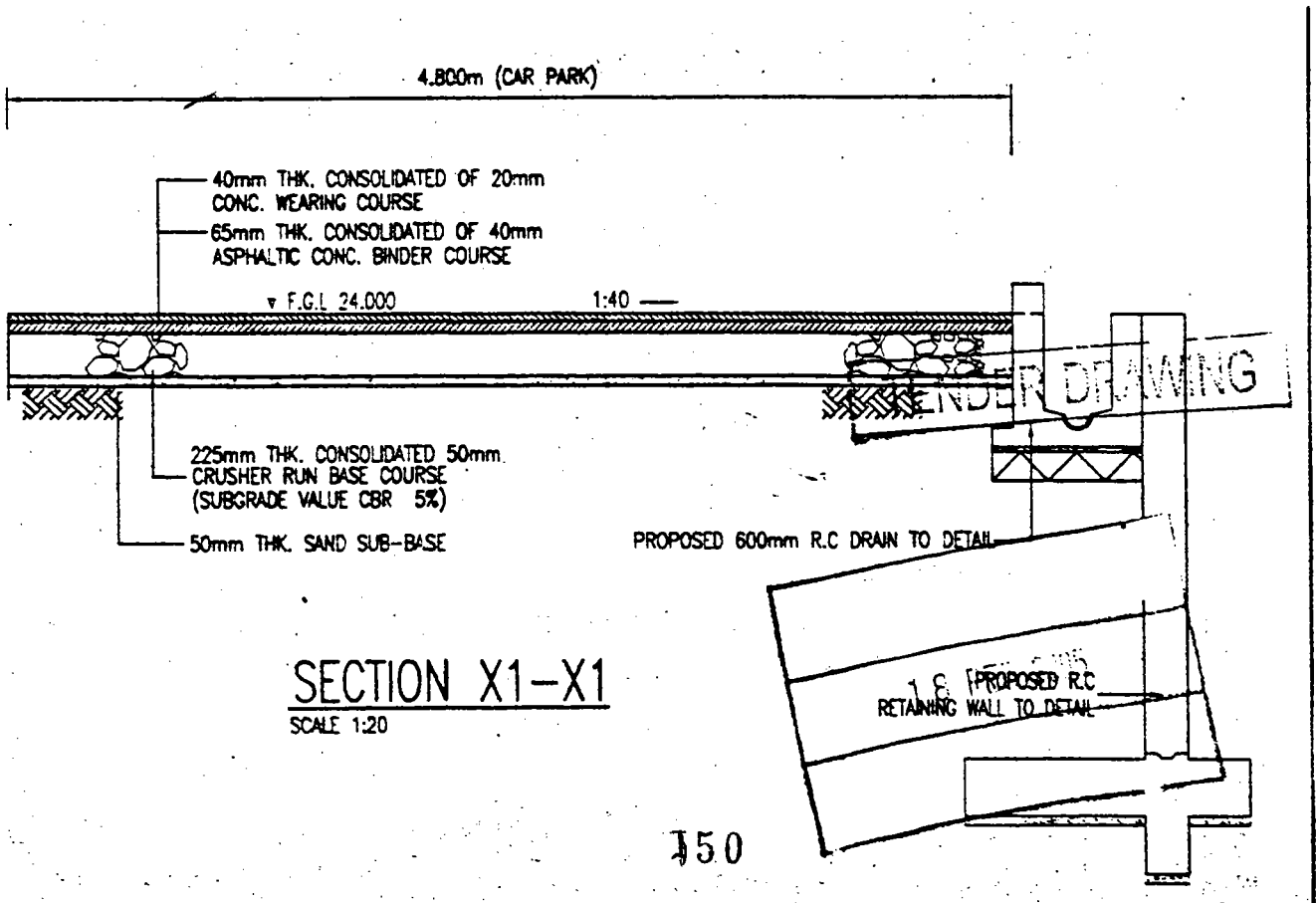
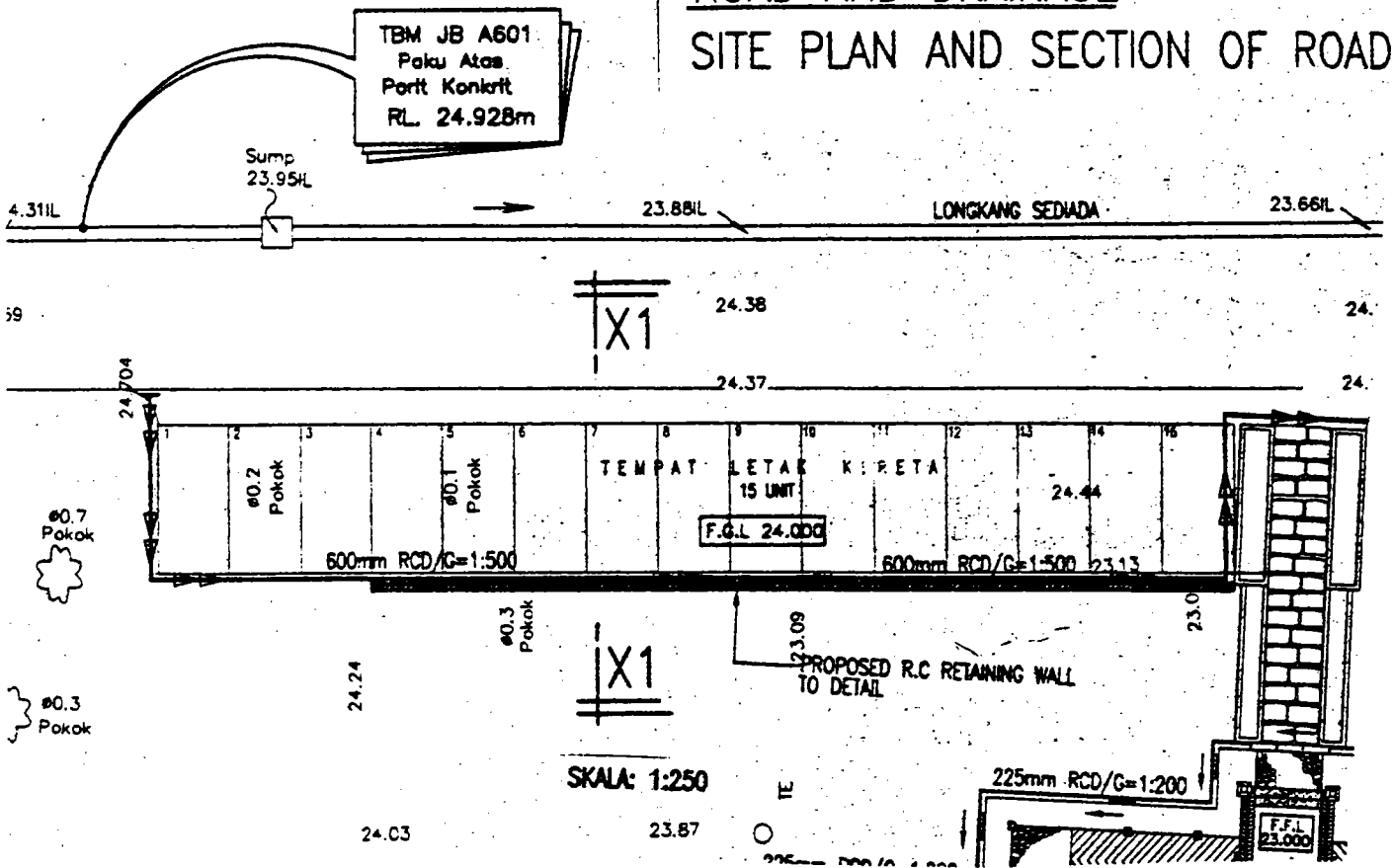
LEGEND:

-  SCOUR VALVE
-  SLUICE VALVE
-  150mm STEEL PIPE CLASS 'C'

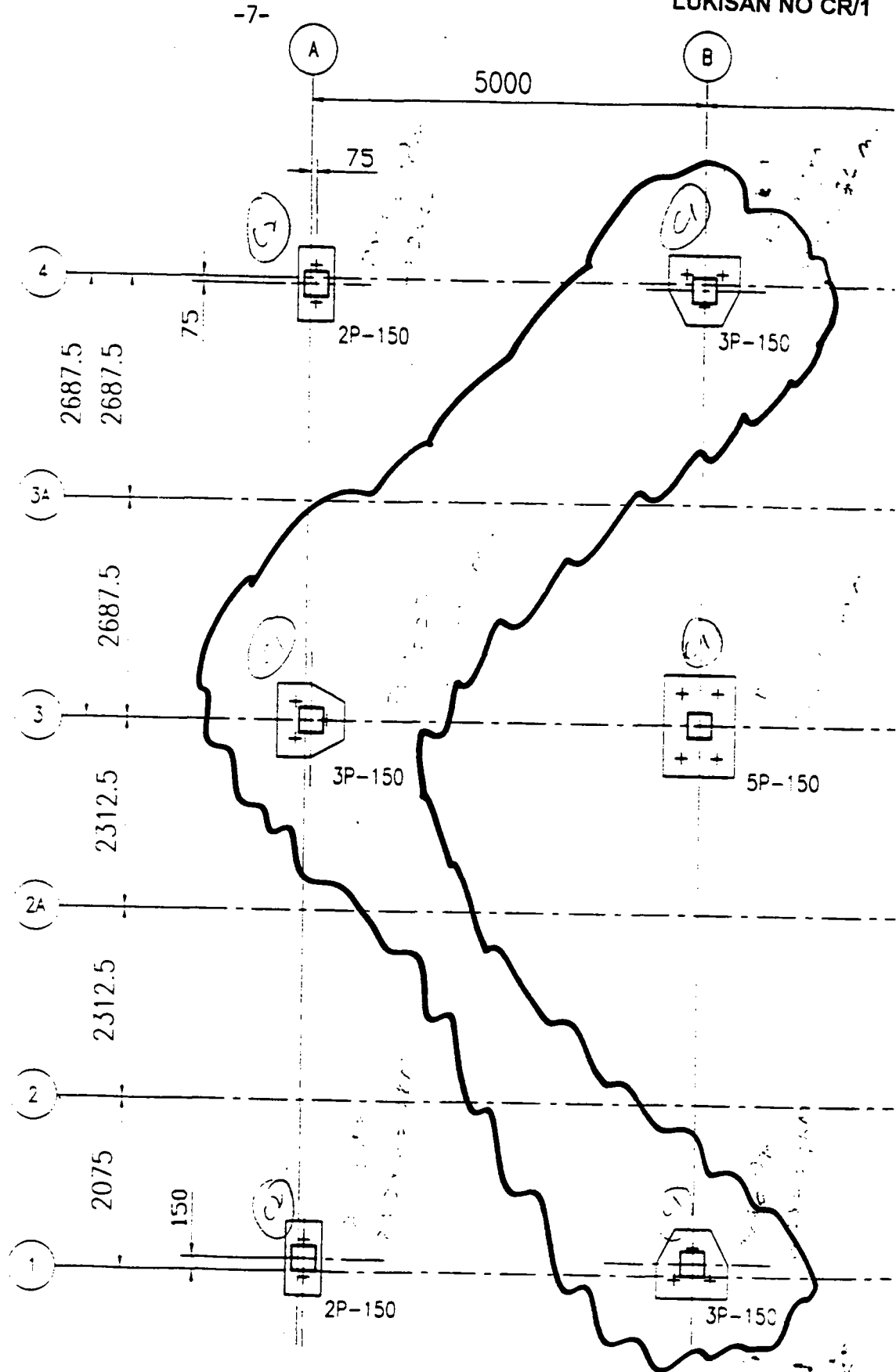
RQK 337 UKUR BAHAN 2 RA/3



**ROAD AND DRAINAGE
 SITE PLAN AND SECTION OF ROAD**



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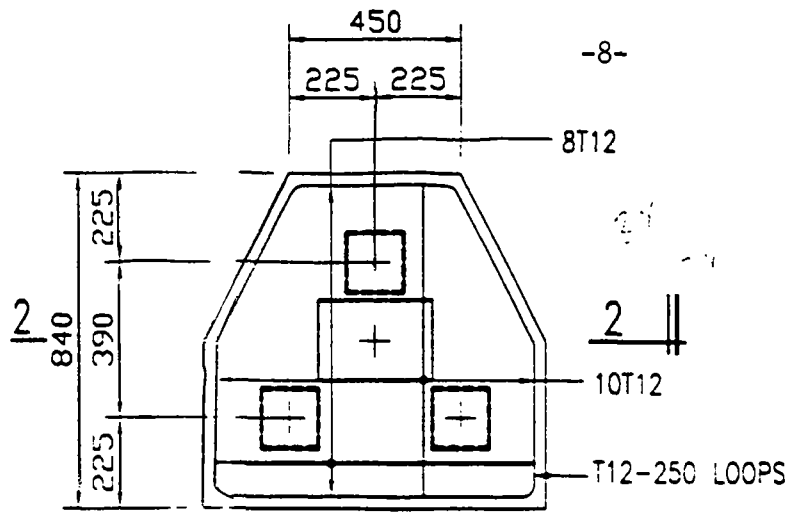


NOTES:

1. WORKING LOAD OF R.C PILE SHALL BE 230 TONNES UNLESS OTHERWISE STATED.
2. PROVISIONAL LENGTH OF R.C. PILE SHALL BE 20M UNLESS OTHERWISE STATED.
3. Concrete Grade 30

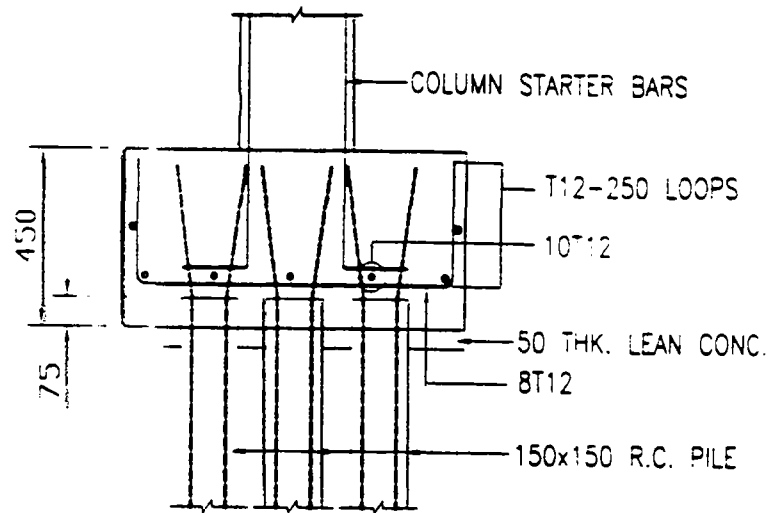
FOUNDATION

SCALE 1 : 75



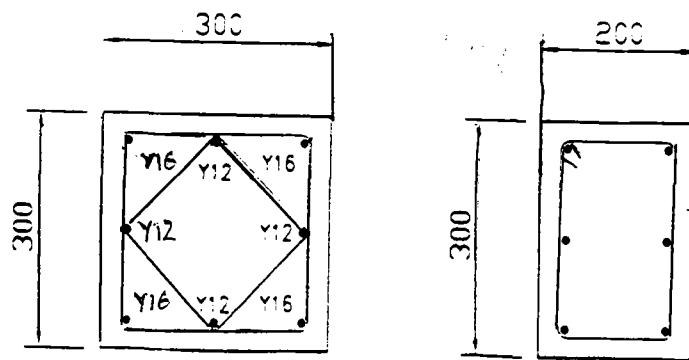
3P-150 PLAN

SCALE 1 : 20



SECTION 2 - 2

SCALE 1 : 20



STUMP. - 300 x 300
 REINF. - 4T16 + 4T12
 LINKS - 2R6-125 c/c

GRD. TO ROOF - 200 x 300
 REINF. - 6T12
 LINKS. - R6-125 c/c

C1

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COLUMN SCHEDULES

SCALE 1 : 10