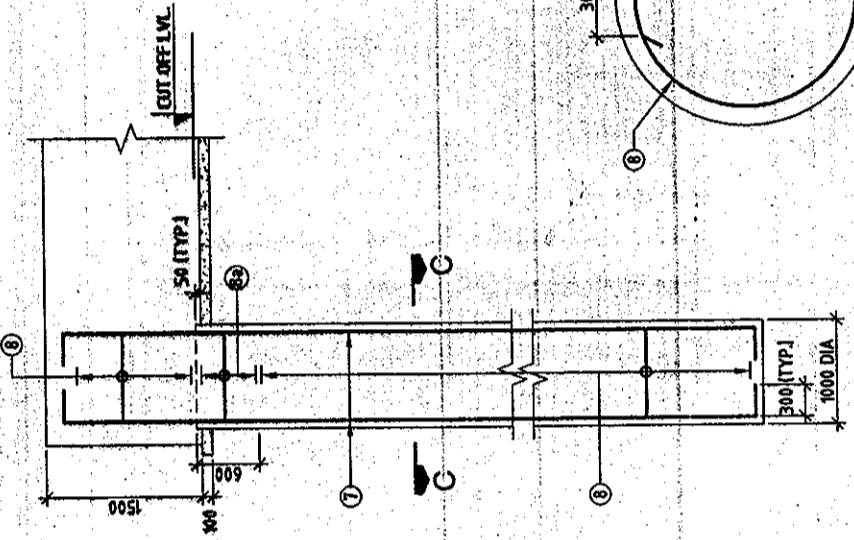
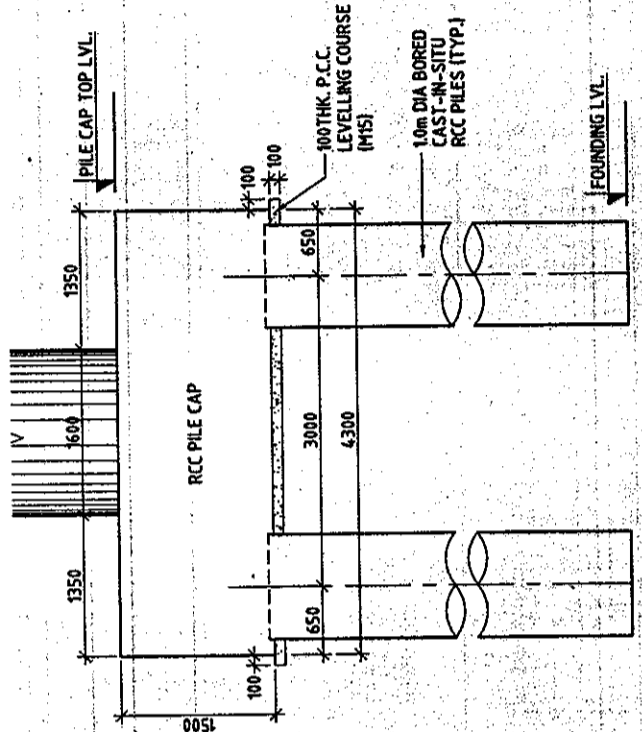


**NOTES:-**

- ALL DIMENSIONS ARE IN mm AND LEVELS IN METRES, UNLESS OTHERWISE MENTIONED. ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED. NO DIMENSION IS TO BE SCALED.
- CONCRETE SHALL BE DESIGN MIX WITH A MINIMUM 28 DAYS CHARACTERISTIC STRENGTH OF 35MPa FOR BORED CAST-IN-SITU PILE AND PILE CAP.
- CLEAR COVER TO SHALL BE AS FOLLOWS.  
 (i) FOR PILE --- 75mm  
 (ii) FOR PILE CAP --- 75mm
- 100THK. P.C.C. LEVELLING COURSE (M15)
- 1.0m DIA BORED CAST-IN-SITU RCC PILES (TYP.)
- MINIMUM BOND LENGTH SHALL BE 42 x DIA OF BAR.
- MINIMUM LAP LENGTH FOR REINFORCEMENT BAR SHALL BE 72 x DIA OF BAR. LAPS SHALL BE STAGGERED AND NOT MORE THAN 50% OF BARS SHALL BE LAPPED AT ANY ONE SECTION.
- LL REPRESENTS LONGITUDINAL AXIS OF BRIDGE AND TT REPRESENTS TRANSVERSE AXIS OF BRIDGE.
- ACTUAL LOAD TEST SHALL BE CARRIED OUT ON A TEST PILE AS PER STANDARD SPECIFICATIONS TO DETERMINE VERTICAL AND LATERAL CAPACITY OF PILE. IT SHALL HOWEVER BE ENSURED THAT IT IS NOT LESS THAN DESIGN VALUES.

**REFERENCE DRAWINGS:-**

- 12/3/SMEC/LUDHIANA/21+100/G-01 (SHEET 1 OF 7 TO 7 OF 7)
- 12/3/SMEC/LUDHIANA/21+100/E-01 (SHEET 2 OF 2)



**REINFORCEMENT DETAIL**

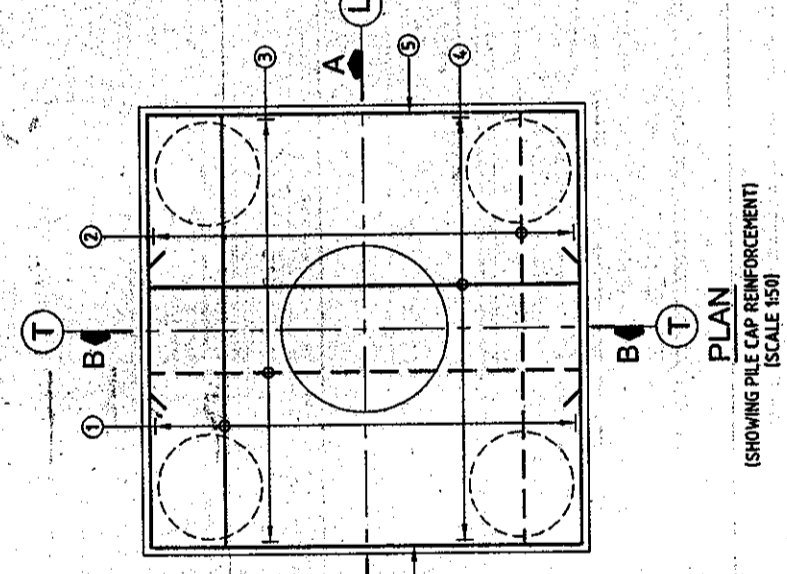
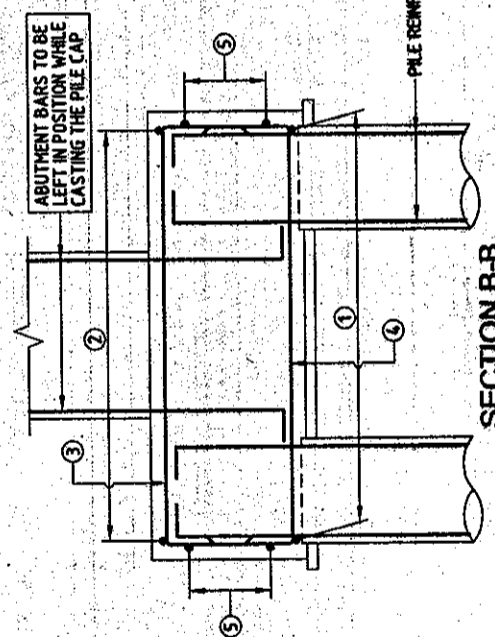
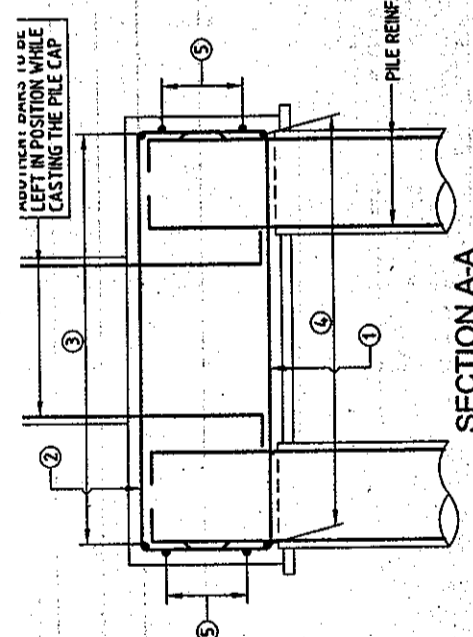
BAR NO.	DIA (mm)	SPACING/Nos.	SHAPE
1	25	16 Nos.	□
2	16	50	□
3	16	50	□
4	25	16 Nos.	□
5	16	8 Nos.	□
7	20	20 Nos.	□
8	10	200	○
8a	10	100	○

**LEGENDS:**

--- APPROVED FOR EXECUTION  
 BAR ON BORESIDE

Assistant Engineer Design (P)  
 Executive Engineer Design (IP)  
 Chief Engineer Design (J)

PI INJAB P.W.D. (B & R)



**LEVELS CHART FOR PILE CAP LAYOUT**

ABUTMENT DESIGNATION	BED LEVELS	TOP OF PILE CAP LEVELS	CUT OFF LEVELS	FOUNDING LEVELS
AD	246.728	246.228	244.778	230.778
AL	246.611	246.111	244.661	230.661

**CLIENT:** PUIDB  
 PUNJAB INFRASTRUCTURE DEVELOPMENT BOARD

**CONSULTANT:** SMEC  
 SMEC (India) Pvt. Ltd.  
 8/F BUILDING No. 8, C TOWER, 3RD FLOOR,  
 CYBER CITY, PHASE-GARDIAN,  
 110046, Gurgaon, Haryana

**PROJECT TITLE:** PREPARATION OF DETAILED PROJECT REPORT FOR UPGRADATION OF SOUTHERN BY-PASS LUDHIANA

**SCALE:** AS SHOWN

**SHEET SIZE:** A2

**REVISIONS:**

REV	DATE	DRAWN	DESIGN	CHECKED	APPROVED	DETAILS OF REVISION
R1	27/09/2009	MKS	VNM	VNM	S LAHRI	REVISED AS PER P.W.D. COMMENTS
R0	25/05/2009	MKS	VNM	VNM	S LAHRI	FIRST ISSUE

**DETAILED PROJECT REPORT**  
 DIMENSIONAL & REINFT. DETAILS OF PILE, PILE CAP, ABUTMENT SHAFT, ABUTMENT CAP & DIRT WALL (SHEET 1 OF 2)

**SCALE:** AS SHOWN

**DRAWING NO.:** 12/3/SMEC/LUDHIANA/21+100/E-01

**DATE:** 25/05/2009

**PROJECT NO.:** 12/3/SMEC/LUDHIANA/21+100/E-01

**SCALE:** AS SHOWN

**PROJECT NO.:** 12/3/SMEC/LUDHIANA/21+100/E-01

**SCALE:** AS SHOWN

**PROJECT NO.:** 12/3/SMEC/LUDHIANA/21+100/E-01