

- NOTES:**
1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE IN METER, UNLESS OTHERWISE SPECIFIED.
  2. DIMENSIONS ARE NOT TO BE SCALED. ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
  3. THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH GENERAL ARRANGEMENT DRAWINGS AND RAIL ALIGNMENT DRAWINGS.
  4. SEISMIC ZONE: II
  5. IF ANY AMBIGUITY IS FOUND IN DRAWINGS OR AT SITE, THE SAME SHALL BE BROUGHT TO DESIGNER'S/ ENGINEER'S NOTICE BEFORE EXECUTION.
  6. REINFORCEMENT STEEL SHALL BE HYSD BARS OF GRADE Fe 500 CONFORMING TO IS: 4566-2008.
  7. GRADE OF CONCRETE SHALL BE AS FOLLOWS:  

LEVELING COURSE	: PCC M20
PILE	: RCC M35
PILE CAP	: RCC M35
PIER	: RCC M50
  8. CLEAR COVER TO ALL REINFORCEMENT SHALL BE:  

PILE	: 75 mm
PILE CAP	: 75 mm
PIER	: 50 mm
  9. BORING AND CONCRETING OF PILE SHALL BE CARRIED OUT AS PER TECHNICAL SPECIFICATIONS AND METHOD STATEMENT.
  10. PILE COORDINATES SHOULD BE CHECKED AND CONFIRMED AT SITE BEFORE CASTING OF PILES.
  11. THE NOMINAL MAXIMUM SIZE OF AGGREGATE TO BE USED SHALL BE 20mm.
  12. PILE TOP SHOULD PROTECT 75mm INTO PILECAP.
  13. CONTRACTOR TO ENSURE THAT CUT-OFF LEVEL THE CONCRETE IS SOUND AND THE MATRIX HAS NO HONEYCOMBING OR OTHER DEFECTS.
  14. THE METHOD OF BORING AND INSTALLATION FOR WORKING PILE SHALL BE SAME AS PER THE TEST PILE.
  15. TOLERANCE IN PILE.  
 (i) TILT-----1 IN 150.  
 (ii) SHIFT-----±75mm
  16. IN CASE OF ANY DEVIATION IS OBSERVED DURING THE PILE BORING OPERATION, THE SAME SHOULD BE BROUGHT TO THE NOTICE OF DESIGNER AND ENGINEER FOR NECESSARY ACTION/ AMENDMENTS BEFORE EXECUTION.
  17. TEMPORARY LIFT SHALL BE FOLLOWED AT SITE, HOWEVER IF ANY DIFFICULTY ARISES IN EXECUTION, PERMANENT LIFT SHALL BE PROVIDED AS PER ENGINEER'S RECOMMENDATION.
  18. ANCHORAGE LENGTH, LAP LENGTH, BAR SPACING'S AND OTHER REINFORCEMENT REQUIREMENT SHALL COMPLY WITH SPECIFICATIONS GIVEN IN IRS-CBC CLAUSE 15.9.6.6.
  19. DEVELOPMENT LENGTH SHALL BE AS GIVEN BELOW :  

GRADE OF CONCRETE	M35	M50
DEVELOPMENT LENGTH	46 $\phi$	41 $\phi$

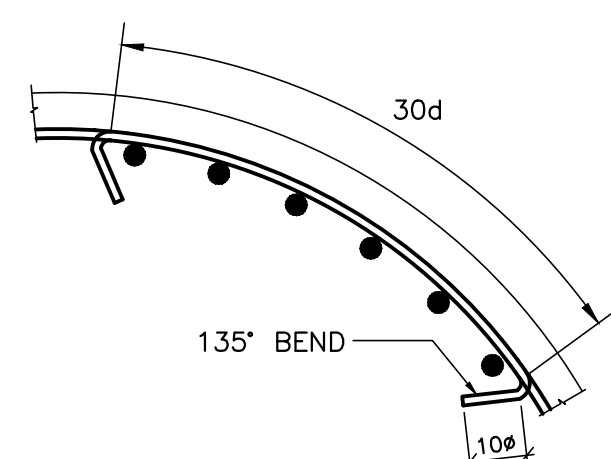
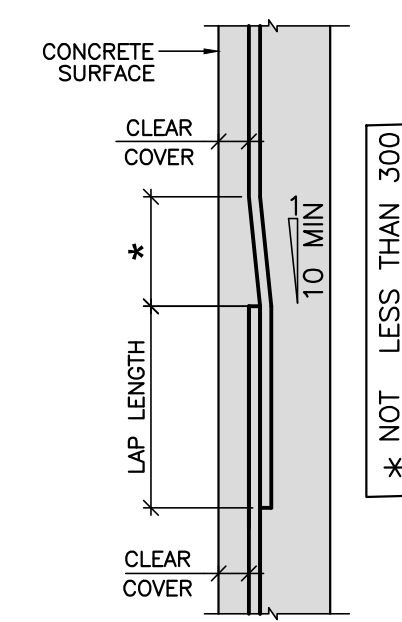
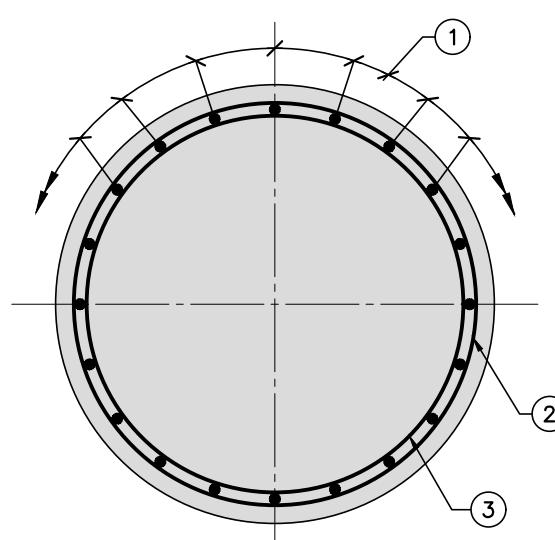
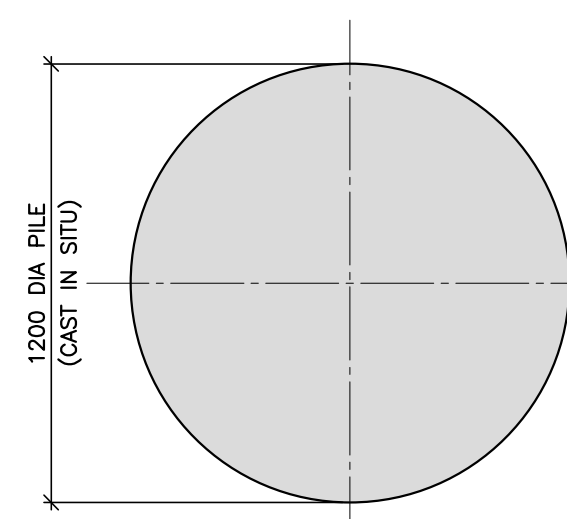
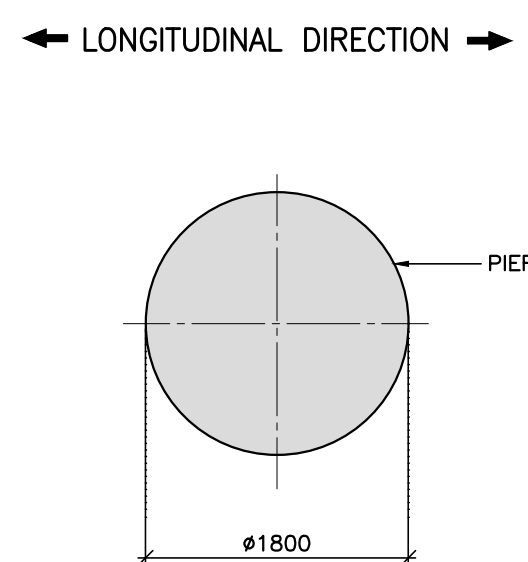
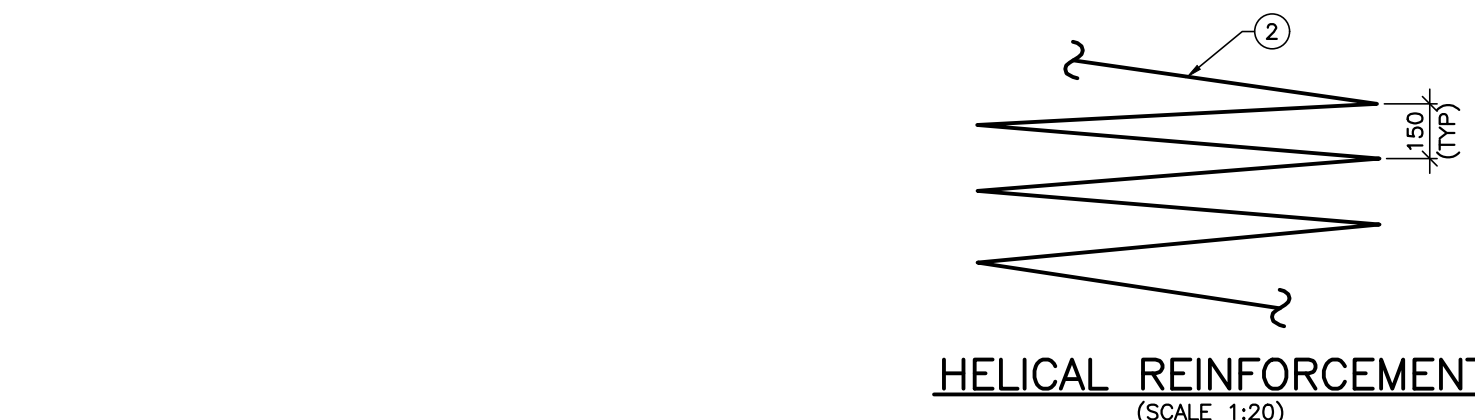
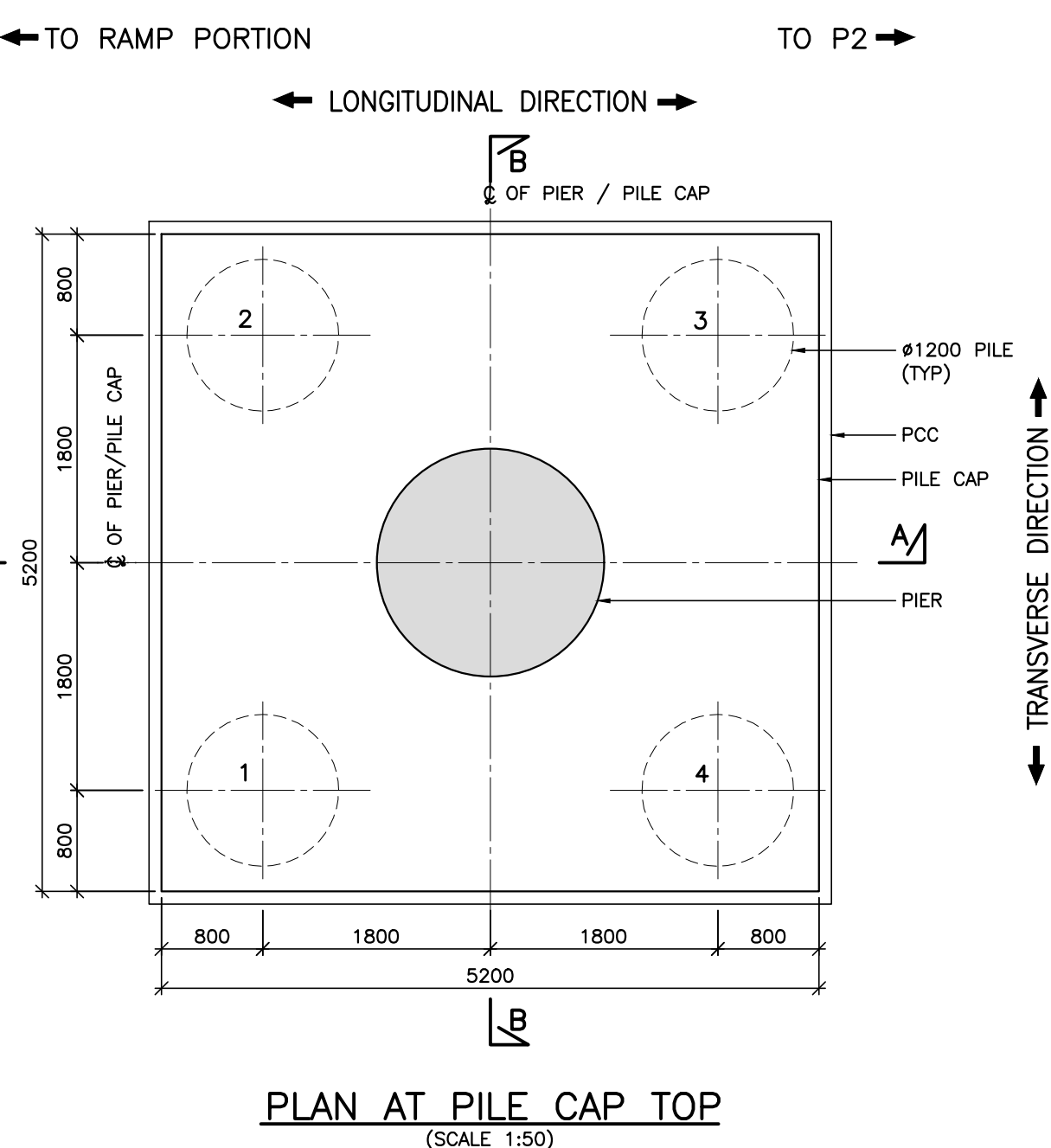
 WHERE  $\phi$  IS THE DIA. OF BAR.
  20. NOT MORE THAN 50% OF THE BAR SHALL BE LAPPED AT ANY LOCATION.
  21. THE PILE CAPACITIES HAVE BEEN WORKED OUT AS PER BORE LOG DATA. DISCREPANCY IF ANY SHALL BE INFORMED TO THE ENGINEER.
  22. ANY SHIFTING IN PILE AT SITE, SHALL BE BROUGHT TO THE NOTICE OF DDC.
  23. NOISE BARRIER LOAD NOT CONSIDERED IN DESIGN.
  24. PILE CAN TERMINATE AT A DEPTH OF 1D FROM THE ROCK SURFACE IF A SOLID CORE OF AT LEAST 75% (750mm) IN A SINGLE 1000MM CORE BARREL) IS RECOVERED USING A ROCK CORE BARREL.
  25. TEMPORARY LEVEL NEED TO BE VERIFIED AT SITE.
  26. ALL LEVELS & CO-ORDINATES TO BE VERIFIED AT SITE BEFORE EXECUTION.
  27. NO LAPPING SHALL BE DONE TILL DEPTH OF FIXITY.

GRADE OF CONCRETE	M35	M50
DEVELOPMENT LENGTH	46 $\phi$	41 $\phi$

WHERE  $\phi$  IS THE DIA. OF BAR.

### SCHEDULE OF REINFORCEMENT

BAR MARK	BAR DIA.	SHAPE	TOTAL NOS./ SPACINGS	REMARKS
①	Ø 25		20 NOS	VERTICAL BAR
②	Ø 10	≡	150 PITCH HELICAL REINFORCEMENT	
③	Ø 16	○	⊗ 1500 c/c	RING
④	Ø 10	○	⊗ 150 c/c	RING



TYPICAL DETAIL OF  
ANCHORAGE OF TIES  
( $\phi$  = DIAMETER OF TIES)  
(SCALE 1:10)

[illegible]