GENERAL NOTES

- 1. ALL DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE STATED.
- 2. ALL LEVÈLS ARE IN METERS ABOVE PRINCIPAL DATUM(mPD) UNLESS OTHERWISE STATED.
- 3. ALL PROPOSÈD CAP TOP LEVEL SHOULD BE -6.35mPD. THICKNESS OF CAP TO BE 2500mm / 2000mm.
- 4. CONCRETE GRADE OF PILE CAP IS C45/20 (UNDER SEPARATE SUBMISSION)
- 5. ALL PILE CAP SHOULD BE UNDER SEPARATE SUBMISSION. 6. ALL FOUNDING LEVELS OF BORED PILES AS SHOWN ARE TENTATIVE ONLY.
- 7. HEIGHT OF BUILDING TO BE 100m.

8. THE DESIGN OF BORED PILING WORKS SHALL BE IN ACCORDANCE WITH HONG KONG BUILDING (CONSTRUCTION) REGULATIONS 1990, THE STRUCTURAL USE OF CONCRETE 2013, CODE OF PRACTICE ON WIND EFFECTS IN HONG KONG 2004, CODE OF PRACTICE FOR FOUNDATION 2017 AND PRACTICE NOTES FROM THE BUILDINGS DEPARTMENT. 9. HIGHEST POSSIBLE GROUND WATER LEVEL TO BE +4, 10mPD. EXISTING GROUND LEVEL IS +4.10mPD.

- 10. FLEXIBLE CAP THEORY IS ADAPTED IN PILE DESIGN.
- 11. ALL LATERAL LOADS ARE RESISTED BY BORED PILES & SOCKETED H-SHEET PILES.
- 12. WIND LOAD SHALL BE REVERSIBLE.
- 13. CONSIDERATION OF N.S.F. IS NOT REQUIRED.

GENERAL NOTES FOR BORED PILE

ALL STRUCTURAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTURAL AND BUILDING SERVICES DRAWINGS. SETTING OUT TO BE IN ACCORDANCE WITH RELEVANT ARCHITECTURAL DRAWINGS.

1. CONCRETE USED IN BORED PILE SHALL HAVE PFA CONTENTS COMPLYING WITH PNAP APP-33 AND NOT EXCEED 25% OF THE CEMENT CONTENT AND COMPLY WITH PNAP APP-74. THE REACTIVE ALKALI OF CONCRETE EXPRESSED AS THE EQUIVALENT SODIUM OXIDE PER CUBIC METER OF CONCRETE SHOULD NOT EXCEED 3.0kg

1.4D+1.4W, 1.2D+1.2L+1.2W, 1.0D - 1.4W

3. THE CONTRACTOR SHALL ESTABLISH THE BASE SETTING OUT POINTS AND LINES FOR THE ENGINEERS.

4. THE CONTRACTOR IS ADVISED TO INSPECT THE CONDITIONS ON SITE AND TO RECORD THE EXISTING LANDSCAPING FEATURES AND UTILITIES WITHIN AND CLOSE TO THE EXCAVATION AREA. THE CONTRACTOR SHALL CARRY OUT PRE-CONSTRUCTION DIVERSION OF THE EXISTING UNDERGROUND UTILITIES WITHIN THE WORK AREA.

5. ALL REINFORCEMENTS ARE HIGH TENSILE DEFORMED STEEL BAR (Y) AND MILD STEEL ROUND BAR (R) COMPLYING WITH CS2 : 2012 WITH MINIMUM YIELD STRESS AS FOLLOWS : HIGH TENSILE DEFORMED STEEL BAR = 500 N/sq mm MILD STEEL ROUND BARS = 250 N/sq mm

6. CONCRETE MIX FOR ALL BORED PILES TO BE GRADE C45 COMPLYING WITH HONG KONG BUILDING (CONSTRUCTION) REGULATION CONCRETING METHOD TO BE BY TREMIE. A REDUCTION FACTOR OF 0.8 SHALL BE APPLIED FOR CONCRETE STRENGTH.

7. ALL LAP LENGTHS OF REINFORCEMENT SHALL BE 46D WHERE D IS THE DIAMETER OF REINFORCEMENT.

8. CUT-OFF LEVEL AND TENTATIVE FOUNDING LEVEL FOR ALL PILES ARE SHOWN IN THE BORED PILE SCHEDULES.

9. COVER TO MAIN REINFORCEMENT FOR BORED PILES TO BE 75mm.

10. ALL DIMENSIONS ARE IN mm. 11. ALL LEVELS ARE IN mPD.

12. ESTIMATED PILE LENGTHS GIVEN IN THE PILING SCHEDULE ARE MEASURED FROM THE CUT-OFF LEVEL 1 OF INDIVIDUAL PILES.

13. ESTIMATED PILE LENGTHS GIVEN ARE TENTATIVE. ACTUAL PILE LENGTH FOR INDIVIDUAL PILES SHALL BE VERIFIED ON SITE. 14. THE TENTATIVE FOUNDING LEVELS OF BORED-PILES ARE APPROXIMATE AS DETERMINED FROM THE BOREHOLE INFORMATION.

15. CONCRETE SHALL BE COMPILED WITH CS1 : 2010, EXCEPT CLAUSE 7.1

16. BORED PILE IS DESIGNED AS FIXED HEAD AND PILE CAP TO BE DESIGNED AS FLEXIBLE CAP. PILE CAP SHALL BE PROVIDED AT B2/F (UNDER SEPARATE SUBMISSION) 17. NO NEGATIVE SKIN FRICTION TO BE CONSIDERED FOR PILE DESIGN DUE TO COMPLETION OF CONSOLIDATION AND REDUCTION OF OVERBURDEN PRESSURE FROM THE BASEMENT CONSTRUCTION.

18. CORRESPONDING GBP SUBMISSION AND SUBSEQUENT AMENDMENT SHALL BE SUBMITTED TO TALLY WITH THE AS-BUILT SETTING OUT OF BORED PILES.

NOTES ON FOUNDING CRITERIA AND PREDRILLING

ALL BORED PILES SHOULD BE FOUNDED AT THE PRESCRIBED LEVELS WHICH ARE DETERMINED BY THE FOLLOWING CRITERIA: 1. THE FOUNDING STRATUM SHALL BE SLIGHTLY TO MODERATELY DECOMPOSED MODERATELY STRONG ROCK OR MATERIAL WEATHERING CAT (1C) ROCK OF BETTER, WITH A TOTAL CORE RECOVERY OF MORE THAN 85% OF THE GRADE AND MINIMUM UNIAXIAL COMPRESSION STRENGTH

(UCS) NOT LESS THAN 25MPa OR EQUIVALENTLY POINT LOAD INDEX STRENGTH (PLI50) NOT LESS THAN 1MPa. THE ALLOWABLE BEARING CAPACITY SHOULD BE 5000 kPa 2. PRE-DRILLING SHALL BE CARRIED OUT FOR EACH PILE TO ASCERTAIN THAT THE FOUNDING TO A DEPTH 5m OR THE DESIGNED LENGTH OF THE ROCK SOCKET OF THE PILE INTO CONTINUOUS CAT (1C)

ROCK OR BETTER WITH TCR > 85% WHICHEVER IS DEEPER. 3. PRIOR TO THE COMMENCEMENT OF BORED PILE WORKS, PRE-DRILLING RECORDS SHALL BE SUBMITTED TO THE SATISFACTION OF THE ENGINEER. IN CASE CHANGE IN FOUNDING LEVEL IS REQUIRED, CORRESPONDING AMENDMENT SHALL BE SUBMITTED TO BD FOR APPROVAL.

4. THE ALLOWABLE BOND BETWEEN ROCK AND CONCRETE SHOULD BE 700 kPA UNDER COMPRESSION OR TRANSIENT TENSION, AND 350kPA UNDER PERMANENT TENSION.

METHOD STATEMENT OF BORED PILE CONSTRUCTION

BEFORE THE COMMENCEMENT OF THE BORED PILE CONSTRUCTION, PREDRILLHOLES TO BE CARRIED OUT AT PILE POSITION TO VERIFY THE FOUNDING LEVEL. 2. SET OUT THE BORED PILE LOCATION CORRECTLY ON SITE.

3. THE HYDRAULIC OSCILLATOR OR ROTATOR SHALL BE SET UP IN CONJUNCTION WITH A CRANE AND THE TEMPORARY STEEL CASING OF THE REQUIRED DIAMETER SHALL BE INSTALLED INTO THE GROUND. 4. EXCAVATION OF SOIL WITHIN THE TEMPORARY CASING SHALL BE CARRIED OUT BY A HAMMER GRAB. EXCAVATION IN ROCK/BOULDER SHALL BE CARRIED OUT BY RCD.

5. A CONSTANT HEAD EQUAL TO GROUND LEVEL OF DRILLING FLUID SHALL BE MAINTAINED SO AS TO CREATE A"BALANCED HEAD CONDITION" TO PREVENT ANY INGRESS OF MATERIALS AT THE BOTTOM OF

6. THE TEMPORARY STEEL CASING SHALL BE EXTENDED BY BOLTING OR WELDING ON ADDITIONAL CASING AND BE OSCILLATED AND JACKED DOWN BY A OSCILLATOR OR BE ROTATED DOWN BY A ROTATOR. THE TEMPORARY CASING SHALL MAINTAIN A MINIMUM OF 1.5m EMBEDMENT LENGTH FROM EXCAVATION I EVEI 7. VERTICALITY OF THE CASING SHALL BE MONITORED BY MEANS OF SPIRIT LEVEL FROM TIME TO TIME.

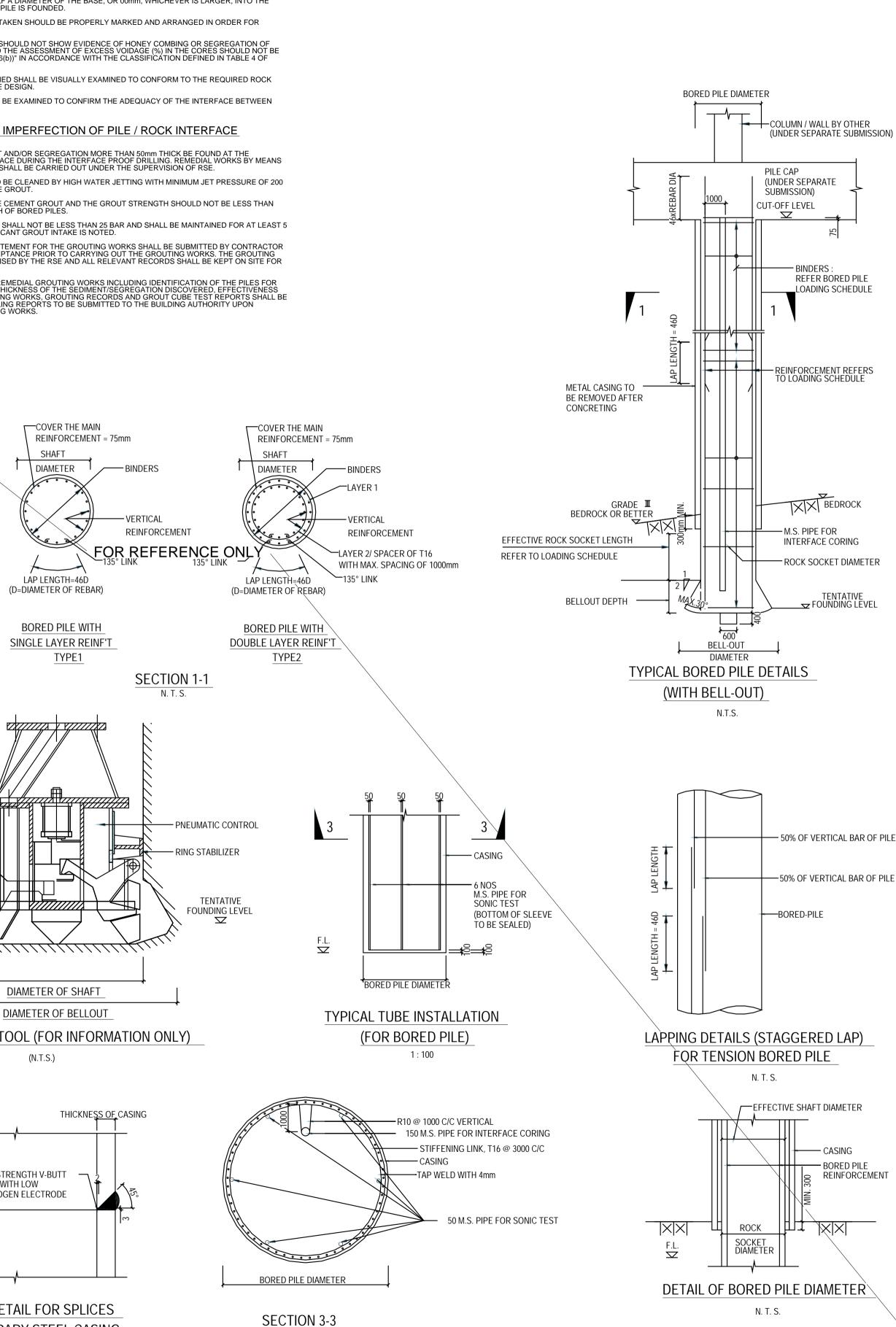
8. TOLERANCE FOR BORE PILES : THE MAX. DEVIATION OF THE CENTRE OF THE HEAD OF EACH PILE FROM THE DESIGNED CENTRE POINT SHALL NOT BE MORE THAN 75mm IN ANY DIRECTION. THE MAX. DEVIATION FROM THE VERTICAL AXIS OF THE PILE THROUGH THE CENTROID OF THE FINISHED PILE SHALL NOT BE MORE THAN 1 IN 10

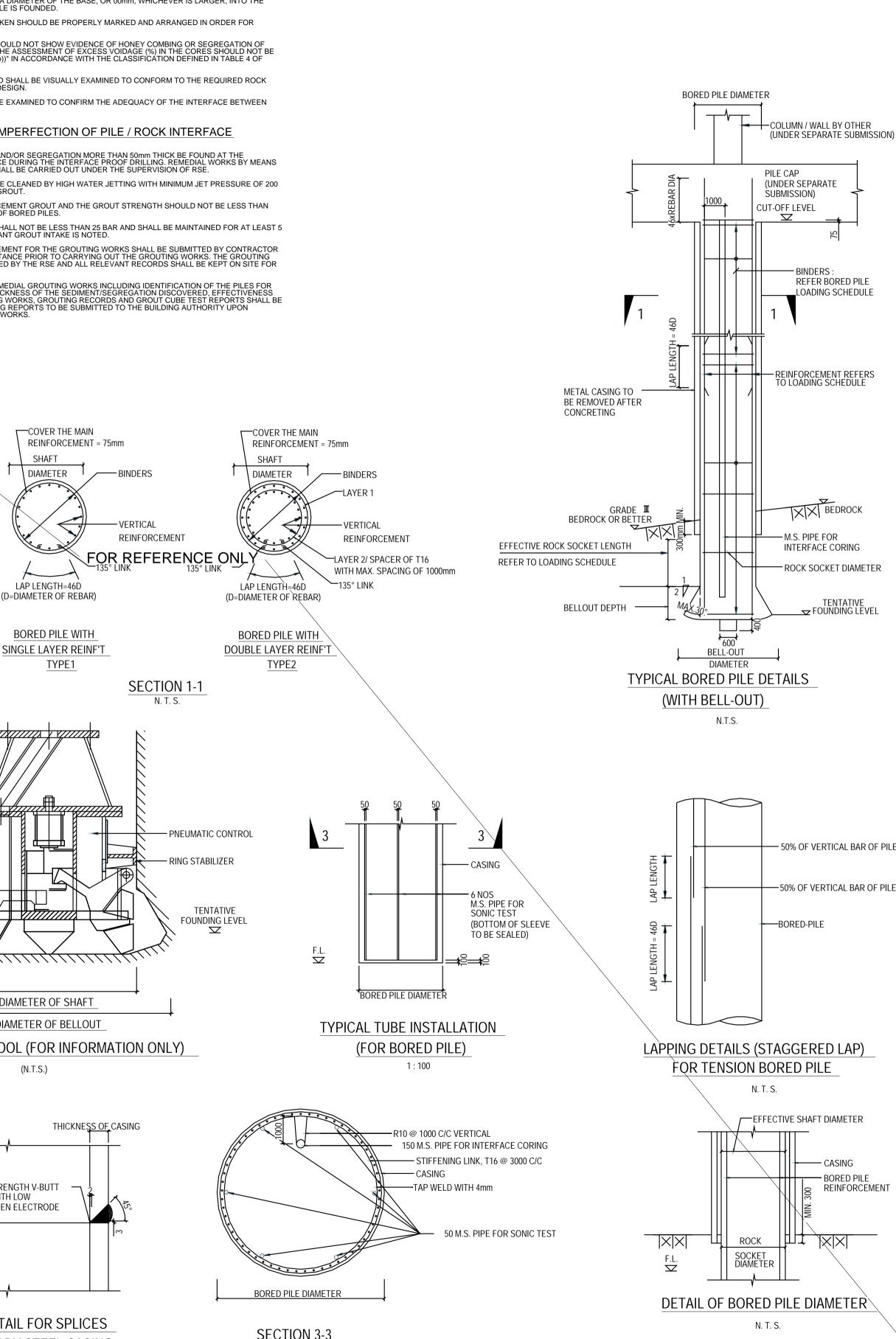
9. CONTINUE PROCEDURES 4 TO 7 UNTIL THE FOUNDING LEVELS OF PILES HAVE BEEN REACHED. 10. FOR PILE ENLARGEMENT / BELLOUT, IT SHALL BE FORMED BY EMPLOYING A BELLING OUT TOOL. 11. THE CONTRACTOR SHALL CARRY OUT KODEN PILE MONITORING TESTS ON ALL (100%) BORED PILES OR SIMILAR ELECTRONIC CALIBRATION TEST METHOD APPROVED BY THE ENGINEER TO CHECK THE DIMENSION, ALIGNMENT AND INTEGRITY OF THE PILE ROCK SOCKET AND BELLOUT. THE CONTRACTOR SHALL SUBMIT THE PROPOSED METHOD FOR APPROVAL PRIOR TO COMMENCEMENT OF THE WORKS. A COPY OF THE TEST RESULTS SHALL BE PROVIDED TO THE ENGINEER IMMEDIATELY AFTER TESTING AND SUBMITTED TO BD TOCETHER WITH FORM PA14 SUBMITTED TO BD TOGETHER WITH FORM BA14. 12. STEEL REINFORCEMENT SHALL BE PRE-FABRICATED INTO CAGES AND LOWERED INTO THE TEMPORARY STEEL CASING. 13. FINAL CLEANING SHALL BE ACHIEVED BY MEANS OF HAMMER GRAB/RCD AND AIR LIFTING METHOD USING HIGH PRESSURE AIR COMPRESSORS. 14. THE MUDDY WATER WITHIN THE STEEL CASING SHALL BE CLEANED AND DELIVERED INTO A DESILTING TANK BEFORE DISCHARGED INTO DRAINS. 15. THE PILE SHAFT SHALL THEN BE CONCRETED USING HIGH SLUMP TREMIE CONCRETE THROUGH TREMIE PIPE DISPLACING FLUID UPWARDS. 16. DURING CONCRETING OPERATION, THE TEMPORARY STEEL CASING SHALL BE EXTRACTED SIMULTANEOUSLY BY THE OSCILLATOR OR ROTATOR. A HEAD OF APPROX. 2m IS MAINTAINED BETWEEN THE TOP OF THE CONCRETE AND THE BASE OF THE TEMPORARY STEEL CASING. 17. THE BASE OF THE TREMIE PIPE SHALL BE KEPT AT A MINIMUM DEPTH OF APPROX. 2m BELOW THE SURFACE OF THE CONCRETE.

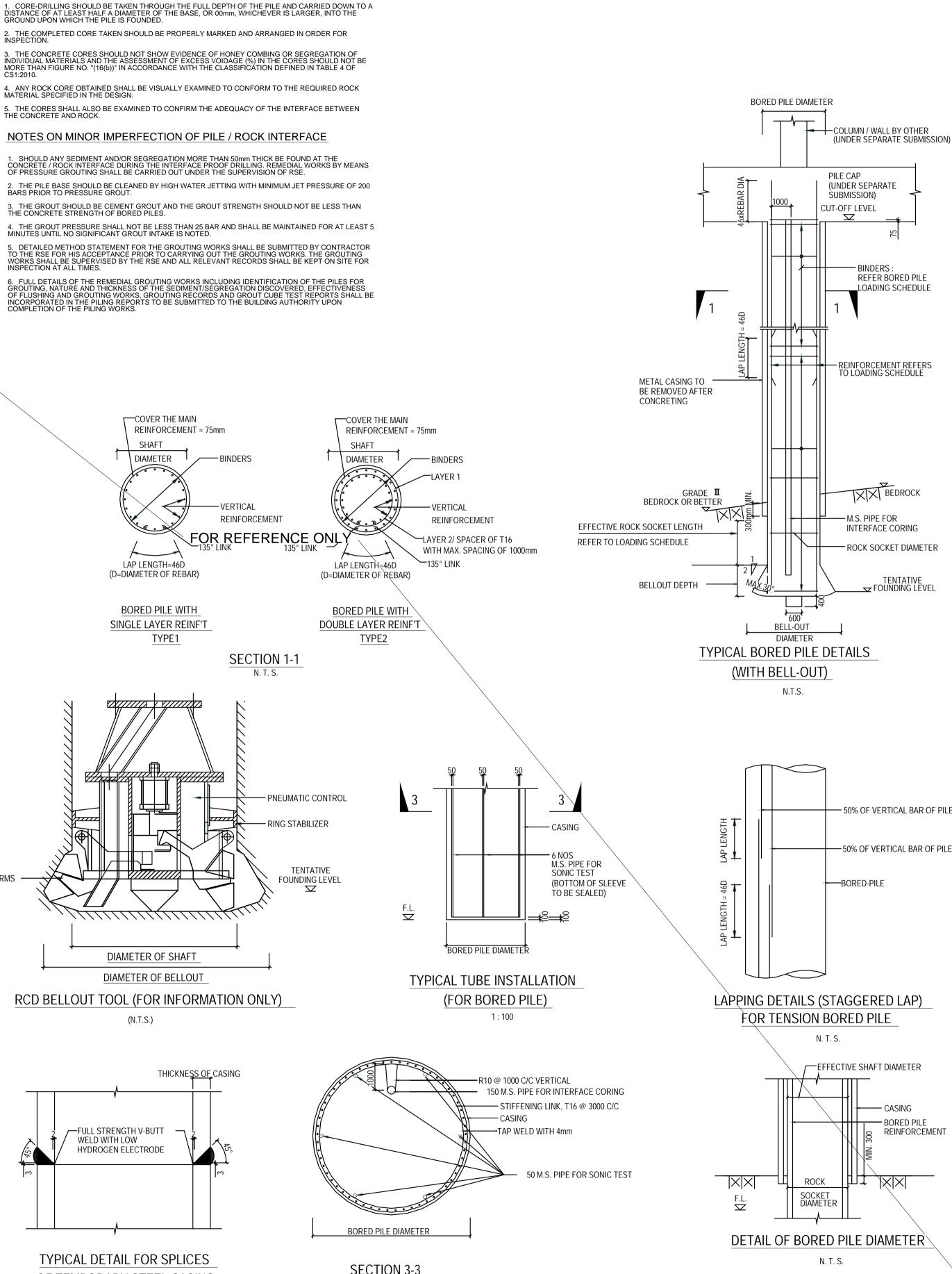
18. CONCRETING SHALL BE CARRIED OUT IN ONE CONTINUOUS OPERATION UNTIL 1.0m.ABOVE THE CUT-OFF LEVEL 2 . THE TREMIE PIPE WILL BE EXTRACTED. 19. CORING TEST OF PILES SHALL BE CONDUCTED IN ACCORDANCE WITH PNAP APP-18 AFTER THE CONCRETE IS MATURED.

20. THE CONTRACTOR SHALL CARRY OUT SONIC LOGGING TEST FOR 100% AT THE TOTAL NUMBER OF LARGE DIAMETER BORED PILE BY AN INDEPENDENT APPROVED LABORATORY 21. NO PILE EXCAVATION SHALL CARRIED OUT WITHIN DISTANCE NO LESS THAN 10m FORM AN ADJACENT PILING BEING UNDER EXCAVATION OR AN ADJACENT PILE HAS BEEN CONCRETING LESS THAN 24 HRS PREVIOUSLY.

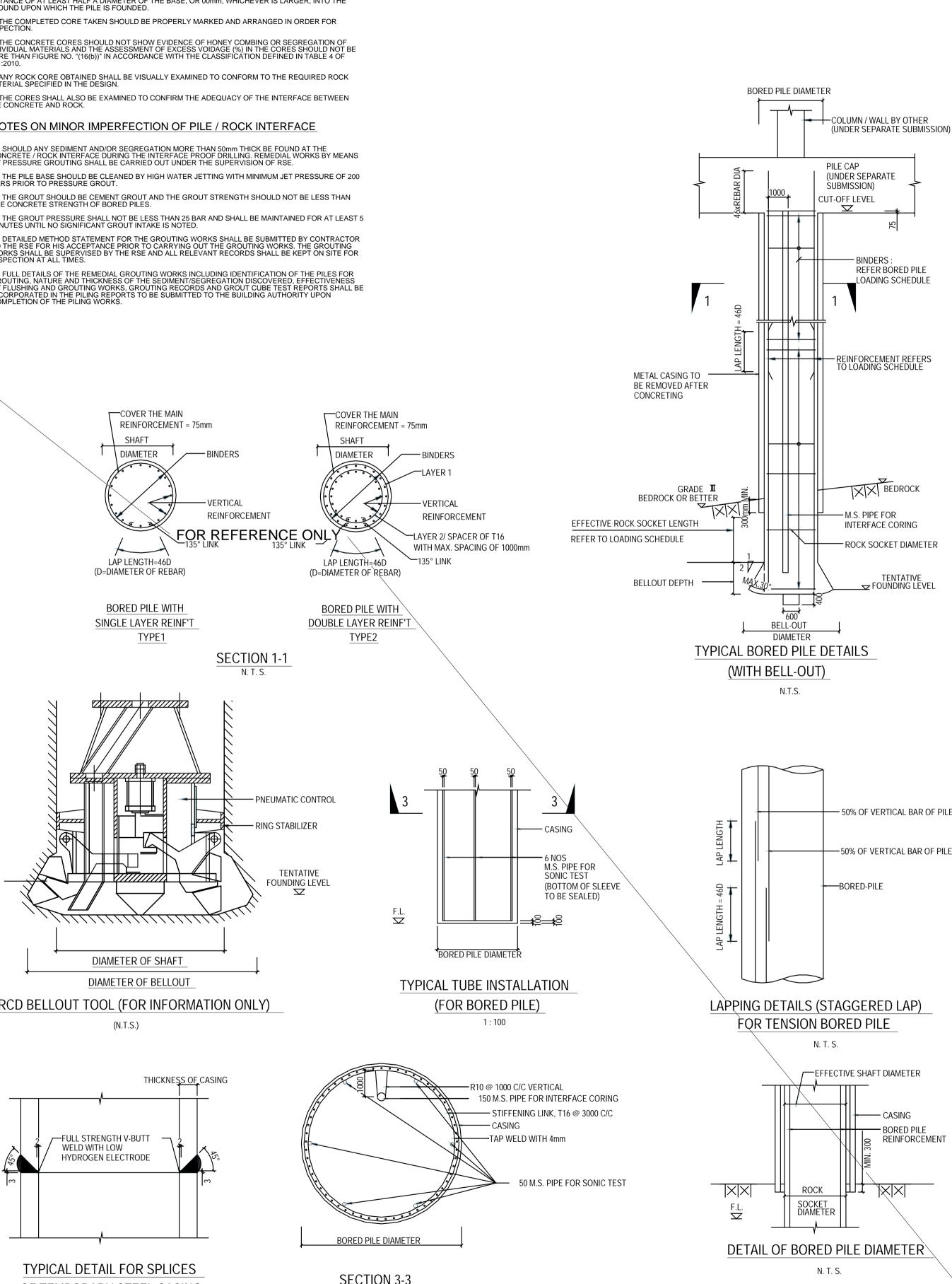
NOTES ON PROOF TEST BY CORE-DRILLING







1:50



OF TEMPORARY STEEL CASING N. T. S.

3 ARMS

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<u>GENERAL NOTES</u>

- 1. ALL PILING WORKS SHALL COMPLY WITH THE HONG KONG BUILDING (CONSTRUCTION) REGULATIONS, CODE OF PRACTICE FOR FOUNDATIONS 2004, CODE OF PRACTICE FOR STRUCTURAL USE OF STEEL 2011, HONG KONG HOUSING AUTHORITY SPECIFICATION AND CONTRACT SPECIFICATIONS.
- PRIOR TO COMMENCEMENT OF WORKS, THE CONTRACTOR SHALL IDENTIFY ALL NECESSARY PRE-CONSTRUCTION DIVERSION OR REMOVAL OF UTILITIES AND SERVICE, THAT WILL BE AFFECTED BY THE WORKS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND EXECUTION OF ALL NECESSARY TEMPORARY WORKS. THE CONTRACTOR SHALL SUBMIT A PROPOSAL TO THE CONTRACT MANAGER (CM) FOR COMMENT AND APPROVAL PRIOR TO COMMENCEMENT OF THE WORKS.
- THE CONTRACTOR SHALL OBTAIN CONSTRUCTION NOISE PERMIT REQUIRED UNDER THE NOISE CONTROL ORDINANCE WHENEVER NECESSARY.
- TEST BORING PROPOSAL SHALL BE SUBMITTED BEFORE THE COMMENCEMENT OF ANY BORING WORKS. CARRY OUT TEST BORING IN ACCORDANCE WITH SUBMITTED TEST BORING PROPOSAL. SUBSEQUENT TO THE SATISFACTORY TEST BORING, THE TEST REPORT SHALL BE SUBMITTED FOR RECORD BEFORE COMMENCING BORING ANY OTHER PILES.
- UPON COMPLETION OF PILE CONSTRUCTION, AS-BUILT RECORDS AND ALL RELATED INFORMATION AND DOCUMENTS OF ALL PILES CONSTRUCTED SHALL BE SUBMITTED FOR OBTAINING THE CONSENT
- TO COMMENCEMENT OF CONSTRUCTION OF PILE CAPS. ALL MONITORING WORKS SHALL BE CARRIED OUT IN ACCORDANCE
- WITH APPROVED MONITORING PLAN(S). 8. SETTLEMENT AND VIBRATION EFFECT ON ADJACENT SLOPES,
- STRUCTURES AND UTILITIES DUE TO THE CONSTRUCTION OF PILES SHALL BE MONITORED IN COMPLIANCE WITH PNAP APP-137 AND APPROVED MONITORING PLAN(S).
- STRUCTURAL MATERIALS
- ALL STEEL H-PILES SHALL BE GRADE S450J0 STRUCTURAL STEEL COMPLYING WITH BS EN 10025 PART 1-6:2004. THE MAXIMUM CARBON EQUIVALENT VALUE OF GRADE
- S450J0 STEEL H-PILES SHALL NOT EXCEED 0.45%. THE ALLOWABLE BEARING CAPACITY OF STEEL H PILES (DESIGN YIELD STRENGTH Py=430 N/mm²)

ALLOWABLE BEARING CAPACITY (KN)							
TO BE INF	PUT						
WITHOUT WIND	WITH WIND						
TO BE INPUT	TO BE INPUT						

- MINIMUM PILE SPACING SHALL BE 1100mm CENTRE TO CENTRE. 4. ALL STEEL CAPPING PLATE AT PILE HEAD SHALL BE GRADE S355
- COMPLYING WITH BS EN 10025 PART 1-6:2004.
- ALL WELDING WORKS SHALL COMPLY WITH BS EN 1011-1:2009, BS EN 1011-2:2001 AND CODE OF PRACTICE FOR THE STRUCTURAL USE OF STEEL 2011.
- 6. WELDING CONSUMABLE SHALL COMPLY WITH BS EN ISO 2560:2009 AND THE MECHANICAL PROPERTIES OF THE WELDING CONSUMABLE SHALL NOT BE LESS THAN THE MINIMA OF THE PARENT METAL. THE DESIGN WELDING STRENGTH IS 220N/mm²
- ALL WELDING WORKS SHALL BE CARRIED OUT BY APPROVED QUALIFIED WELDERS WITH QUALIFICATIONS IN COMPLIANCE WITH BS EN 287-1:2004. DETAIL WELDING PROCEDURES SHALL COMPLY WITH BS EN ISO 15614-1:2004 + A1:2008 AND SHALL BE SUBMITTED BY CONTRACTOR TO THE CM FOR APPROVAL BEFORE PILE INSTALLATION.
- ALL STRUCTURAL STEEL SHALL BE CLASS 1 STEEL COMPLYING WITH THE
- CODE OF PRACTICE FOR THE STRUCTURAL USE OF STEEL 2011 9. THE GROUT FOR PRE-BORED HOLE SHALL BE NON-SHRINK AND HAVE A
- MINIMUM CHARACTERISTIC STRENGTH OF 30 MPa AT 28 DAYS.
- 10. ALL REINFORCEMENT BARS SHALL COMPLY WITH CS2:2012.
- 11. 'T' DENOTES RIBBED STEEL REINFORCING BARS WITH A CHARACTERISTIC STRENGTH OF 500 N/mm². 'R' DENOTES PLAIN STEEL REINFORCING BARS WITH A CHARACTERISTIC STRENGTH OF 250N/mm
- 12. ALLOWABLE BOND STRENGTH BETWEEN GROUT AND STEEL TO BE 0.6 MPa OR 0.48 MPa (FOR GROUTING UNDER WATER).

FOUNDING CRITERIA

. ALL PILES SHALL BE INSTALLED BY INSERTING STEEL H-PILES INTO ROCK SOCKET WITH LENGTH IN ROCK SOCKET NOT LESS THAN THE ROCK SOCKET LENGTH AS SHOWN IN THE PILING SCHEDULE. THE ROCK SOCKET SHALL BE FORMED IN SLIGHTLY TO MODERATELY DECOMPOSED MODERATELY STRONG ROCK OF MATERIAL WEATHERING GRADE III OR BETTER, WITH A TOTAL CORE RECOVERY OF MORE THAN 85% OF THE GRADE AND MINIMUM UNIAXIAL COMPRESSIVE STRENGTH OF ROCK MATERIAL (UCS) NOT LESS THAN 25 MPa (EQUIVALENT POINT LOAD INDEX STRENGTH PLI 50 NOT LESS THAN 1MPa). THE FOUNDING ROCK IS IN ACCORDANCE WITH THE CATEGORY 1(c) OR BETTER OF TABLE 2.1 IN THE CODE OF PRACTICE FOR FOUNDATIONS 2004. THE PRESUMED ALLOWABLE BOND OR FRICTION BETWEEN ROCK AND CONCRETE OR GROUT FOR PILES IS AS FOLLOWS:

UNDER COMPRESSION OR TRANSIENT TENSION	UNDER PERMANENT TENSION
700 kPa	350 kPa

- 2. THE PRE-DRILLING SHALL BE SUNK AT LEAST 5m INTO THE CATEGORY OF ROCK SPECIFIED FOR FOUNDING OR FORMING OF ROCK SOCKET, OR THE DESIGNED ROCK SOCKET LENGTH OF THE NEAREST PILE, WHICHEVER IS THE DEEPER. THE PRE-DRILING SHALL BE CARRIED OUT SUCH THAT THE TIP OF EVERY PILE SHALL BE WITHIN 5m DISTANCE FROM A PRE-DRILLING HOLE.
- 3. THE UNIAXIAL COMPRESSIVE STRENGTH (UCS) OR EQUIVALENT POINT LOAD INDEX STRENGTH (PLI 50) OF THE FOUNDING MATERIAL FOR PILES SOCKETED IN CAT I(c) OR BETTER ROCK SHALL BE CARRIED OUT FOR TEST ON BEARING STRATA. THE NUMBER OF TESTS CONDUCTED SHALL BE SUCH THAT THERE IS AT LEAST 1 SUCH TEST PREFORMED ON ROCK SPECIMEN TAKEN WITHIN 5m OF EVERY INSTALLED PILE.
- 4. NOTWITHSTANDING THE DEFINITION OF THE BEDROCK, INFERRED BEDROCK LEVEL FOR A PILE SHALL BE DEFINED AS THE LOWEST ROCK HEAD LEVEL WITHIN THE FOOTPRINT OF INDIVIDUAL PILE AFTER INTERPOLATING THE RESULTS OF THE SURROUNDING PRE-DRILLINGS AND GROUND INVESTIGATION BORE HOLES. ROCK SOCKET LENGTH AND THE FOUNDING LEVEL OF THE PILE SHALL BE DEDUCED FROM SUCH LOWEST ROCKHEAD LEVEL
- 5. THE ACTUAL BEDROCK LEVEL FOR EACH PILE SHALL BE VERIFIED ON SITE. NOTES ON PILE INSTALLATION
- THE FOLLOWING NOTES INDICATE ONLY THE MAJOR ACTIVITIES OF PILE CONSTRUCTION. THE CONTRACTOR SHALL PROPOSE THE DRILLING SYSTEM AND A DETAILED METHOD STATEMENT FOR CM'S APPROVAL PRIOR TO THE COMMENCEMENT OF PILING WORKS. PROCEDURES SHALL BE ADOPTED, WHEREVER APPLICABLE, TO ENSURE THERE WOULD BE NO OVER BREAKING INTO THE GROUND.
- ALL PILES SHALL BE SET OUT IN ACCORDANCE WITH APPROVED PILING LAYOUT PLAN.
- THE INSTALLATION SEQUENCE FOR EACH BUILDING STRUCTURE SHALL BE PROPOSED BY THE CONTRACTOR.

- 4. SET UP PILING RIG IN POSITION. THE DRILLING MAST SHALL BE SET AND FIXED IN THE CORRECT VERTICALITY OR INCLINATION OF THE PILE. THE STEEL CASING SHALL BE FREQUENTLY CHECKED DURING THE COURSE OF DRILLING. REFERENCE MARKING TO MONITOR THE ORIENTATION CORRECTNESS DURING THE COURSE OF DRILLING SHALL BE PROVIDED AND AGREED WITH THE CM.
- 5. DRILL HOLE SHALL BE FORMED BY USING APPROVED METHOD SUCH AS DOWN-THE-HOLE SYSTEM WITH DUE CONSIDERATION OF AVOIDING OVERBREAKING OF SUBSOIL IN BORING WORKS.
- 6. STEEL CASING SHALL BE USED AND SUNK TOGETHER WITH HAMMER HEAD OR REAMING AND DRILL BIT TO PREVENT COLLAPSE OF THE GROUND AND SOIL FROM FALLING INTO THE PRE-BORED HOLE DURING THE BORING OPERATION DOWN TO THE LEVEL AT LEAST 500mm BELOW ACTUAL BEDROCK LEVEL.
- 7. EXTENDING DRILLING ROD AND SPLICING STEEL CASINGS BY THE METHOD APPROVED BY THE CM WHEN THE REQUIRED LEVEL CANNOT BE REACHED BY ONE DRILLING RUN.
- 8. THE ACTUAL BEDROCK LEVEL FOR EACH PILE SHALL BE DETERMINED BY OBSERVING THE ROCK SAMPLE COLLECTED FROM COMPRESSED AIR OR WATER FLUSHING ON SITE AND AGREED WITH CONTRACT MANAGER.
- 9. THE PRE-BORED HOLE SHALL BE CLEANED THOROUGHLY FROM DEBRIS AND SOIL BY PRESSURED AIR OR WATER FLUSHING AND DEPTH OF PRE-BORED HOLE SHALL BE ASCERTAINED BY DIPPING A CALIBRATED TAPE FOR MEASUREMENT WITNESSED BY THE CM PRIOR TO INSERTING THE PILE SECTION INTO IT
- 10. THE PRE-BORED HOLES SHALL BE OF ADEQUATE SIZE TO ENABLE THE INSERTION OF THE STEEL H-PILE AND TO ALLOW A MINIMUM GROUT COVER OF 40mm TO THE PILE (EXCEPT AT THE BASE). N. THE PILE SURFACE SHALL BE CLEAN AND FREE FROM LOOSE MILL SCALE,
- LOOSE RUST OR ANY SUBSTANCE THAT MAY REDUCE THE BOND. 12. AFTER THE COMPLETION OF THE INSERTION OF PILE, THE PRE-BORED HOLE
- WITH PILE SECTION SHALL BE CLEANED AGAIN THOROUGHLY FROM DEBRIS AND SOIL BY PRESSURED AIR OR WATER FLUSHING JUST BEFORE THE GROUTING WORKS.
- 13. GROUTING SHALL BE CARRIED OUT BY TREMIE METHOD WITH RIGID TREMIE PIPE OF INTERNAL DIAMETER NOT LESS THAN 25mm IN ONE CONTINUOUS OPERATION.
- 14. FOR VERTICAL PILES, AFTER COMPLETION OF GROUTING TO A HEIGHT OF NOT LESS THAN 2M ABOVE THE ROCKHEAD, THE STEEL CASING SHALL BE WITHDRAWN. DURING THE COURSE OF GROUTING, A MINIMUM HEAD OF 1M OF GROUT ABOVE THE BASE OF THE STEEL CASING SHALL BE MAINTAINED.
- 15. FOR RAKING PILES, THE STEEL CASING SHALL NOT BE EXTRACTED. 16. GROUTING TO BE CONTINUED UNTIL A CONSISTENT AND SOUND GROUT COMES OUT FROM THE PRE-BORED HOLE.
- 17. WHEN THE BOULDER OBSTRUCTION ARE ENCOUNTERED USE DOWN-THE HOLE HAMMER TO BREAK THROUGH THE OBSTRUCTION.
- 18. BEFORE COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT A METHOD STATEMENT OF CONTROLLING VIBRATION QURING CONSTRUCTION COMPLIED WITH PNAP APP-137.
- NOTES ON METHOD OF CONTROLLING AND MONITORING THE VERTICALITY, INCLINATION AND ALIGNMENT OF PILES DURING INSTALLATION 1. A DETAILED METHOD STATEMENT AND PROCEDURES FOR CONTROLLING AND MONITORING THE VERTICALITY, INCLINATION AND ALIGNMENT OF PILES
- DURING INSTALLATION SHALL BE PROPOSED BY THE CONTRACTOR FOR CM'S APPROVAL BEFORE COMMENCEMENT OF PILE INSTALLATION WORKS. 2. DURING THE PILE INSTALLATION, THE VERTICALITY AND ALIGNMENT OF THE PILE SHALL BE FREQUENTLY CHECKED. IN THE EVENT OF VERTICALITY OR ALIGNMENT OF THE PILE EXCEED THE ALLOWABLE TOLERANCE, THE REMEDIAL PROPOSAL SHALL BE SUBMITTED.
- 3. THE MAXIMUM PERMISSIBLE DEVIATION OF PILE CENTRE AT CUT-OFF LEVEL OF THE COMPLETED PILE SHALL BE 75mm IN ANY DIRECTION FROM THE DESIGNED PILE CENTRE. FOR VERTICAL PILES, THE MAXIMUM PERMISSIBLE DEVIATION FROM THE VERTICAL AT ANY LEVEL OF THE FINISHED PILE SHALL BE 1°. FOR RAKING PILES, THE MAXIMUM PERMISSIBLE DEVIATION FROM DESIGN INCLINATION MEASURED FROM THE CENTRE OF PILES AT ANY LEVEL OF THE FINISHED PILE SHALL BE 2°.
- 4. IF THE DEVIATION EXCEEDS THE TOLERANCE AS STIPULATED IN THE SPECIFICATION. THE CONTRACTOR SHALL SUBMIT REMEDIAL PROPOSAL TO THE CM IN ACCORDANCE WITH THE SPECIFICATION.

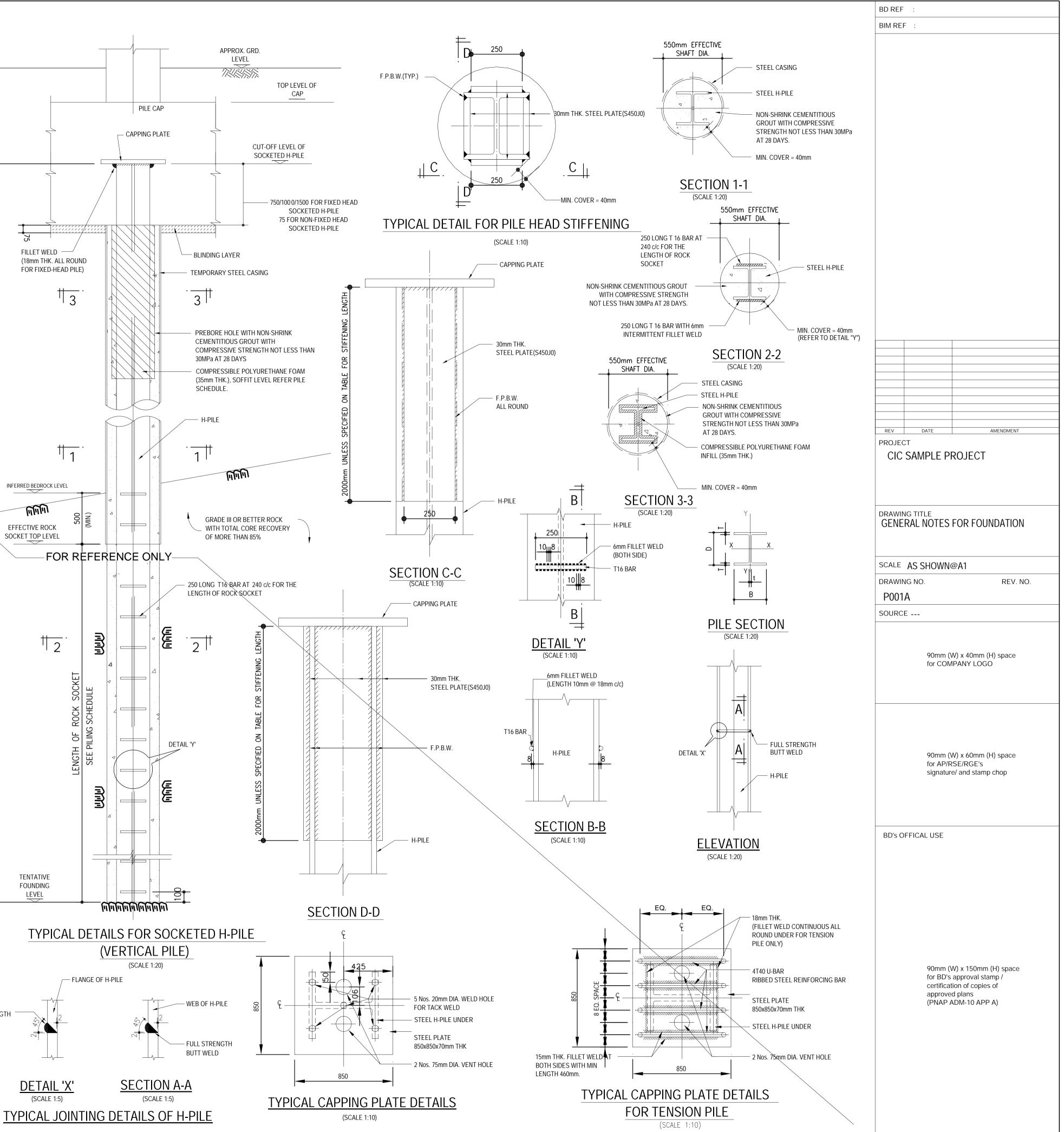
NOTES ON POST INSTALLATION PROOF BOREHOLES AND PROOF TEST (LOADING TEST)

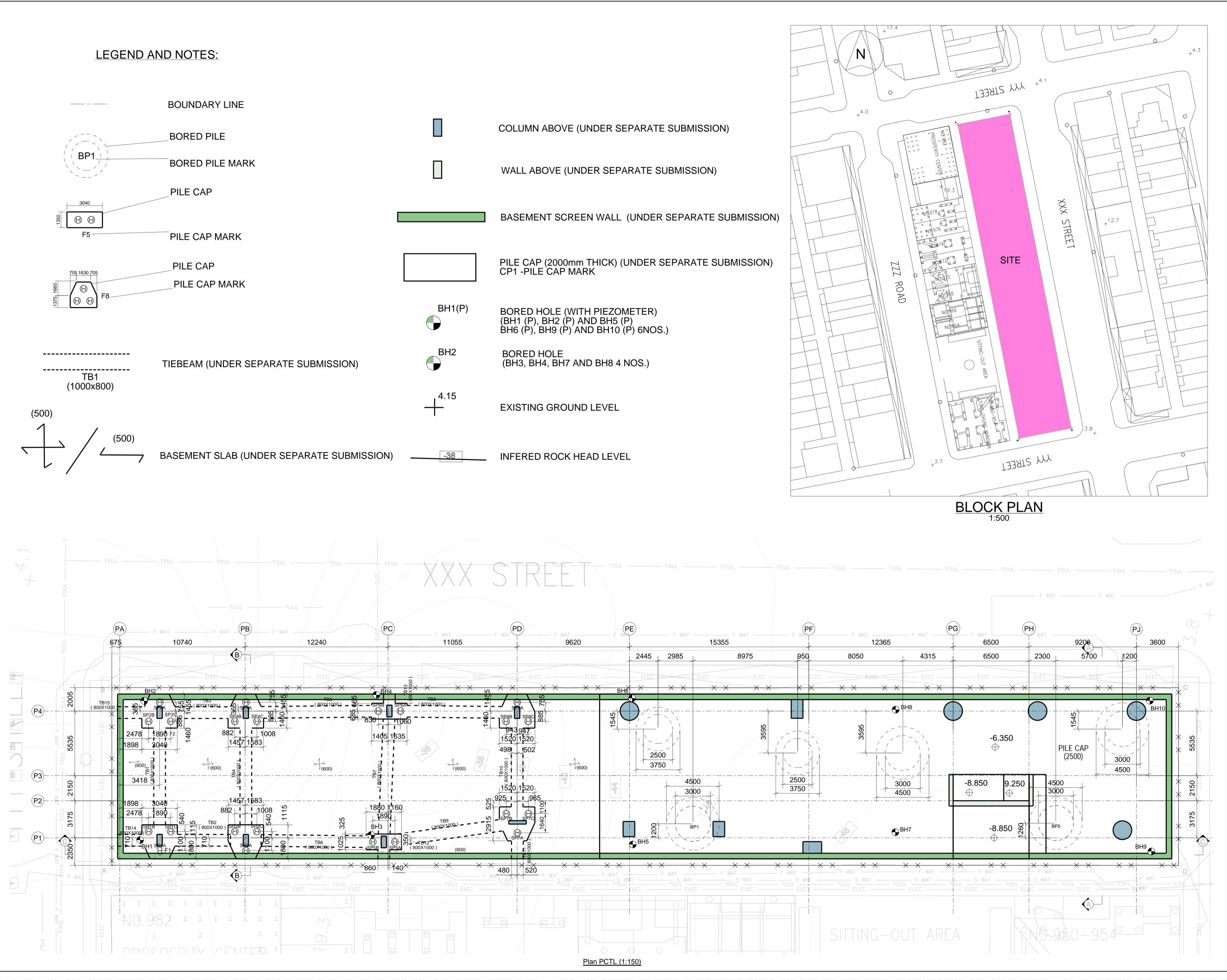
- 1. THE LOCATIONS OF THE POST-INSTALLATION DRILLING SHALL BE DETERMINED BY THE CM AFTER COMPLETION OF ALL PILES OR BATCH OF PILES.
- 2. THE POST-INSTALLATION PROOF BOREHOLES SHALL BE SUNK INTO THE ROCK MASS AND DOWN TO AT LEAST 5m BELOW THE AS-BUILT TOP LEVEL OF THE ROCK SOCKET OF THE NEAREST PILE OR TO THE AS-BUILT BOTTOM LEVEL OF THE ROCK SOCKET OF THE NEAREST PILE, WHICHEVER IS THE DEEPER.
- 3. THE NUMBER OF POST-INSTALLATION BOREHOLES SHALL BE AT LEAST 2 FOR SITES WITH 100 PILES OR LESS; OR 1% OF THE NUMBER OF PILES FOR SITES WITH MORE THAN 100 PILES (ANY FRACTION OF A BOREHOLE SO CALCULATED SHALL BE CONSTRUED AS ONE ADDITIONAL BOREHOLE).
- 4. AFTER THE SUBMISSION OF THE SATISFACTORY REPORT ON COMPLETION OF PILING WORKS, PILE(S) SHALL BE SELECTED FOR PROOF TEST(S) BY IMPOSITION OF TEST LOADS. THE LOADING TESTS SHALL BE IN ACCORDANCE WITH CLAUSE 8.4 OF THE CODE OF PRACTICE FOR
- FOUNDATIONS 2004. 5. WHENEVER DOUBT EXISTS AS TO THE DESIGN ASSUMPTION OR LOAD CARRYING CAPACITY OF ANY PILE FOUNDATION, FURTHER ON-SITE TESTS MAY BE REQUIRED.

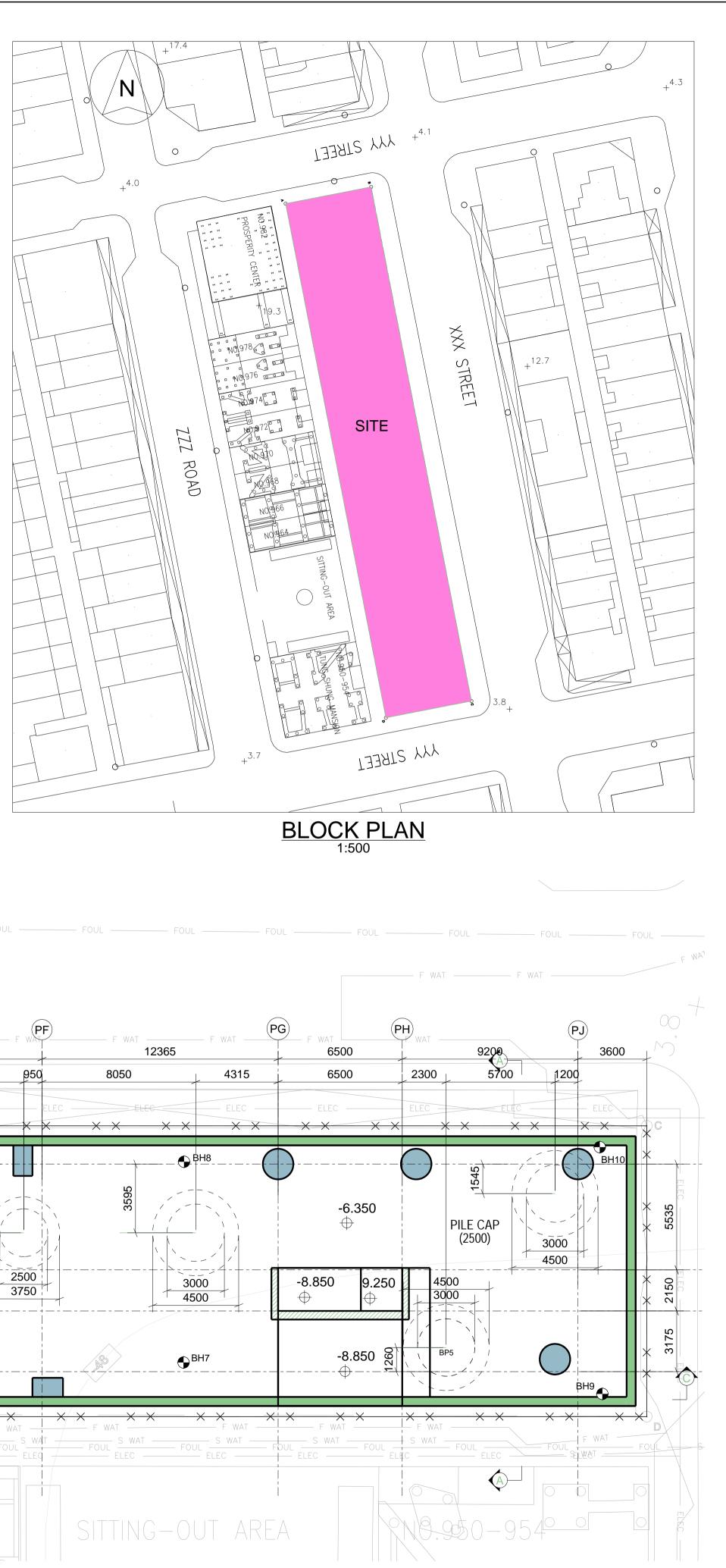
TAL. TAL. TAL. TAL. TAL. TAL. TAL. TAL. EXTRA REINFORCEMENT (SIZE & NO. OF LAYER REF CAP R.C. DETAIL)	ER PILE	Ţ
TYPICAL TRIMMING DETAILS	FULL STRENGTH – BUTT WELD	

FOR FIXED-HEAD SOCKETED H-PILE

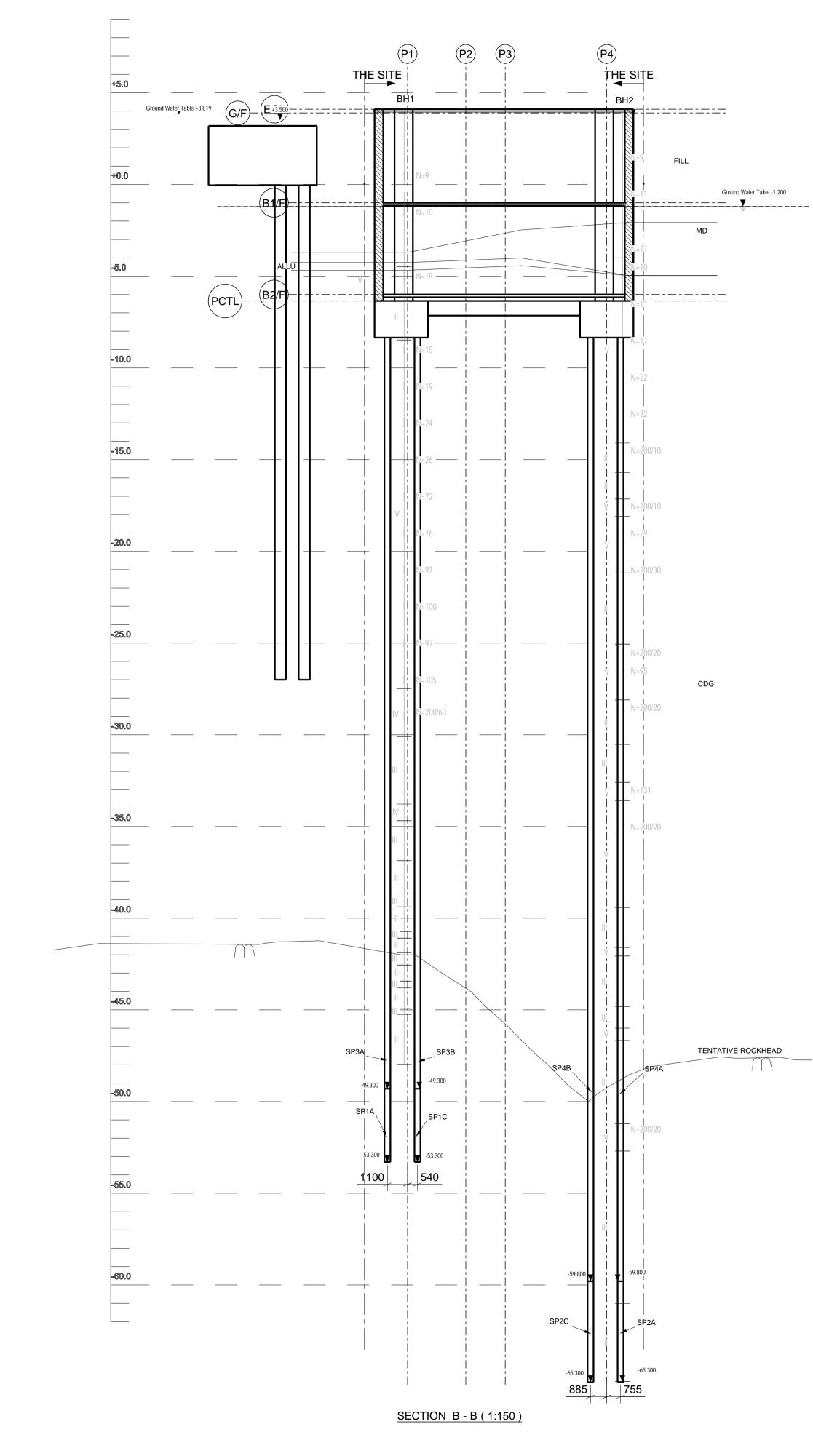
(SCALE 1:20) (PILE CAP DETAILS NOT SHOWN FOR CLARITY)

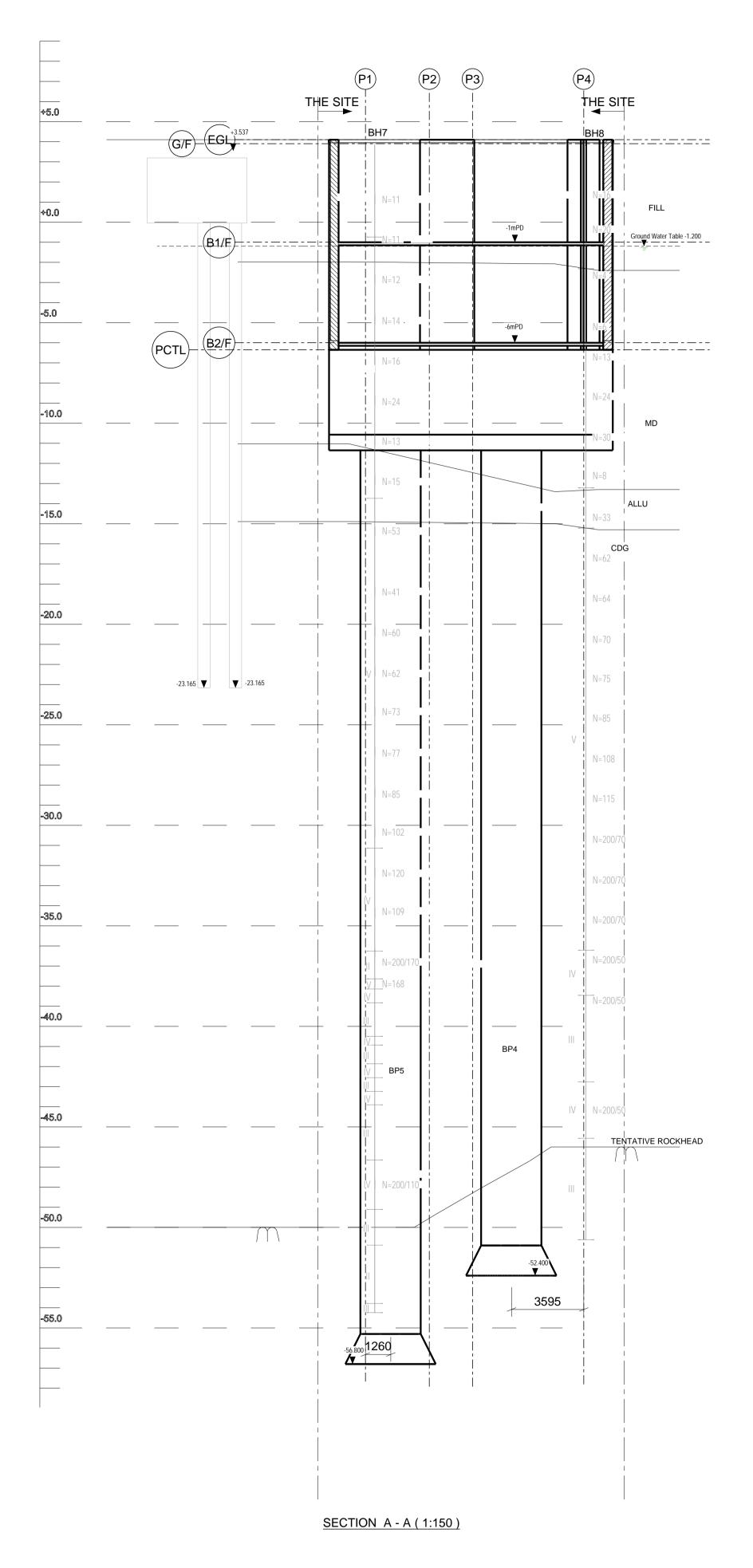




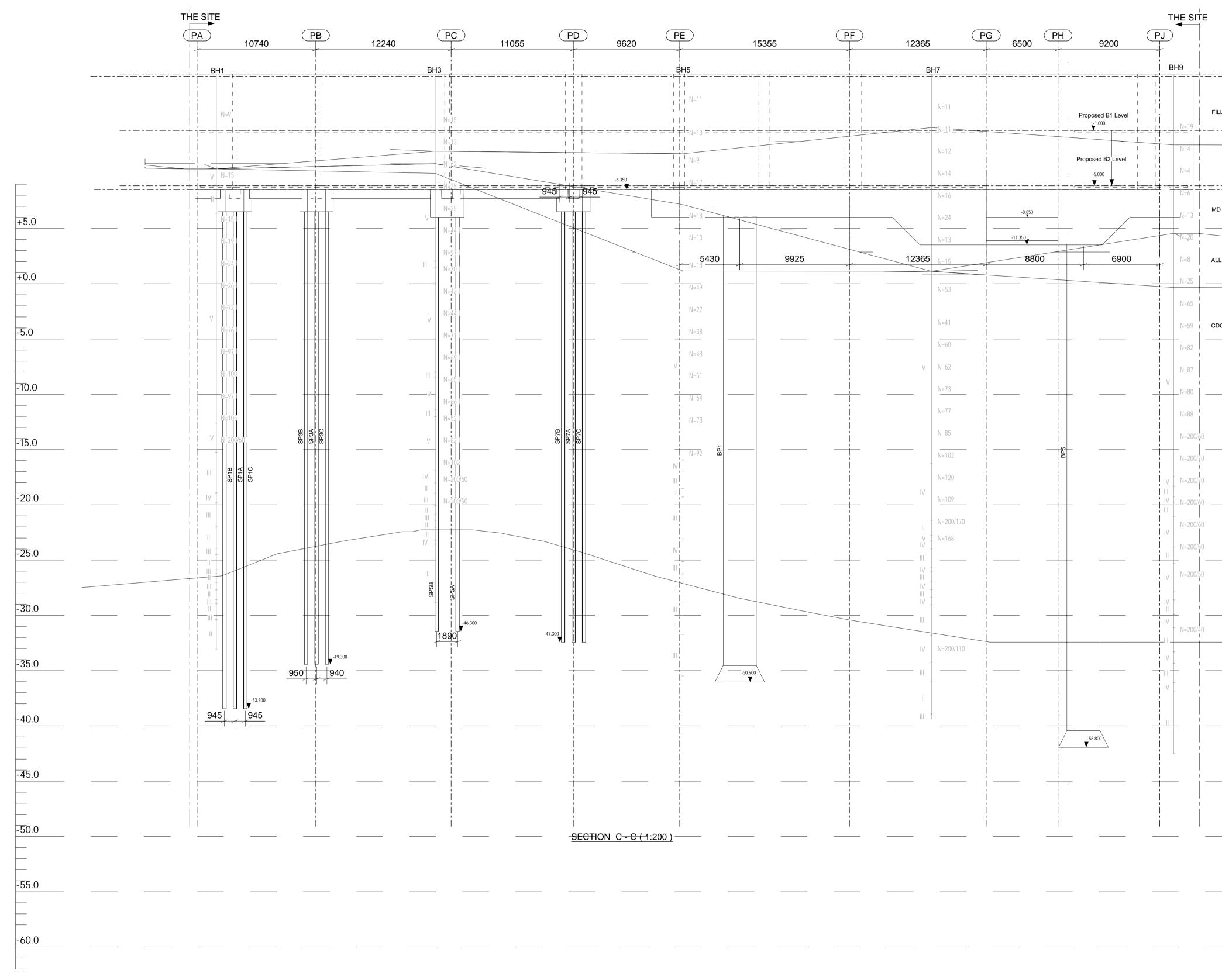


REV	DATE	AMENDMENT
PROJEC	SAMPLE P	DOJECT
	NG TITLE	
DRAWIN		
	NG NO.	@A1
drawin P002	NG NO. E	@A1 REV. NO.
drawin P002	NG NO. E 90mm (@A1
drawin P002	NG NO. E 90mm (@A1 REV. NO. W) x 40mm (H) space
drawin P002	NG NO. E 90mm (@A1 REV. NO. W) x 40mm (H) space
drawin P002	NG NO. E 90mm (@A1 REV. NO. W) x 40mm (H) space
drawin P002	NG NO. E 90mm (for CON 90mm (for AP/F	@A1 REV. NO. W) x 40mm (H) space //PANY LOGO W) x 60mm (H) space RSE/RGE's
drawin P002	NG NO. E 90mm (for CON 90mm (for AP/F	@A1 REV. NO. W) x 40mm (H) space APANY LOGO W) x 60mm (H) space
drawin P002	NG NO. E 90mm (for CON 90mm (for AP/F	@A1 REV. NO. W) x 40mm (H) space //PANY LOGO W) x 60mm (H) space RSE/RGE's
DRAWIN P002 SOURC	NG NO. E 90mm (for CON 90mm (for AP/F	@A1 REV. NO. W) x 40mm (H) space //PANY LOGO W) x 60mm (H) space RSE/RGE's
DRAWIN P002 SOURC	NG NO. E 90mm (for CON 90mm (for AP/F signatur	@A1 REV. NO. W) x 40mm (H) space //PANY LOGO W) x 60mm (H) space RSE/RGE's
DRAWIN P002 SOURC	NG NO. E 90mm (for CON 90mm (for AP/F signatur	@A1 REV. NO. W) x 40mm (H) space //PANY LOGO W) x 60mm (H) space RSE/RGE's
DRAWIN P002 SOURC	NG NO. E 90mm (for CON 90mm (for AP/F signatur	@A1 REV. NO. W) x 40mm (H) space //PANY LOGO W) x 60mm (H) space RSE/RGE's
DRAWIN P002 SOURC	NG NO. E 90mm (for CON 90mm (for AP/F signatur	@A1 REV. NO. W) x 40mm (H) space //PANY LOGO W) x 60mm (H) space RSE/RGE's
DRAWIN P002 SOURC	NG NO. E 90mm (for CON 90mm (for AP/F signatur	@A1 REV. NO. W) x 40mm (H) space //PANY LOGO W) x 60mm (H) space RSE/RGE's
DRAWIN P002 SOURC	NG NO. E 90mm (for CON 90mm (for AP/F signatur	@A1 REV. NO. W) x 40mm (H) space //PANY LOGO W) x 60mm (H) space RSE/RGE's
DRAWIN P002 SOURC	VG NO. E 90mm (for CON 90mm (for AP/F signatur PFFICAL USE	@A1 REV. NO. W) x 40mm (H) space /PANY LOGO W) x 60mm (H) space RSE/RGE's re/ and stamp chop W) x 150mm (H) space
DRAWIN P002 SOURC	VG NO. E 90mm (for CON 90mm (for AP/F signatur FFICAL USE FFICAL USE 90mm (for BD's certifica approve	@A1 REV. NO. W) x 40mm (H) space /PANY LOGO W) x 60mm (H) space RSE/RGE's re/ and stamp chop w) x 150mm (H) space sapproval stamp / tition of copies of ed plans
DRAWIN P002 SOURC	VG NO. E 90mm (for CON 90mm (for AP/F signatur FFICAL USE FFICAL USE 90mm (for BD's certifica approve	@A1 REV. NO. W) x 40mm (H) space /PANY LOGO W) x 60mm (H) space RSE/RGE's re/ and stamp chop W) x 150mm (H) space s approval stamp / tion of copies of
DRAWIN P002 SOURC	VG NO. E 90mm (for CON 90mm (for AP/F signatur FFICAL USE FFICAL USE 90mm (for BD's certifica approve	@A1 REV. NO. W) x 40mm (H) space /PANY LOGO W) x 60mm (H) space RSE/RGE's re/ and stamp chop w) x 150mm (H) space
DRAWIN P002 SOURC	VG NO. E 90mm (for CON 90mm (for AP/F signatur FFICAL USE FFICAL USE 90mm (for BD's certifica approve	@A1 REV. NO. W) x 40mm (H) space /PANY LOGO W) x 60mm (H) space RSE/RGE's re/ and stamp chop w) x 150mm (H) space
DRAWIN P002 SOURC	VG NO. E 90mm (for CON 90mm (for AP/F signatur FFICAL USE FFICAL USE 90mm (for BD's certifica approve	@A1 REV. NO. W) x 40mm (H) space /PANY LOGO W) x 60mm (H) space RSE/RGE's re/ and stamp chop w) x 150mm (H) space



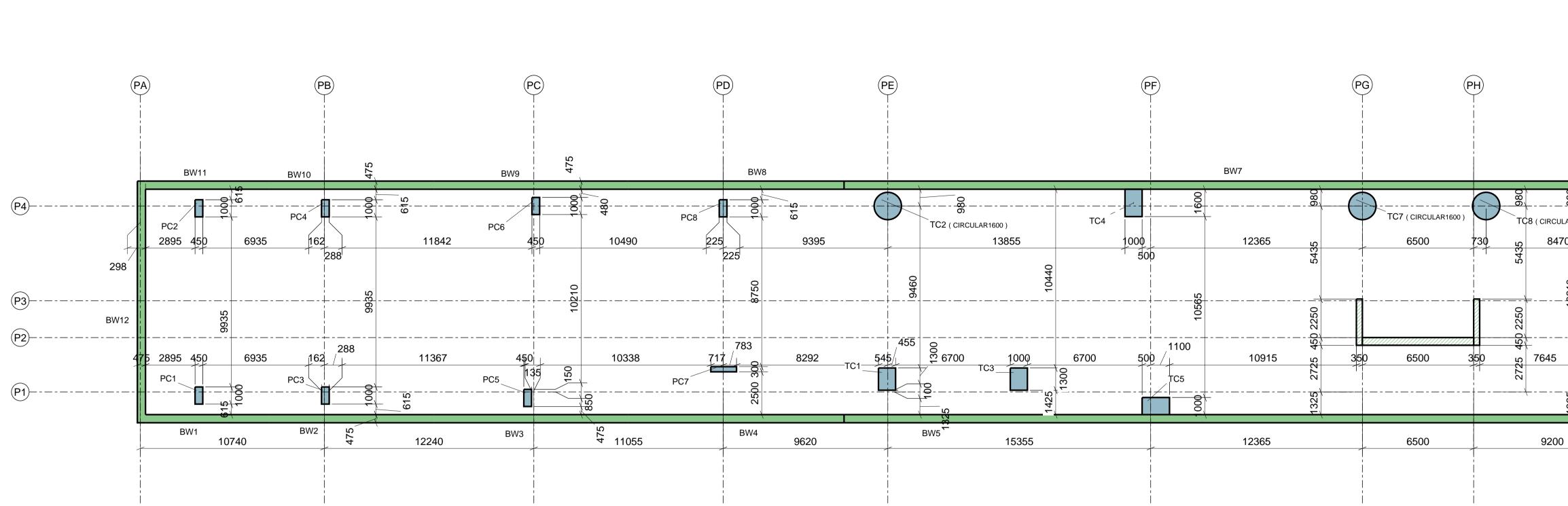


	BD REF :
	BIM REF :
Lat Davidaria	
Lot Boundary	
COLUMN/ WALL (UNDER SEPARATE SUBMISSION)	
PILE CAP (UNDER SEPARATE SUBMISSION)	
F3 PILE CAP MARK	
F3HP01 F3HP02 SOCKET H PILE	
SOCKET H-PILE MARK	
CP1 PILE CAP (2000mm THICK) CP1 -PILE CAP MARK (UNDER SEPARATE SUBMISSION)	
Basement Wall	
	REV DATE AMENDMENT PROJECT
	CIC SAMPLE PROJECT
	DRAWING TITLE PILING SECTION A & SECTION B
	SCALE AS SHOWN@A1 DRAWING NO. REV. NO.
	DRAWING NO. REV. NO.
	drawing no. Rev. no. P003
	DRAWING NO. REV. NO. P003 SOURCE 90mm (W) x 40mm (H) space
	DRAWING NO. REV. NO. P003 SOURCE 90mm (W) x 40mm (H) space for COMPANY LOGO 90mm (W) x 60mm (H) space for AP/RSE/RGE's
	DRAWING NO. REV. NO. P003 SOURCE 90mm (W) x 40mm (H) space for COMPANY LOGO 90mm (W) x 60mm (H) space for AP/RSE/RGE's signature/ and stamp chop

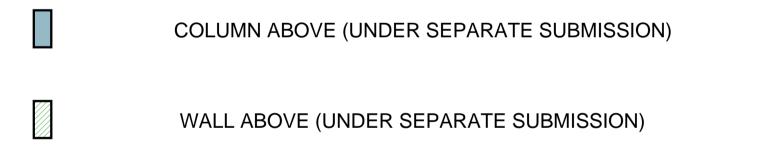


Fekla Structures

	BD REF :
Lot Boundary	BIM REF :
PILE CAP (UNDER SEPARATE SUBMISSION) F3	
PILE CAP MARK	
F3HP01 F3HP02 SOCKET H-PILE MARK	
TIE BEAM	
— — — — — — — — (UNDER SEPARATE SUBMISSION) TB1 (1000x800)	
CP1 PILE CAP (2000mm THICK) CP1 - PILE CAP MARK (UNDER SEPARATE SUBMISSION)	
Basement Wall	
D	
LU	
	REV DATE AMENDMENT
DG	PROJECT CIC SAMPLE PROJECT
	DRAWING TITLE PILIING SECTION C
	SCALE AS SHOWN@A1
	DRAWING NO. REV. NO.
	P004 SOURCE
	SOURCE
	90mm (W) x 40mm (H) space
	for COMPANY LOGO
	90mm (W) x 60mm (H) space for AP/RSE/RGE's
	signature/ and stamp chop
	BD's OFFICAL USE
	00mm (11) + 150mm (11) + 1 + 1
	90mm (W) x 150mm (H) space for BD's approval stamp / certification of copies of
	approved plans (PNAP ADM-10 APP A)



LEGEND AND NOTES:





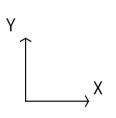
BASEMENT SCREEN WALL (UNDER SEPARATE SUBMISSION)



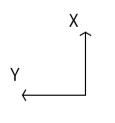
PILE CAP (2000mm THICK) (UNDER SEPARATE SUBMISSION) CP1 -PILE CAP MARK

<u> Plan PCTL (1:150)</u>

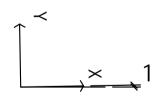
LOCAL AXIS



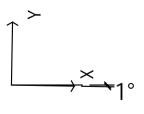
LOCAL AXIS SHOWN ABOVE APPLIES TO COLUMNS & WALLS WITH ANGLE 0°.



LOCAL AXIS SHOWN ABOVE APPLIES TO WALL WITH ANGLE 90°.



LOCAL AXIS SHOWN ABOVE APPLIES TO WALL WITH ANGLE 1°.

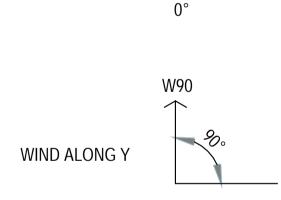


LOCAL AXIS SHOWN ABOVE APPLIES TO WALL WITH ANGLE -1°.

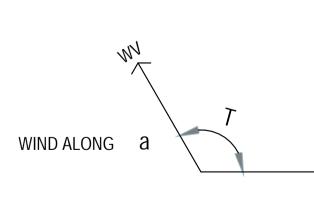
DIRECTION OF WIND LOAD CASE

 \rightarrow W0

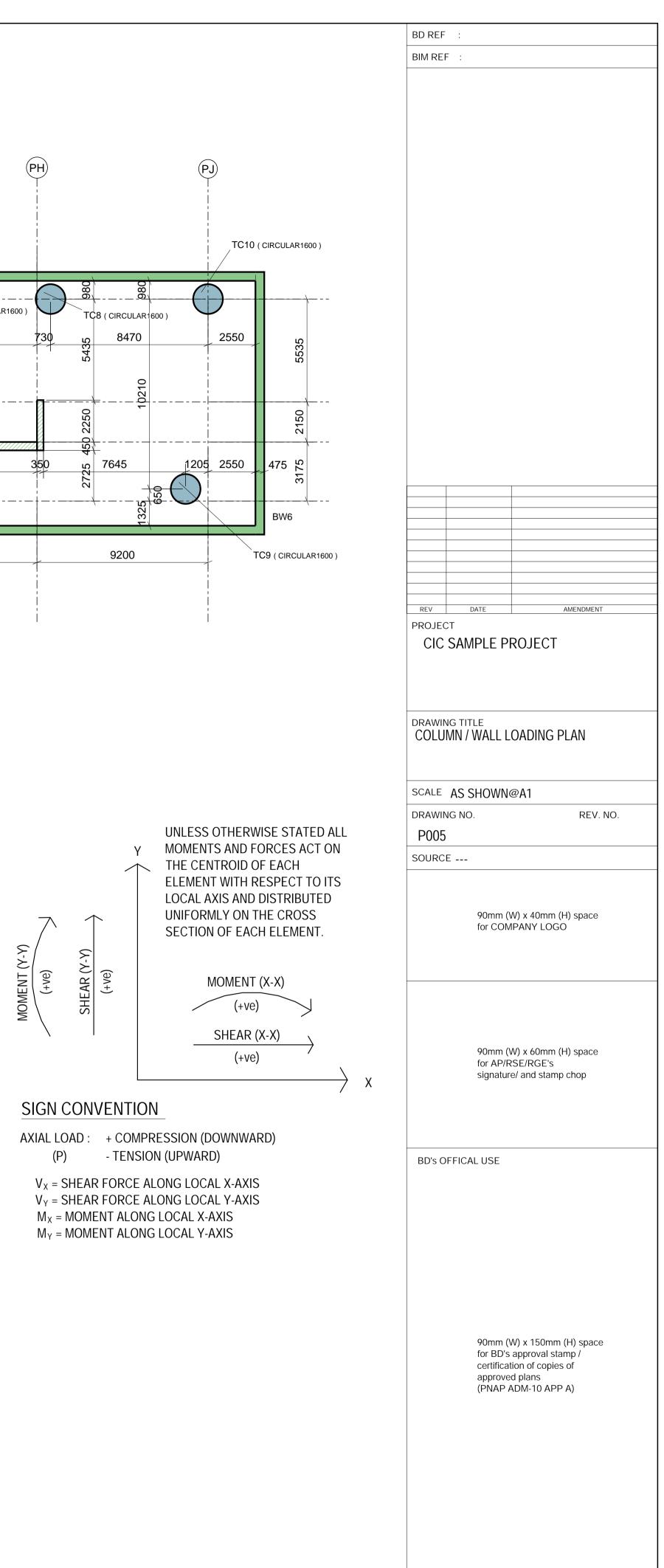








WMAX = ABSOLUTE MAXIMUM OF W0, W90, WU, WV



							COLUMN L	OADING SCHED	ULE ABOVE PI	LE CAP (1 OF 2)							
COLUMN	DIMENSION	ANGLE	М	IN DEAD LOAD (I	Dmin)		SDL		DEAI	D LOAD (DL) = Dr	min + SDL		LIVE LOAD (LI	L)		DL + LL	
MARK	DIVIENSION	ANGLE	P (kN)	M2 (kNm)	M3 (kNm)	P (kN)	M2 (kNm)	M3 (kNm)	P (kN)	M2 (kNm)	M3 (kNm)	P (kN)	M2 (kNm)	M3 (kNm)	P (kN)	M2 (kNm)	1
PC1	1000X450	0	1600	0	0	800	0	0	2400	0	0	700	0	0	3100	0	1
PC2	1000X450	0	2100	0	0	1400	0	0	3500	0	0	900	0	0	4400	0	
PC3	1000X450	0	2400	0	0	1700	0	0	4100	0	0	1000	0	0	5100	0	
PC4	1000X450	0	2300	0	0	2000	0	0	4300	0	0	1000	0	0	5300	0	
PC5	1000X450	0	2300	0	0	1400	0	0	3700	0	0	900	0	0	4600	0	
PC6	1000X450	0	2500	0	0	1400	0	0	3900	0	0	1000	0	0	4900	0	
PC7	5350X300	0	4200	0	200	1600	0	300	5800	0	500	1800	0	100	7600	0	
PC8	1000X450	0	3200	0	0	1100	0	0	4300	0	0	1300	0	0	5600	0	
TC1	1300X1000	0	12700	0	0	5600	0	0	18300	0	0	4500	0	0	22800	0	
TC2	CIRCULAR1600	0	19400	0	0	9300	0	0	28700	0	0	6400	0	0	35100	0	
TC3	1300X1000	0	17200	0	0	7200	0	0	24400	0	0	7100	0	0	31500	0	
TC4	1600X1000	0	18000	0	0	7400	0	0	25400	0	0	8100	0	0	33500	0	
TC5	1000X1600	0	24200	0	0	10900	0	0	35100	0	0	9300	0	0	44400	0	
TC7	CIRCULAR1600	0	16200	0	0	7300	0	0	23500	0	0	6100	0	0	29600	0	
TC8	CIRCULAR1600	0	13400	0	0	6700	0	0	20100	0	0	4200	0	0	24300	0	
TC9	CIRCULAR1600	0	13200	0	0	7200	0	0	20400	0	0	4700	0	0	25100	0	
TC10	CIRCULAR1600	0	13000	0	0	7500	0	0	20500	0	0	4300	0	0	24800	0	

COLUMN	DIMENSION	ANGLE			WO					W90	_				WD1					WD2					WMAX	
MARK	DIVIENSION	ANGLE	P (kN)	V2 (kN)	V3 (kN)	M2 (kNm)	M3 (kNm)	P (kN)	V2 (kN)	V3 (kN)	M2 (kNm)	M3 (kNm)	P (kN)	V2 (kN)	V3 (kN)	M2 (kNm)	M3 (kNm)	P (kN)	V2 (kN)	V3 (kN)	M2 (kNm)	M3 (kNm)	P (kN)	V2 (kN)	V3 (kN)	Μ
PC1	1000X450	0	-200	10	30	0	0	-1000	10	300	0	0	-400	10	80	0	0	-700	-10	230	0	0	1000	10	300	
PC2	1000X450	0	100	10	30	0	0	1000	-10	290	0	0	200	10	80	0	0	800	-10	230	0	0	1000	10	290	
PC3	1000X450	0	-200	10	30	0	0	-1600	-10	390	0	0	-500	10	90	0	0	-1200	-10	300	0	0	1600	10	390	
PC4	1000X450	0	200	10	30	0	0	1600	-10	370	0	0	400	10	90	0	0	1300	-10	290	0	0	1600	10	370	
PC5	1000X450	0	-200	10	30	0	0	-1800	10	380	0	0	-500	10	90	0	0	-1400	-10	300	0	0	1800	10	380	
PC6	1000X450	0	100	10	20	0	0	1500	10	350	0	0	300	10	80	0	0	1200	-10	280	0	0	1500	10	350	
PC7	5350X300	0	-400	270	10	0	1200	-1100	-80	10	0	-400	-700	450	10	0	2000	-600	-330	10	0	-1400	1100	450	10	
PC8	1000X450	0	-200	10	10	0	0	1300	-10	200	0	0	-200	10	40	0	0	1300	-10	170	0	0	1300	10	200	
TC1	1300X1000	0	-1300	10	20	0	0	-11400	-30	510	0	0	-3800	-10	90	0	0	-8300	-20	420	0	0	11400	30	510	
TC2	CIRCULAR1600	0	-500	50	20	0	0	15200	-20	540	0	0	1400	80	90	0	0	13100	-60	450	0	0	15200	80	540	
TC3	1300X1000	0	-500	-10	-10	0	0	-13100	-10	340	0	0	-2700	-10	40	0	0	-10400	10	290	0	0	13100	10	340	
TC4	1600X1000	0	-1400	-10	-20	0	0	-13000	-50	350	0	0	-4100	-20	20	0	0	-9500	-40	310	0	0	13000	50	350	
TC5	1000X1600	0	-600	50	10	0	0	20600	-20	400	0	0	2100	80	60	0	0	17600	-60	330	0	0	20600	80	400	
TC7	CIRCULAR1600	0	-1500	50	-10	0	0	19000	20	-490	0	0	300	90	-70	0	0	17100	-30	-400	0	0	19000	90	490	
TC8	CIRCULAR1600	0	600	60	20	0	0	17000	30	-470	0	0	3400	90	-50	0	0	13500	-40	-410	0	0	17000	90	470	
TC9	CIRCULAR1600	0	3100	-40	10	0	0	-17300	230	330	0	0	2700	-30	50	0	0	-17100	220	280	0	0	17300	230	330	
TC10	CIRCULAR1600	0	2100	40	-10	0	0	13300	60	360	0	0	5400	70	40	0	0	9100	10	310	0	0	13300	70	360	
				·				·						·			l.					·				

							WALL LOADIN	IG SCHEDULE A	BOVE PILE CAP	P (1 OF 2)							
	THICKNESS	ANGLE	N	MIN DEAD LOAD (Dmin)			SDL		DEAI	D LOAD (DL) = Dr	min + SDL		LIVE LOAD (LL)	DL + LL		
WALL MARK	THICKNESS	ANGLE	P (kN)	M2 (kNm)	M3 (kNm)	P (kN)	M2 (kNm)	M3 (kNm)	P (kN)	M2 (kNm)	M3 (kNm)	P (kN)	M2 (kNm)	M3 (kNm)	P (kN)	M2 (kNm)	M3 (kNm)
BW1	475	0	2300	0	-900	700	0	-500	3000	0	-1400	400	0	-200	3400	0	-1600
BW2	475	0	3200	0	-600	1100	0	-300	4300	0	-900	700	0	-100	5000	0	-1000
BW3	475	0	3200	0	-600	900	0	-300	4100	0	-900	600	0	-100	4700	0	-1000
BW4	475	0	2600	0	-300	400	0	-100	3000	0	-400	400	0	-100	3400	0	-500
BW5	475	0	11300	0	-2500	2200	0	2600	13500	0	100	4000	0	-3300	17500	0	-3200
BW6	475	90	4000	0	-2200	1000	0	-800	5000	0	-3000	1100	0	-600	6100	0	-3600
BW7	475	0	19600	0	-11400	5800	0	1800	25400	0	-9600	6000	0	-14700	31400	0	-24300
BW8	475	0	3400	0	500	800	0	300	4200	0	800	600	0	100	4800	0	900
BW9	475	0	2000	0	-200	200	0	-100	2200	0	-300	200	0	-200	2400	0	-500
BW10	475	0	2000	0	-100	400	0	-100	2400	0	-200	100	0	-200	2500	0	-400
BW11	475	0	1700	0	-100	400	0	100	2100	0	0	200	0	-100	2300	0	-100
BW12	475	90	1600	0	-400	300	0	-200	1900	0	-600	200	0	-100	2100	0	-700
TW6A	350	90	4700	0	200	2000	0	200	6700	0	400	2100	0	-100	8800	0	300
TW6B	350	0	24200	0	1200	10400	0	200	34600	0	1400	9600	0	1000	44200	0	2400
TW6C	450	90	4600	0	300	2100	0	100	6700	0	400	1900	0	-100	8600	0	300

												WALL LOADING	SCHEDULE AB	BOVE PILE CAP (2	2 OF 2)											
	THICKNESS				WO					W90					WD1					WD2					WMAX	
WALL MARK	THICKNESS	ANGLE	P (kN)	V2 (kN)	V3 (kN)	M2 (kNm)	M3 (kNm)	P (kN)	V2 (kN)	V3 (kN)	M2 (kNm)	M3 (kNm)	P (kN)	V2 (kN)	V3 (kN)	M2 (kNm)	M3 (kNm)	P (kN)	V2 (kN)	V3 (kN)	M2 (kNm)	M3 (kNm)	P (kN)	V2 (kN)	V3 (kN)	M2 (kNm)
TW6A	350	90	-2600	-280	-10	0	25500	8300	4880	-10	0	-1100	-3300	200	-10	0	1800	9400	4330	-10	0	2220	9400	4880	10	0
TW6B	350	0	900	3170	10	0	600	-47600	-180	-10	0	27700	-5300	5340	-10	0	46800	-40200	-3190	-10	0	-26100	47600	5340	10	0
TW6C	450	90	2400	120	-10	0	26700	9100	5150	10	0	300	5300	910	10	0	4100	5300	4160	10	0	21900	9100	5150	10	0

COLUMN LOADING SCHEDULE ABOVE PILE CAP (2 OF 2)

M3 (kNm)
0
0
0
0
0
0
600
0
0
0
0
0
0
0
0
0
0

M3 (kNm) -1600 -1000 -1000 -500 -3200 -3600 -24300 900 -500
-1600 -1000 -1000 -500 -3200 -3600 -24300 900
-1600 -1000 -1000 -500 -3200 -3600 -24300 900
-1000 -1000 -500 -3200 -3600 -24300 900
-1000 -500 -3200 -3600 -24300 900
-500 -3200 -3600 -24300 900
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-3600 -24300 900
-24300 900
900
-300
-100
-700
300
2400
300

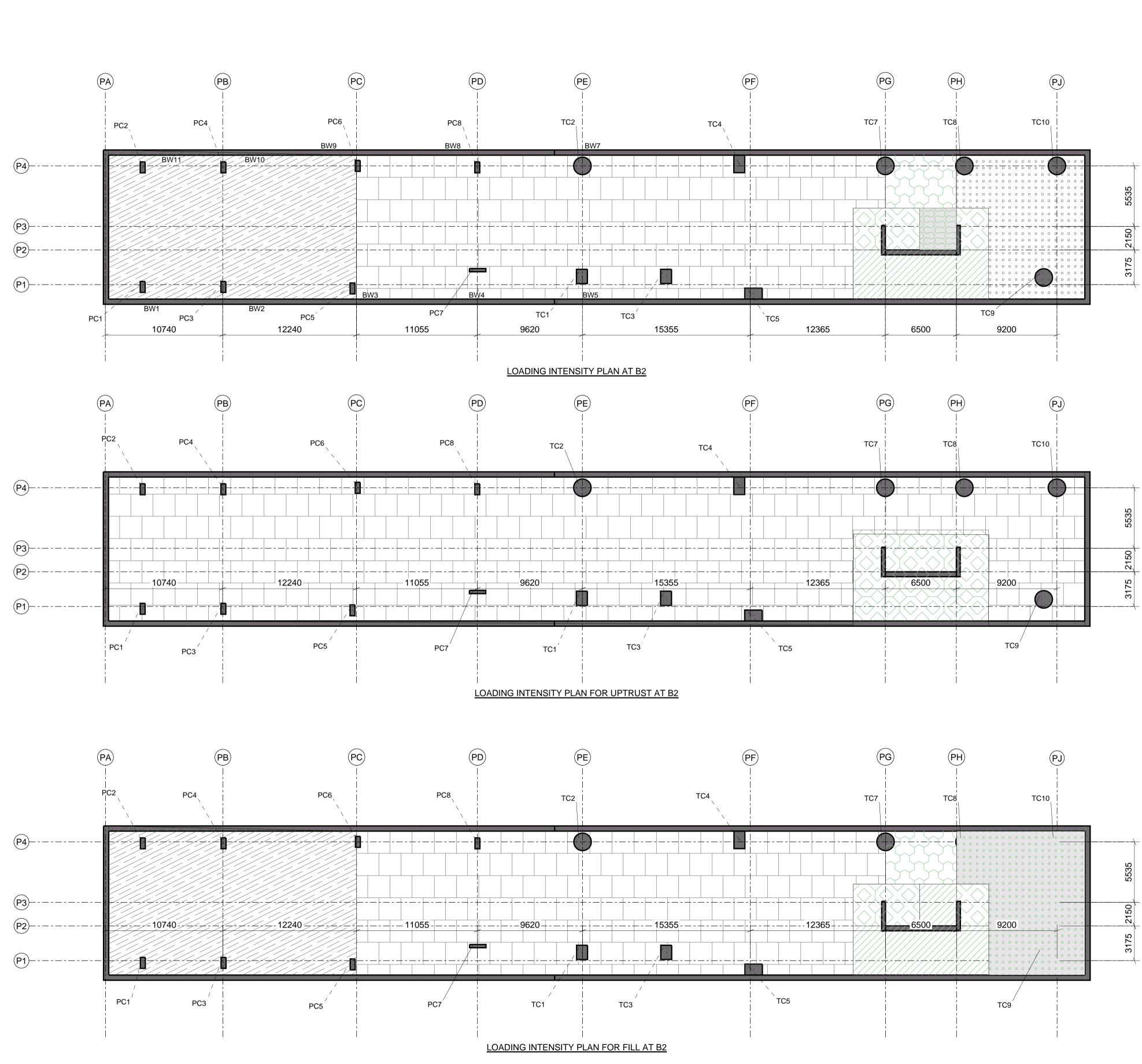
BD REF : BIM REF :		
REV	DATE	AMENDMENT
drawing tit COLUMN /		LOADING SCHEDULE
COLUMN /	' WALL I	
	' WALL I SHOWN	
COLUMN /	' WALL I SHOWN	@A1
COLUMN / SCALE AS S DRAWING NO	' WALL I SHOWN	@A1
COLUMN / SCALE AS S DRAWING NC P006	' WALL I SHOWN	@A1
COLUMN / SCALE AS S DRAWING NC P006	WALL I SHOWN). 90mm (1	@A1 REV. NO W) x 40mm (H) space
COLUMN / SCALE AS S DRAWING NC P006	WALL I SHOWN). 90mm (1	@A1 REV. NO
COLUMN / SCALE AS S DRAWING NC P006	WALL I SHOWN). 90mm (1	@A1 REV. NO W) x 40mm (H) space
COLUMN / SCALE AS S DRAWING NC P006	WALL I SHOWN). 90mm (1	@A1 REV. NO W) x 40mm (H) space
COLUMN / SCALE AS S DRAWING NC P006	WALL I SHOWN). 90mm (1	@A1 REV. NO W) x 40mm (H) space
COLUMN / SCALE AS S DRAWING NC P006	90mm (for CON	@A1 REV. NO W) x 40mm (H) space /PANY LOGO
COLUMN / SCALE AS S DRAWING NC P006	90mm (for COM	@A1 REV. NO W) x 40mm (H) space /PANY LOGO W) x 60mm (H) space RSE/RGE's
COLUMN / SCALE AS S DRAWING NC P006	90mm (for COM	@A1 REV. NO W) x 40mm (H) space /PANY LOGO W) x 60mm (H) space
COLUMN / SCALE AS S DRAWING NC P006	90mm (for COM	@A1 REV. NO W) x 40mm (H) space /PANY LOGO W) x 60mm (H) space RSE/RGE's
COLUMN / SCALE AS S DRAWING NC P006	90mm (for COM	@A1 REV. NO W) x 40mm (H) space /PANY LOGO W) x 60mm (H) space RSE/RGE's
COLUMN / SCALE AS S DRAWING NC P006	90mm (for CON 90mm (for AP/F signatur	@A1 REV. NO W) x 40mm (H) space /PANY LOGO W) x 60mm (H) space RSE/RGE's
COLUMN /	90mm (for CON 90mm (for AP/F signatur	@A1 REV. NO W) x 40mm (H) space /PANY LOGO W) x 60mm (H) space RSE/RGE's
COLUMN /	90mm (for CON 90mm (for AP/F signatur	@A1 REV. NO W) x 40mm (H) space /PANY LOGO W) x 60mm (H) space RSE/RGE's
COLUMN /	90mm (for CON 90mm (for AP/F signatur	@A1 REV. NO W) x 40mm (H) space /PANY LOGO W) x 60mm (H) space RSE/RGE's
COLUMN /	90mm (for CON 90mm (for AP/F signatur	@A1 REV. NO W) x 40mm (H) space /PANY LOGO W) x 60mm (H) space RSE/RGE's

M2 (kNm) M3 (kNm) 0 0 0 0 0 0 0 $\begin{array}{c|cccc}
0 & 0 \\
0 & 2000 \\
\hline
0 & 0 \\
0 & 0 \\
\hline
0 &$ 0

 M2 (kNm)
 M3 (kNm)

 0
 25500
 0 46800 26700

> 90mm (W) x 150mm (H) space for BD's approval stamp / certification of copies of approved plans (PNAP ADM-10 APP A)



LOADING INTENSITY PLAN AT B2

DESCRIPTION	LEGEND	FINISHES (kPa)	IMPOSED LOAD (kPa)
LOBBY		1.2	3.0
CAR PARK		1.2	3.0
CAR LIFT PIT		1.2	7.5
LIFT PIT	2222	1.2	7.5
PLANT ROOM		1.2	7.5
WATER TANK 1		14.7+1.2	30.0
WATER TANK 2		17.0+1.2	30.0

LOADING INTENSITY PLAN FOR UPTRUST AT B2

LEGEND	UPTRUST (kPa)
	129.5
	140.5
	154.5

LOADING INTENSITY PLAN FOR FILL AT B2

LEGEND	FILL (kPa)
	12.3
	NO FILL
	NO FILL
	25.8
	61.3
	NO FILL

BIM REF :		
	DATE	
REV PROJECT	DATE	AMENDMENT
		TY PLANS
LOADING	INTENSI	
LOADING SCALE AS	INTENSI SHOWN	
LOADING SCALE AS DRAWING N P007	SHOWN	@A1
LOADING SCALE AS DRAWING N P007	SHOWN	@A1
LOADING SCALE AS DRAWING N P007	SHOWN	@A1
LOADING SCALE AS DRAWING N P007	SHOWN SHOWN IO. -	@A1
LOADING SCALE AS DRAWING N P007	SHOWN SHOWN IO. -	@A1 REV. NO. W) x 40mm (H) space
LOADING SCALE AS DRAWING N P007	SHOWN SHOWN IO. -	@A1 REV. NO. W) x 40mm (H) space
LOADING SCALE AS DRAWING N P007	SHOWN SHOWN IO. -	@A1 REV. NO. W) x 40mm (H) space
LOADING SCALE AS DRAWING N P007	SHOWN SHOWN IO. - 90mm (\ for CON	@A1 REV. NO. W) x 40mm (H) space IPANY LOGO
LOADING SCALE AS DRAWING N P007	90mm (\ for CON	@A1 REV. NO. W) x 40mm (H) space IPANY LOGO
LOADING SCALE AS DRAWING N P007	90mm (\ for CON	@A1 REV. NO. W) x 40mm (H) space IPANY LOGO
LOADING SCALE AS DRAWING N P007	90mm (\ for CON	@A1 REV. NO. W) x 40mm (H) space IPANY LOGO
LOADING SCALE AS DRAWING N P007	SHOWN SHOWN IO. - 90mm (\ for COV 90mm (\ for AP/R signatur	@A1 REV. NO. W) x 40mm (H) space IPANY LOGO
LOADING SCALE AS DRAWING N P007 SOURCE	SHOWN SHOWN IO. - 90mm (\ for COV 90mm (\ for AP/R signatur	@A1 REV. NO. W) x 40mm (H) space IPANY LOGO
LOADING SCALE AS DRAWING N P007 SOURCE	SHOWN SHOWN IO. - 90mm (\ for COV 90mm (\ for AP/R signatur	@A1 REV. NO. W) x 40mm (H) space IPANY LOGO
LOADING SCALE AS DRAWING N P007 SOURCE	SHOWN SHOWN IO. - 90mm (\ for COV 90mm (\ for AP/R signatur	@A1 REV. NO. W) x 40mm (H) space IPANY LOGO
LOADING SCALE AS DRAWING N P007 SOURCE	SHOWN SHOWN IO. - 90mm (\ for COV 90mm (\ for AP/R signatur	@A1 REV. NO. W) x 40mm (H) space IPANY LOGO
LOADING SCALE AS DRAWING N P007 SOURCE	SHOWN SHOWN IO. - 90mm (\ for COV 90mm (\ for AP/R signatur	@A1 REV. NO. W) x 40mm (H) space IPANY LOGO
LOADING SCALE AS DRAWING N P007 SOURCE	SHOWN SHOWN IO. - 90mm (\ for COV 90mm (\ for AP/R signatur	@A1 REV. NO. W) x 40mm (H) space IPANY LOGO
LOADING SCALE AS DRAWING N P007 SOURCE	SHOWN SHOWN IO. - 90mm (\ for COW 90mm (\ for AP/R signatur	@A1 REV. NO. //) x 40mm (H) space IPANY LOGO //) x 60mm (H) space SE/RGE's e/ and stamp chop
LOADING SCALE AS DRAWING N P007 SOURCE	SHOWN SHOWN IO. - 90mm (\ for COV 90mm (\ for AP/R signatur	@A1 REV. NO. W) x 40mm (H) space IPANY LOGO W) x 60mm (H) space RSE/RGE's e/ and stamp chop
LOADING SCALE AS DRAWING N P007 SOURCE	SHOWN SHOWN IO. - 90mm (\ for COV 90mm (\ for AP/R signatur CAL USE	@A1 REV. NO. W) x 40mm (H) space IPANY LOGO W) x 60mm (H) space RSE/RGE's e/ and stamp chop
SCALE AS DRAWING N P007 SOURCE	SHOWN SHOWN IO. - 90mm (\ for COV 90mm (\ for AP/R signatur CAL USE	@A1 REV. NO. W) x 40mm (H) space IPANY LOGO W) x 60mm (H) space RSE/RGE's e/ and stamp chop

									E	BORED PILE L	OADING SCH	HEDULE (1 OF	2)									
						(X)	(AA)	(W)	Z=W-0.3-(X)-(Y)	(AB)=(AA)-(Z)	(Y)	(a)	(b)	(c)=(a)+(b)	(d)	(b)+(d)	(e)	(f)=(b)+(d)+(e)	(h)	(i)	(j)	(k)
BORED PILE	BORED PILE CAP THICKNESS (FOR	BORED PILE	BORED PILE EFFECTIVE	ROCK SOCKET	PILE BASE	BELLOUT DEPTH	CUT-OFF LEVEL	TENTATIVE ROCKHEAD	TENTATIVE FOUNDING	TENTATIVE PILE	EFFECTIVE ROCK SOCKET	SELF-WEIGHT OF BORED PILE	Dmin (total)	Dmin + SWP	SDL(total)	TOTAL DEAD LOAD (DL) = Dmin	LIVE LOAD (LL)	DL + SDL + LL	Wmax (total)	TOTAL UPLIFT FORCE DUE TO		L LOAD DUE TO NG EFFECT
MARK	REFERENCE ONLY)	DIAMETER	SHAFT DIAMETER	DIAMETER	DIAMETER	DEPTH		LEVEL	LEVEL	LENGTH	LENGTH	(SUBMERGED) (SWP)			ODE((O(d))	+ SDL	(total)			GROUND WATER (U)	WITHOUT WIND	WITH WIND
	(m)	(m)	(m)	(m)	(m)	(m)	(mPD)	(mPD)	(mPD)	(m)	(m)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)
BP1	2.50	3.00	2.80	2.80	4.50	1.50	-8.761	-45.50	-50.90	42.139	3.60	3950	45600	49550	17500	63100	15200	78300	15800	-21400	80	99
BP2	2.50	2.50	2.80	2.80	4.50	1.25	-8.761	-44.50	-49.15	40.389	3.10	3950	45600	49550	17500	63100	15200	78300	15800	-21400	0	0
BP3	2.50	2.50	2.80	2.80	4.50	1.25	-8.761	-46.50	-51.15	42.389	3.10	3950	45600	49550	17500	63100	15200	78300	15800	-21400	0	0
BP4	2.50	3.00	2.80	2.80	4.50	1.50	-11.280	-47.00	-52.40	41.120	3.60	3950	45600	49550	17500	63100	15200	78300	15800	-21400	0	0
BP5	2.50	3.00	2.80	2.80	4.50	1.50	-11.280	-50.00	-56.80	45.520	5.00	3950	45600	49550	17500	63100	15200	78300	15800	-21400	49	61
BP6	2.50	3.00	2.80	2.80	4.50	1.50	-8.780	-46.00	-51.40	42.620	3.60	3950	45600	49550	17500	63100	15200	78300	15800	-21400	0	0

	(f)	(f)+(h)	(f)+(a)+(j)	(f)+(h)+(a)+(k)	(l)=(b)+(i)	(m)=(b)-(h)+(i)	(n)=(b)-1.5*(h)+1.5 *(i)				(0)	(p)=(o)*1.25	(q)	(r)=(q)*1.25	(r1)	(p1)	(a1)=Min of(((r1),(p1)/3))+(a)	(u1)=Min of(((r1)*2,(p1))+(a)	(u)=(o)+(q)	(v)=(u)*1.25	(b)+0.9*(u1)-1.5 *(h) +1.5*(i)>0	(b)+(a1)-(h)+(i)>0	
		MAX.	PILE LOAD			MIN. PILE LOA	٨D				PILE BARING (COMPR		ROCK FRICTION (C	COMPRESSION)		ROCK/SOIL	UPLIFT RES	SISTANCE	BORED PILE BEAR (COMPRE		STABILI7	TY CHECK	
BORED PILE MARK	DL + SDL + LL	DL + SDL + LL + Wmax	DL + SDL + LL + Stepping Load	Wmax + Stepping		Dmin + SWP - Wmax - U	Dmin + SWP - 1.5Wmax - 1.5U	VERTIC	AL BARS	LINKS	WITHOUT WIND	WITH WIND	WITHOUT WIND	WITH WIND	ROCK FRICTION (TENSION)	MASS (SUBMERGED)	ALLOWABLE	ULTIMATE	WITHOUT WIND	WITH WIND	Dmin + 0.9*Ru -1.5Wmax - 1.5U	Dmin + Ra - Wmax - U	REFERENCE BORED HOLE
	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	LAYER 1	LAYER 2		(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	Ra (kN)	Ru (kN)	(kN)	(kN)	(kN)	(kN)	_
BP1	78300	94100	82330	98149	28150	12350	-6250	54 T40	50 T40	T16 / 300 (2 rings)	798530	998162	17250	21562	11090	21899	11249	25849	815780	1019725	13064	19649	BP1
BP2	78300	94100	82250	98050	28150	12350	-6250	54 T40	50 T40	T16 / 300 (2 rings)	798530	998162	17250	21562	11090	21899	11249	25849	815780	1019725	13064	19649	BP2
BP3	78300	94100	82250	98050	28150	12350	-6250	54 T40	50 T40	T16 / 300 (2 rings)	798530	998162	17250	21562	11090	21899	11249	25849	815780	1019725	13064	19649	BP3
BP4	78300	94100	82250	98050	28150	12350	-6250	54 T40	50 T40	T16 / 300 (2 rings)	798530	998162	17250	21562	11090	21899	11249	25849	815780	1019725	13064	19649	BP4
BP5	78300	94100	82299	98111	28150	12350	-6250	54 T40	50 T40	T16 / 300 (2 rings)	798530	998162	17250	21562	11090	21899	11249	25849	815780	1019725	13064	19649	BP5
BP6	78300	94100	82250	98050	28150	12350	-6250	54 T40	50 T40	T16 / 300 (2 rings)	798530	998162	17250	21562	11090	21899	11249	25849	815780	1019725	13064	19649	BP6

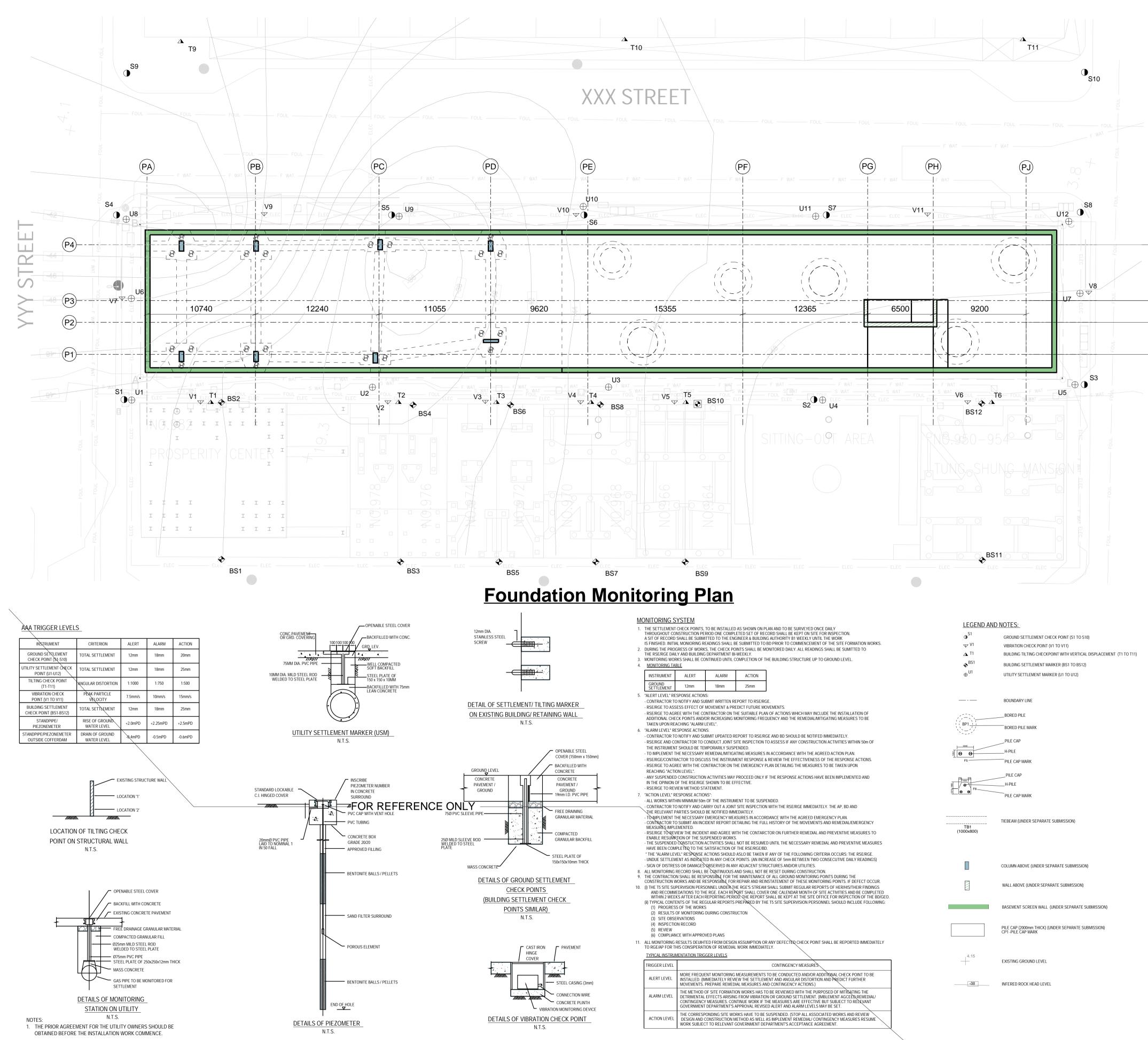
PILE CAP THICKNESS (FOR REFERENCE ONLY)PILE CAP THICKNESS (FOR REFERENCE ONLY)SP1A(m)(SP1A2(SP1B2(SP1C2(SP2A2(SP2B2(SP3A2(SP3B2(SP3C2((A) R PIPE EFFECTIVE SHAFT DIAMETER (m) 0.55 0.55 0.55 0.55 0.55	(A) ROCK SOCKET DIAMETER (mPD) 0.55 0.55 0.55	PILE CAP BASE LEVEL (mPD) -8.350 -8.350	(AA) CUT-OFF LEVEL (mPD) -8.275	(w) TENTATIVE ROCKHEAD LEVEL (m) -46.300	(Z) TENTATIVE FOUNDING LEVEL (m)	(AB) TENTATIVE PILE LENGTH (m)	TENTATIVE PILE LENGTH ABOVE RH	(Y) EFFECTIVE ROCK SOCKET LENGTH	(P1) ROCK MASS (SUBMEGED)	(P2) SOIL MASS SURROUNDING	(P3) = (P1) + (P2) ROCK/SOIL MASS	(a)	(P4) = (P3) + (a)	(d)	(d)	(b) + (d)	(e)	(f) = (b) + (d) + (e)	(h)	(i)		(k) = (j) * 1.25
PILE MARKTHICKNESS (FOR REFERENCE ONLY)THICKNESS (FOR REFERENCE ONLY)SP1A(m)(SP1A2(SP1B2(SP1C2(SP2A2(SP2B2(SP3A2(SP3B2(R SHAFT DIAMETER (m) 0.55 0.55 0.55 0.55 0.55	DIAMETER (mPD) 0.55 0.55	LEVEL (mPD) -8.350 -8.350	(mPD) -8.275	ROCKHEAD LEVEL (m)	FOUNDING LEVEL	LENGTH	LENGTH ABOVE	ROCK SOCKET														
(m) SP1A 2 SP1B 2 SP1B 2 SP1C 2 SP2A 2 SP2A 2 SP2B 2 SP2B 2 SP2C 2 SP3A 2 SP3B 2	(m) 0.55 0.55 0.55 0.55 0.55	0.55 0.55	-8.350 -8.350	-8.275	(m)		(m)		LLINGTH	(/	PILE	(SUBMERGED W/O PILE		PILE SELF	Min DEAD LOAD PER PILE (Dmin)	SDL PER PILE	TOTAL DEAD LOAD (DL) = Dmin + SDL	LIVE LOAD (LL)	DL + SDL + LL	Wmax PER PILE	UPLIFT FORCE PER PILE (AT THE BOTTOM OF	STEPPI	AL LOAD DUE TO
SP1A 2 SP1B 2 SP1C 2 SP2A 2 SP2B 2 SP2C 2 SP3A 2 SP3B 2	0.55 0.55 0.55 0.55	0.55 0.55	-8.350 -8.350	-8.275		(m)	(m)				(SUBMERGED)	SELF-WEIGHT	(3007)	WEIGHT			+ 3DL				CAP) (U)	WITHOUT WIND	WITH WIND
SP1B 2 SP1C 2 SP2A 2 SP2B 2 SP2C 2 SP3A 2 SP3B 2	0.55 0.55 0.55	0.55	-8.350		-46,300		,	(m)	(m)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)
SP1C 2 SP2A 2 SP2B 2 SP2C 2 SP3A 2 SP3B 2	0.55 0.55			0 775		-53.300	45.025	38.025	7	220	4838	5058	190	5248	8290	2900	11190	2100	13290	1300	-10000	440	551
SP2A 2 SP2B 2 SP2C 2 SP3A 2 SP3B 2	0.55	0.55		-8.275	-46.300	-53.300	45.025	38.025	7	220	4838	5058	190	5248	8290	2900	11190	2100	13290	1300	-10000	440	551
SP2B 2 SP2C 2 SP3A 2 SP3B 2			-8.350	-8.275	-46.300	-53.300	45.025	38.025	7	220	4838	5058	190	5248	8290	2900	11190	2100	13290	1300	-10000	440	551
SP2C 2 SP3A 2 SP3B 2	0.55	0.55	-8.350	-8.275	-58.300	-65.300	57.025	50.025	7	220	4838	5058	190	5248	8290	2900	11190	2100	13290	1300	-10000	190	238
SP3A 2 SP3B 2	0.00	0.55	-8.350	-8.275	-58.300	-65.300	57.025	50.025	7	220	4838	5058	190	5248	8290	2900	11190	2100	13290	1300	-10000	190	238
SP3B 2	0.55	0.55	-8.350	-8.275	-58.300	-65.300	57.025	50.025	7	220	4838	5058	190	5248	8290	2900	11190	2100	13290	1300	-10000	190	238
	0.55	0.55	-8.350	-8.275	-42.300	-49.300	41.025	34.025	7	220	4838	5058	190	5248	8290	2900	11190	2100	13290	1300	-10000	626	783
SP3C 2	0.55	0.55	-8.350	-8.275	-42.300	-49.300	41.025	34.025	7	220	4838	5058	190	5248	8290	2900	11190	2100	13290	1300	-10000	626	783
	0.55	0.55	-8.350	-8.275	-42.300	-49.300	41.025	34.025	7	220	4838	5058	190	5248	8290	2900	11190	2100	13290	1300	-10000	626	783
SP4A 2	0.55	0.55	-8.350	-8.275	-52.800	-59.800	51.525	44.525	7	220	4838	5058	190	5248	8290	2900	11190	2100	13290	1300	-10000	96	120
SP4B 2	0.55	0.55	-8.350	-8.275	-52.800	-59.800	51.525	44.525	7	220	4838	5058	190	5248	8290	2900	11190	2100	13290	1300	-10000	96	120
SP4C 2	0.55	0.55	-8.350	-8.275	-52.800	-59.800	51.525	44.525	7	220	4838	5058	190	5248	8290	2900	11190	2100	13290	1300	-10000	96	120
SP5A 2	0.55	0.55	-8.350	-8.275	-39.300	-46.300	38.025	31.025	7	240	3022	3262	190	3452	8290	2900	11190	2100	13290	1300	-10000	107	134
SP5B 2	0.55	0.55	-8.350	-8.275	-39.300	-46.300	38.025	31.025	7	240	3022	3262	190	3452	8290	2900	11190	2100	13290	1300	-10000	107	134
SP6A 2	0.55	0.55	-8.350	-8.275	-38.300	-45.300	37.025	30.025	7	240	3022	3262	190	3452	8290	2900	11190	2100	13290	1300	-10000	0	0
SP6B 2	0.55	0.55	-8.350	-8.275	-38.300	-45.300	37.025	30.025	7	240	3022	3262	190	3452	8290	2900	11190	2100	13290	1300	-10000	0	0
SP7A 2	0.55	0.55	-8.350	-8.275	-40.300	-47.300	39.025	32.025	7	220	4838	5058	190	5248	8290	2900	11190	2100	13290	1300	-10000	54	68
SP7B 2	0.55	0.55	-8.350	-8.275	-40.300	-47.300	39.025	32.025	7	220	4838	5058	190	5248	8290	2900	11190	2100	13290	1300	-10000	54	68
SP7C 2	0.55	0.55	-8.350	-8.275	-40.300	-47.300	39.025	32.025	7	220	4838	5058	190	5248	8290	2900	11190	2100	13290	1300	-10000	54	68
SP8A 2	0.55	0.55	-8.350	-8.275	-39.300	-46.300	38.025	31.025	7	220	4838	5058	190	5248	8290	2900	11190	2100	13290	1300	-10000	0	0
SP8B 2	0.55	0.55	-8.350	-8.275	-39.300	-46.300	38.025	31.025	7	220	4838	5058	190	5248	8290	2900	11190	2100	13290	1300	-10000	0	0
SP8C 2	0.55	0.55	-8.350	-8.275	-39.300	-46.300	38.025	31.025	7	220	4838	5058	190	5248	8290	2900	11190	2100	13290	1300	-10000	0	

							SOCKET H-F	PILE LOADING S	CHEDULE (2 OF	2)						
	(f)	(f)+(h)	(f)+(a)+(j)	(f)+(h)+(a)+(k)	(l)=(b)+(a)+(i)	(m)=(b)-(h)+(i)	(n)=(b)-1.5*(h)+1.5 *(i)	(0)	(p)=(o)*1.25	(r1)	(p1) = (P3)	(a1)=Min of(((r1),(p1)/3))+(a)	(u1)=Min of(((r1)*2,(p1))+(a)	(b)+0.9*(u1)-1.5 *(h) +1.5*(i)>0	(b)+(a1)-(h)+(i)>0	
		Max. F	PILE LOAD			MIN. PILE LOAI	C		NG CAPACITY RESSION)		ROCK/SOIL	UPLIFT F	RESISTANCE	STABIL	ITY CHECK	
BORED PILE MARK	DL + SDL + LL	DL + SDL + LL + Wmax	DL + SDL + LL + SWP + Stepping Load	DL + SDL + LL + Wmax + SWP + Stepping Load	Dmin + SWP -U	Dmin + SWP - Wmax - U	Dmin + SWP - 1.5Wmax - 1.5U	WITHOUT WIND	WITH WIND	ROCK FRICTION (TENSION)	MASS (SUBMERGED)	ALLOWABLE	ULTIMATE	Dmin + 0.9*Ru -1.5Wmax - 1.5U	Dmin + Ra - Wmax - U	REFERENCE BORED HOLI
	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(kN)	(m)	(kN)	(kN)	(kN)	Ra (kN)	Ru (kN)	(kN)	(kN)	
SP1A	13290	14590	13921	15221	-1520	-220	-4570	6106	7633	3053	5058	1876	5248	26063	18866	BH1
SP1B	13290	14590	13921	15221	-1520	-220	-4570	6106	7633	3053	5058	1876	5248	26063	18866	BH1
SP1C	13290	14590	13921	15221	-1520	-220	-4570	6106	7633	3053	5058	1876	5248	26063	18866	BH1
SP2A	13290	14590	13670	14970	-1520	-220	-4570	6106	7633	3053	5058	1876	5248	26063	18866	BH2
SP2B	13290	14590	13670	14970	-1520	-220	-4570	6106	7633	3053	5058	1876	5248	26063	18866	BH2
SP2C	13290	14590	13670	14970	-1520	-220	-4570	6106	7633	3053	5058	1876	5248	26063	18866	BH2
SP3A	13290	14590	14106	15406	-1520	-220	-4570	6106	7633	3053	5058	1876	5248	26063	18866	BH1
SP3B	13290	14590	14106	15406	-1520	-220	-4570	6106	7633	3053	5058	1876	5248	26063	18866	BH1
SP3C	13290	14590	14106	15406	-1520	-220	-4570	6106	7633	3053	5058	1876	5248	26063	18866	BH1
SP4A	13290	14590	13576	14876	-1520	-220	-4570	6106	7633	3053	5058	1876	5248	26063	18866	BH2
SP4B	13290	14590	13576	14876	-1520	-220	-4570	6106	7633	3053	5058	1876	5248	26063	18866	BH2
SP4C	13290	14590	13576	14876	-1520	-220	-4570	6106	7633	3053	5058	1876	5248	26063	18866	BH2
SP5A	13290	14590	13587	14887	-1520	-220	-4570	6106	7633	3053	3262	1277	3452	24447	18267	BH3
SP5B	13290	14590	13587	14887	-1520	-220	-4570	6106	7633	3053	3262	1277	3452	24447	18267	BH3
SP6A	13290	14590	13480	14780	-1520	-220	-4570	6106	7633	3053	3262	1277	3452	24447	18267	BH4
SP6B	13290	14590	13480	14780	-1520	-220	-4570	6106	7633	3053	3262	1277	3452	24447	18267	BH4
SP7A	13290	14590	13534	14834	-1520	-220	-4570	6106	7633	3053	5058	1876	5248	26063	18866	BH5
SP7B	13290	14590	13534	14834	-1520	-220	-4570	6106	7633	3053	5058	1876	5248	26063	18866	BH5
SP7C	13290	14590	13534	14834	-1520	-220	-4570	6106	7633	3053	5058	1876	5248	26063	18866	BH5
SP8A	13290	14590	13480	14780	-1520	-220	-4570	6106	7633	3053	5058	1876	5248	26063	18866	BH6
SP8B	13290	14590	13480	14780	-1520	-220	-4570	6106	7633	3053	5058	1876	5248	26063	18866	BH6
SP8C	13290	14590	13480	14780	-1520	-220	-4570	6106	7633	3053	5058	1876	5248	26063	18866	BH6

BORED PILE LOADING SCHEDULE (1 OF 2)

BD REF			
BIM REF	· · ·		
T			
REV PROJEC	DATE		AMENDMENT
	SAMPLE PI	ROJECT	
	IG TITLE OADING SCI	HEDULE	
SCALE	AS SHOWN	@A1	
DRAWIN		- / \	REV. NO.
P008			
SOURCI			
	00 ^		
		N) x 40mm IPANY LOG	
	90mm /	N) x 60mm	(H) snace
	for AP/R	SE/RGE's	
	signatur	e/ and stam	ի ՀԱՆի
BD's O	FFICAL USE		
	90mm (\	<i>N</i>) x 150mm	n (H) space
	for BD's	approval station of copie	amp /
	approve	d plans ADM-10 APF	
	ער זאר ד		• •

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- 2

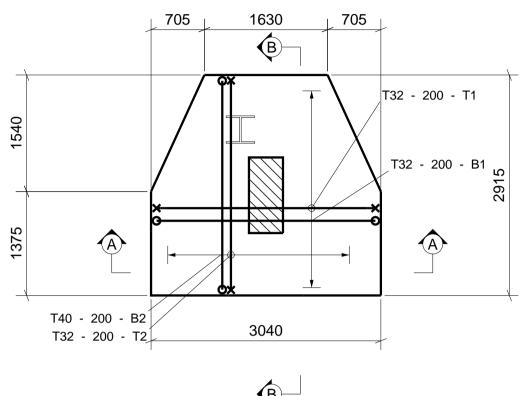


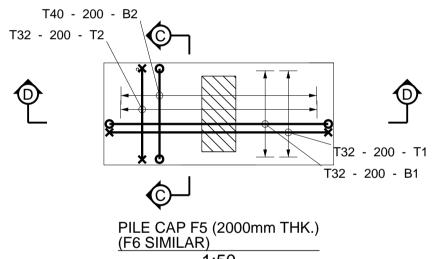
Tekla Structures

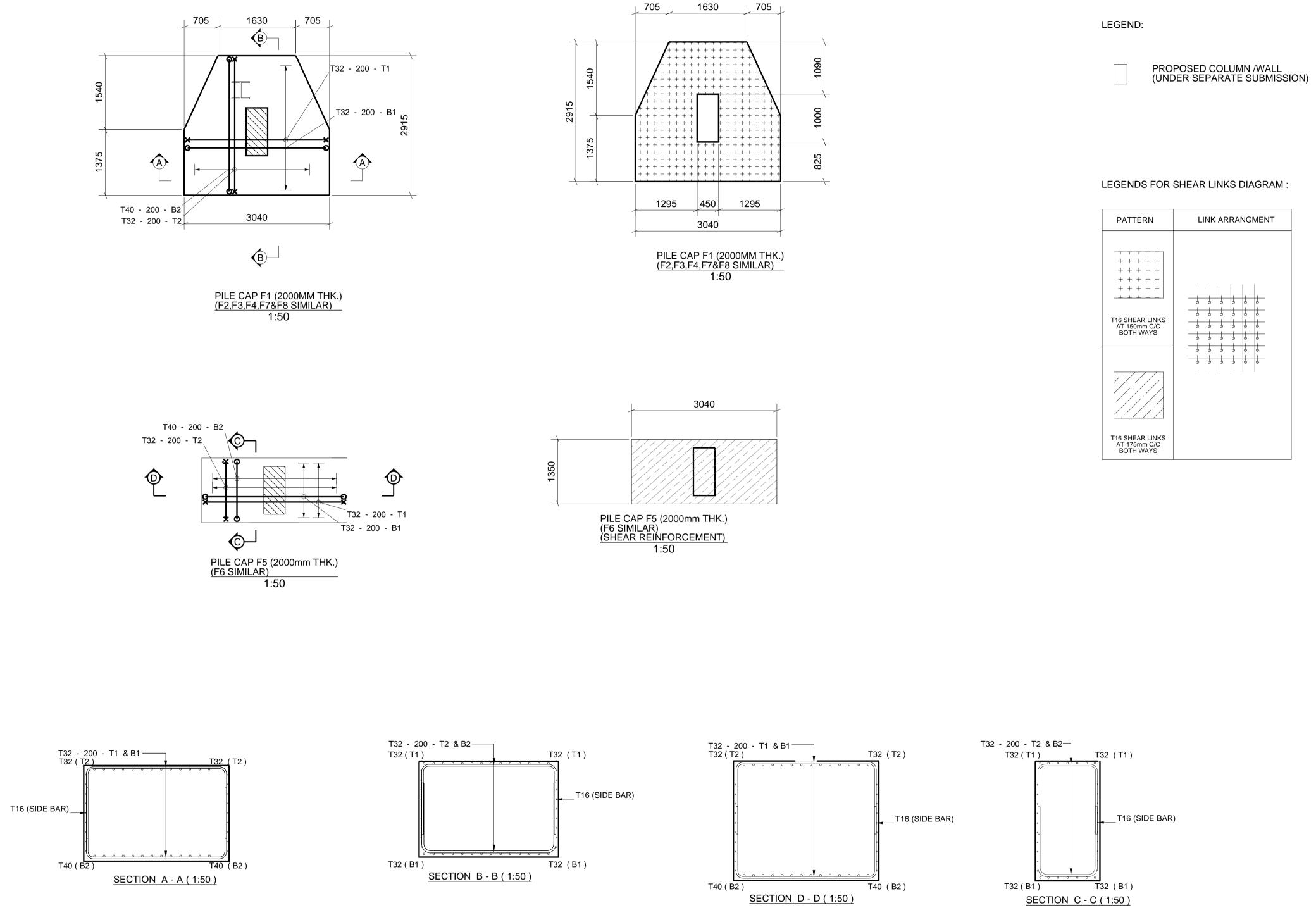


REV	DATE	AMENDMENT
	ст SAMPLE F	PROJECT
010		KOJECT
	NG TITLE	DNITORING PLAN
SCALE DRAWII	AS SHOWN	N@A1 REV. NO.
P009		
30000	· _	
	90mm for CO	(W) x 40mm (H) space MPANY LOGO
	90mm for AP	(W) x 60mm (H) space /RSE/RGE's
	signati	ure/ and stamp chop
BD's C	OFFICAL USE	
	ეელო	(W) x 150mm (H) space
	for BD certific	(W) x 150mm (H) space 's approval stamp / ation of copies of
	for BD certific approv	's approval stamp /
	for BD certific approv	's approval stamp / ation of copies of /ed plans
	for BD certific approv	's approval stamp / ation of copies of /ed plans
	for BD certific approv	's approval stamp / ation of copies of /ed plans
	for BD certific approv	's approval stamp / ation of copies of /ed plans

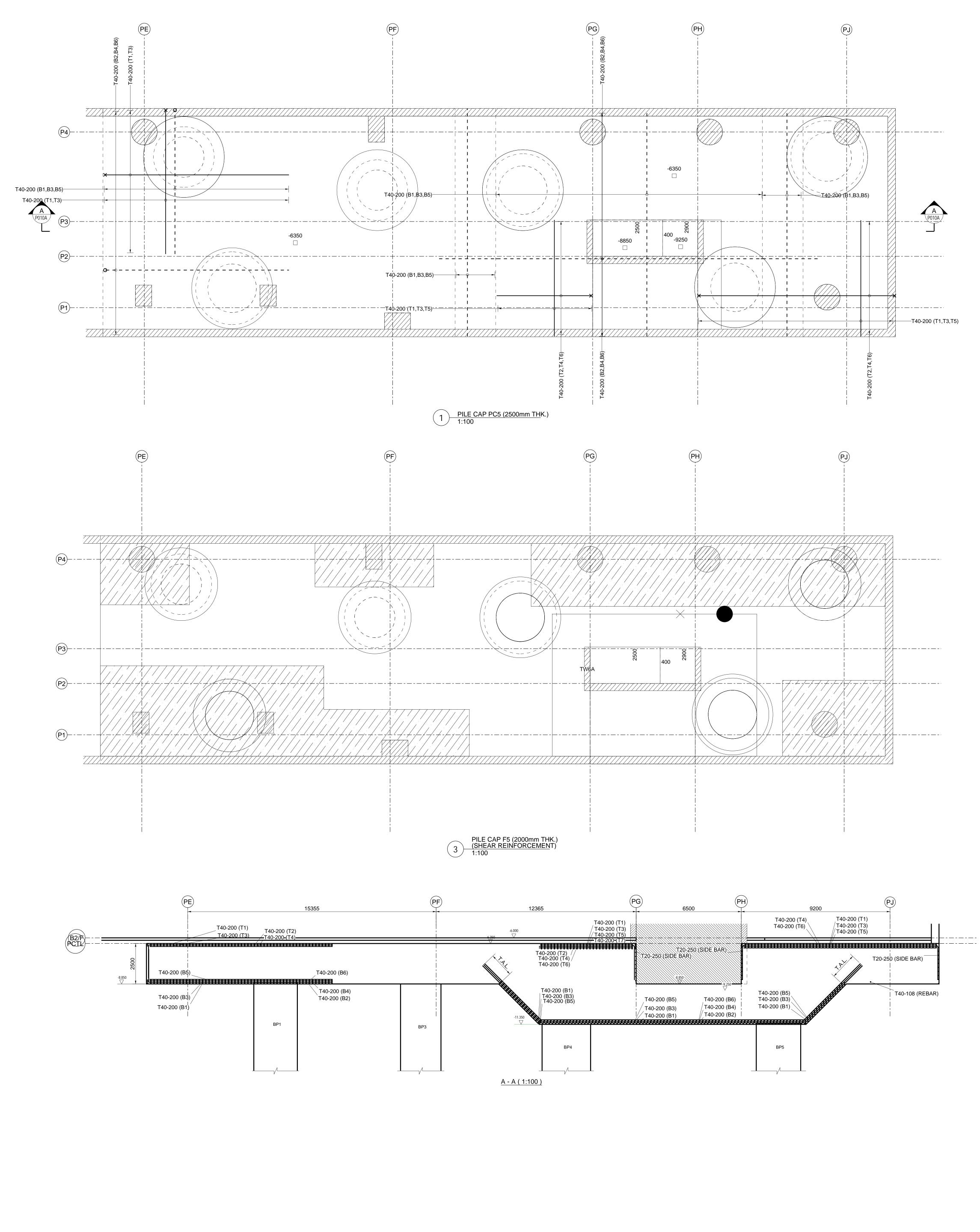
BD REF



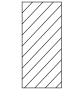




BIM REF	· :	
PROJEC	DATE	AMENDMENT
(10F scale	2) AS SHOWN	
	G NO.	REV. NO.
P010 SOURCE		
		40 x 40mm (11) anaca
	90mm (V	V) x 40mm (H) space PANY LOGO
	90mm (V	V) x 40mm (H) space PANY LOGO
	90mm (V	V) x 40mm (H) space PANY LOGO
	90mm (V	V) x 40mm (H) space PANY LOGO
	90mm (V for COM	PANY LOGO
	90mm (V for COM 90mm (V for AP/R	PANY LOGO N) x 60mm (H) space SE/RGE's
	90mm (V for COM 90mm (V for AP/R	PANY LOGO W) x 60mm (H) space
	90mm (V for COM 90mm (V for AP/R	PANY LOGO N) x 60mm (H) space SE/RGE's
	90mm (V for COM 90mm (V for AP/R signature	PANY LOGO N) x 60mm (H) space SE/RGE's
	90mm (V for COM 90mm (V for AP/R	PANY LOGO N) x 60mm (H) space SE/RGE's
	90mm (V for COM 90mm (V for AP/R signature	PANY LOGO N) x 60mm (H) space SE/RGE's
	90mm (V for COM 90mm (V for AP/R signature	PANY LOGO N) x 60mm (H) space SE/RGE's
	90mm (V for COM 90mm (V for AP/R signature	PANY LOGO N) x 60mm (H) space SE/RGE's
	90mm (V for COM 90mm (V for AP/R signature	PANY LOGO N) x 60mm (H) space SE/RGE's
	90mm (V for COM 90mm (V for AP/R signature	PANY LOGO N) x 60mm (H) space SE/RGE's
	90mm (V for COM 90mm (V for AP/R signature	PANY LOGO V) x 60mm (H) space SE/RGE's e/ and stamp chop
	90mm (V for COM 90mm (V for AP/R signature FFICAL USE FFICAL USE	PANY LOGO N) x 60mm (H) space SE/RGE's e/ and stamp chop N) x 150mm (H) space approval stamp / ion of copies of
	90mm (V for COM 90mm (V for AP/R signature FFICAL USE FFICAL USE 90mm (V for BD's certificat approved	PANY LOGO N) x 60mm (H) space SE/RGE's e/ and stamp chop N) x 150mm (H) space approval stamp / ion of copies of
	90mm (V for COM 90mm (V for AP/R signature FFICAL USE FFICAL USE 90mm (V for BD's certificat approved	PANY LOGO N) x 60mm (H) space SE/RGE's e/ and stamp chop N) x 150mm (H) space approval stamp / ion of copies of d plans
	90mm (V for COM 90mm (V for AP/R signature FFICAL USE FFICAL USE 90mm (V for BD's certificat approved	PANY LOGO N) x 60mm (H) space SE/RGE's e/ and stamp chop N) x 150mm (H) space approval stamp / ion of copies of d plans
	90mm (V for COM 90mm (V for AP/R signature FFICAL USE FFICAL USE 90mm (V for BD's certificat approved	PANY LOGO N) x 60mm (H) space SE/RGE's e/ and stamp chop N) x 150mm (H) space approval stamp / ion of copies of d plans
	90mm (V for COM 90mm (V for AP/R signature FFICAL USE FFICAL USE 90mm (V for BD's certificat approved	PANY LOGO N) x 60mm (H) space SE/RGE's e/ and stamp chop N) x 150mm (H) space approval stamp / ion of copies of d plans

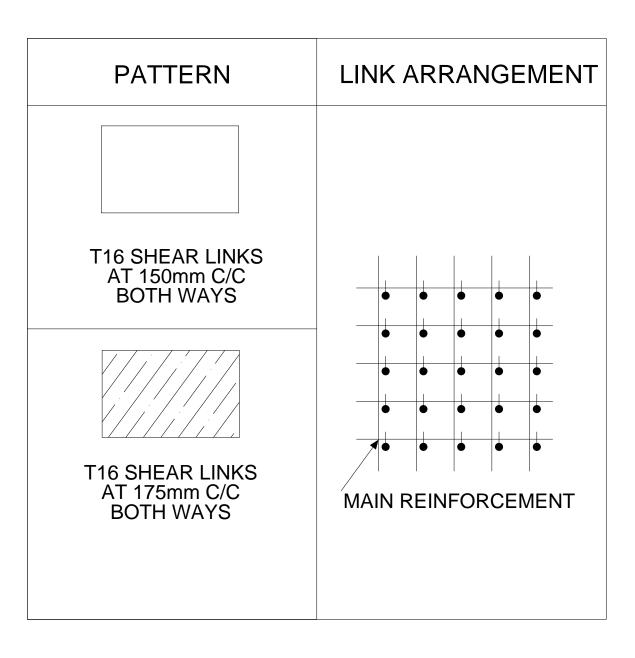


LEGEND

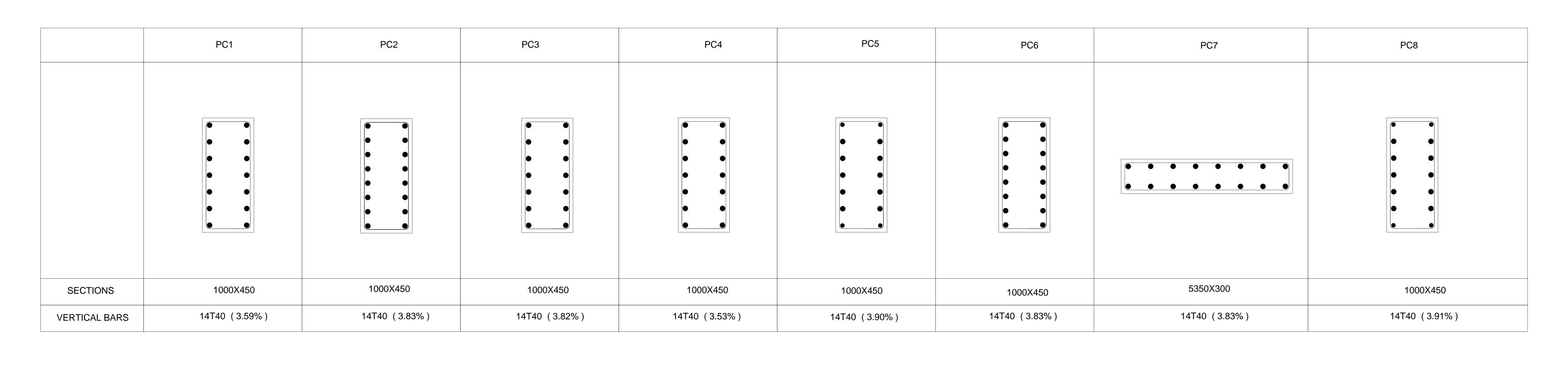


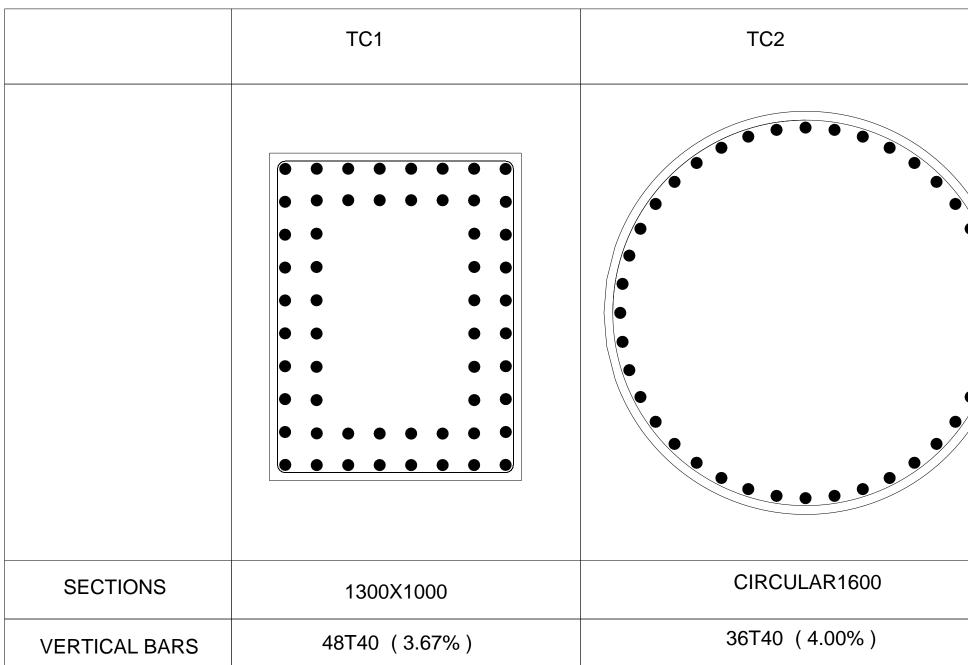
PROPOSED COLUMN / WALL (UNDER SEPARATE SUBMISSION)

LEGENDS FOR SHEAR LINK DIAGRAM:

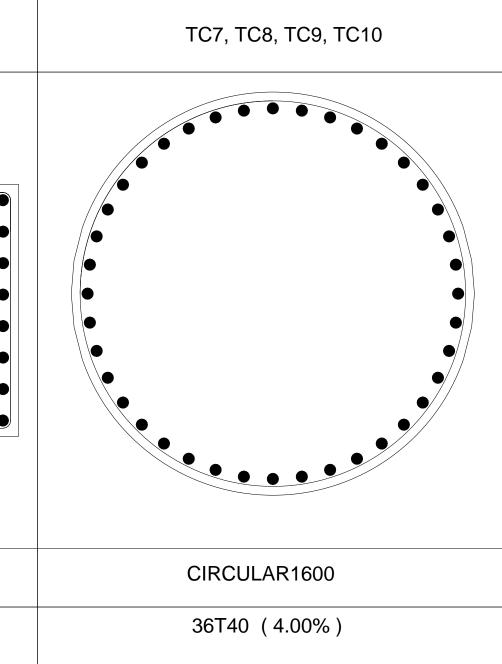


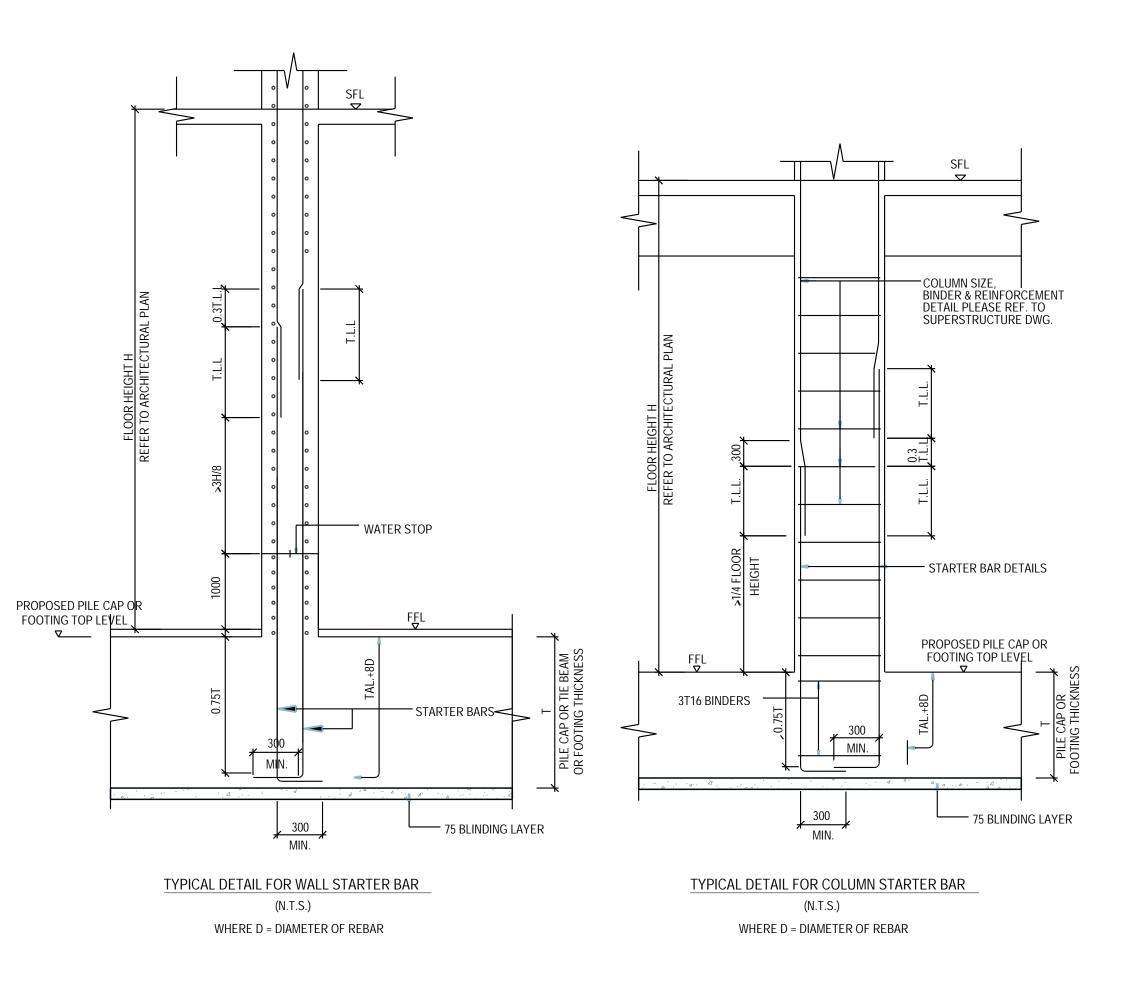
REV	DATE	AMENDMENT
PROJE		
PILE ((2 OF	2) AS SHOW NG NO. DA	ORCEMENT LAYOUT PLAN
PILE ((2 OF SCALE DRAWIN P010	CAP REINF(2) AS SHOW NG NO. A E 90mm	DRCEMENT LAYOUT PLAN
PILE ((2 OF SCALE DRAWIN P010	CAP REINF(2) AS SHOW NG NO. A E 90mm	N@A1 REV. NO.
PILE ((2 OF SCALE DRAWIN P010	CAP REINF(2) AS SHOW NG NO. A E 90mm for CO 90mm for AP	N@A1 REV. NO.
PILE ((2 OF SCALE DRAWIN SOURC	CAP REINF(2) AS SHOW NG NO. A E 90mm for CO 90mm for AP	ORCEMENT LAYOUT PLAN N@A1 REV. NO. (W) x 40mm (H) space MPANY LOGO (W) x 60mm (H) space /RSE/RGE's





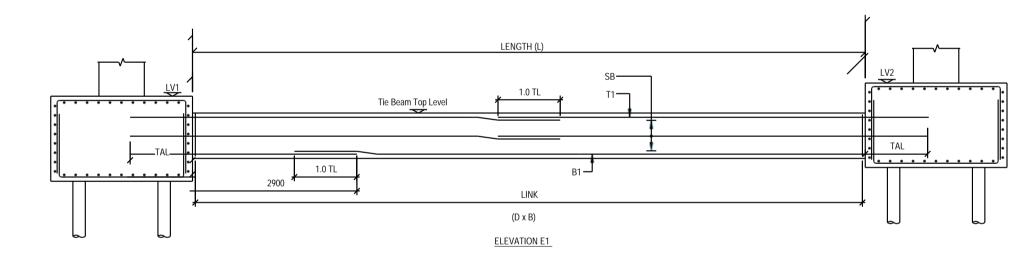
 TC3	TC4	TC5
1300X1000	1600X1000	1000X1600
48T40 (3.67%)	56T40 (3.97%)	56T40 (3.97%)

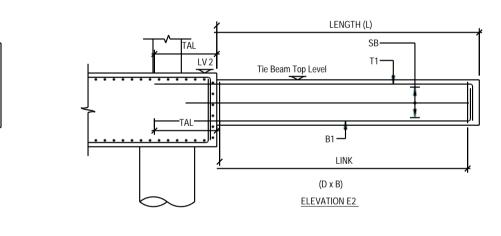


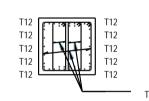


REV PROJE(DATE	AMENDMENT
50 MI F		
DRAWIN P011 SOURC		@A1 REV. NO.
drawin P011	NG NO. E 90mm (
drawin P011	NG NO. E 90mm (for CON 90mm (for AP/I	(W) x 40mm (H) space
DRAWIN	NG NO. E 90mm (for CON 90mm (for AP/I	(W) x 40mm (H) space MPANY LOGO (W) x 60mm (H) space RSE/RGE's

TIE BEAM R.C. DETAILS SCHEDULE														
TIE BEAM	BEAM SIZE	LENGTH	PILE CAP	TOP LEVEL	PILE CAP	TOP LEVEL			STEEL BAR				SECTION	ELEVATION
MARK	(D x B)	(m)	(P1)	(Lv1)	(P2)	(Lv2)	T1	T2	B1	B2	SB	Link	REFERENCE	REFERENCE
TB1	1000 x 800	10.935	F1	-6350	F2	-6350	10T40	6T40	10T40	6T40	5T12 E.F.	T12-150 T.S.	SECTION S1	ELEVATION E1
TB2	1000 x 800	7.385	F1	-6350	F3	-6350	10T40	6T40	10T40	6T40	5T12 E.F.	T12-150 T.S.	SECTION S1	ELEVATION E1
TB3	1000 x 800	7.400	F2	-6350	F4	-6350	10T40	6T40	10T40	6T40	5T12 E.F.	T12-150 T.S.	SECTION S1	ELEVATION E1
TB4	1000 x 800	10.936	F3	-6350	F4	-6350	10T40	6T40	10T40	6T40	5T12 E.F.	T12-150 T.S.	SECTION S1	ELEVATION E1
TB5	1000 x 800	12.293	F4	-6350	F6	-6350	10T40	6T40	10T40	6T40	5T12 E.F.	T12-150 T.S.	SECTION S1	ELEVATION E1
TB6	1000 x 800	11.818	F3	-6350	F5	-6350	10T40	6T40	10T40	6T40	5T12 E.F.	T12-150 T.S.	SECTION S1	ELEVATION E1
TB7	1000 x 800	11.220	F5	-6350	F6	-6350	10T40	6T40	10T40	6T40	5T12 E.F.	T12-150 T.S.	SECTION S1	ELEVATION E1
TB8	1000 x 800	10.941	F6	-6350	F8	-6350	10T40	6T40	10T40	6T40	5T12 E.F.	T12-150 T.S.	SECTION S1	ELEVATION E1
TB9	1000 x 800	11.530	F5	-6350	F7	-6350	10T40	6T40	10T40	6T40	5T12 E.F.	T12-150 T.S.	SECTION S1	ELEVATION E1
TB10	1000 x 800	9.451	F7	-6350	F8	-6350	10T40	6T40	10T40	6T40	5T12 E.F.	T12-150 T.S.	SECTION S1	ELEVATION E1
TB11	1000 x 800	3.075	BW4	-6350	F7	-6350	10T32	-	10T32	-	5T12 E.F.	T12-150 T.S.	SECTION S1	ELEVATION E2
TB12	1000 x 800	1.450	BW3	-6350	F5	-6350	10T32	-	10T32	-	5T12 E.F.	T12-150 T.S.	SECTION S1	ELEVATION E2
TB13	1000 x 800	1.455	BW9	-6350	F6	-6350	10T32	-	10T32	-	5T12 E.F.	T12-150 T.S.	SECTION S1	ELEVATION E2
TB14	1000 x 800	3.595	BW13	-6350	F1	-6350	10T32	-	10T32	-	5T12 E.F.	T12-150 T.S.	SECTION S1	ELEVATION E2
TB15	1000 x 800	3.595	BW12	-6350	F2	-6350	10T32	-	10T32	-	5T12 E.F.	T12-150 T.S.	SECTION S1	ELEVATION E2



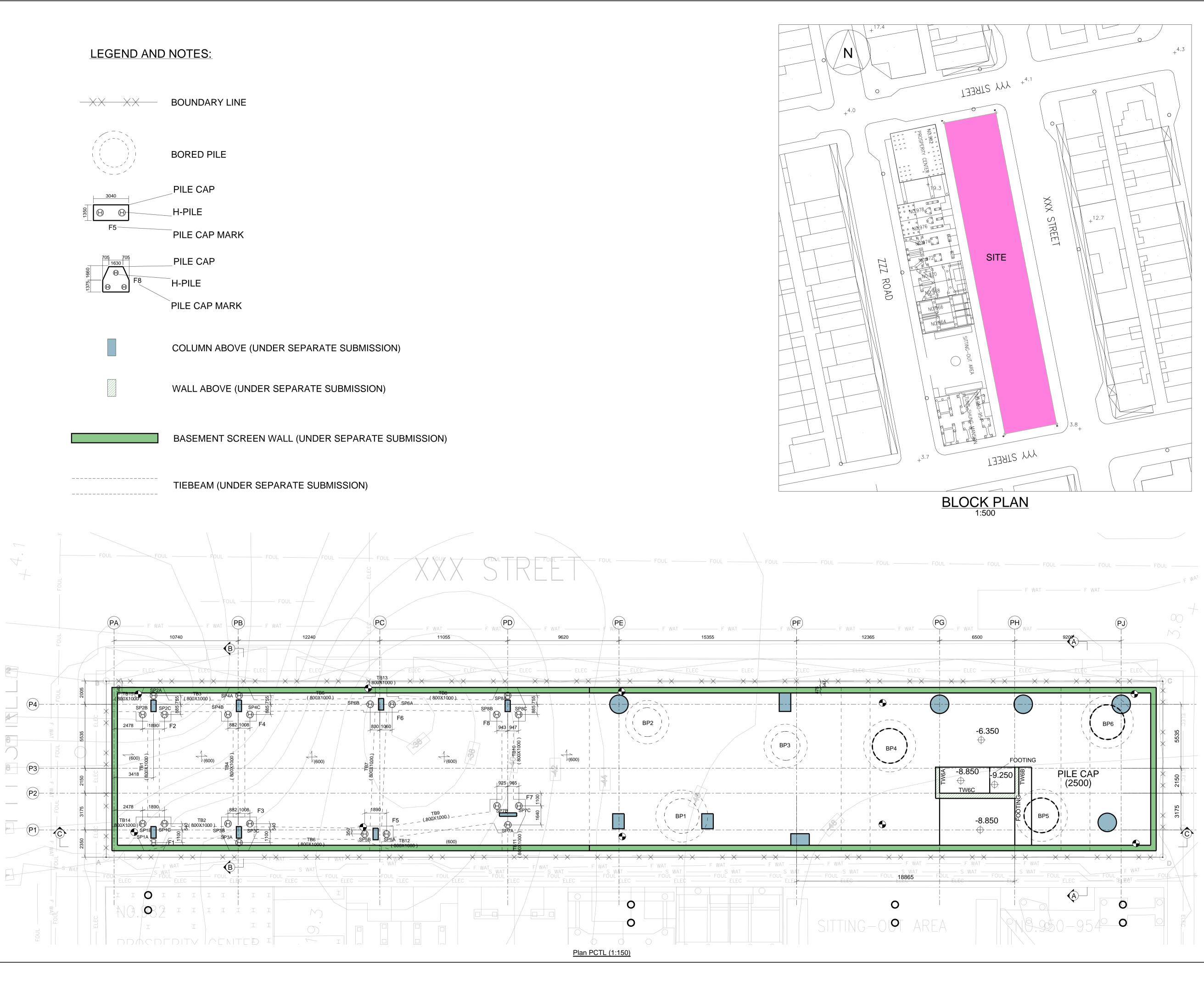




SECTION S1

BD REF		
BIM REI	F :	
REV PROJEC	DATE	AMENDMENT
	SAMPLE P	ROJECT
	LAIVI DE LAIL;	S & SCHEDULE
	AS SHOWN	
drawin P012	AS SHOWN NG NO.	@A1
drawin P012	AS SHOWN NG NO.	@A1
drawin P012	AS SHOWN NG NO. E	@A1 REV. NO.
drawin P012	AS SHOWN NG NO. E 90mm (1	@A1
drawin P012	AS SHOWN NG NO. E 90mm (1	@A1 REV. NO. W) x 40mm (H) space
drawin P012	AS SHOWN NG NO. E 90mm (1	@A1 REV. NO. W) x 40mm (H) space
drawin P012	AS SHOWN NG NO. E 90mm (1	@A1 REV. NO. W) x 40mm (H) space
drawin P012	AS SHOWN NG NO. E 90mm (1	@A1 REV. NO. W) x 40mm (H) space
drawin P012	AS SHOWN NG NO. E 90mm (for COM	@A1 REV. NO. W) x 40mm (H) space IPANY LOGO W) x 60mm (H) space
drawin P012	AS SHOWN NG NO. E 90mm (for COM 90mm (for AP/F	@A1 REV. NO. W) x 40mm (H) space IPANY LOGO
drawin P012	AS SHOWN NG NO. E 90mm (for COM 90mm (for AP/F	@A1 REV. NO. W) x 40mm (H) space IPANY LOGO W) x 60mm (H) space RSE/RGE's
DRAWI	AS SHOWN NG NO. E 90mm (for COM 90mm (for AP/F	@A1 REV. NO. W) x 40mm (H) space IPANY LOGO W) x 60mm (H) space RSE/RGE's
DRAWIN P012 SOURC	AS SHOWN NG NO. E 90mm (for COM 90mm (for AP/F	@A1 REV. NO. W) x 40mm (H) space IPANY LOGO W) x 60mm (H) space RSE/RGE's
DRAWIN P012 SOURC	AS SHOWN NG NO. E 90mm (for CON 90mm (for AP/F signatur	@A1 REV. NO. W) x 40mm (H) space IPANY LOGO W) x 60mm (H) space RSE/RGE's
DRAWIN P012 SOURC	AS SHOWN NG NO. E 90mm (for CON 90mm (for AP/F signatur	@A1 REV. NO. W) x 40mm (H) space IPANY LOGO W) x 60mm (H) space RSE/RGE's
DRAWIN P012 SOURC	AS SHOWN NG NO. E 90mm (for CON 90mm (for AP/F signatur	@A1 REV. NO. W) x 40mm (H) space IPANY LOGO W) x 60mm (H) space RSE/RGE's
DRAWIN P012 SOURC	AS SHOWN NG NO. E 90mm (for CON 90mm (for AP/F signatur	@A1 REV. NO. W) x 40mm (H) space IPANY LOGO W) x 60mm (H) space RSE/RGE's
DRAWIN P012 SOURC	AS SHOWN NG NO. E 90mm (for CON 90mm (for AP/F signatur	@A1 REV. NO. W) x 40mm (H) space IPANY LOGO W) x 60mm (H) space RSE/RGE's
DRAWIN P012 SOURC	AS SHOWN NG NO. E 90mm (for CON 90mm (for AP/F signatur	@A1 REV. NO. W) x 40mm (H) space IPANY LOGO W) x 60mm (H) space RSE/RGE's
DRAWIN P012 SOURC	AS SHOWN NG NO. E 90mm (for COM 90mm (for AP/F signatur	@A1 REV. NO. W) x 40mm (H) space IPANY LOGO W) x 60mm (H) space RSE/RGE's re/ and stamp chop
DRAWIN P012 SOURC	AS SHOWN NG NO. E 90mm (for COM 90mm (for AP/F signatur	@A1 REV. NO. W) x 40mm (H) space APANY LOGO W) x 60mm (H) space RSE/RGE's re/ and stamp chop w) x 150mm (H) space
DRAWIN P012 SOURC	AS SHOWN NG NO. E 90mm (for COM 90mm (for AP/F signatur	@A1 REV. NO. W) x 40mm (H) space APANY LOGO W) x 60mm (H) space RSE/RGE's re/ and stamp chop w) x 150mm (H) space
DRAWIN P012 SOURC	AS SHOWN NG NO. E 90mm (for COM 90mm (for AP/F signatur	@A1 REV. NO. W) x 40mm (H) space (PANY LOGO W) x 60mm (H) space RSE/RGE's re/ and stamp chop W) x 150mm (H) space approval stamp / tion of copies of ed plans
DRAWIN P012 SOURC	AS SHOWN NG NO. E 90mm (for COM 90mm (for AP/F signatur	@A1 REV. NO. W) x 40mm (H) space (PANY LOGO W) x 60mm (H) space RSE/RGE's re/ and stamp chop W) x 150mm (H) space approval stamp / tion of copies of ed plans
DRAWIN P012 SOURC	AS SHOWN NG NO. E 90mm (for COM 90mm (for AP/F signatur	@A1 REV. NO. W) x 40mm (H) space (PANY LOGO W) x 60mm (H) space RSE/RGE's re/ and stamp chop W) x 150mm (H) space approval stamp / tion of copies of ed plans
DRAWIN P012 SOURC	AS SHOWN NG NO. E 90mm (for COM 90mm (for AP/F signatur	@A1 REV. NO. W) x 40mm (H) space (PANY LOGO W) x 60mm (H) space RSE/RGE's re/ and stamp chop W) x 150mm (H) space approval stamp / tion of copies of ed plans
DRAWIN P012 SOURC	AS SHOWN NG NO. E 90mm (for COM 90mm (for AP/F signatur	@A1 REV. NO. W) x 40mm (H) space (PANY LOGO W) x 60mm (H) space RSE/RGE's re/ and stamp chop W) x 150mm (H) space approval stamp / tion of copies of ed plans
DRAWIN P012 SOURC	AS SHOWN NG NO. E 90mm (for COM 90mm (for AP/F signatur	@A1 REV. NO. W) x 40mm (H) space (PANY LOGO W) x 60mm (H) space RSE/RGE's re/ and stamp chop W) x 150mm (H) space approval stamp / tion of copies of ed plans







GENERAL NOTES ON PILE CAP

- 1. ALL DESIGN SHALL COMPLY WITH HONG KONG BUILDING (CONSTRUCTION) REGULATIONS AND THE CODE OF PRACTICE FOR STRUCTURAL USE OF CONCRÈTE 2013, CODE OF PRACTICE FOR FOUNDATIONS
- 2. ALL DIMENSIÒNS ARE IN mm AND ALL LEVEL ARE IN METERS ABOVE PRINCIPAL DATUM UNLESS OTHERWISE STATED.
- 3. 75mm THICK BLINDING LAYER OF GRADE 10/20 CONCRETE SHALL BE LAID
- UNDERNEATH ALL PILE CAP 4. ALL REINFORCEMENT SHALL COMPLY WITH BS4449:1997 AND CONSTRUCTION STANDARD, CS2, 1995 T' INDICATES HIGH TENSILE STEEL, WITH MINIMUM TENSILE STRESS EQUAL TO 500 MPa.
- CONCRETE FOR ALL PILE CAP SHALL COMPLY WITH CS1:2010 (EXCEPT SECTION 7.1), THE CONCRETE DESIGN MIX SHALL BE GRADE 45D/20 AND MINIMUM CONCRETE COVER SHALL BE 40mm.
- 6. THE REACTIVE ALKALI OF CONCRETE EXPRESSED AS THE EQUIVALENT SODIUM OXIDE PER CUBIC METER OF OF CONCRETE SHALL NOT EXCEED 3.0kg WHEN DETERMINED IN ACCORDANCE WITH THE SPECIFIED ITEM GIVEN IN APPENDIX A QF PNAP APP-74.
- 7. ANY ADDITIVE OR ADMIXTURE SHALL COMPLY WITH BS5075 AND SHALL NOT BE USED WITHOUT PRIOR AGREEMENT OF THE ENGINEER.
- SAMPLES OF ALL MATERIALS USED SHALL BE TESTED & TEST RESULTS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL ALL WORKS, MATERIALS AND TESTING SUCH AS TESTING OF STEEL BAR & CONCRETE CUBES SHALL COMPLY WITH GENERAL SPECIFICATION FOR CIVIL ENGINEERING WORKS 1992 EDITION AND HONG KONG BUILDING (CONSTRUCTION) REGULATION UNLESS OTHERWISE STATED IN THE DRAWING.
- 9. DETAILS SETTING OUT OF THE BUILDING SHALL REFER TO BUILDING PLANS. 10. THE CONTRACTOR SHALL CHECK ALL RELEVANT DRAWINGS AND VERIFY LEVELS AND DIMENSIONS IN ADVANCE OF THE WORK AND REPORT ANY DISCREPANCY
- TO THE ARCHITECT/ENGINEER IMMEDIATELY. 11. THE WIND LOAD OF BUILDING IS BASED ON CODE OF PRACTICE ON WIND
- EFFECTS HONG KONG 2004. 12. ALL STRUCTURAL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE RELEVANT
- ARCHITECT'S AND SERVICES ENGINEER'S DRAWINGS THE CONTRACTOR SHALL CHECK ALL DRAWINGS AND VERIFY LEVELS AND DIMENSIONS IN ADVANCE OF THE WORK AND FOR REFERENCE ONLY
- 13. HIGH TENSILE STEEL BARS (DENOTED BY T) SHALL BE HOT ROLLED TYPE 2 DEFORMED BAR OF GRADE 500 TO CS2-2012. MILD STEEL BARS (DENOTED BY R) SHALL BE PLAIN ROUND GRADE 250 TO CS2-2012. ALL REINFORCEMENT TO BE CUT AND BENT IN ACCORDANCE WITH BS4466.
- 14. ALLOW SUFFICIENT STEEL CHAIRS TO SUPPORT TOP REINFORCEMENTS IN PILE CAP AND TIE BEAM TO KEEP VERTICAL WALL REINFORCEMENTS IN THEIR CORRECT ALIGNMENTS.
- 15. UNLESS NOTED OTHERWISE, MINIMUM LAP LENGTHS AND MINIMUM ANCHORAGE LENGTHS OF BEAM BARS AND COLUMN BARS SHALL COMPLY WITH CODE OF PRACTICE FOR STRUCTURAL USE OF CONCRETE 2013 OR BE AS FOLLOW, WHICHEVER IS THE GREATER.
 - (A) MINIMUM TENSION ANCHORAGE LENGTH (T.A.L.)

HIGH YIELD	DESIGNED MIX (CONC GRADE)
BAR DIA. (mm.)	45D
10	300
12	360
16	480
20	600
25	750
32	960
40	1200

(B) MINIMUM TENSION LAP LENGTH (T.L.L.)

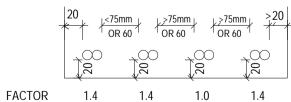
HIGH YIELD BAR DIA. (mm.)		DESIGNED MIX (CONC GRADE)		
		45D		
	(Ĺ.L.)	300		
10	(1.4 L.L.)	420		
	(2.0 L.L.)	600		
	(L.L.)	360		
12	(1.4 L.L.)	510		
	(2.0 L.L.)	720		
	(L.L.)	480		
16	(1.4 L.L.)	680		
	(2.0 L.L.)	960		
	(L.L.)	600		
20	(1.4 L.L.)	840		
	(2.0 L.L.)	1200		
	(L.L.)	750		
25	(1.4 L.L.)	1050		
	(2.0 L.L.)	1500		
	(L.L.)	960		
32	(1.4 L.L.)	1350		
	(2.0 L.L.)	1920		
	(L.L.)	1200		
40	(1.4 L.L.)	1680		
	(2.0 L.L.)	2400		

NOTES :

TENSION LAP LENGTH (T.L.) NORMALLY EQUAL TO LAP LENGTH (L.L.)

- LAP LENGTH FOR UNEQUAL SIZE BARS JULY BE BASED UPON THE SMALLER BAR. 3. (2.0 L.L.) APPEARS ON TOP MOST LAYERS OF STEEL BARS ONLY.
- (C) SPECIAL CASE FOR TENSION LAP LENGTH
 - (a) WHERE A LAP OCCURS AT THE TOP OF A SECTION AS CAST AND THE MINIMUM COVER IS LESS THAN TWICE THE SIZE OF THE LAPPED REINFORCEMENT, THE LAP LENGTH SHOULD BE INCREASED BY A FACTOR OF 1.4.
 - (b) WHERE A LAP OCCURS AT THE CORNER OF A SECTION AND THE MINMUM COVER TO EITHER FACE IS LESS THAN TWICE THE SIZE OF THE LAPPED REINFORCEMENT OR, WHERE THE CLEAR DISTANCE BETWEEN ADJACENT LAPS IS LESS THAN 75mm OR SIX TIMES THE SIZE OF THE LAPPED REINFORCEMENT, WHICHEVER IS THE GREATER, THE LAP LENGTH SHOULD BE INCREASED BY A FACTOR OF 1.4.
 - (c) IN CASE WHERE BOTH CONDITIONS (a) & (b) APPLY, THE LAP LENGTH SHOULD BE INCREASED BY A FACTOR OF 2.0.
 - e.g TOP BARS AS CAST (NOTES : ? = BAR DIA)

e.g. BOTTOM BARS AS CAST



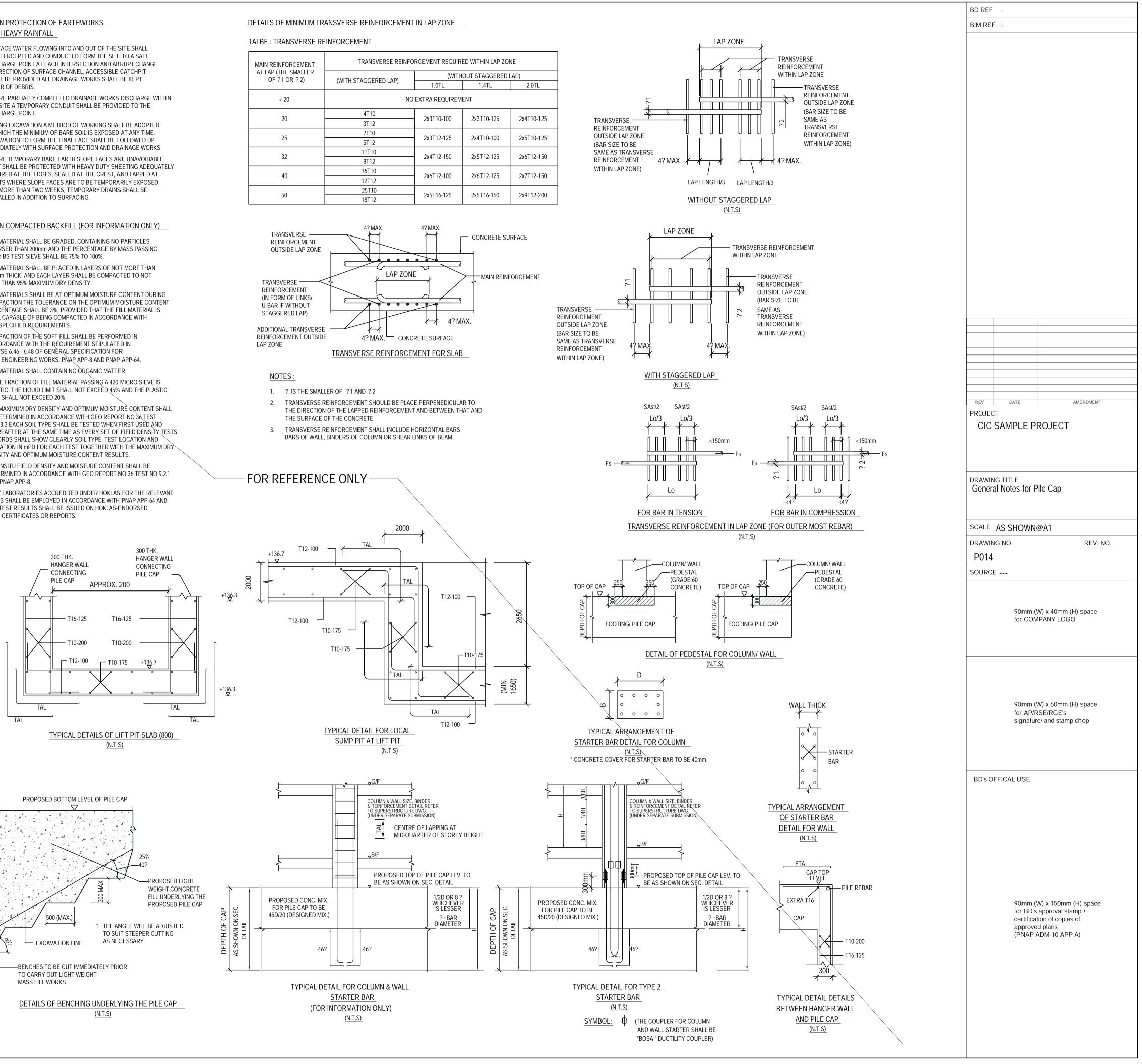
- 16. THE PILE CAP DESIGN IS ADOPTED BY FLEXIBLE CAP ASSUMPTION.
- 17. THE CONCRETE COVER TO REINFORCEMENT BAR OF PILE CAP SHALL BE 40mm.
- 18. PULVERISED FUEL ASH (PFA) WILL BE USED AS A PARTIAL CEMENT REPLACEMENT IN CONCRETE OF PILE CAP:
- (a) PFA AS A SEPARATE CONSTITUENT MAY BE USED ONLY WITH OPC AND SHOULD COMPLY WITH BS3892 : PART I : 1982, EXCEPT THAT THE CRITERION FOR MAXIMUM WATER REQUIREMENT MAY NOT APPLY;
- (b) BLENDED CEMENT CONTAINING PFA SHOULD COMPLY WITH BS6588:1985 AND HAVE A NOMINAL PFA CONTENT NOT EXCEEDING 25%;
- (c) THE PFA CONTENT SHOULD NOT EXCEED 25% BY MASS OF THE CEMENTITIOUS CONTENT (OPC PLUS PFA) OF THE CONCRETE.

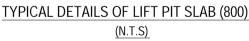
NOTES ON PROTECTION OF EARTHWORKS AGAINST HEAVY RAINFALL

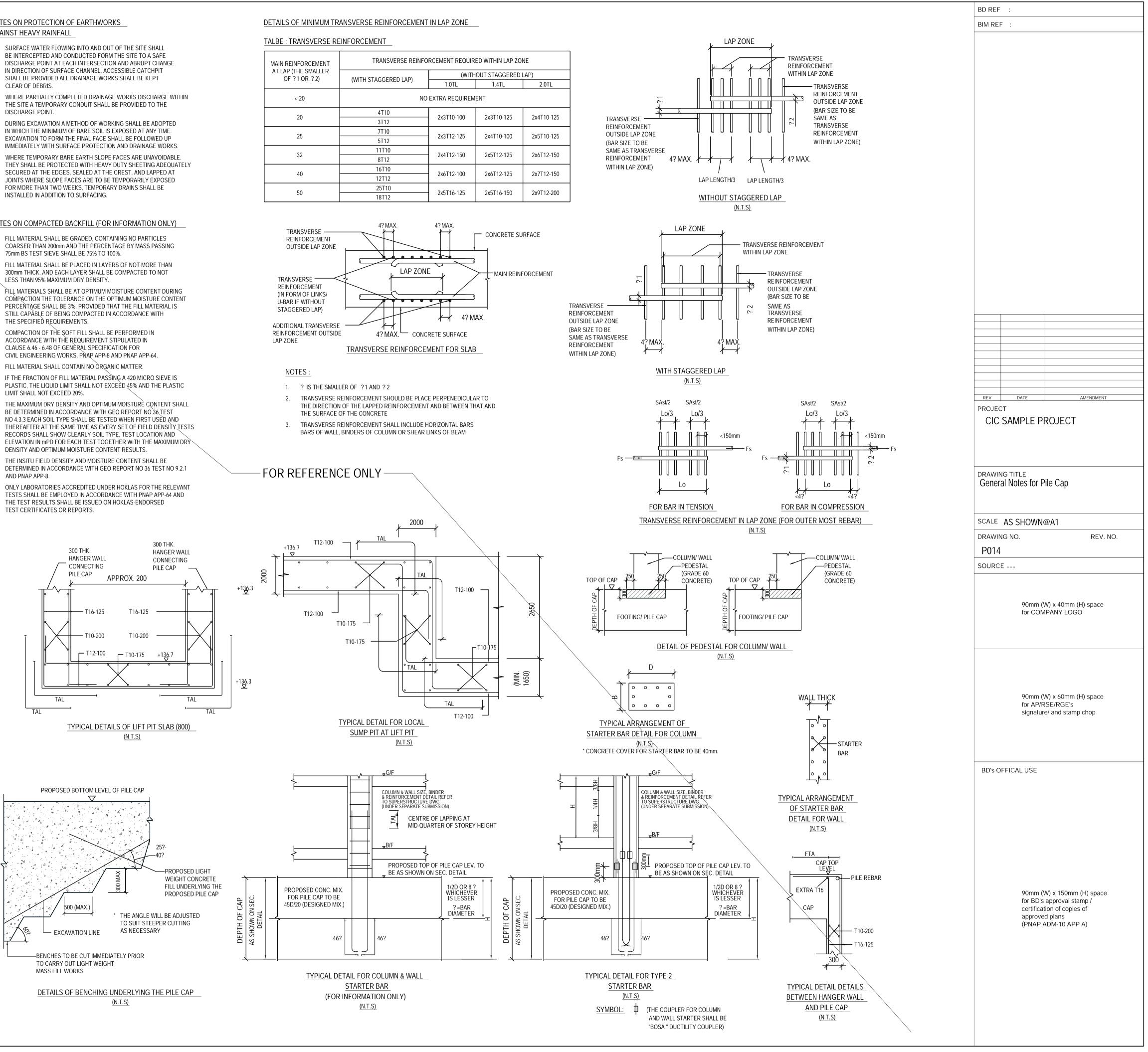
- SURFACE WATER FLOWING INTO AND OUT OF THE SITE SHALL BE INTERCEPTED AND CONDUCTED FORM THE SITE TO A SAFE DISCHARGE POINT AT EACH INTERSECTION AND ABRUPT CHANGE IN DIRECTION OF SURFACE CHANNEL, ACCESSIBLE CATCHPIT SHALL BE PROVIDED ALL DRAINAGE WORKS SHALL BE KEPT
- WHERE PARTIALLY COMPLETED DRAINAGE WORKS DISCHARGE WITHIN 2. THE SITE A TEMPORARY CONDUIT SHALL BE PROVIDED TO THE DISCHARGE POINT.
- DURING EXCAVATION A METHOD OF WORKING SHALL BE ADOPTED IN WHICH THE MINIMIUM OF BARE SOIL IS EXPOSED AT ANY TIME. EXCAVATION TO FORM THE FINAL FACE SHALL BE FOLLOWED UP IMMEDIATELY WITH SURFACE PROTECTION AND DRAINAGE WORKS.
- WHERE TEMPORARY BARE EARTH SLOPE FACES ARE UNAVOIDABLE. 4. SECURED AT THE EDGES, SEALED AT THE CREST, AND LAPPED AT JOINTS WHERE SLOPE FACES ARE TO BE TEMPORARILY EXPOSED FOR MORE THAN TWO WEEKS, TEMPORARY DRAINS SHALL BE

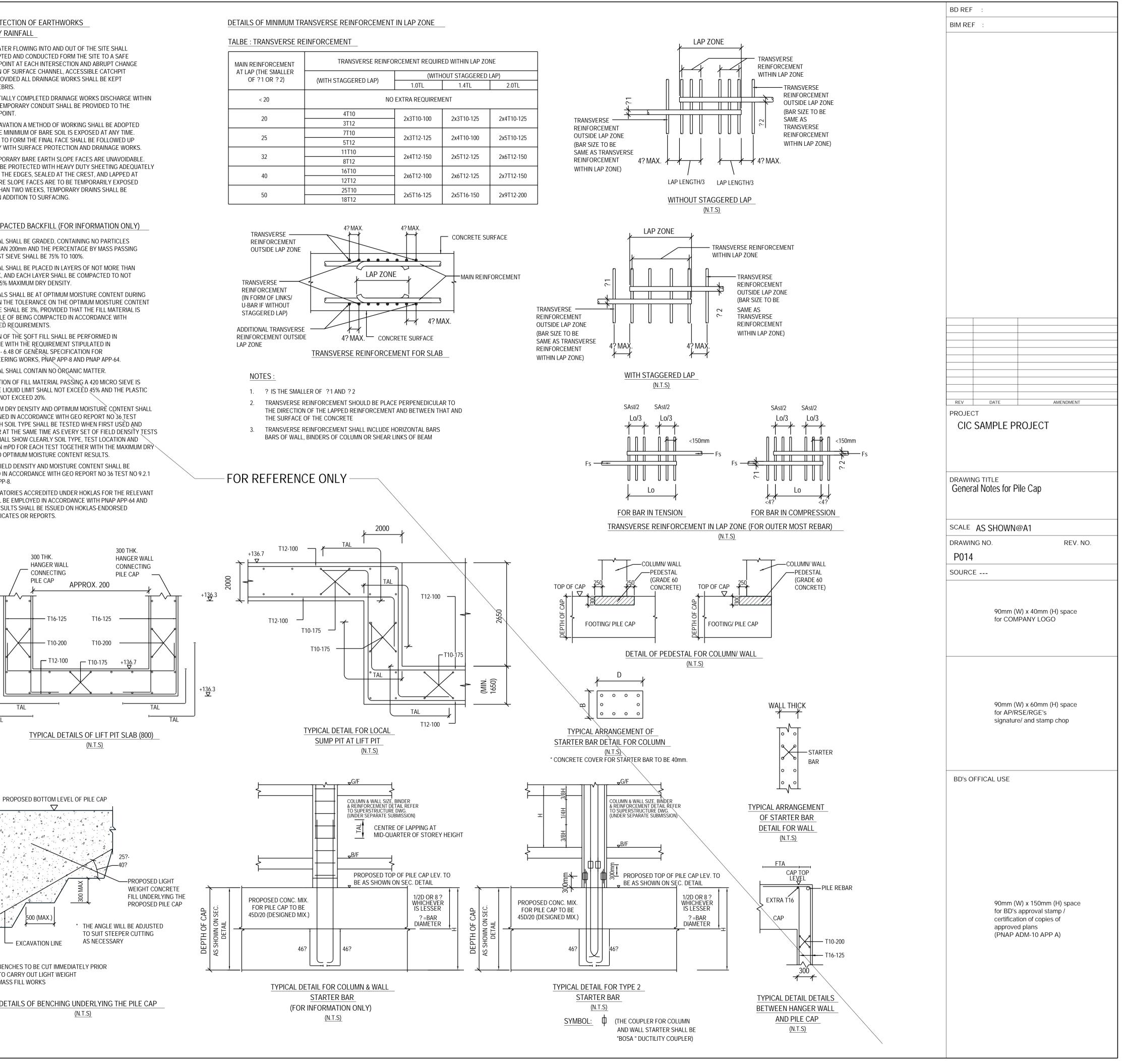
NOTES ON COMPACTED BACKFILL (FOR INFORMATION ONLY)

- 1. FILL MATERIAL SHALL BE GRADED, CONTAINING NO PARTICLES 75mm BS TEST SIEVE SHALL BE 75% TO 100%.
- 300mm THICK, AND EACH LAYER SHALL BE COMPACTED TO NOT
- FILL MATERIALS SHALL BE AT OPTIMUM MOISTURE CONTENT DURING PERCENTAGE SHALL BE 3%, PROVIDED THAT THE FILL MATERIAL IS STILL CAPABLE OF BEING COMPACTED IN ACCORDANCE WITH
- 4. COMPACTION OF THE SOFT FILL SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENT STIPULATED IN CLAUSE 6.46 - 6.48 OF GENÈRAL SPECIFICATION FOR
- 5. FILL MATERIAL SHALL CONTAIN NO ÒRGANIC MATTER.
- 6. IF THE FRACTION OF FILL MATERIAL PASSING A 420 MICRO SIEVE IS LIMIT SHALL NOT EXCEED 20%.
- THE MAXIMUM DRY DENSITY AND OPTIMUM MOISTURE CONTENT SHALL BE DETERMINED IN ACCORDANCE WITH GEO REPORT NO 36 TEST NO 4.3.3 EACH SOIL TYPE SHALL BE TESTED WHEN FIRST USED AND RECORDS SHALL SHOW CLEARLY SOIL TYPE, TEST LOCATION AND DENSITY AND OPTIMUM MOISTURE CONTENT RESULTS.
- 8. THE INSITU FIELD DENSITY AND MOISTURE CONTENT SHALL BE
- 9 ONLY LABORATORIES ACCREDITED UNDER HOKLAS FOR THE RELEVANT TESTS SHALL BE EMPLOYED IN ACCORDANCE WITH PNAP APP-64 AND THE TEST RESULTS SHALL BE ISSUED ON HOKLAS-ENDORSED TEST CERTIFICATES OR REPORTS.









MAIN REINFORCEMENT	TRANSVERSE REINFORCEMENT REQUIRED WITHIN LAP ZONE					
AT LAP (THE SMALLER OF ?1 OR ?2)		(WITHOUT STAGGERED LAP)				
	(WITH STAGGERED LAP)	1.0TL	1.4TL	2.0TL		
< 20	NO EXTRA REQUIREMENT					
20	4T10	2x3T10-100	2x3T10-125	2x4T10-125		
20	3T12	2X3110-100	2X3110-125	284110-125		
25	7T10	2x3T12-125	2x4T10-100	2x5T10-125		
25	5T12	283112-123	274110-100	283110-125		
32	11T10	2x4T12-150	2x5T12-125	2x6T12-150		
JZ	8T12	274112-130	283112-123	270112-130		
40	16T10	2x6T12-100	2x6T12-125	2x7T12-150		
40	12T12	2X0112-100	280112-125	287112-150		
50	25T10	2x5T16-125	2x5T16-150	2x9T12-200		
50	18T12	270110-120	273110-150	289112-200		

