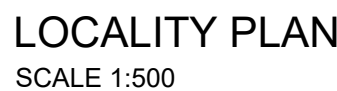


G1.	All Works to be in accordance with the Contract / Specification, the latest issue of SANS 10400 and SANS 1200 unless noted otherwise.
G2.	Contractor to ensure that all drawings are to be read in conjunction with any relevant Architectural, Civil, Mechanical, Electrical or Other drawings. Any errors or discrepancies are to be reported to the Engineer immediately.
G3.	Contractor to supply a full set of drawings on site. Drawings are not to be scaled; use figure dimensions only. Large scale details to be used, where available.
G4.	Contractor is solely responsible for correctly setting out the site, with particular reference to the site boundaries and building lines.
G5.	All setting out to Architect's details.
G6.	Piles, pit caps, columns, beams, etc. are central on grid lines unless otherwise stated.
G7.	Contractor to check all dimensions and levels prior to commencing work on site, and any errors or discrepancies are to be reported to the Engineer immediately.
G8.	Contractor to give due (minimum) notice to all inspections. No inspections, no Stability / Compaction Certificate.

- P1. Piles to be set out from the building grid. Setting out of the building grid to Architect's details.
- P2. The positions of the piles and the positions and checking thereof after installation shall be carried out by a registered Land Surveyor.
- P3. Pile design based on skin friction in accordance with geotechnical investigation data (see BRE 407, 1994) or Resistance (see BS 25849).
- P4. All piles to be group-installed continuous-flight auger (CFA) piles unless indicated otherwise.
- P5. Pile capacities to be based on 6MPa of the pile tip cross-sectional area.
- P6. All concrete to have a minimum compressive strength of 35MPa at 28day.
- P7. Grout mix design to be submitted to Engineer for approval prior to casting.
- P8. Grout of Engineer-approved grout mixtures and admixtures to be used.
- P9. Piles to be reinforced in accordance with the Specification.
- P10. Concrete cover to meet reinforcement.
- P11. Pile Ø > 400mm: 50 mm
- P12. Pile Ø < 400mm: 75 mm
- P13. Installed pile lengths to be taken from existing ground level (EGL)
- P14. Minimum pile length 1.0m below design level (i.e. SANS 1200F).
- P15. Deflection of earthworks to be confirmed prior to commencement of piling. (Where piles are installed in areas of fill the downward forces are to be taken into account when calculating final pile lengths.)
- P16. Pile groups are symmetric about both axes.
individual piles are restrained in both directions.
- P17. Individual piles shall not be driven more than 50mm (2 inches) from the design position. (Where piles are installed in areas of fill the downward forces are to be taken into account when calculating final pile lengths.)
- P18. Deviations of the final from the initial surveyed pile positions are to be reported to the Engineer prior to pile cap construction.
- P19. All pile designs are for pricing purposes only and must be re-measurable.
- P20. If any pile is damaged during installation such that its usefulness as a pile is compromised, it shall be replaced by the Contractor. The cost of all remedial measures in this regard shall be borne by the Contractor.
- P21. 100% of the piles shall be integrity tested and the pile test reports submitted to the Engineer for approval prior to commencement of construction of the pile caps.
- P22. If any pile fails during integrity testing, it shall be replaced or strengthened by the installation of a new pile or piles, all as directed by the Engineer. The cost of all remedial measures in this regard shall be borne by the Contractor.
- P23. A detailed record of the piling shall be kept in accordance with SANS 1200F.
- P24. The Contractor shall produce the specified standards of workmanship necessary to implement the design in the actual conditions encountered so that the piles and pile caps carry the design loads in the intended manner.
- P25. In the event of failure of any pile, the Contractor shall make good the same at his own expense and shall indemnify the Employer against all damage to any structure and any injury to any person caused by such failure.

R1.	Steel stress and bending of all reinforcement in accordance with SANS 920.
R2.	Fixing of reinforcement to comply with the tolerances specified in SANS 1200-GB.
R3.	No heating, bending, or cutting of reinforcement without prior approval of the Engineer.
R4.	The Contractor is to inspect fixed reinforcement to ensure concrete cover is as specified on the relevant drawings prior to notifying the Engineer of the required inspection.

C1.	Specify mix designs to SANS 10100.	Design loads from SANS 10160 and Client's specification.
C2.	Concrete mix designs to be submitted to Engineer for approval prior to commencement of work.	
C3.	Only Engineer-approved admixtures to be used.	
C4.	All concrete to have a minimum compressive strength at 28 days as follows:	
C4.1.	Bindings:	15 MPa / 18mm
C4.2.	Foundations:	25 MPa / 25mm
C4.3.	Columns:	30 MPa / 19mm
C4.4.	Suspended Slabs & Beams:	30 MPa / 19mm
C5.	Concrete cover to main reinforcement:	
C5.1.	Foundations:	50 mm
C5.2.	Columns:	30 mm
C5.3.	Suspended Slabs & Beams:	25 mm
C6.	All concrete work, including formwork stripping times and propping, to SANS 1200-C6.	
C7.	All sharp edges to concrete to have 25mm chamfers.	
C8.	Formwork classification:	
C8.1.	Exposed surfaces:	Rough
C8.2.	Coated surfaces:	Smooth (off-shutter)
C9.	Exposed surfaces to Grade IIb concrete.	
C10.	Unfinished surface finishes as follows:	
C10.1.	Surface Bed:	Power-floated
C10.2.	Suspended Slab:	Power-floated
C11.	All services and sleeves to be installed prior to concrete pour. No in situ concrete to be cast without prior approval from the Engineer.	
C12.	The positions of all construction joints not shown on the drawings are to be discussed with and approved by the Engineer.	
C13.	All services and construction joints (normal weathering):	
C13.1.	Beam sides, walls, unloaded columns:	2 day
C13.2.	Slabs with props left under:	4 day
C13.3.	Beam soffits with props left under:	7 day
C13.4.	Slab props:	10 day
C13.5.	Beam props:	14 day
C14.	Concrete stripping times (cold weather):	
C14.1.	Beam sides, walls, unloaded columns:	4 day
C14.2.	Slabs with props left under:	7 day
C14.3.	Beam soffits with props left under:	12 day
C14.4.	Slab props:	12 day
C14.5.	Beam props:	28 day
C15.	Staging during construction of multi-storey structures:	
C15.1.	Ground Floor Floor:	basement-ground 100 % propping
C15.2.	First Floor:	ground-first basement-ground 75 %



Stamped by Health Plans Approval Committee
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