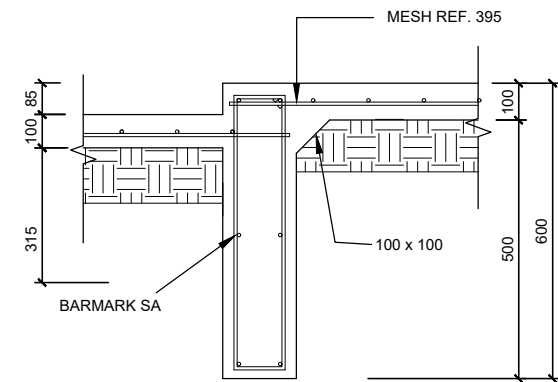


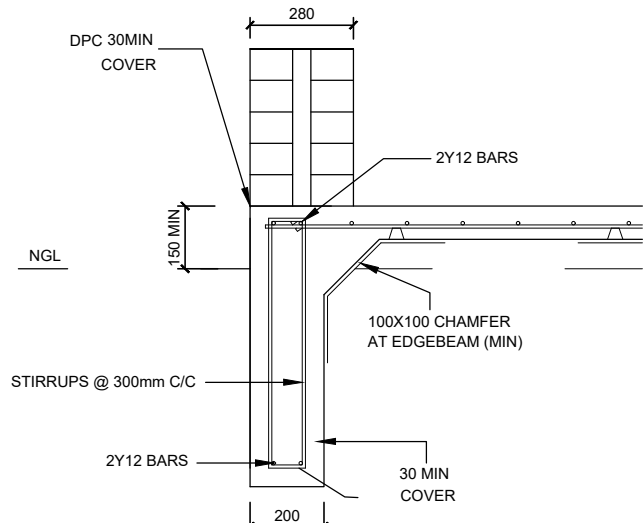
RAFT FOUNDATION REBAR LAYOUT PLAN
SCALE 1:100



TYPICAL STEP SECTION
SCALE 1:30

- NOTES:
- BRICKFORSSE AT VERTICAL CENTRES NOT EXCEEDING 425mm IN ALL SUPERSTRUCTURE WALLS WITH ADDITIONAL LAYERS (MARKED X) AS FOLLOWS :
 - IN EVERY COURSE IN ALL FOUNDATION MASONRY.
 - IN TWO COURSES IMMEDIATELY ABOVE FLOOR SLAB.
 - IN EVERY COURSE ABOVE ALL LINTELS EXTENDING 600mm BEYOND OPENING.
 - 5.6mm DIAM. REINFORCEMENT (MARKED Y) AS FOLLOWS :
 - 2 No. IN COURSE IMMEDIATELY ABOVE AND BELOW OPENINGS, EXTENDING 600mm BEYOND OPENING.
 - 2 No. (CONTINUOUS) IN UPPERMOST BED JOINT OF EXTERNAL WALLS.
 - 1 No. (CONTINUOUS) IN UPPERMOST BED JOINT OF INTERNAL WALLS.
 - MINIMUM LAP LENGTH TO BE :
 - RODS - 600mm
 - BRICKFORCE - 300mm
 - LINTELS TO BE PLACED ABOVE ALL WINDOWS, OPENINGS AND EXTERNAL DOORS.
 - APRON SLABS WITH MINIMUM WIDTH 1.5m AND FALL OF MIN. 1:25.
 - FOUNDATION DEPTH TO BE min 600mm FROM N.G.L.
 - ALL FOUNDATIONS MUST BE INSPECTED AND APPROVED BY THE ENGINEER BEFORE ANY CONCRETE IS CAST.
 - ALL CONCRETE TO BE IN ACCORDANCE WITH SABS 1200 G.
 - ALL CONCRETE TO BE STRENGTH
 - GRADES OF CONCRETE:

IN FOUNDATIONS	30MPa/19
IN SURFACE BEDS	25MPa/19
IN COLUMNS	30MPa/19
IN BEAMS	30MPa/19
 - SINGLE STOREY BUILDING TO RECEIVE 600x250 FOUNDATIONS. DOUBLE STOREY BUILDING TO RECEIVE 700x300 FOUNDATIONS.



UNRECESSED RAFT
SCALE 1:30

<p>Engineer:</p> <p>KEON CONSULTING ENGINEERS</p> <p>TECHNO DESIGNS</p> <p>Civil Structural & Transport Engineers</p> <p>TECHNO DESIGNS ENGINEERING 34 Dang Street Glen Austin Midrand TELEPHONE (011) 045 2532 CELL (072) 301 1811 EMAIL engineer@technodesigns.co.za WEBSITE www.technodesigns.co.za</p> <p>KEON CONSULTING ENGINEERS 5th Avenue Office Park, 4th St. Avenue Newton Port Elizabeth TELEPHONE: 07 413630189 WEBSITE www.keon.co.za</p>	<p>Client:</p> <p>Johannesburg Water</p> <p>Turbine Hall, 65 Meiri Ploa Street, Newtown, Johannesburg</p>	<p>THESE NOTES SERVE AS AN ADDENDUM TO THE SPECIFICATION IN THE BILL OF QUANTITIES (BOQ). IN THOSE CASES WHERE THE BOQ SPECIFICATIONS DIFFER FROM THESE NOTES, THESE NOTES SHALL TAKE PRECEDENCE ON ORIGINAL</p> <p>0 10 20 30 40 50MM</p> <p>Engineer: T.Chikwata Pr Eng (20140009) <i>T.Chikwata</i></p> <table><tr><td>Drawn By: M. Mulumba</td><td>Designed By: T. Maplumo</td><td>Checked By: T. Chikwata</td></tr></table> <p>Signature: <i>T.Chikwata</i> Date: October 2024</p>	Drawn By: M. Mulumba	Designed By: T. Maplumo	Checked By: T. Chikwata	<p>CONCRETE NOTES:</p> <ol style="list-style-type: none">SETTING OUT AND GENERALTHIS DRAWING SHOULD BE READ IN CONJUNCTION WITH ARCHITECT'S DRAWINGS.ALL DIMENSIONS AND HEIGHTS ARE TO BE CHECKED ON SITE BEFORE WORK IS PUT IN HAND.REPORT DISCREPANCIES TO ARCHITECT OR ENGINEER IMMEDIATELY.THIS DRAWING MUST NOT BE USED TO SCALE OFF. USE ONLY WRITTEN DIMENSIONS. CONTACT THE ENGINEER OR ARCHITECT WHERE CLARITY IS SOUGHT.FOR SETTING OUT DATA, SETTING OUT POINTS AND DATUM LEVELS REFER TO SURVEY INFORMATION AND ARCHITECT'S DRAWINGS.STRUCTURAL WORK IS TO BE CARRIED OUT IN ACCORDANCE WITH THE PROJECT SPECIFICATION AND THE RELEVANT S.A.N.S SPECIFICATIONS. ALL CONCRETE WORK IS TO BE DONE IN ACCORDANCE WITH S.A.N.S 1200G AND EARTHWORKS IN ACCORDANCE WITH S.A.N.S 1200D.CONSULT RELEVANT ARCHITECT'S MECHANICAL, ELECTRICAL & PLUMBING DRAWINGS AND DETAILS AS RELEVANT FOR DRAINAGE, STORMWATER OUTLETS, RWIDS AND HOLES AND SLEEVES FOR THESE SERVICES. NO HOLES ARE TO BE CORED WITHOUT ENGINEERS WRITTEN APPROVAL.FOUNDATIONSALL FOUNDATION EXCAVATIONS TO BE INSPECTED AND APPROVED IN WRITING BY THE ENGINEER BEFORE CONCRETE IS CAST.NO FOUNDATIONS ARE TO BE CAST IN FILL MATERIAL. A 50mm THICK LAYER OF 10MPa / 19mm BLINDING CONCRETE IS TO BE CAST UNDER ALL REINFORCED BASES, REINFORCED STRIP FOOTINGS AND GROUND BEAMS.ANY OVER EXCAVATIONS ARE TO BE MADE GOOD WITH 10MPa / 19mm CONCRETE AT THE CONTRACTOR'S EXPENSE.BACKFILLING OVER COLUMN BASES SHALL BE DONE WITH AN APPROVED MATERIAL, COMPACTED IN LAYERS IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.ALLOWABLE BEARING PRESSURE UNDER:<table><tr><td>CONCRETE BASES =</td><td>150kPa</td></tr><tr><td>STRIP FOOTINGS =</td><td>100kPa</td></tr></table>CONCRETE CHARACTERISTIC 28 DAY STRENGTH:<table><tr><td>BASES:</td><td>25MPa / 19mm</td></tr><tr><td>STRIP FOOTINGS:</td><td>25MPa / 19mm</td></tr><tr><td>SURFACE BEDS:</td><td>30MPa / 19mm</td></tr><tr><td>SUSPENDED SLABS & BEAMS:</td><td>30MPa / 19mm</td></tr><tr><td>COLUMNS:</td><td>30MPa / 19mm</td></tr></table>CONCRETE MIX DESIGNS FOR ALL GRADES OF CONCRETE TO BE GIVEN TO ENGINEER FOR PERUSAL AND COMMENT. CONCRETE MIX DESIGNS FOR SURFACE BEDS TO HAVE MINIMUM BLEED CHARACTERISTICS.ALL CONCRETE TO BE ADEQUATELY CURED BY KEEPING SURFACES CONTINUOUSLY DAMP FOR AT LEAST 5 DAYS AFTER CASTING.ALL CONCRETE TO BE CONSTRUCTED TO THE S.A.N.S 1200G PERMISSIBLE DEVIATION DEGREE OF ACCURACY CLASS II UNLESS SPECIFIED OTHERWISE.CONCRETE CUBE TEST RESULTS TO BE SUBMITTED TIMOUSLY TO ENGINEER FOR PERUSAL, RECORDS, COMMENT AND APPROVAL.REINFORCEMENTCHARACTERISTIC STRENGTH:<table><tr><td>MILD STEEL:</td><td>250N/mm²</td></tr><tr><td>HIGH YIELD STEEL:</td><td>450N/mm²</td></tr></table>ALL REINFORCEMENT TO BE CHECKED AND APPROVED BY ENGINEER BEFORE ANY CONCRETE IS CAST. 48 HOURS WRITTEN NOTICE TO BE GIVEN TO ENGINEER BEFORE TIME OF INSPECTION.LAP LENGTH TO REINFORCING TO BE MINIMUM 50 x SMALLER BAR DIAMETER, UNLESS OTHERWISE NOTED.MESH REINFORCEMENT REFERENCE 245 TO BE PLACED IN SLAB (TOP) MINIMUM LAPS = 300mm UNLESS OTHERWISE NOTED.THE CONTRACTOR MUST TAKE PARTICULAR CARE TO ENSURE THAT THE SPECIFIED COVER TO ALL REINFORCEMENT HAS BEEN ATTAINED THROUGHOUT BEFORE THE ENGINEER IS CALLED TO SITE FOR INSPECTION OF THE REINFORCEMENT.COVER TO REINFORCEMENT:<table><tr><td>BASES:</td><td>50mm</td></tr><tr><td>COLUMNS AND WALLS:</td><td>50mm</td></tr><tr><td>STRIP FOOTINGS:</td><td>30mm</td></tr><tr><td>SUSPENDED SLABS:</td><td>30mm</td></tr></table>SUSPENDED BEAMS: 30mmCONTRACTOR IS TO CONDUCT HIS OWN INSPECTION OF REINFORCEMENT BEFORE CALLING THE ENGINEER FOR INSPECTION.FORMWORK AND PROPPINGSTRIPPING TIMES FOR:<table><tr><td>COLUMN AND WALL SHUTTERING:</td><td>1.5 DAYS</td></tr><tr><td>BEAM SHUTTERING:</td><td>7 DAYS IN HOT WEATHER, 12 DAYS IN COLD WEATHER, 4 DAYS IN HOT WEATHER, 7 DAYS IN COLD WEATHER.</td></tr><tr><td>SLABS AND BEAMS:</td><td>14 DAYS IN HOT WEATHER, 21 DAYS IN COLD WEATHER</td></tr></table>PROPPING TIMES FOR:<table><tr><td>CANTILEVER SLABS AND BEAMS:</td><td>(SUBJECT TO CUBE TEST RESULTS BEING SUBMITTED TIMOUSLY TO ENGINEER FOR APPROVAL)</td></tr><tr><td>NO DE-PROPPING OF SUSPENDED ELEMENTS UNTIL INSTRUCTED BY ENGINEER.</td><td></td></tr></table>CONCRETE FINISHES: UNLESS NOTED OTHERWISECOLUMNS AND WALLS: OFF SHUTTER<tr><td>BEAMS AND SLAB SOFFIT:</td><td>OFF SHUTTER</td></tr><tr><td>TOP OF SUSPENDED SLABS: STEEL FLOAT</td><td></td></tr><tr><td>SURFACE BEDS: POWER FLOAT</td><td></td></tr><tr><td>SIDES OF GROUND BEAMS TO BE SHUTTERED.</td><td></td></tr>	CONCRETE BASES =	150kPa	STRIP FOOTINGS =	100kPa	BASES:	25MPa / 19mm	STRIP FOOTINGS:	25MPa / 19mm	SURFACE BEDS:	30MPa / 19mm	SUSPENDED SLABS & BEAMS:	30MPa / 19mm	COLUMNS:	30MPa / 19mm	MILD STEEL:	250N/mm ²	HIGH YIELD STEEL:	450N/mm ²	BASES:	50mm	COLUMNS AND WALLS:	50mm	STRIP FOOTINGS:	30mm	SUSPENDED SLABS:	30mm	COLUMN AND WALL SHUTTERING:	1.5 DAYS	BEAM SHUTTERING:	7 DAYS IN HOT WEATHER, 12 DAYS IN COLD WEATHER, 4 DAYS IN HOT WEATHER, 7 DAYS IN COLD WEATHER.	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