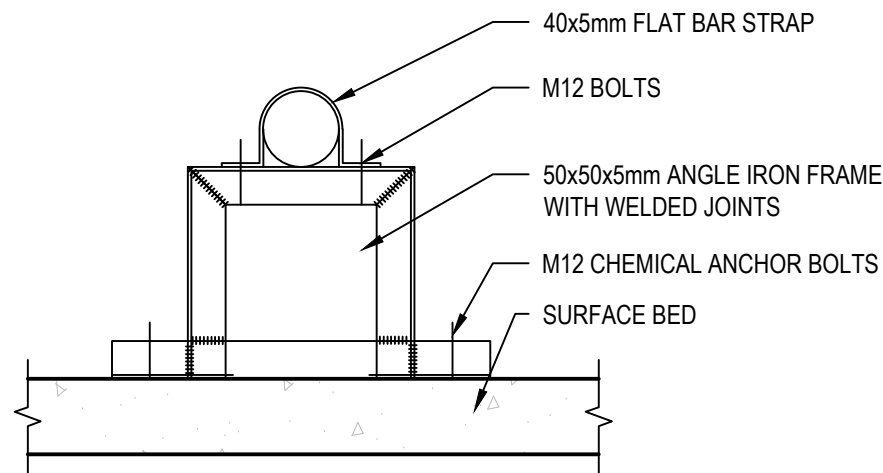


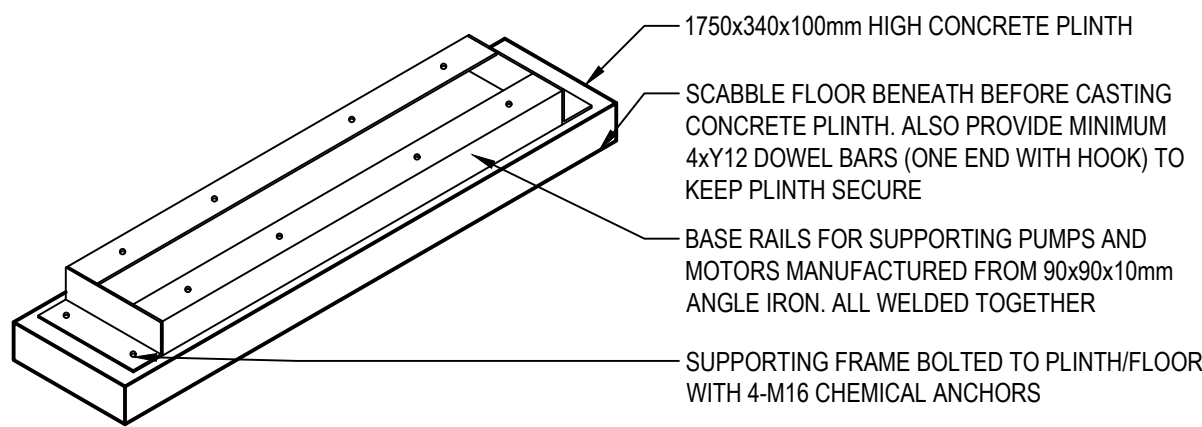
TYPICAL LAYOUT OF WATER TANK
AND PUMP ROOM

SCALE 1:25



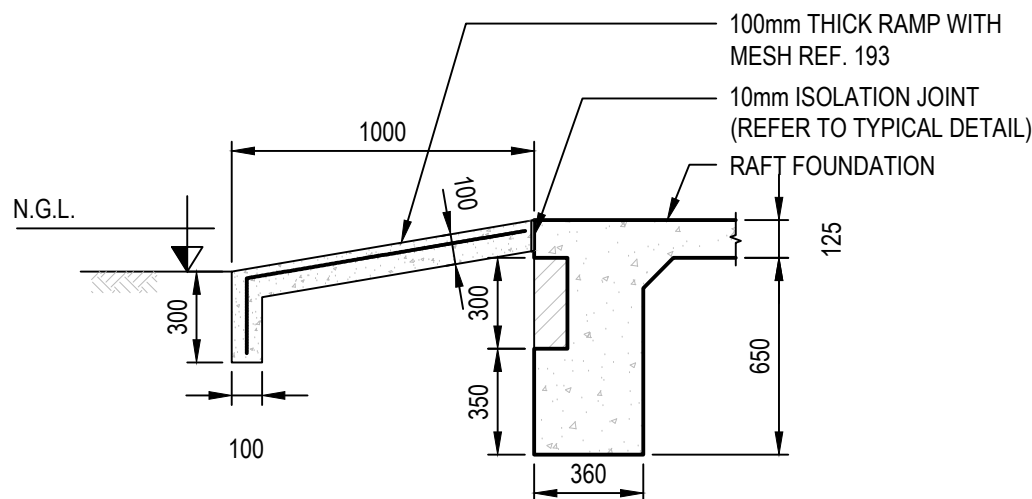
TYPICAL PIPE SUPPORT
INSIDE OF PUMP ROOM

SCALE 1:10



PROPOSED BASE RAIL AND PLINTH FOR
SUPPORTING ELECTRIC MOTORS AND PUMPS

SCALE 1:20



SECTION B-B

SCALE 1:25

NOTE:
THE DIAGRAMS SHOWN ARE DIAGRAMMATIC AND ILLUSTRATIVE ONLY. BEFORE ANY PARTS ARE ASSEMBLED OR MANUFACTURED, e.g. PIPE SUPPORTS, BASE RAILS ETC. THEY SHOULD BE CHECKED FOR COMPATIBILITY WITH THE ITEMS OR MACHINERY CONCERNED.
IF THERE IS ANY DOUBT, CONSULT THE CONSULTING ENGINEERS IMMEDIATELY.
LEGEND:
BV - BUTTERFLY VALVE
NRV - NON RETURN VALVE
VJ - VIKING JOHNSON COUPLING
GS - GALVANIZED STEEL PIPE
PG - PRESSURE GAUGE WITH SWITCH

CAPACITY OF NEW WATER RESERVOIR:
THE CAPACITY IS CALCULATED WITH STANDARDS AS SET OUT IN SANS 0400 & "GUIDELINE FOR HUMAN SETTLEMENT PLANNING AND DESIGN (THE RED BOOK)":
• EDUCATIONAL INSTITUTION: 18l/person PER DAY WITH 48hrs OF RETENTION PERIOD;
• FIRE HOSE REELS: 0.5l/s FOR 2 HOURS
• CALCULATION
EDUCATIONAL - TOTAL PERSONS 1200:
1200x18lx2 = 43 200l
FHR - MAX OF 6 HOSE REELS OPERATING AT ONCE:
6x0.5l/sx60x60x2 = 21 600l
TOTAL CAPACITY = 43 200l
= 21 600l
= 64 800l
SIZE OF RESERVOIR: MANUFACTURED FROM STANDARD PRESSED STEEL PANELS OF 1.22m SQUARE AND TO MANUFACTURER'S SPECIFICATIONS.

WATER PRESSURE REQUIRED FOR FIRE FIGHTING PURPOSES:
300kPa
PROPOSAL FOR WATER PUMP REQUIRED:
PUMP TO OPERATE TO ATTAIN 250kPa FOR DOMESTIC USE AT 1.5l/s.
PUMP TO OPERATE TO ATTAIN 300kPa FOR FIRE FIGHTING PURPOSES AT 5l/s.
PRESSURE SWITCH TO BE PROVIDED ON OUTLET PIPE TO AUTOMATICALLY SWITCH OFF PUMPS AT PRESSURE ABOVE 450 kPa.
DRY RUN PROTECTION REQUIRED.
MOTOR PROTECTION REQUIRED.
PUMP TO BE A VARIABLE SPEED DRIVE (VSD) PUMP.
RECOMMENDED PUMP:
• SINGLE PUMPS (2 OFF, 1 AS BACK-UP)
GRUNDFOS CR 15-5 (OR SIMILAR APPROVED)
POWER: 4 kW
RATED VOLTAGE: 3 x 380-415D V
RATED CURRENT: 7.9 A
STARTING CURRENT: 1000 - 1110 %

NOTES: RESERVOIR
1. RESERVOIR TO BE PROVIDED BY ABECO TANKS OR SIMILAR APPROVED
2. PANEL THICKNESS TO BE 4.5mm
3. ROOF COVER PLATE THICKNESS TO BE 2.5mm MINIMUM.
4. ALL STEEL COMPONENTS TO BE HOT DIP GALVANISED. PIPE CONNECTIONS TO BE WELDED BEFORE GALVANISING.
5. RESERVOIR TO CONSIST OF 3 X 3 X 4 PANELS DEEP. ACTUAL VOLUME IS 65.37 KILOLITERS WITH ACTUAL DIMENSIONS OF 3.66x3.66x4.88
6. FOUNDATIONS FOR RESERVOIR IS BASED ON PANEL SIZE OF 1.22m
7. THE RESERVOIR MUST BE PROVIDED WITH ONE 75 Ø INLET PIPE, ONE 75Ø OVERFLOW PIPE AND ONE 50Ø OUTLET PIPE TO BOOSTER PUMP.
8. THE FLOAT LEVEL VALVE SHALL BE A 75 Ø "COMBI MODEL BLCB RIGHT ANGLE PATTERN, PN16 HYDRAULICALLY OPERATED END OF LINE LEVEL CONTROL VALVE" OR SIMILAR APPROVED. THE VALVE SHALL BE BRONZE AND FITTED WITH STAINLESS STEEL FLOAT PILOT AND SUITABLE LENGTH DISCHARGE PIPE.

FOR TENDER