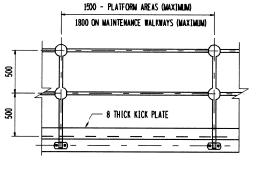
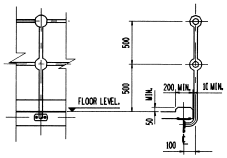
THIS DRAWING DOES NOT APPLY TO EMERGENCY ESCAPE ROUTES.

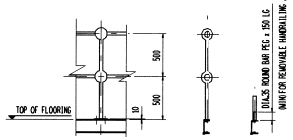


TYPICAL HANDRAIL ARRANGEMENT
SIDE MOUNTED STANCHIONS. (S90)

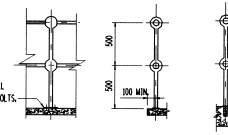
NB. (GOOSENECK-TYPE STANCHIONS SHOULD PREFERABLY BE AVOIDED.)



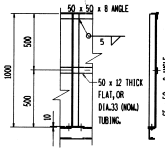
GOOSENECK MOUNTED STANCHIONS (S90)
(USE ONLY WITH APPROVAL.)



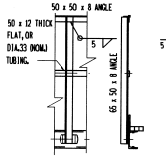
TOP MOUNTED STANCHION (T90) AND (P90)



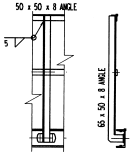
CONCRETE MOUNTED STAIR AND WALL STANCHIONS.



TOP MOUNTED.

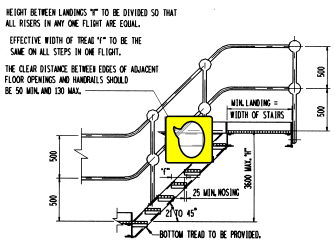


SIDE MOUNTED.

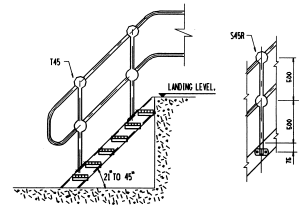


NB. AVOID IF POSSIBLE.

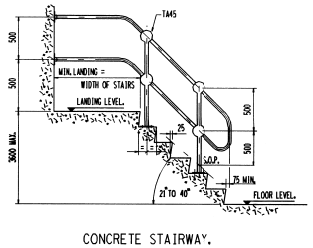
(ANGLE STANCHIONS TO BE MADE FROM 65 x 50 x 8 ANGLES. PALM PLATES TO BE SIMILAR TO THOSE USED WITH HOLLOW STANCHIONS.)



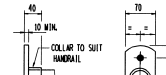
STEEL STAIRWAY.



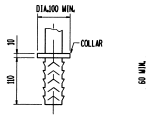
STEEL STAIRWAY TO CONCRETE.



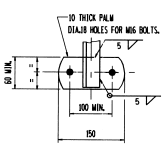
CONCRETE STAIRWAY.

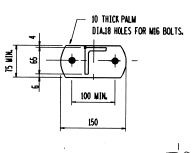


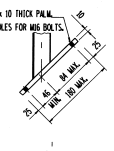
WALL FLANGE.

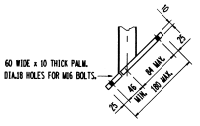


ROUND SPIGOT BASE.

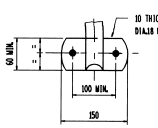




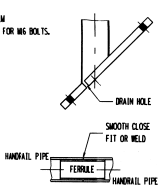


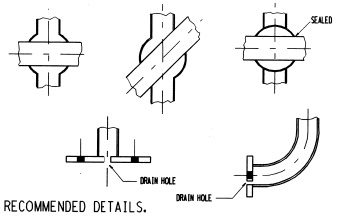


2 - HOLE INCLINED PALM.

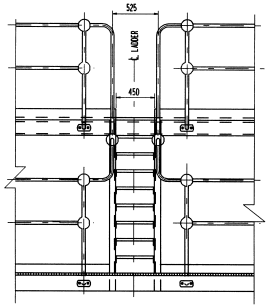


2 - HOLE PALM.

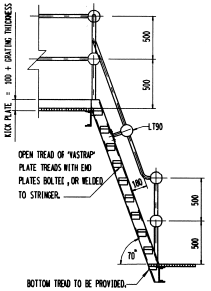


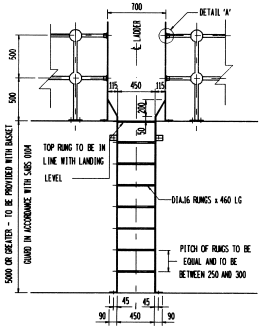


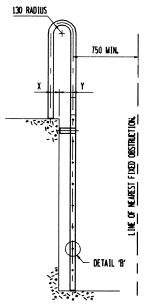
RECOMMENDED DETAILS.
(THERE SHOULD BE NO INTERNAL MOISTURE TRAPS OR AIR POCKETS.)

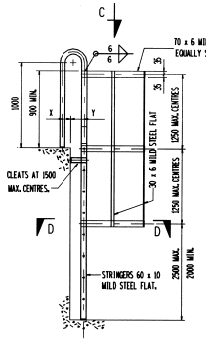


70° SLOPING LADDER.

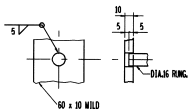








TYPE OF LANDING.	'X' MIN.	'Y' MAX.
CONCRETE	100	150
STEELWORK	60	200



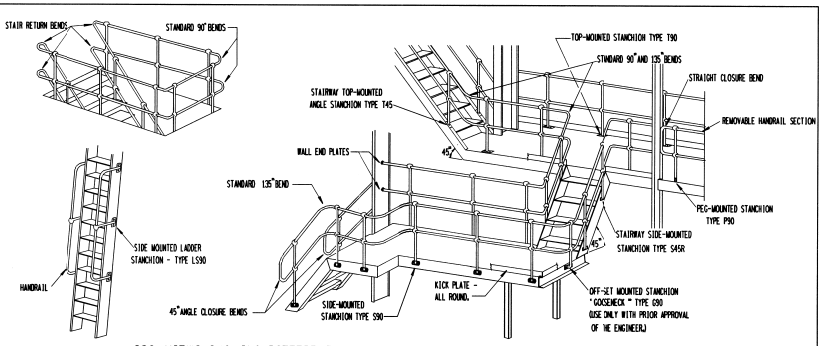
DETAIL 'B'.

CAT LADDERS.

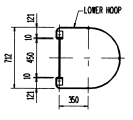
GENERAL NOTES:

1.) HEADROOM ABOVE STAIRS AND LANDING NOT LESS THAN 2150mm ABOVE TREAD.
2.) SIDE STEP TYPE LADDERS PREFERRED TO THROUGH STEP TYPE WHERE SPACE PERMITS.
3.) FEEDING ON CONCRETE STAIRS TO BE 75mm MIN.
4.) SIGHTING STRIP ON STEEL STAIRS AND 70° LADDERS TO BE NON SLIP AND CONTRAST FROM TREAD.
5.) STEEL AND CONCRETE RISERS TO BE BETWEEN 190mm & 150mm IF POSSIBLE, WITH A MAX RISER OF 225mm.
6.) ALL WELDING TO BE CONTINUOUS UNLESS OTHERWISE NOTED.
7.) HANDRAIL AND HANDRAIL STANCHIONS TO THE REQUIREMENTS OF THE LATEST EDITIONS OF S.A.B.S. 0104 (SAFETY ASPECTS), S.A.B.S. 0160 (LOADINGS) AND S.A.B.S. 0162 (DESIGN).
8.) HANDRAILING. a.) HEIGHT TO KNEE RAIL 500mm, FROM FLOOR LEVEL.
b.) HEIGHT TO TOP RAIL 1000mm, FROM FLOOR LEVEL.
c.) CONTINUOUS KNEE AND HANDRAIL MIN 33mm OUTSIDE DIA AND 2.6mm THICK.
9.) STANCHIONS: a.) MINIMUM 42mm OUTSIDE DIA AND 3mm THICK THROUGHOUT, (SEE SPECIFICATIONS FOR MATERIAL GRADES) AT A MAXIMUM OF 1800mm CENTRES. (EXCLUDING GOOSENECK TYPES.)
a.) MINIMUM 42mm OUTSIDE DIA AND 4mm THICK THROUGHOUT, (SEE SPECIFICATIONS FOR MATERIAL GRADES) AT A MAXIMUM OF 1800mm CENTRES. (C90 GOOSENECK ONLY.)
10.) STANCHION CENTRES: a.) ON STAIRS WOULD BE 1000mm.
a.) PLATFORM AREAS 1500mm.
b.) MAINTENANCE WALKWAYS, ETC UP TO 1800mm.
11.) STANCHIONS NOT TO BE FIXED TO KICK PLATES.
12.) ANGLE HANDRAIL STANCHIONS ACCEPTABLE ONLY WHEN SPECIFIED.
13.) KICK PLATES TO BE A MINIMUM OF 100mm ABOVE FLOOR LEVEL.
14.) NO KICK PLATES AT THE ENTRANCE OF LADDERS AND STAIRS.
15.) NO FLIGHT OF STAIRS SHALL RISE MORE THAN 3600mm VERTICALLY WITHOUT AN INTERMEDIATE LANDING.
16.) MINIMUM WIDTH OF STAIRS TO BE 750mm UNLESS OTHERWISE NOTED.
17.) DOORS AT LANDINGS SHALL BE ARRANGED TO SWING OPEN, AWAY FROM STAIRS.
18.) NO CASTINGS ALLOWED.
19.) WELDING SYMBOLS FROM CODE OF PRACTICE FOR WELDING, S.A.B.S. 044 PART 2 1963.
20.) WELDING TO CONFORM TO S.A.B.S.044.
21.) ALL WELDS ON STANCHIONS TO BE DRESSED SMOOTH WITH A MAXIMUM REDUCTION OF THICKNESS 0,5mm AFTER DRESSING.
22.) WITH OTHER MANUFACTURING PROCESSES TO THE BALL, A REDUCTION ON THICKNESS OF NOT MORE THAN 0,5mm WILL BE ACCEPTED.
23.) THIS DRAWING MUST BE READ IN CONJUNCTION WITH RELEVANT SPECIFICATIONS. ESKOM PARTICULAR SPECIFICATION No. 23.09 WILL APPLY. ALTERNATIVELY, S.A.B.S. 1200HA WILL APPLY WHERE THIS FORMS PART OF THE PROJECT SPECIFICATIONS.
24.) ALL STEELS OTHER THAN STATED BELOW, SHALL BE MILD STEEL AND CONFORM TO AT LEAST GRADE 43A OF BS4360. COMMERCIAL GRADE STEELS WITH A GUARANTEED MINIMUM YIELD STRENGTH OF AT LEAST 220 MPa ARE RESTRICTED TO 1) HANDRAILS EXCLUDING STANCHIONS.
2) OPENGRID FLOORING.

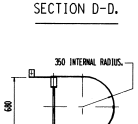
NB. HANDRAIL STANCHIONS WHICH DEPART FROM THE REQUIREMENTS OF THIS DRAWING MUST BE SUBMITTED FOR APPROVAL.



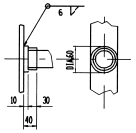
ISO VIEWS SHOWING DIFFERENT HANDRAIL APPLICATIONS.



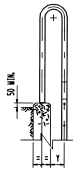
SECTION D-D.



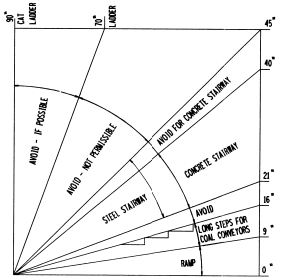
VIEW C.



DETAIL 'A'



TOP OF WALL MOUNTING.



PERMISSIBLE AND PREFERRED ANGLES FOR :-
LADDERS, STAIRWAYS AND RAMPS.

No.	C.P.W.	M/S	NOTE 20 REVISED & 24 ADDED.	A.C.	A.C.B.
A	K.B.	P/M	REVISED AND REDRAWN ON CAD.	A.C.	A.C.B.
0			FIRST ISSUE / ERSTE UITREIKING		
REV	DATE	REVISIONS/WIJZIGINGS		By	CHKD
	DATE	SHEET REF / BLADVERWYSING	STRUCTURAL	DRAW	O·

DRAWING ORIGINATOR: CAD LAYER: STR
CHKD: A.C.BRUNA
DRAWN: M.PLATT
SCALE: N.T.S.
APPROVED: P.WILLENSE.
SUBSCRIBED: N.MARNARD.
DATE: 00 00 00

ESKOM

STANDARD STAIR AND MAINTENANCE PLATFORM HANDRAIL DETAILS.

0·00/2901 | REV 9

THIS DRAWING HAS BEEN CREATED ON A C.A.D. SYSTEM. ANY AMENDMENT MUST BE EFFECTED ON THE SAME SYSTEM.
C.A.D. REFERENCE No [D3 , D4] 029016000 . R09 ± 1 .