APPENDIX 2

STANDARD DRAWINGS

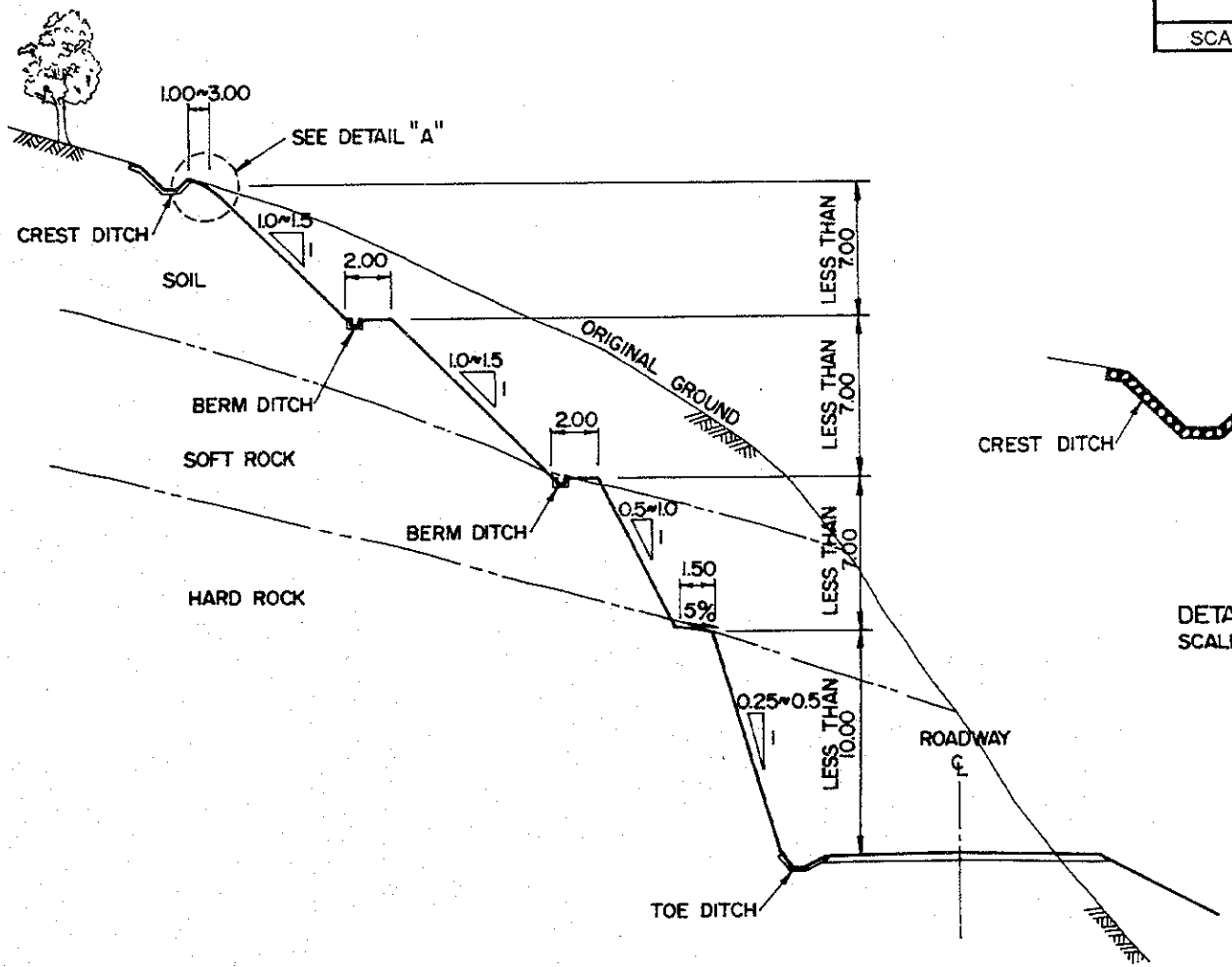
APPENDIX 2

STANDARD DRAWINGS

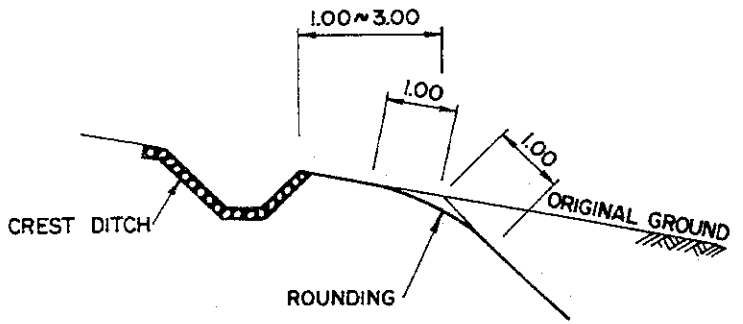
DRAWING NO.

1. Cut Slope
2. Fill Slope
3. Refilling with Compaction
4,5. Surface Drainage
   - Crest Ditch
   - Berm Ditch
   - Toe Ditch
   - Surface Ditch
6. Underground Drainage
7,8. Horizontal Drain Hole
9,10. Vegetation
   - Strip Sodding
   - Block Sodding
   - Seed Spraying
11. Precast Concrete Cribwork
12. Sprayed Concrete Cribwork
13. Shotcrete
14. Dumped Rock
15. Stone Riprap with Mortar
16. Concrete Revetment
17. Gabion for Scouring Protection
18. Gabion Retaining Wall
19. Gravity Type Retaining Wall
20. Rockfall Prevention Net
21. Rockfall Prevention Barrier
22. Box Culvert
23. Pipe Culvert
24. Guide Dike
25. Raising of the Road Elevation
26. Bailey Bridge

STANDARD DRAWINGS			
CUT SLOPE			
SCALE	1:300	DRAWING NO.	1

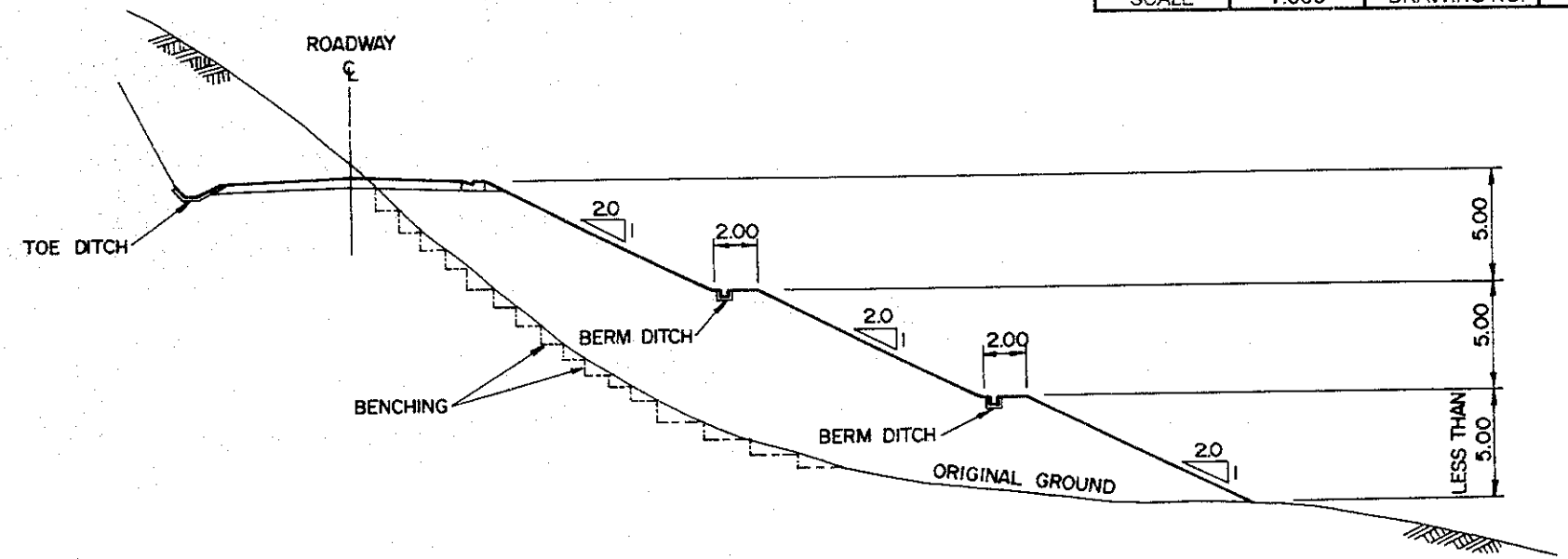


TYPICAL CROSS SECTION FOR CUT SLOPE
SCALE 1 : 300



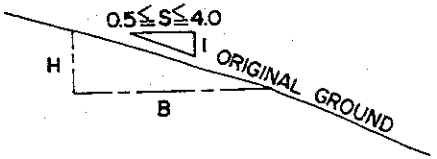
DETAIL "A"
SCALE 1:100

STANDARD DRAWINGS			
FILL SLOPE			
SCALE	1:300	DRAWING NO.	2



TYPICAL CROSS SECTION FOR FILL SLOPE
SCALE 1 : 300

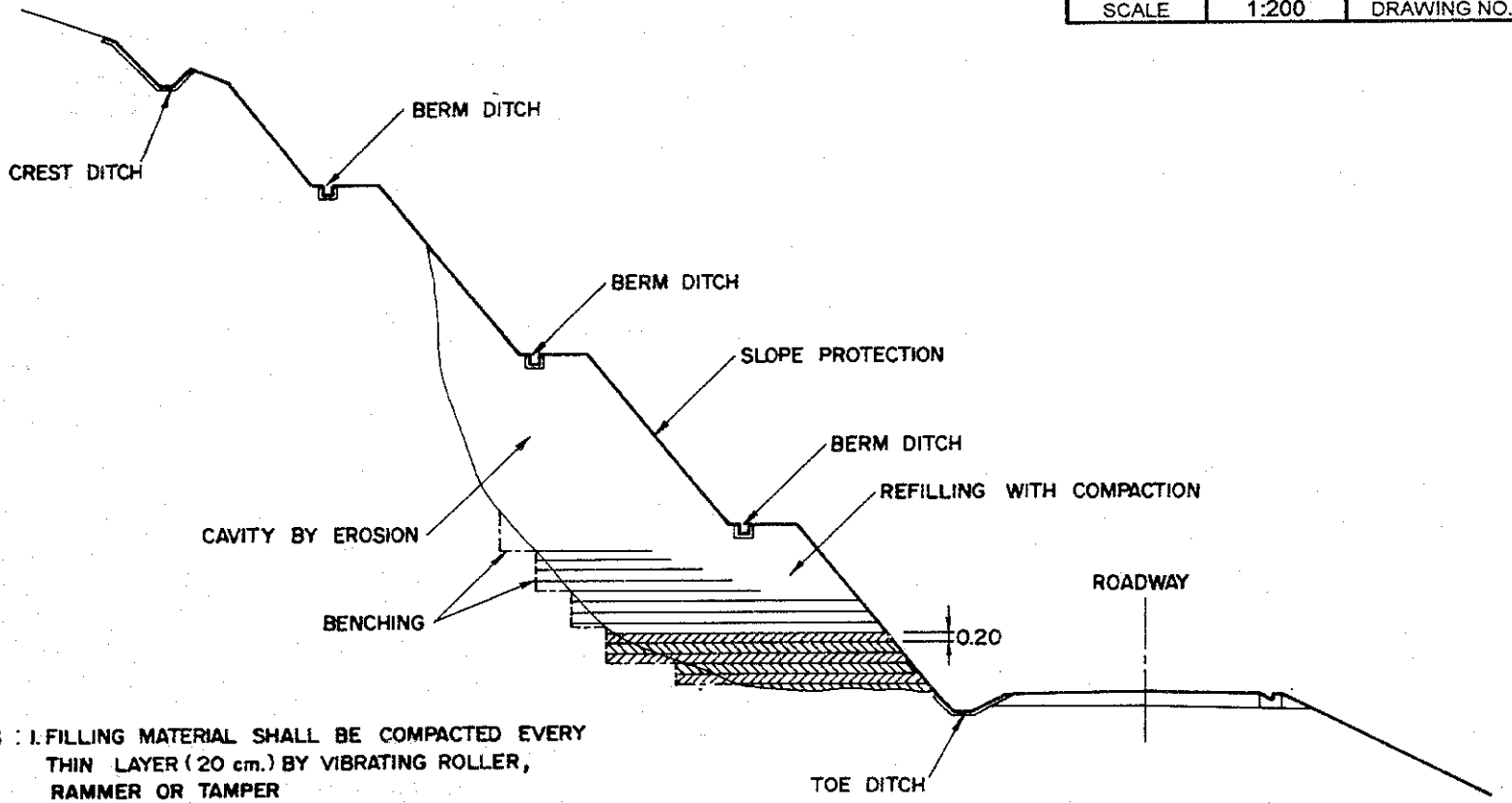
NOTES : BENCHING SHALL BE CONSTRUCTED AS BELOW



(in meter)

S	B	H
4.0~2.0	2.0	0.5~1.0
2.0~0.5	1.0	0.5~2.0

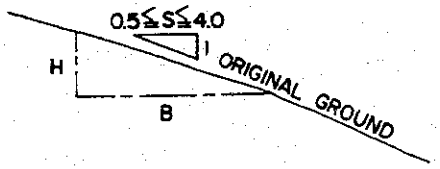
STANDARD DRAWINGS			
REFILLING WITH COMPACTION			
SCALE	1:200	DRAWING NO.	3



TYPICAL CROSS SECTION

NOTES : 1. FILLING MATERIAL SHALL BE COMPACTED EVERY THIN LAYER (20 cm.) BY VIBRATING ROLLER, RAMMER OR TAMPER

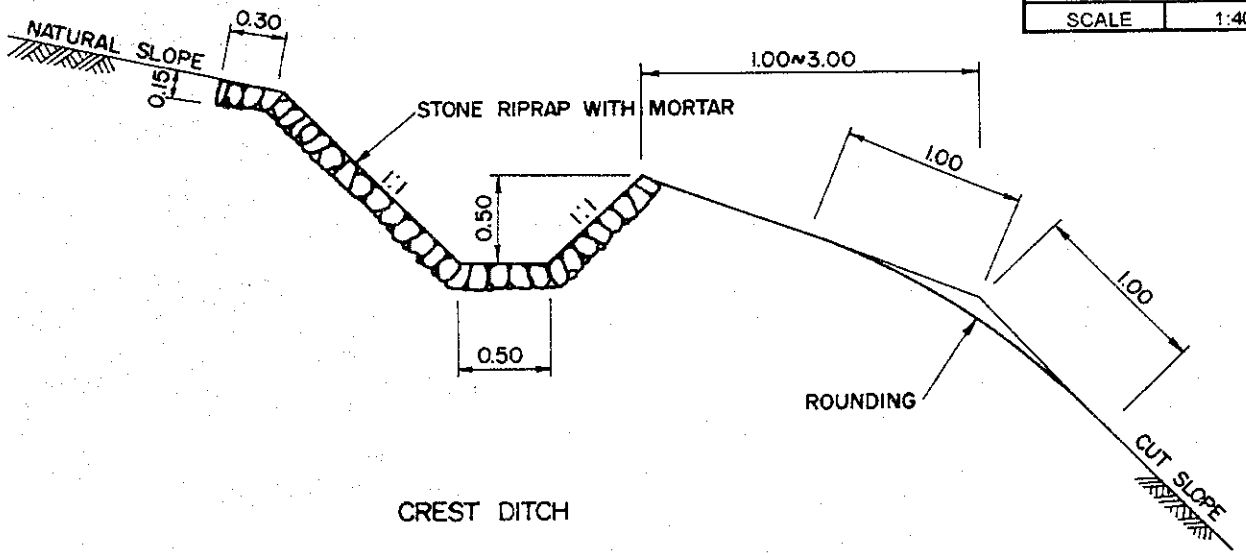
2. BENCHING SHALL BE CONSTRUCTED AS BELOW



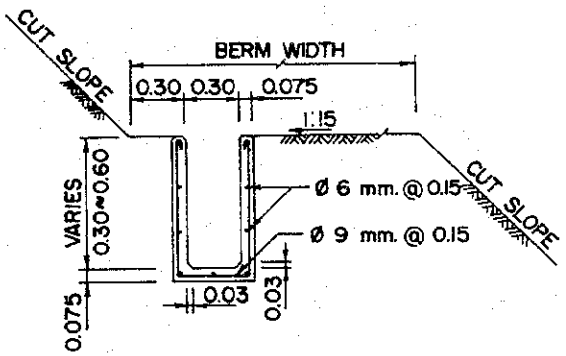
(in meter)

S	B	H
4.0~2.0	2.0	0.5~1.0
2.0~0.5	1.0	0.5~2.0

STANDARD DROWINGS			
SURFACE DRAINAGE(1)			
SCALE	1:40	DRAWING NO.	4

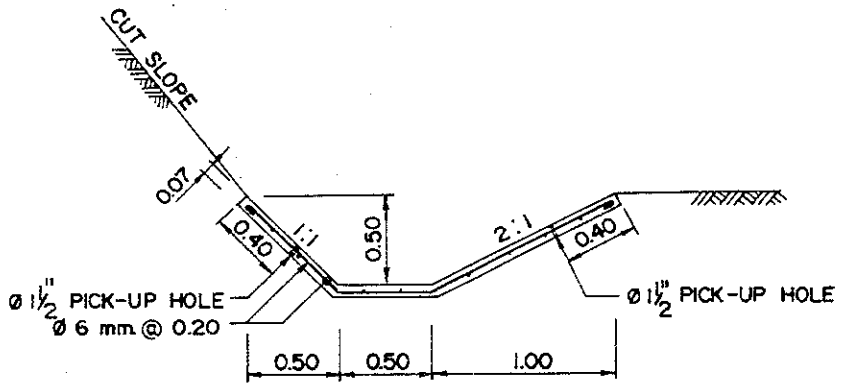


CREST DITCH



BERM DITCH

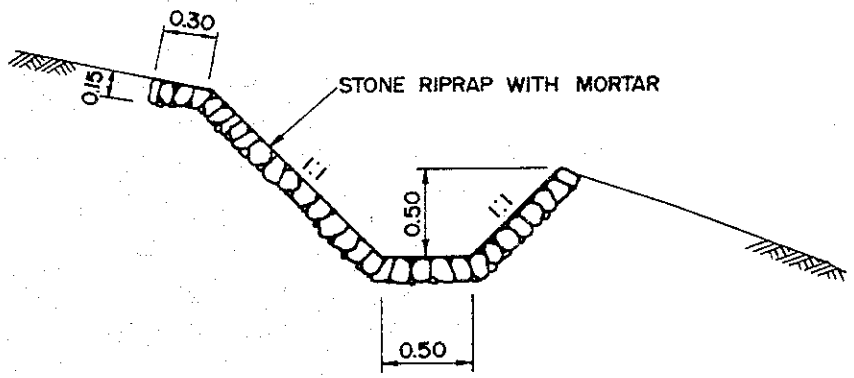
(quotations from DOH Standard)



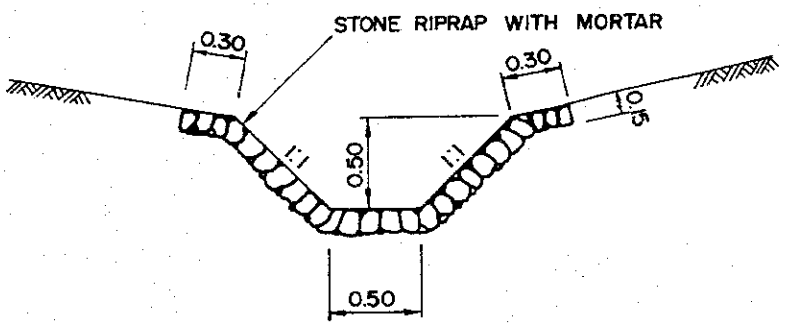
TOE DITCH

(quotations from DOH Standard)

STANDARD DROWINGS			
SURFACE DRAINAGE(2)			
SCALE	AS SHOW	DRAWING NO.	5

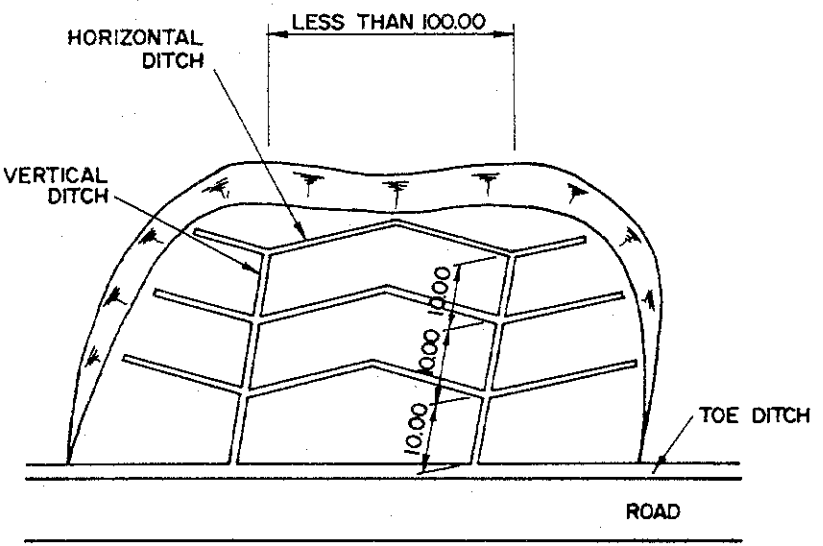


HORIZONTAL SECTION



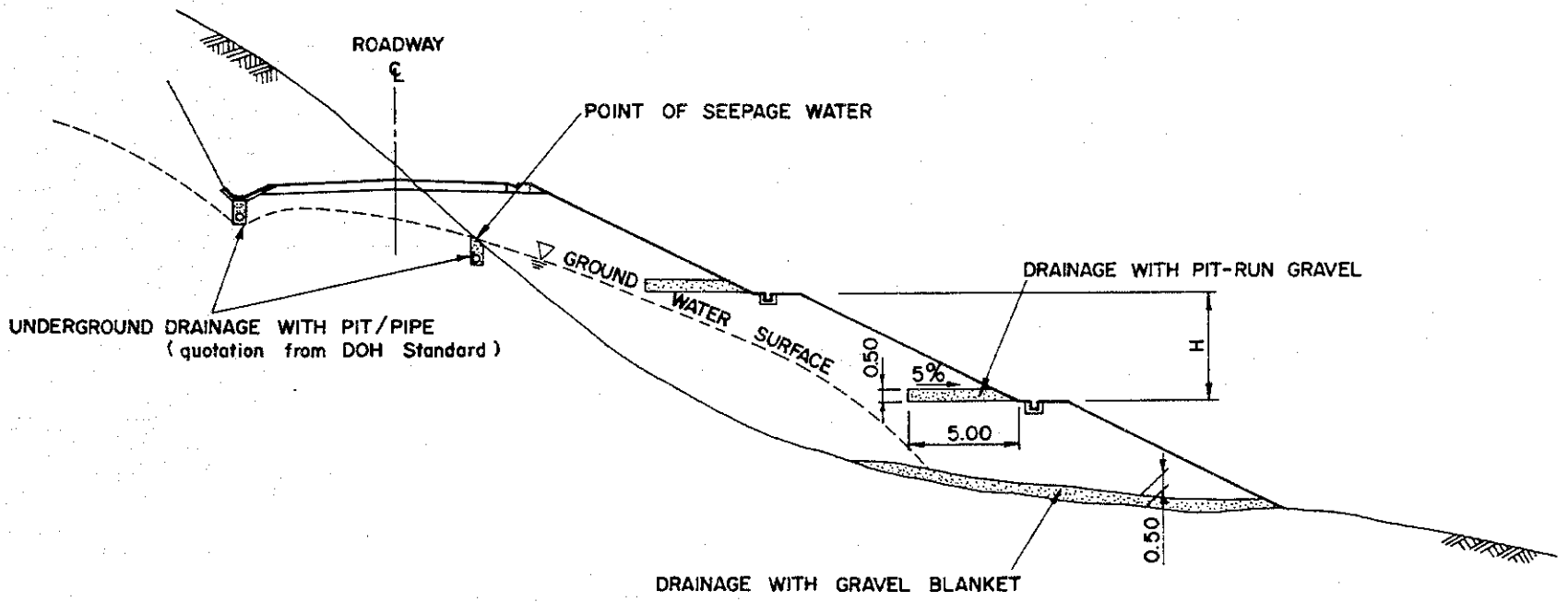
VERTICAL SECTION

SURFACE DRAINAGE
SCALE 1 : 40



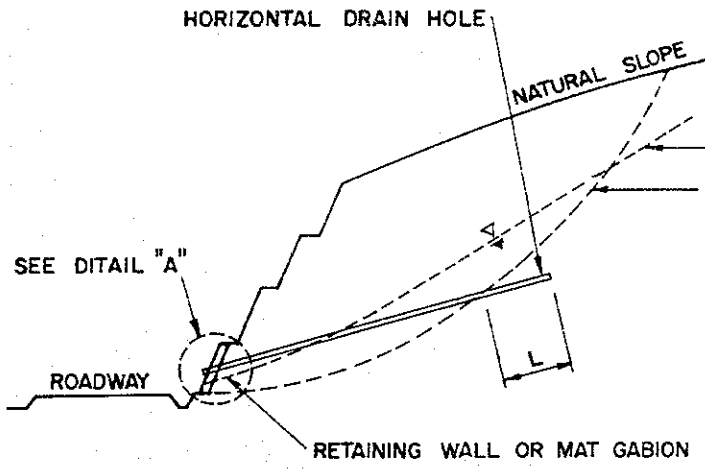
SURFACE DRAINAGE SYSTEM
NOT TO SCALE

STANDARD DRAWINGS			
UNDERGROUND DRAINAGE			
SCALE	1:300	DRAWING NO.	6

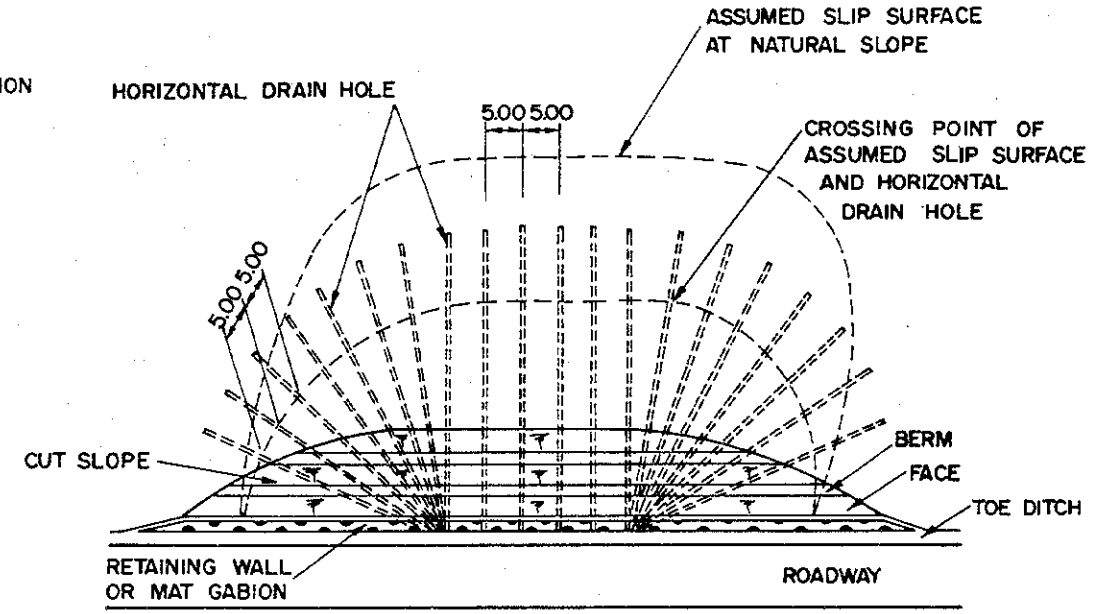


TYPICAL UNDERGROUND DRAINAGE

STANDARD DRAWINGS			
HORIZONTAL DRAIN HOLE (1)			
SCALE	AS SHOWN	DRAWING NO.	7

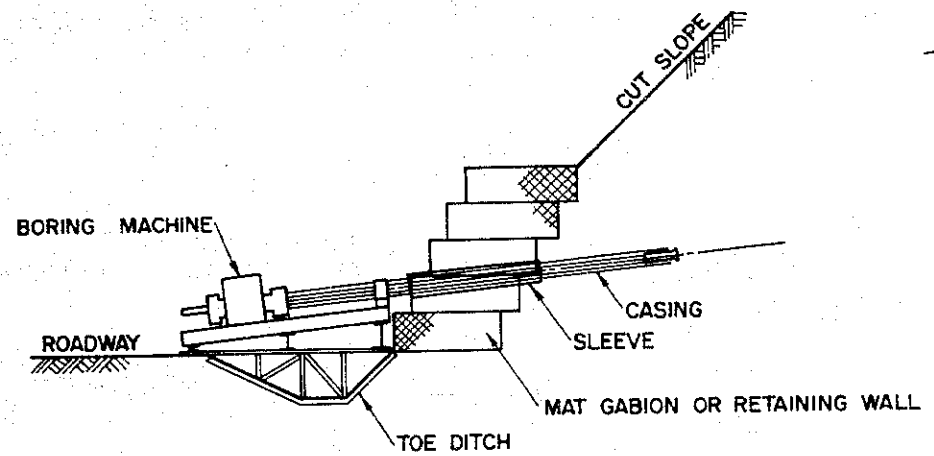


ORIGINAL GROUND CONDITION	L
SOIL	10.00
ROCK	3.00

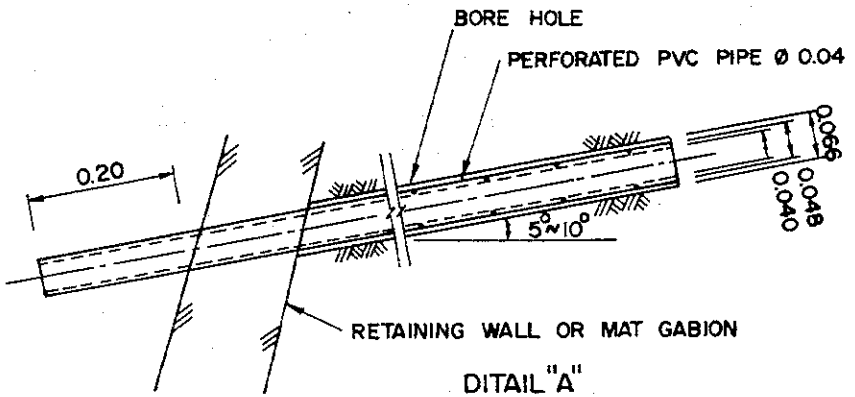


LOCATION OF HORIZONTAL DRAIN HOLE
NOT TO SCALE

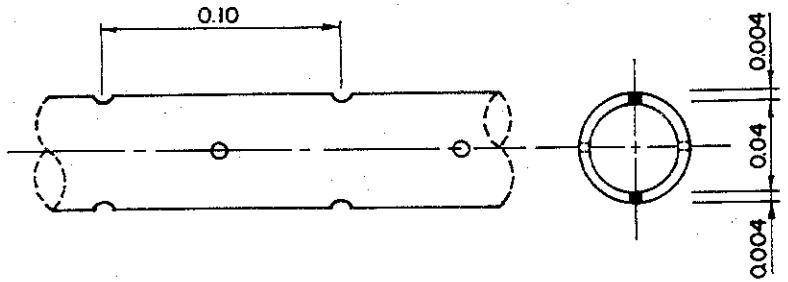
STANDARD DRAWINGS			
HORIZONTAL DRAIN HOLE (2)			
SCALE	AS SHOWN	DRAWING NO.	8



DETAIL OF BORING
SCALE 1 : 80



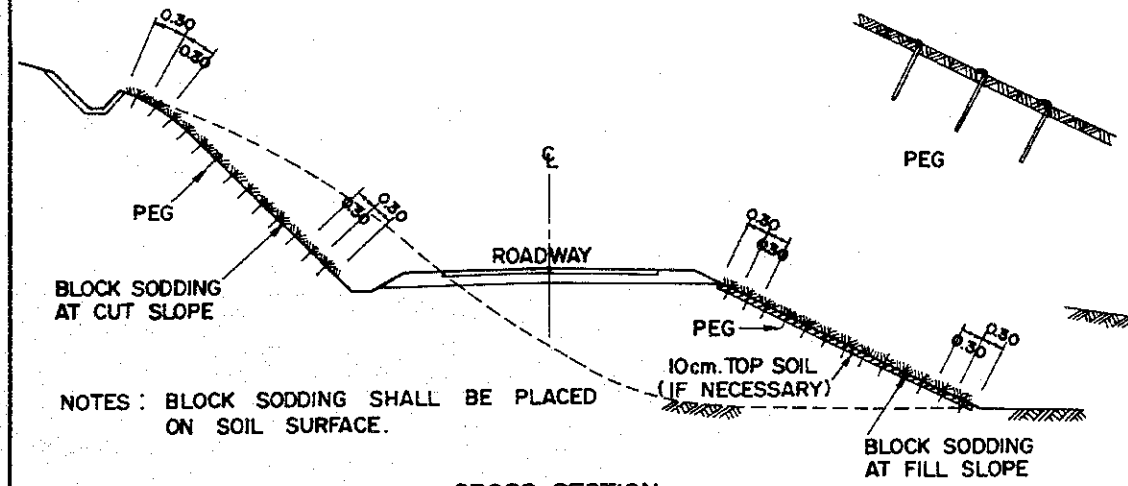
DITAIL "A"
SCALE 1 : 10



PERFORTED PVC PIPE
SCALE 1 : 3

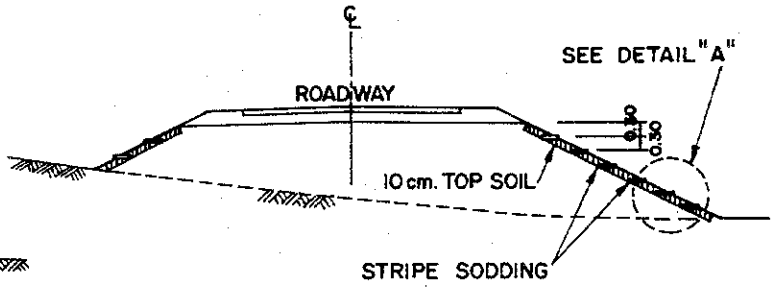
A2 - 9

STANDARD DRAWINGS			
VEGETATION (1)			
SCALE	AS SHOWN	DRAWING NO.	9

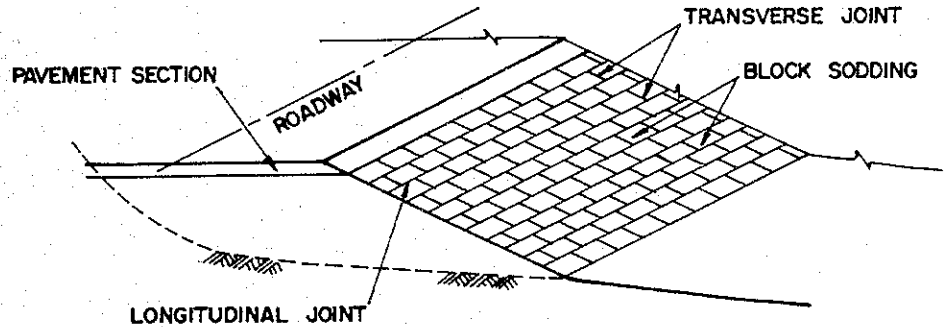


NOTES : BLOCK SODDING SHALL BE PLACED ON SOIL SURFACE.

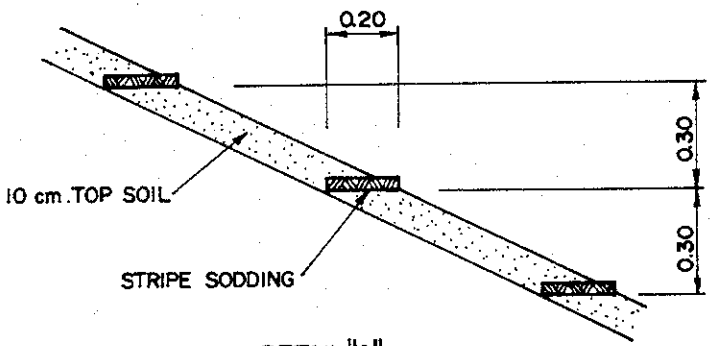
CROSS SECTION
NOT TO SCALE



CROSS SECTION
NOT TO SCALE



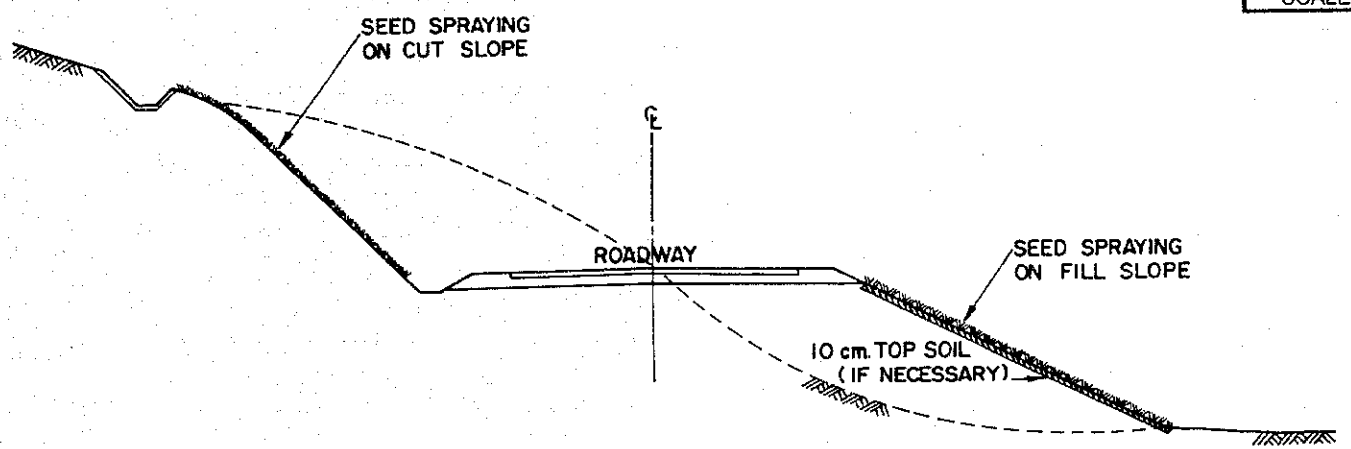
BLOCK SODDING
NOT TO SCALE
(quotation from DOH Standard)



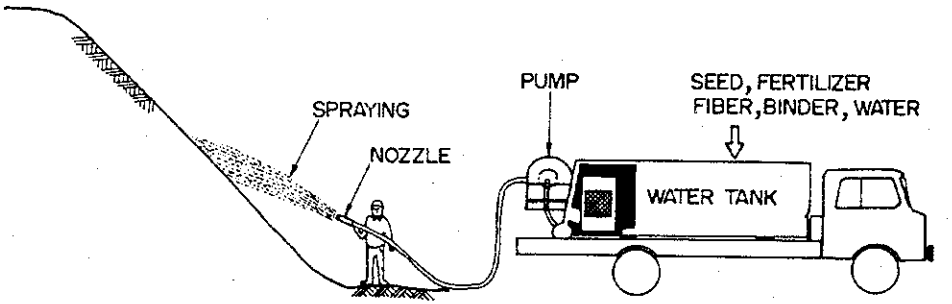
DETAIL "A"
SCALE 1 : 20

STRIPE SODDING

STANDARD DRAWINGS			
VEGETATION (2)			
SCALE	AS SHOWN	DRAWING NO.	10

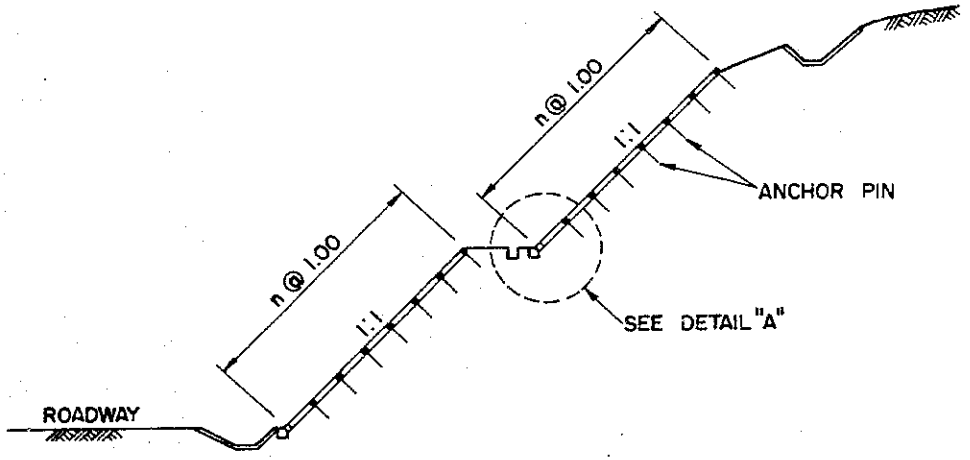


NOTES : SEED SPRAYING SHALL BE APPLIED TO A FILL SLOPE OR CUT SLOPE WITH A SOIL SURFACE.

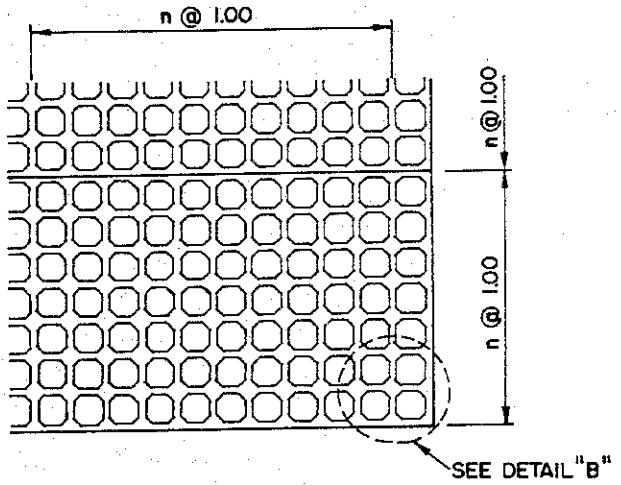


SEED SPRAYING
NOT TO SCALE

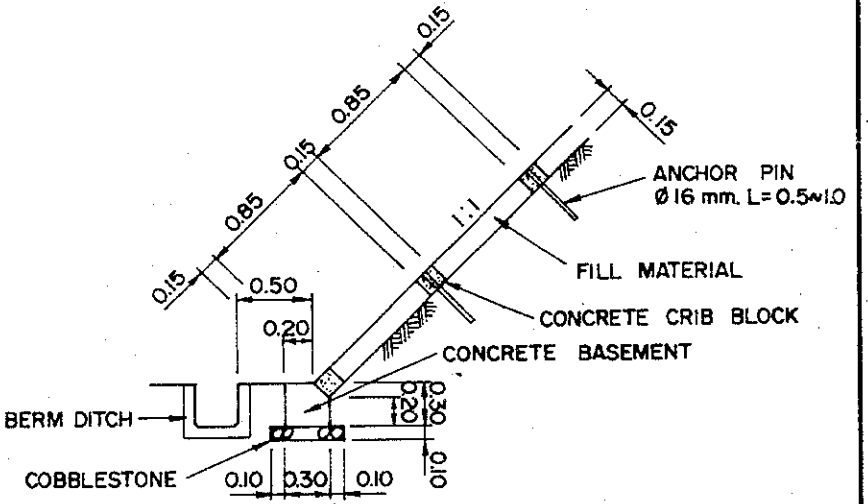
STANDARD DRAWINGS			
PRECAST CONCRETE CRIBWORK			
SCALE	AS SHOWN	DRAWING NO.	11



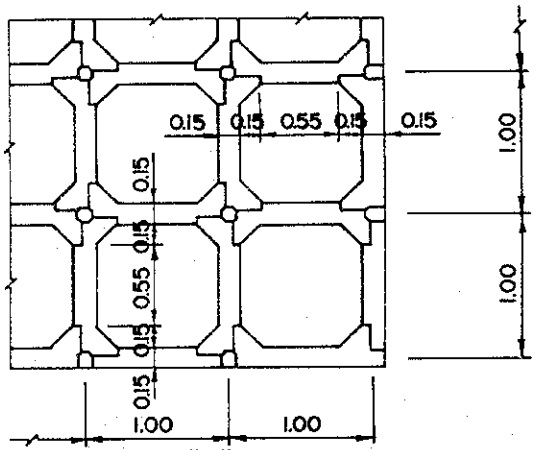
CROSS SECTION
SCALE 1 : 200



DEVELOPMENT
SCALE 1 : 200

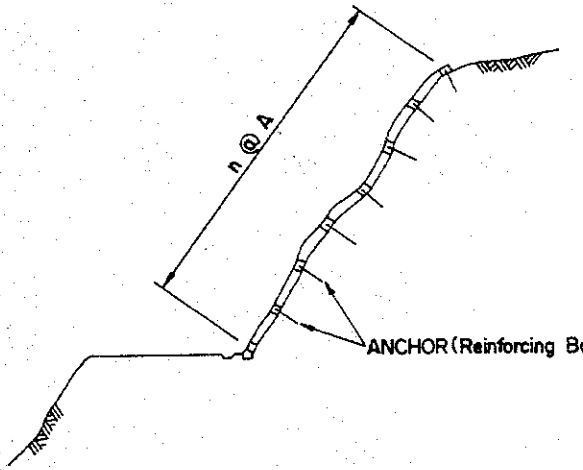


DETAIL "A"
SCALE 1 : 50

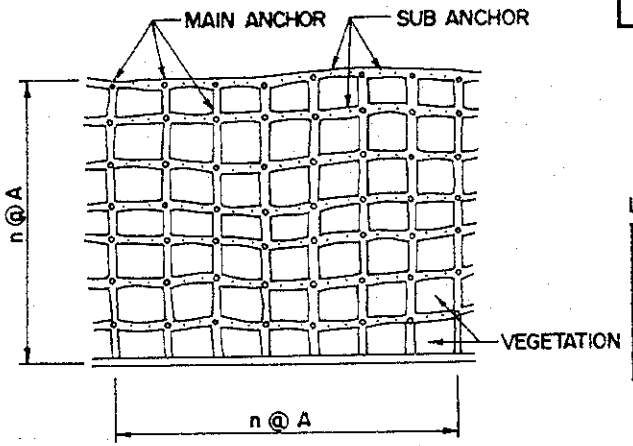


DETAIL "B"
SCALE 1:50

STANDARD DRAWINGS			
SPRAYED CONCRETE CRIBWORK			
SCALE	AS SHOWN	DRAWING NO.	12



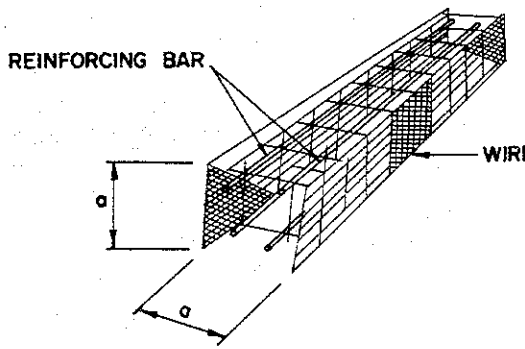
CROSS SECTION
SCALE 1 : 300



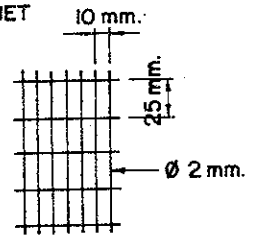
DEVELOPMENT
SCALE 1 : 300

LIST OF DIMENSION (in meter)

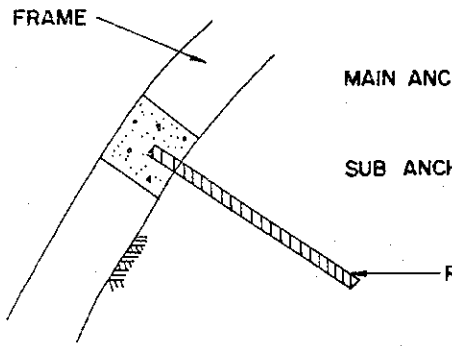
FRAME SIZE : a	0.15	0.20	0.30	0.40	0.50
SPAN LENGTH OF CRIB : A	1.15	1.20	2.00	2.00	3.00



FRAME
SCALE 1 : 25



DETAIL OF WIRE NET
SCALE 1 : 5

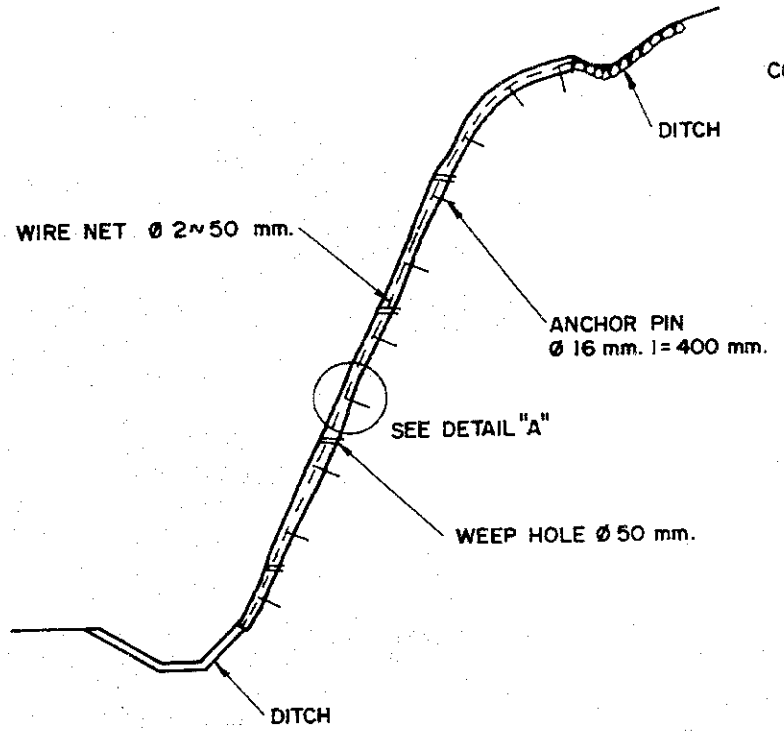


MAIN ANCHOR Ø 16~22 mm.
L= 0.75~1.50

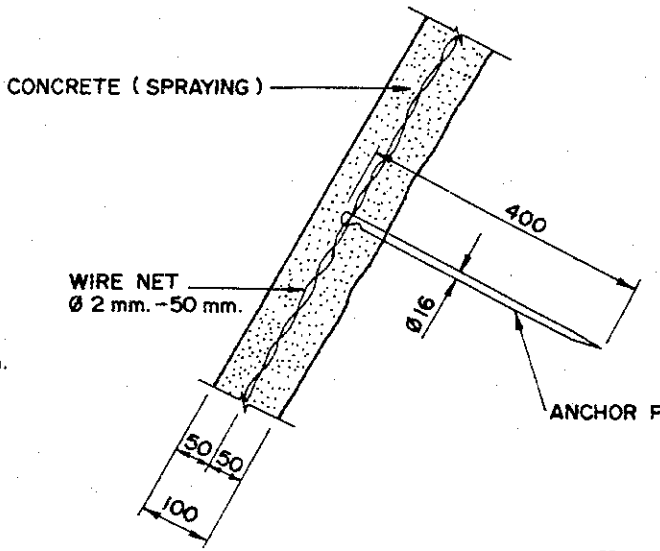
SUB ANCHOR Ø 10~16 mm.
L= 0.40~0.70

ANCHOR
SCALE 1 : 30

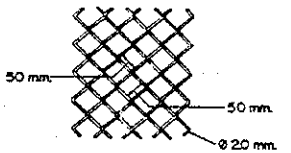
STANDARD DRAWINGS			
SHOTCRETE			
SCALE	AS SHOWN	DRAWING NO.	13



CROSS SECTION
SCALE 1:100



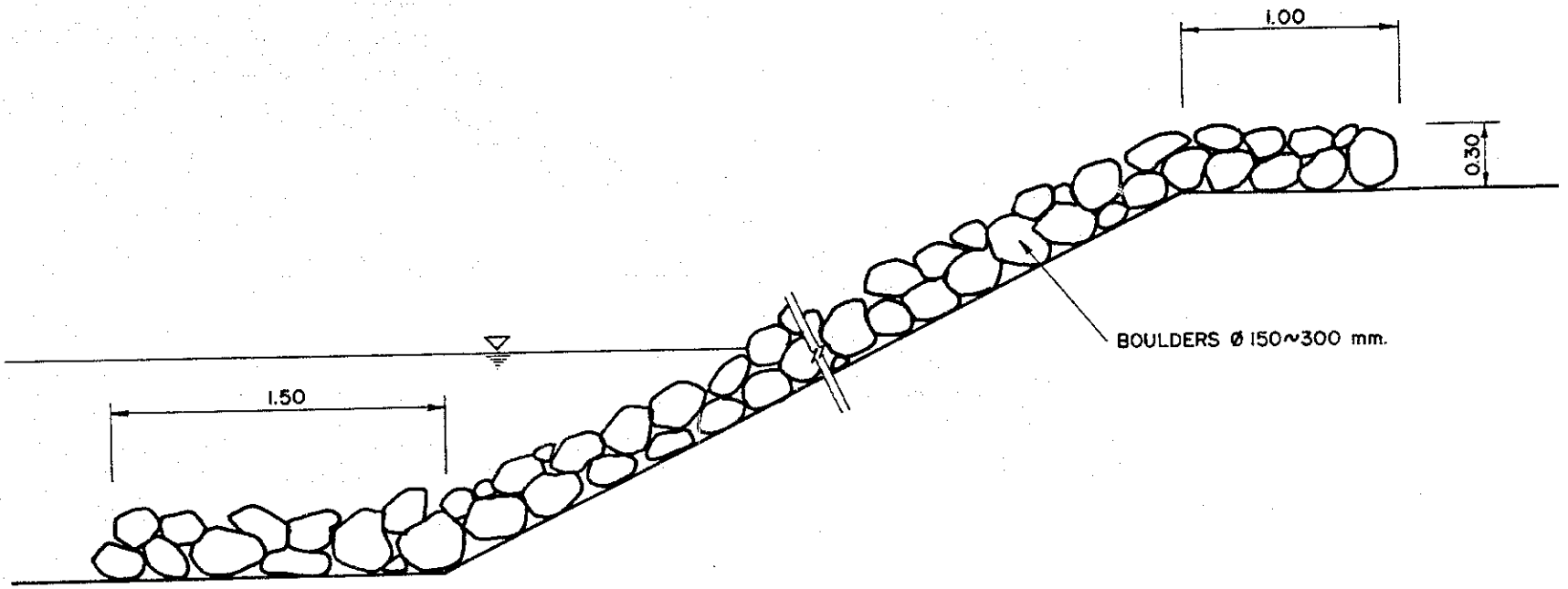
DETAIL "A"
SCALE 1:10



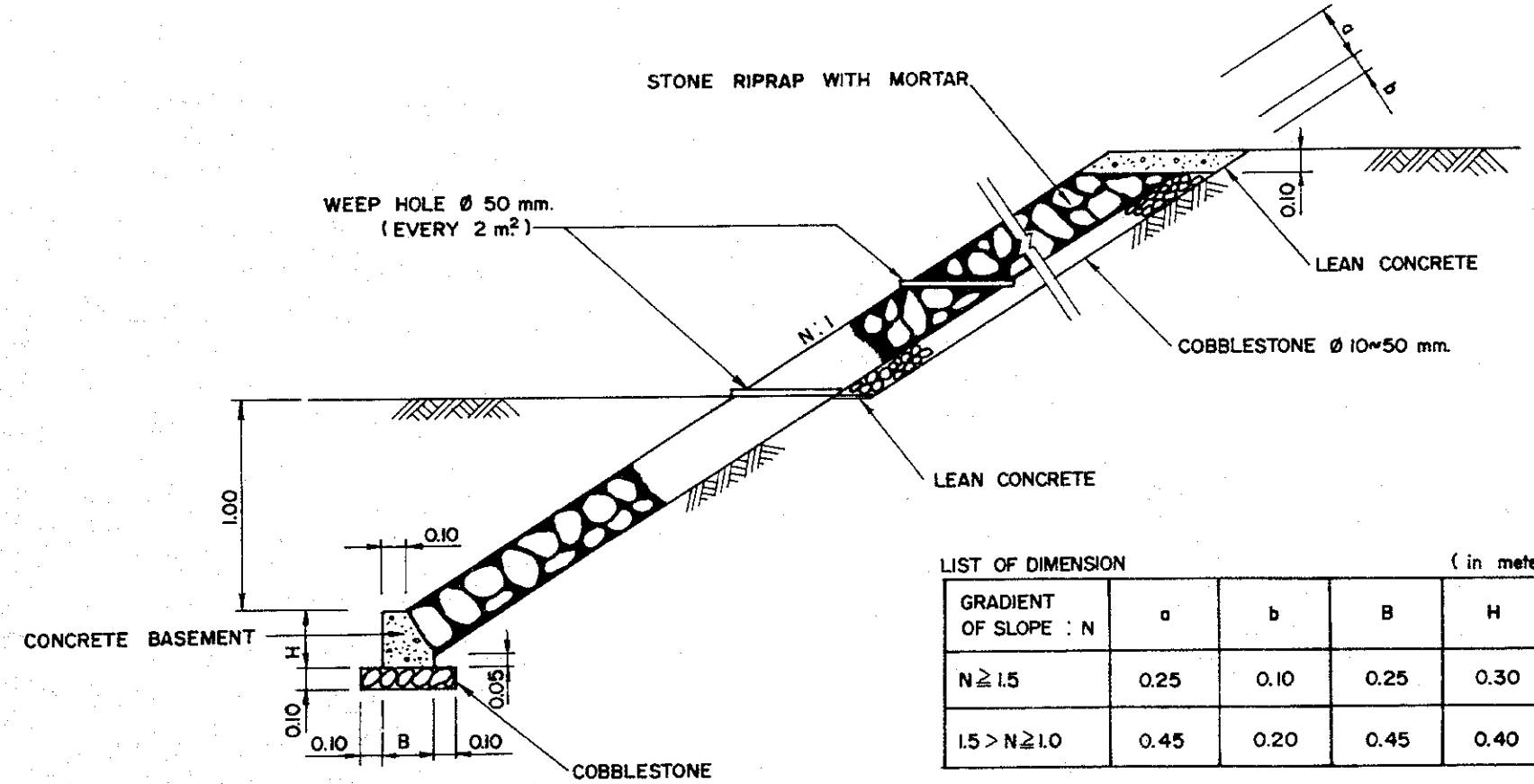
DETAIL OF WIRE NET
SCALE 1:20

NOTES : 1. AN ANCHOR PIN SHALL BE PLACED EVERY 1 m^2 OR MORE.
2. A WEEP HOLE SHALL BE DRILLED EVERY 2 m^2 OR MORE.

STANDARD DRAWINGS			
DUMPED ROCK			
SCALE	1:30	DRAWING NO.	14



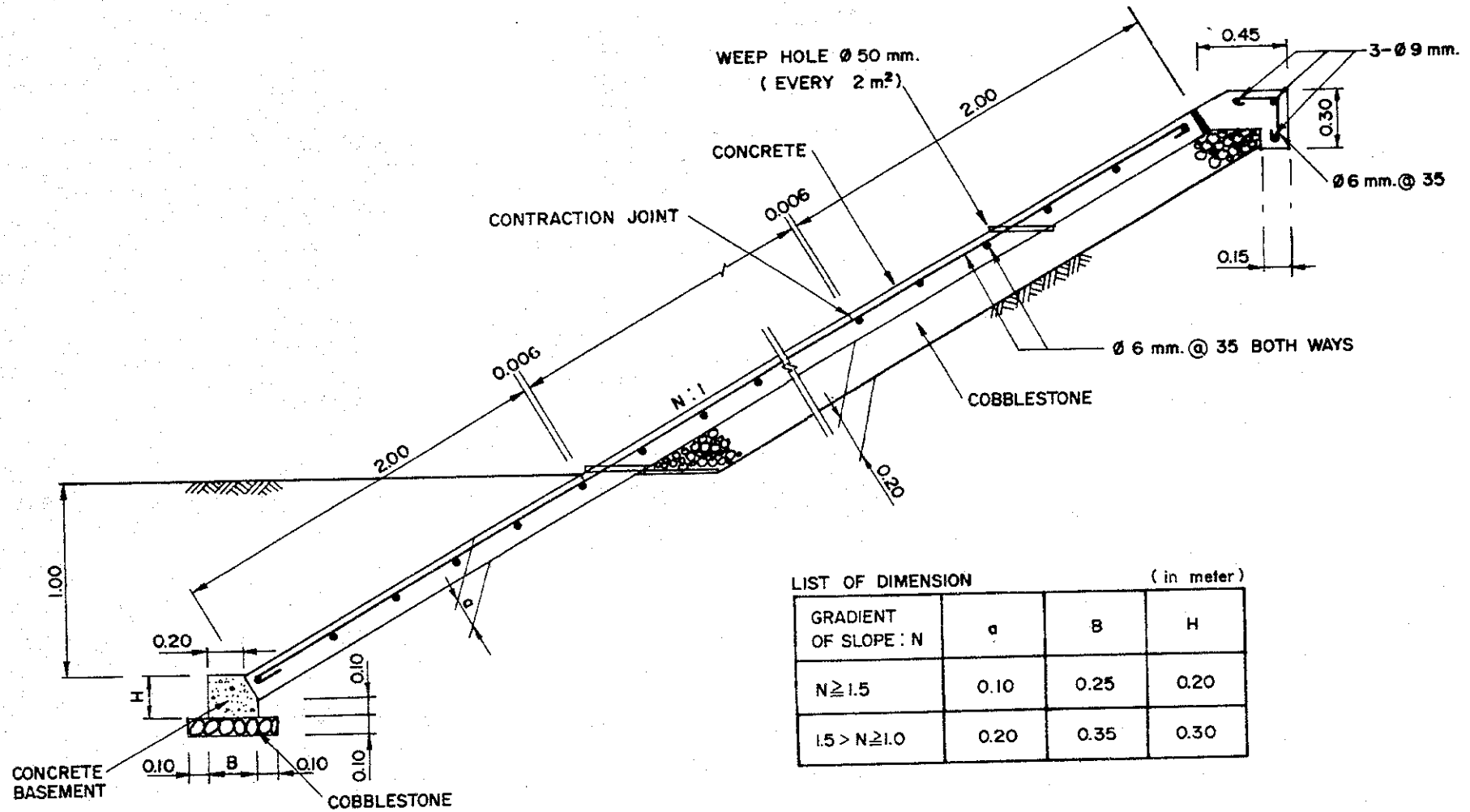
STANDARD DRAWINGS			
STONE RIPRAP WITH MORTAR			
SCALE	1:30	DRAWING NO.	15



LIST OF DIMENSION (in meter)

GRADIENT OF SLOPE : N	a	b	B	H
N ≧ 1.5	0.25	0.10	0.25	0.30
1.5 > N ≧ 1.0	0.45	0.20	0.45	0.40

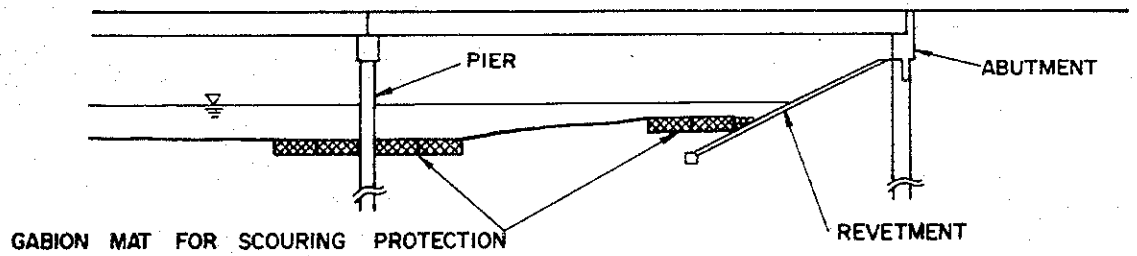
STANDARD DRAWINGS			
CONCRETE REVETMENT			
SCALE	1:30	DRAWING NO.	16



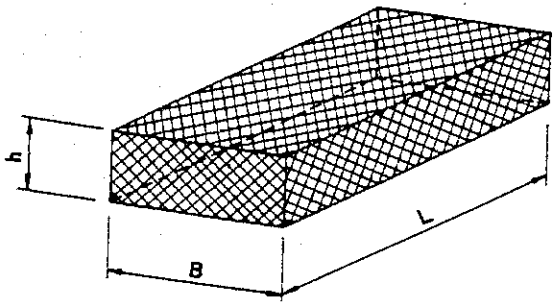
LIST OF DIMENSION (in meter)

GRADIENT OF SLOPE : N	a	B	H
N ≧ 1.5	0.10	0.25	0.20
1.5 > N ≧ 1.0	0.20	0.35	0.30

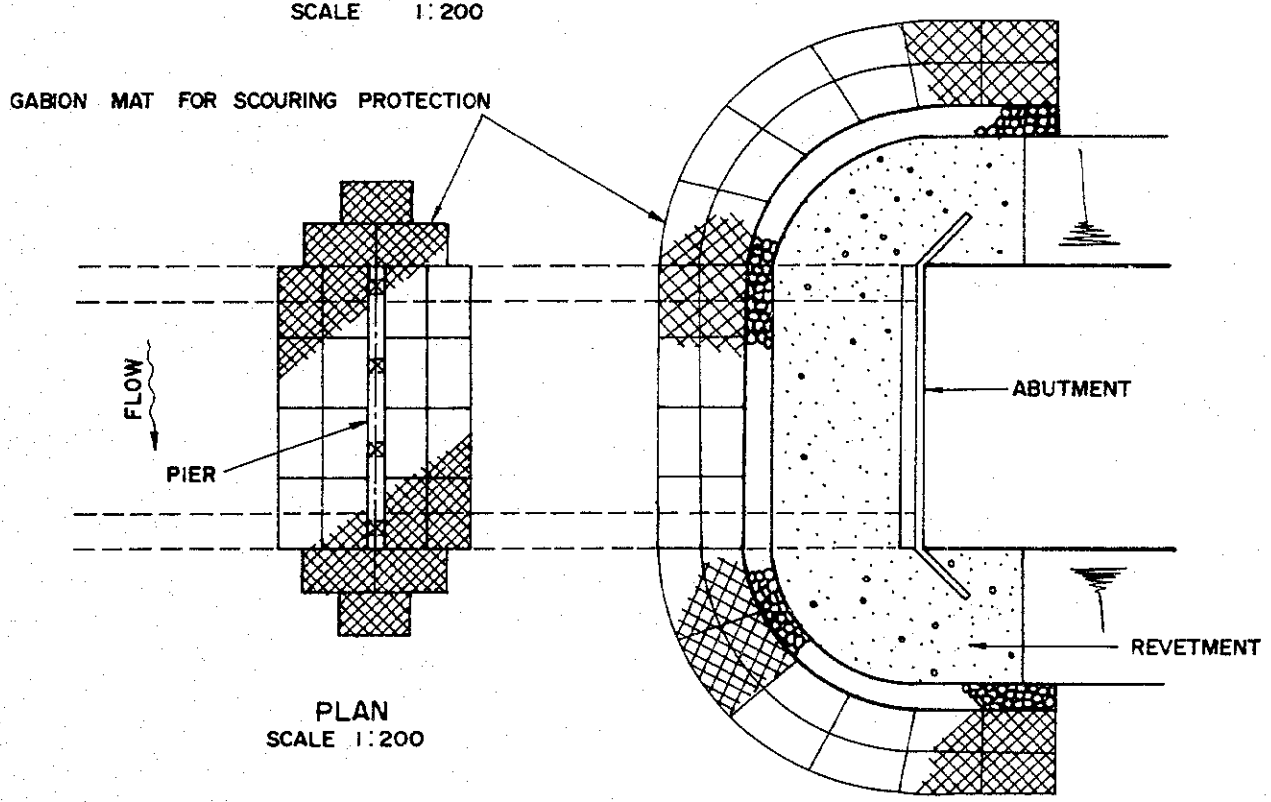
STANDARD DRAWINGS			
GABION FOR SCOURING PROTECTION			
SCALE	AS SHOWN	DRAWING NO.	17



PROFILE
SCALE 1 : 200

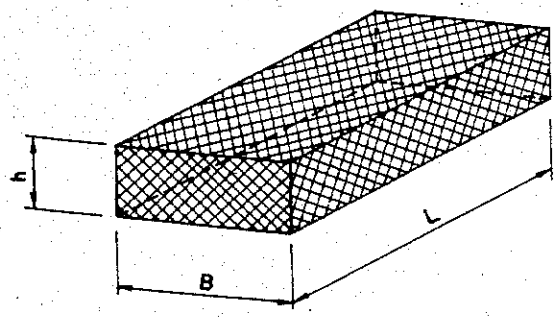


h : 0.40 , 0.50 , 0.60
B : 1.20
L : 2.00 , 3.00 , 4.00

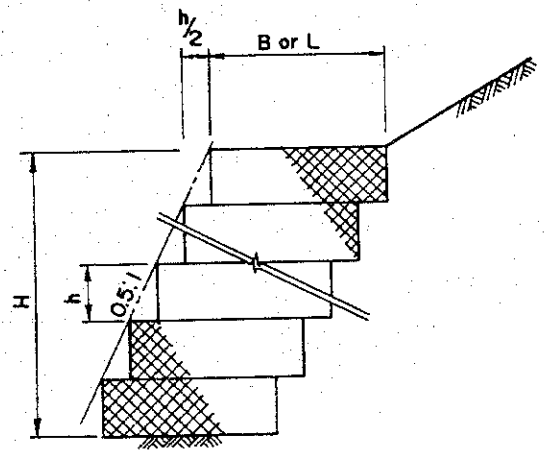


PLAN
SCALE 1 : 200

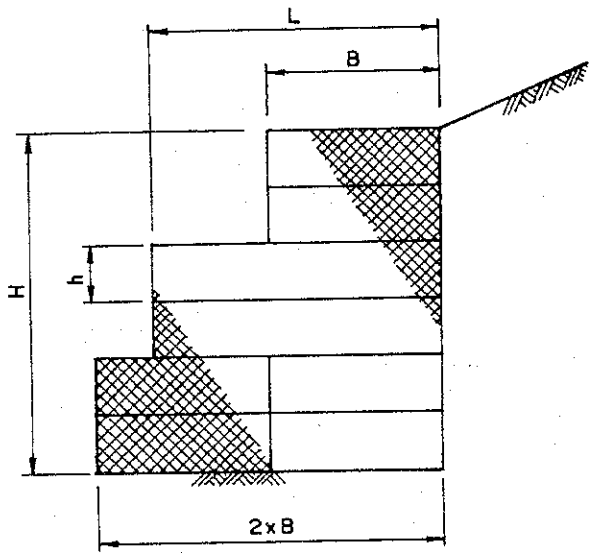
STANDARD DRAWINGS			
GABION RETAINING WALL			
SCALE	AS SHOWN	DRAWING NO.	18



h : 0.40, 0.50, 0.60
B : 1.20
L : 2.00, 3.00, 4.00

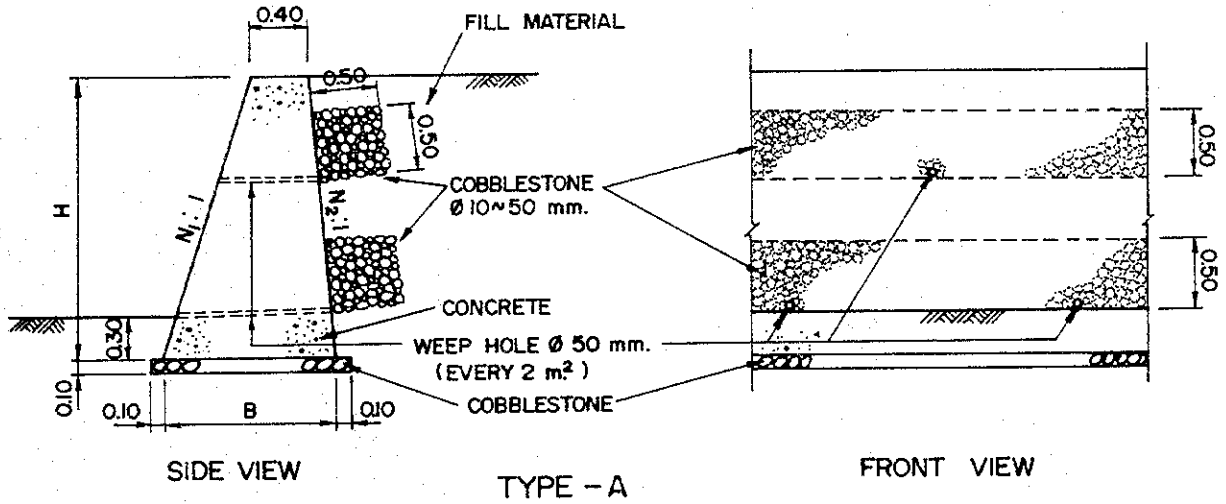


TYPE - A
SCALE 1:50



TYPE - B
SCALE 1:50

STANDARD DRAWINGS			
GRAVITY TYPE RETAINING WALL			
SCALE	1:50	DRAWING NO.	19



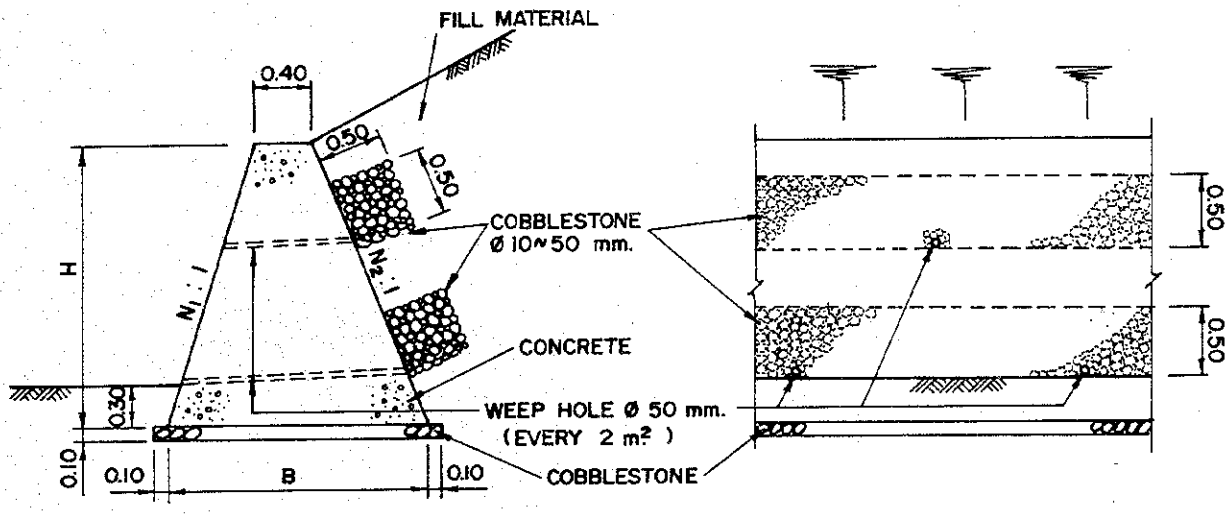
SIDE VIEW

TYPE – A

FRONT VIEW

LIST OF DIMENSION (in meter)

H	N_1	N_2	B
H≦1.00	0.02	0.40	0.40+(N_1+N_2)xH
	0.30	0.00	
	0.50	0.00	
1.00<H≦2.00	0.02	0.60	
	0.30	0.40	
	0.50	0.20	
2.00<H≦3.00	0.02	0.70	
	0.30	0.50	
	0.50	0.30	



SIDE VIEW

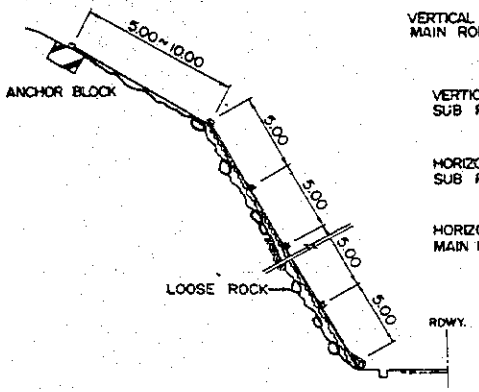
TYPE – B

FRONT VIEW

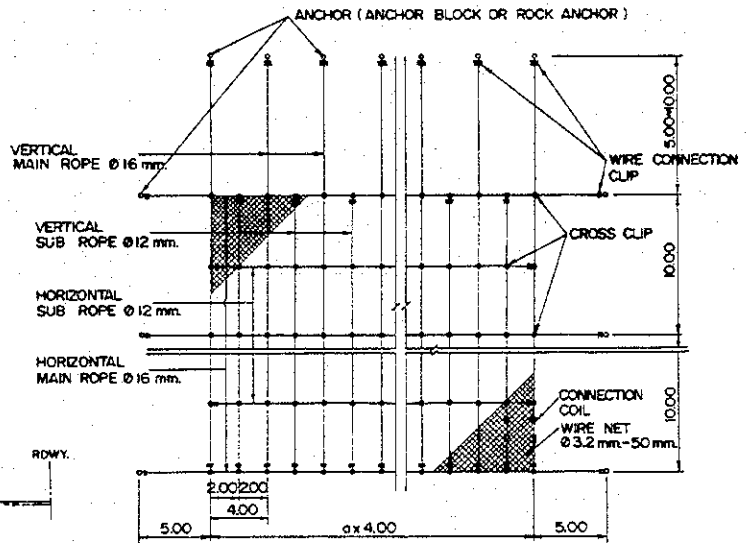
LIST OF DIMENSION (in meter)

H	N_1	N_2	B
H≦1.00	0.02	0.30	0.40+(N_1+N_2)xH
	0.30	0.00	
	0.50	0.00	
1.00<H≦2.00	0.02	0.50	
	0.30	0.10	
	0.50	0.00	
2.00<H≦3.00	0.02	0.60	
	0.30	0.20	
	0.50	0.10	

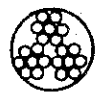
STANDARD DRAWINGS			
ROCKFALL PREVENTION NET			
SCALE	AS SHOWN	DRAWING NO.	20



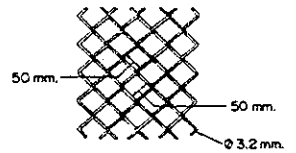
CROSS SECTION
SCALE 1:500



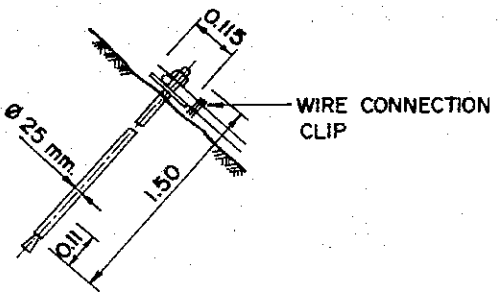
DEVELOPMENT
SCALE 1:500



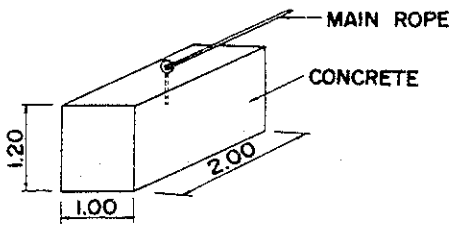
CROSS SECTION OF ROPE
SCALE 1:1
DIAMETER D Ø12 mm.
Ø16 mm.



DETAIL OF WIRE MESH
SCALE 1:20



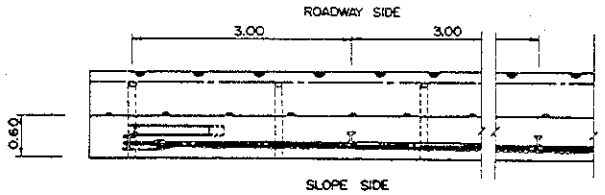
ROCK ANCHOR
SCALE 1:20

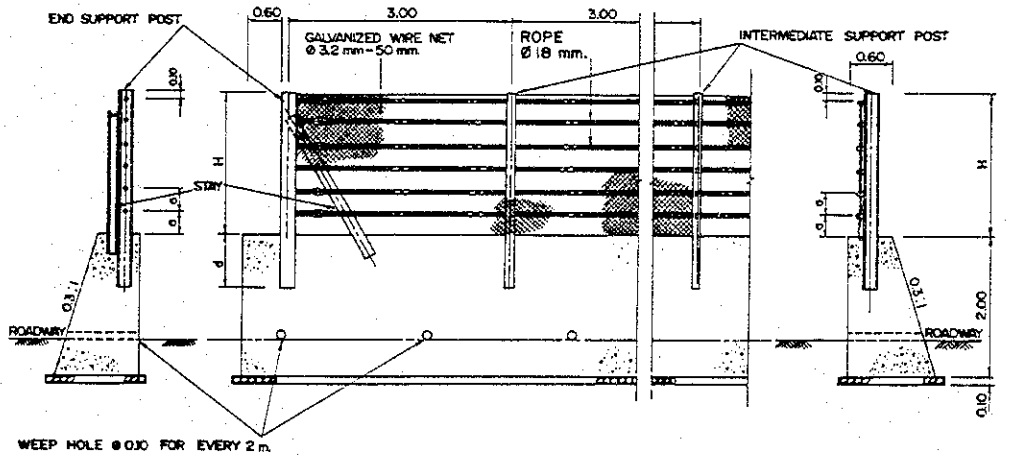


ANCHOR BLOCK
SCALE 1:100

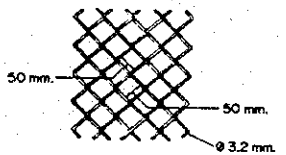
NOTES : 1. LONGITUDINAL LENGTH OF NET SHALL BE LESS THAN 70 m.
2. TOTAL WEIGHT OF ROCK SHALL BE LESS THAN 1000 kg. PER UNIT (40 m^2)

STANDARD DRAWINGS			
ROCKFALL PREVENTION BARRIER			
SCALE	1:100	DRAWING NO.	21





NOTES : 1. PRE-TENSION FORCE ON EACH ROPE SHALL BE 500 kg.
2. LENGTH OF FENCE SHALL BE LESS THAN 100 m.

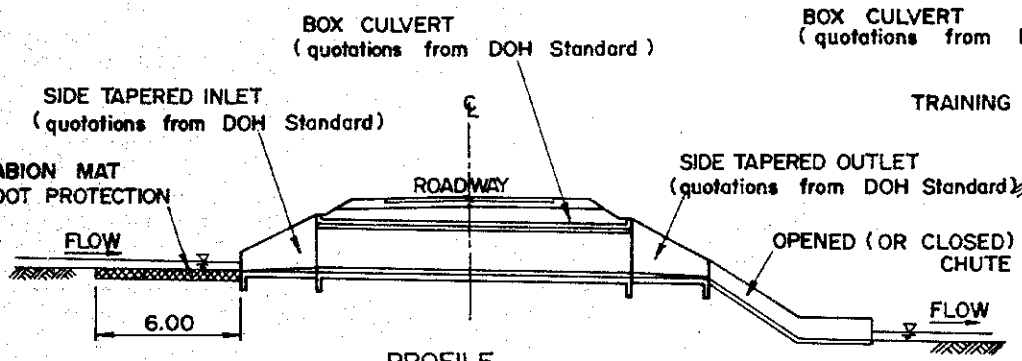


DETAIL OF WIRE MESH
SCALE 1 : 20

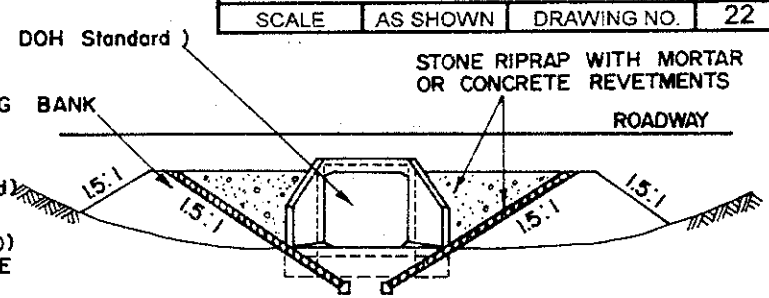
LIST OF DIMENSION (in meter)

HEIGHT H	WIRE ROPE		INTERMEDIATE SUPPORT POST			END SUPPORT POST (mm.)	ENERGY ABSORPTION BY FENCE (t-m)
	NUMBER EACH	SPACING a	SECTION (mm.)	LENGTH	EMBEDMENT d		
1.00	3	0.30~0.35	H-150x75 x5x7	1.50	0.50	H-125x125x6.5x9-1500 STAY H-100x100x6x8	4.6
2.00	6	0.30~0.35	H-200x100 x5.5x8	2.75	0.75	H-175x175x7.5x11-2750 STAY H-150x150x7x10	5.8

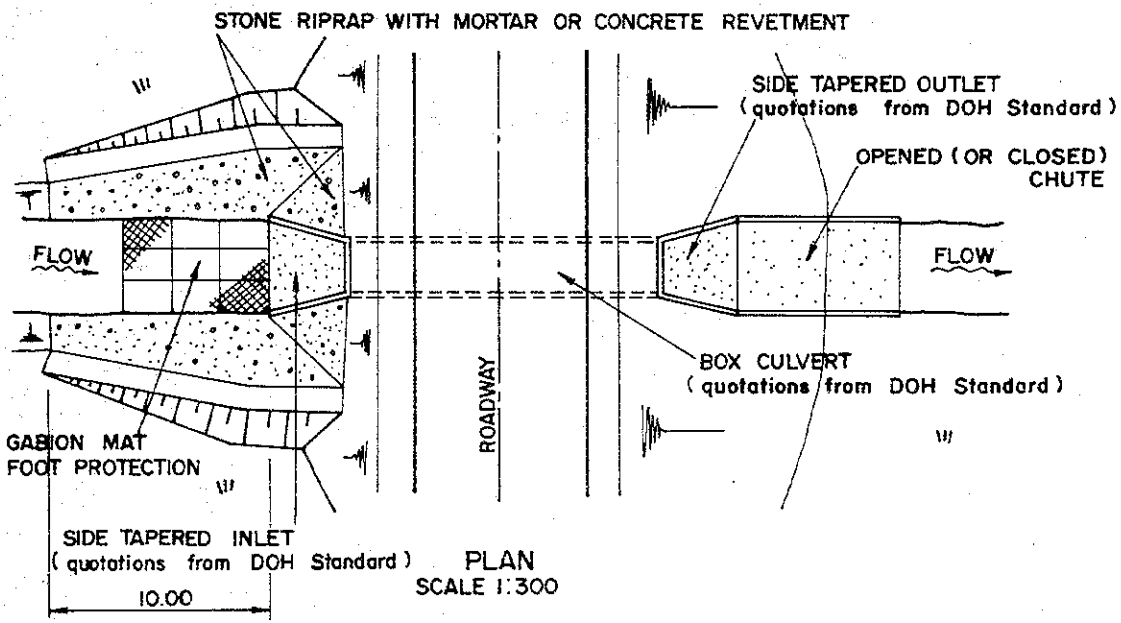
STANDARD DRAWINGS			
BOX CULVERT			
SCALE	AS SHOWN	DRAWING NO.	22



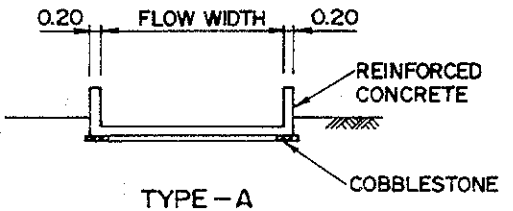
PROFILE
SCALE 1:300



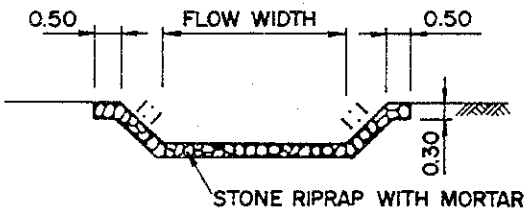
ELEVATION
SCALE 1:200



PLAN
SCALE 1:300



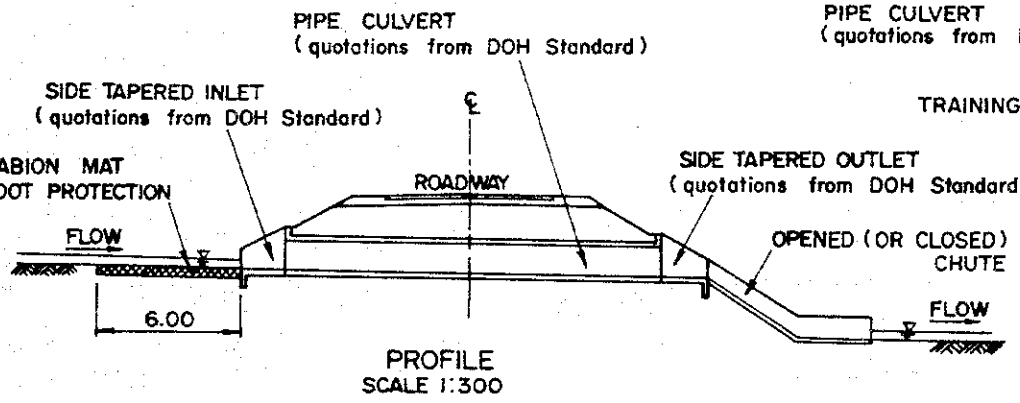
TYPE – A



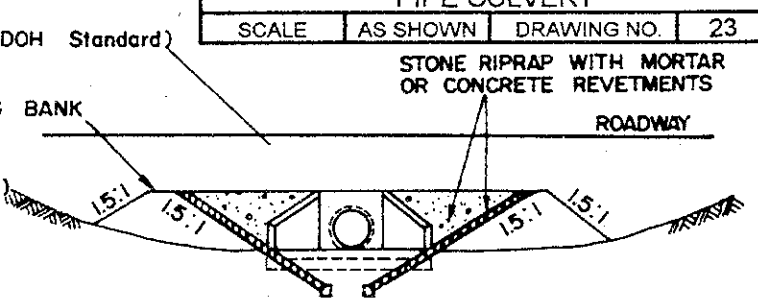
TYPE – B

OPEN CHUTE
SCALE 1:150

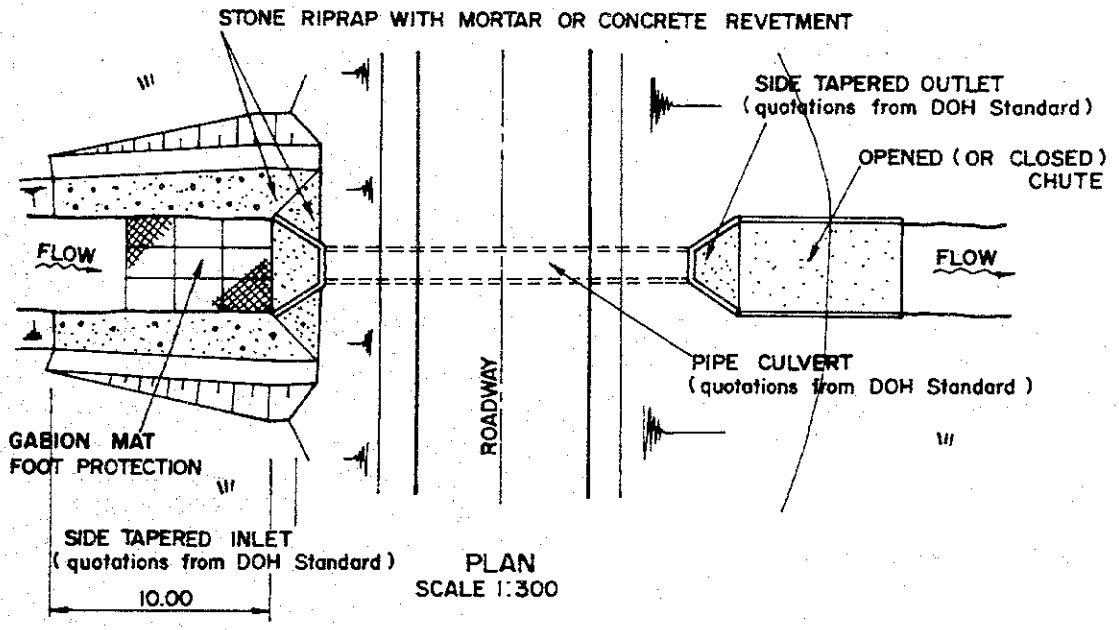
STANDARD DRAWINGS			
PIPE CULVERT			
SCALE	AS SHOWN	DRAWING NO.	23



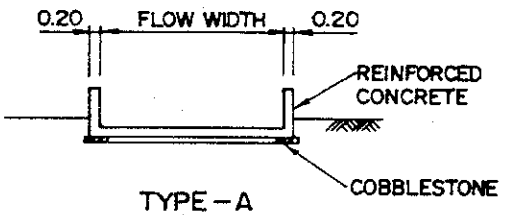
PROFILE
SCALE 1:300



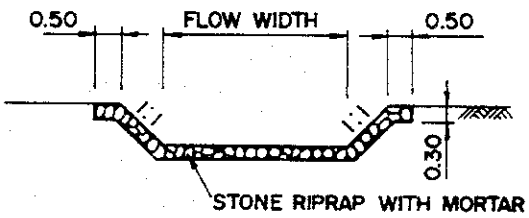
ELEVATION
SCALE 1:200



PLAN
SCALE 1:300



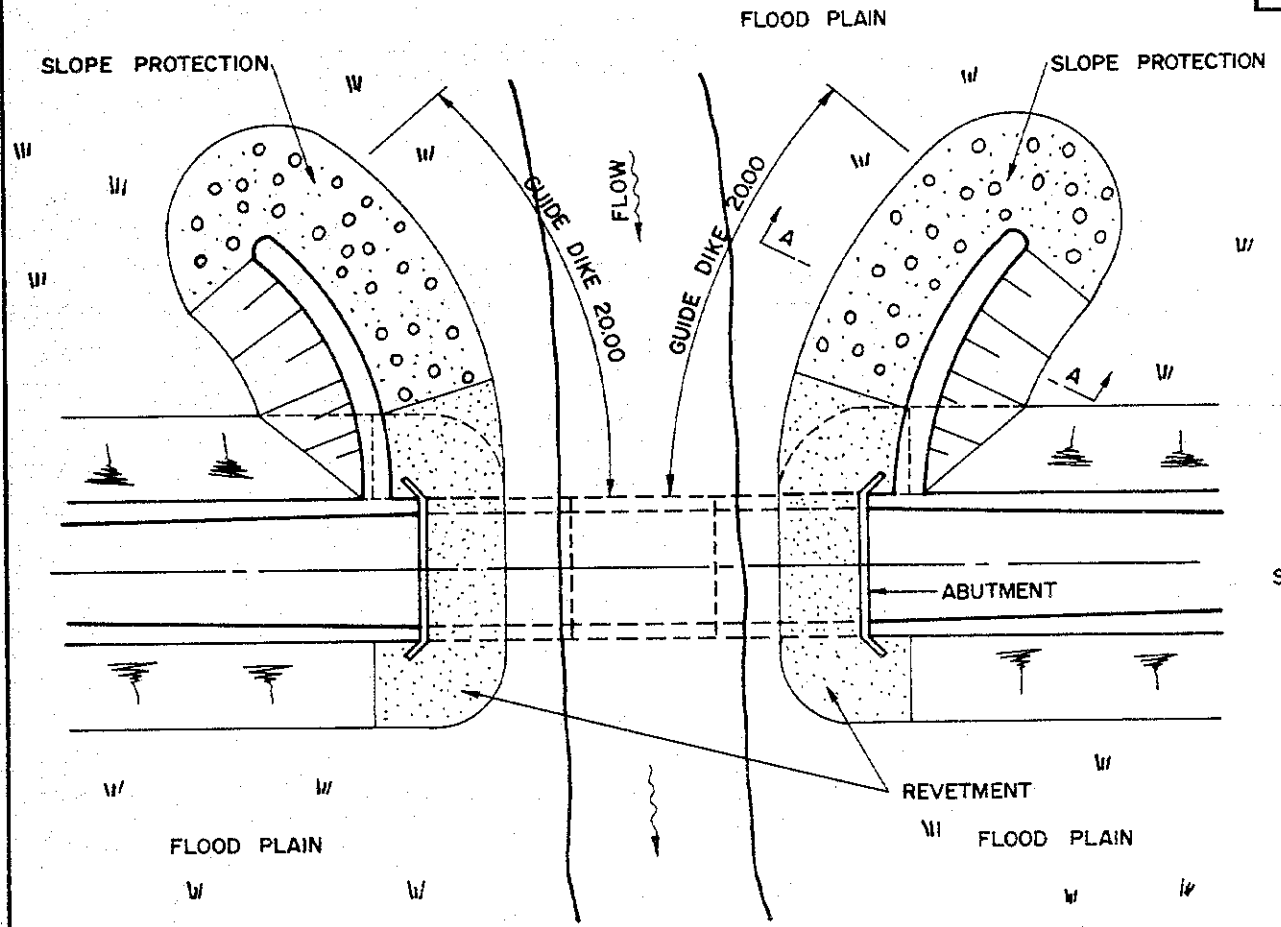
TYPE – A



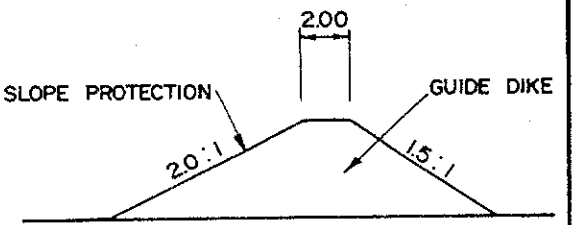
TYPE – B

OPEN CHUTE
SCALE 1:150

STANDARD DRAWINGS			
GUIDE DIKE			
SCALE	AS SHOWN	DRAWING NO.	24



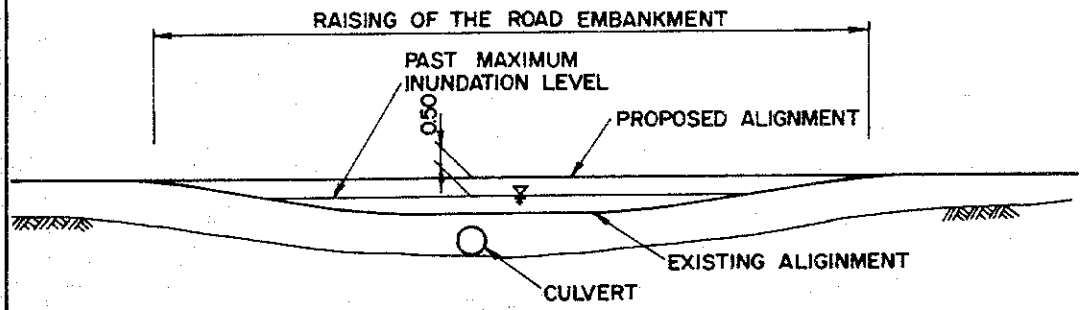
PLAN
SCALE 1:500



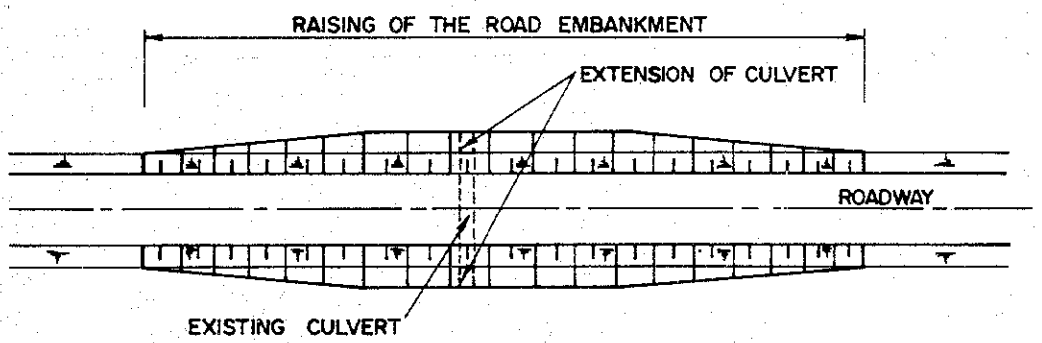
SECTION A-A
SCALE 1:300

A2 - 25

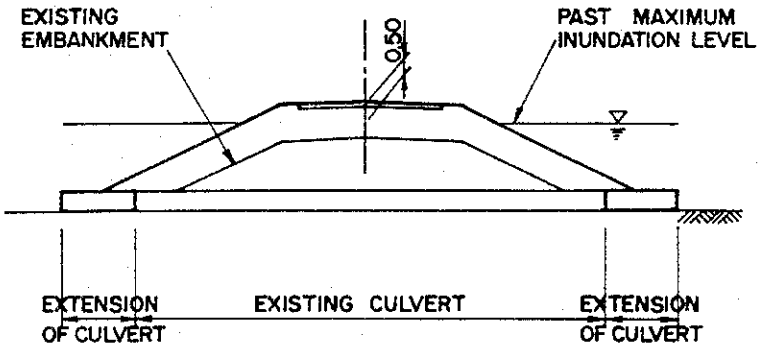
STANDARD DROWINGS			
RAISING OF THE ROAD EMBANKMENT			
SCALE	AS SHOW	DRAWING NO.	25



PROFILE
NOT TO SCALE



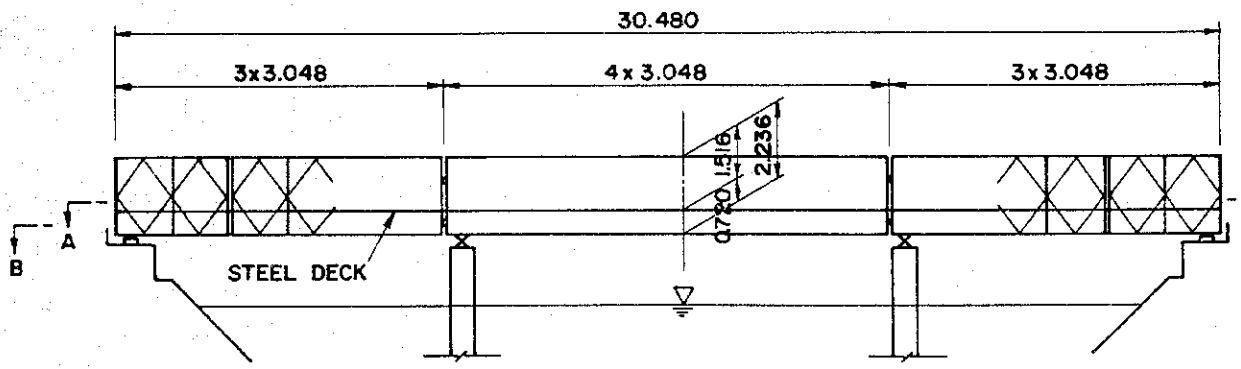
PLAN
NOT TO SCALE



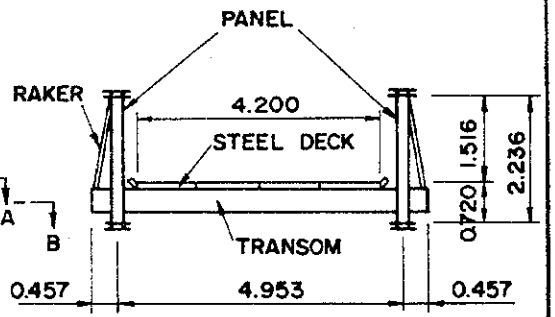
CROSS SECTION
SCALE 1:200

NOTES : THE ROAD SURFACE SHALL BE RAISED MORE THAN 50 cm. ABOVE THE PAST MAXIMUM INUNDATION LEVEL.

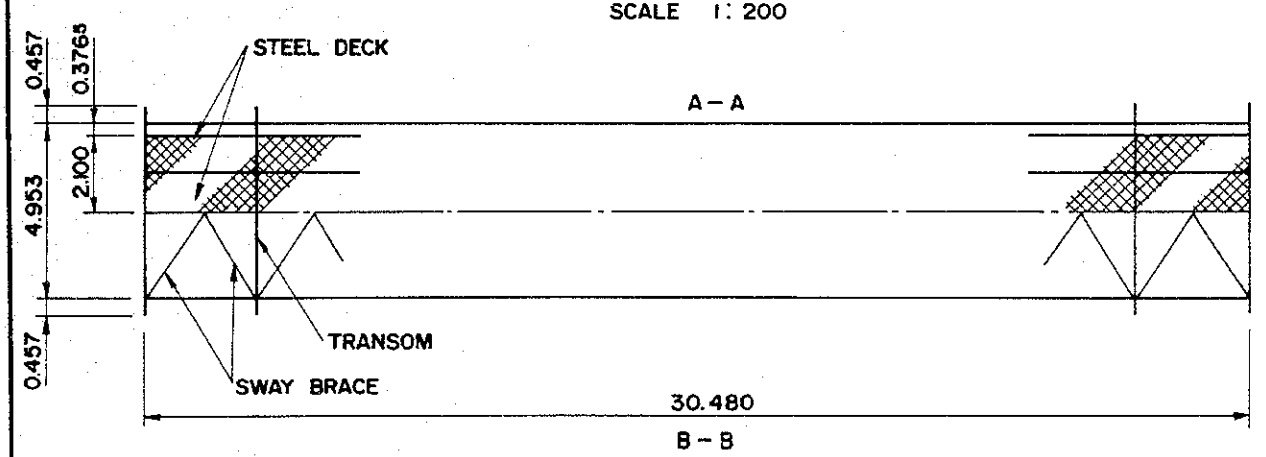
STANDARD DRAWINGS			
BAILEY BRIDGE			
SCALE	AS SHOWN	DRAWING NO.	26



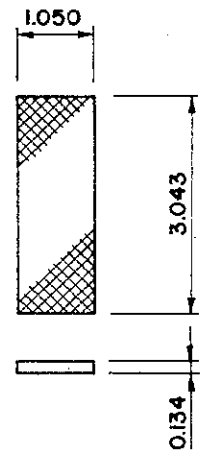
PROFILE
SCALE 1 : 200



CROSS SECTION
SCALE 1 : 125



PLAN
SCALE 1 : 200



STEEL DECK
SCALE 1 : 100