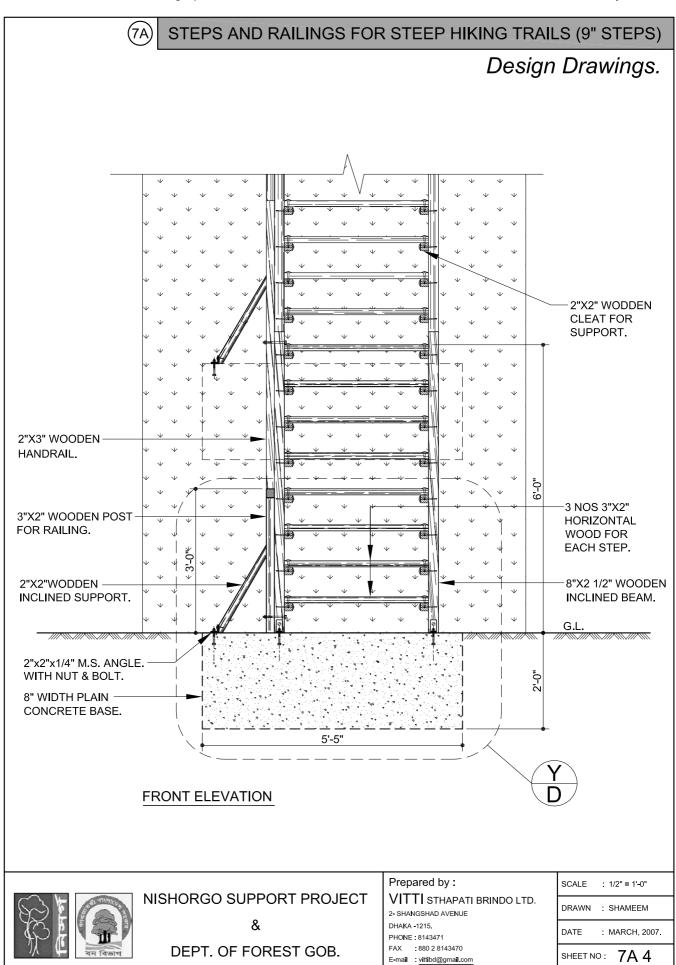
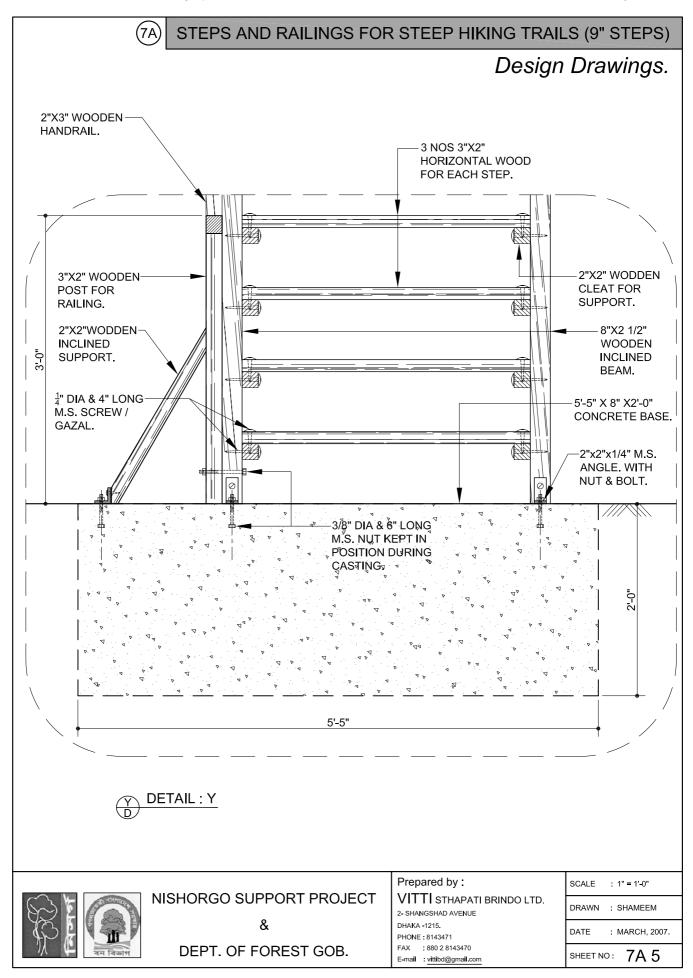


"Illustrated Guide Of Building Specifications For Conservation Area Facilities Within The Protected Area System".



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STEPS & RAILINGS FOR STEEP HIKING TRAILS (9" STEPS)

Technical Data and Specifications

Components Required for one Flight & one landing of 13'-0" way :

Description	Characteristics	Unit	Dimensions		
Description			Height	Length	Width
Concrete Base	Concrete Cast-in-situ block	2 Nos	2'-0"	5′-5″	8″
	for foundation (1:2:4)	1 No	3'-0"	5'-5″	8″
Wood work (inclined)	Wooden beam (Garjon)	2 Nos.	8″	9'-0"	2.5″
Wood work	Horizontal wooden beam	2 Nos.	8″	4'-0"	2.5″
Wood work for step	Horizontal wood plank	39 Nos.	2″	3'-0"	3″
Wood work for step	Wooden cleat for step	26Nos.	2″	9″	2″
Wood work for railing	Wooden vertical post	3 Nos.	3'-0"	3″	2″
Wood work for railing	Wooden hand rail	1 No.	3″	9'-0"	2″
	Wooden hand rail	1 No.	3″	4'-0"	2″
	Wooden inclined support	3 Nos.	2'-10"	2″	2″
Hardware	3/8" dia Nut	9 Nos.	-	6″	3/8" dia
	¼″ Gajal/ wire nail	136 Nos.	-	4″	¼" dia

Summary of Materials :

Fit out Darte	Type of Materials	Nos.	Volume		Weight	Long
Fit out Parts		NUS.	M ³	(p.m.p.)	(Kg)	(mm)
Cement	Portland Cement				200	
Aggregate	Brick Chips (1/2" to 3/4")		0.62			
Sand	Medium sand (F.M. 1.5)		0.31			
Wood	Garjon Wood		0.30			
Hardware	3/8" dia Nut ¼" Gajal/ wire nail	9 Nos. 136 Nos.				6" 4″

Specifications:

- 1. Concrete should be poured in proportion 1:2:4 (Cement : Sand : Brick chips)
- 2. Brick chips should be of 20 mm down graded.
- 3. Sand and chips should be washed with pure water properly before used.
- 4. The concrete should be softened before compaction for leveling. Necessary cement grouting may use at the time of compaction.
- 5. Water cement ratio should be properly maintained.
- 6. All wood should be seasoned and treated.

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DEPARTMENT OF FOREST, GOB & NISHORGO SUPPORT PROJECT	Design Guideline : STEPS & RAILING FOR STEEP HIKING TRAILS	Prepared by VITTI Sthapati Brindo Ltd.