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### 1.1 GENERAL

NHIDCL has evinced interest for taking up improvement to road from Lalchara (16.077 km) to Simlung (43.935 km) in the state of Tripura. The road stretch totally lies in hilly terrain. The condition of the road is bad. This will require major correction in geometries besides widening of the formation width. This will require some earthwork. The proposed project would involve a number of activities leading to production of large quantities of muck. Even though some of the muck will be utilized for back filling, yet some quantity of the excavated material will need to be relocated and dumped in such a manner that it does not impose any negative impact on the environment.

### 1.2 QUANTITY OF MUCK GENERATED AND ITS CONSUMATIVE USE

During construction of the various components of the projects, muck is generated both from soil or slide material and from rock excavation. Total quantity of muck / debris, generated due to the project, shall be 40,89,922 cum. Out of the total muck generated, 10,73,200 cum shall be utilized on project work leaving 30,16,722 cum to be dumped with 20% compaction at designated sites. The muck shall be properly rolled, compacted and dumped on slopes and treated to mix and match with the surrounding environment with least change in landscape. The total quantity to be disposed of would be as described below. Considerable quantities of muck can be reused for the project.

Table 1: GENERATED & USEABLE MUCK					
SI		Item	Generated Muck (in cum)	Reuseable Quantity (in cum)	Balance Quantity for disposal
1		Earth work in excavation			
	A	Soil	40,89,922	10,73,200	30,16,722
		Total	40,89,922	10,73,200	30,16,722

### 1.3 SELECTION OF MUCK DISPOSAL SITE

The selection of muck disposal sites was carried out considering the quantity of the muck. landscape, cost effectiveness, nearness to source of generation, absence of ground and surface water, relief and scope for afforestation works. **All the dumping locations are Govt. land i.e. Non- Forest land.** Two (2)

muck dumping sites have been identified matching the criteria. The details of dumping sites along with their total capacity and amount of muck to be disposed are enumerated in **Table 2 & 3**.

<b>Table-2</b>			
SI No	1		
Identification No of Muck Dumping Site	MDS/U-01		
Name of the Dumping Location/Site	1489/Ujan Machmara		
Area of Field=	60133	sqm	
Average Filling Height=	12.0	m	
Filling Volume=	<b>865915.20</b>	cum	
SI No	2		
Identification No of Muck Dumping Site	MDS/U-02		
Name of the Dumping Location/Site	1489/Ujan Machmara		
Area of Field=	150834.0	sqm	
Average Filling Height=	12.0	m	
Filling Volume=	<b>2172009.60</b>	cum	

Table-3							
SI No	District	Identification No of Muck Dumping Site	Name of the Dumping Location/Site	Capacity of the Dumping Site considering 20% compaction (cum)	GPS Co-ordinates (With Reference to Geo Referenced Cadastal Maps)		
					Point No.	Latitude	Longitude
1	NORTH TRIPUR A	MDS/U-01	1489/UJAN MACHMARA	865915	A	24.05099130	92.16295260
					B	24.04964020	92.16292770
					C	24.04890420	92.16705150
					D	24.05020730	92.16690980
2		MDS/U-02	1489/UJAN MACHMARA	2172009.6	E	24.05062720	92.16824700
					F	24.04921080	92.16836160
					G	24.04895150	92.17713430
					H	24.05022800	92.17745830
			Total=	3037925			

#### **1.4 IMPLEMENTATION OF ENGINEERING MEASURES AT MUCK DISPOSAL SITE**

In all the muck sites, the muck brought in dumpers shall be dumped and manually spread behind the crates and roller compacted in such a manner that rock mass is properly stacked behind the crates with minimum of voids.

#### **1.5 IMPLEMENTATION OF BIOLOGICAL MEASURES AT MUCK DISPOSAL SITE**

Biological measures, however, require special efforts as the disposed muck will be devoid of nutrients and soil contents to support vegetation. The selection of soil for spreading over such an area would require nutrient profiling of soil for different base elements. Suitable mixture of nutrients would be done before placing the soil on the top surface of muck disposal area to have administered growth of forest canopy.

#### **1.6 MONITORING & COMPLIANCES**

Muck shall be dumped from bottom in layers 50-70 cm depending on size of boulders.

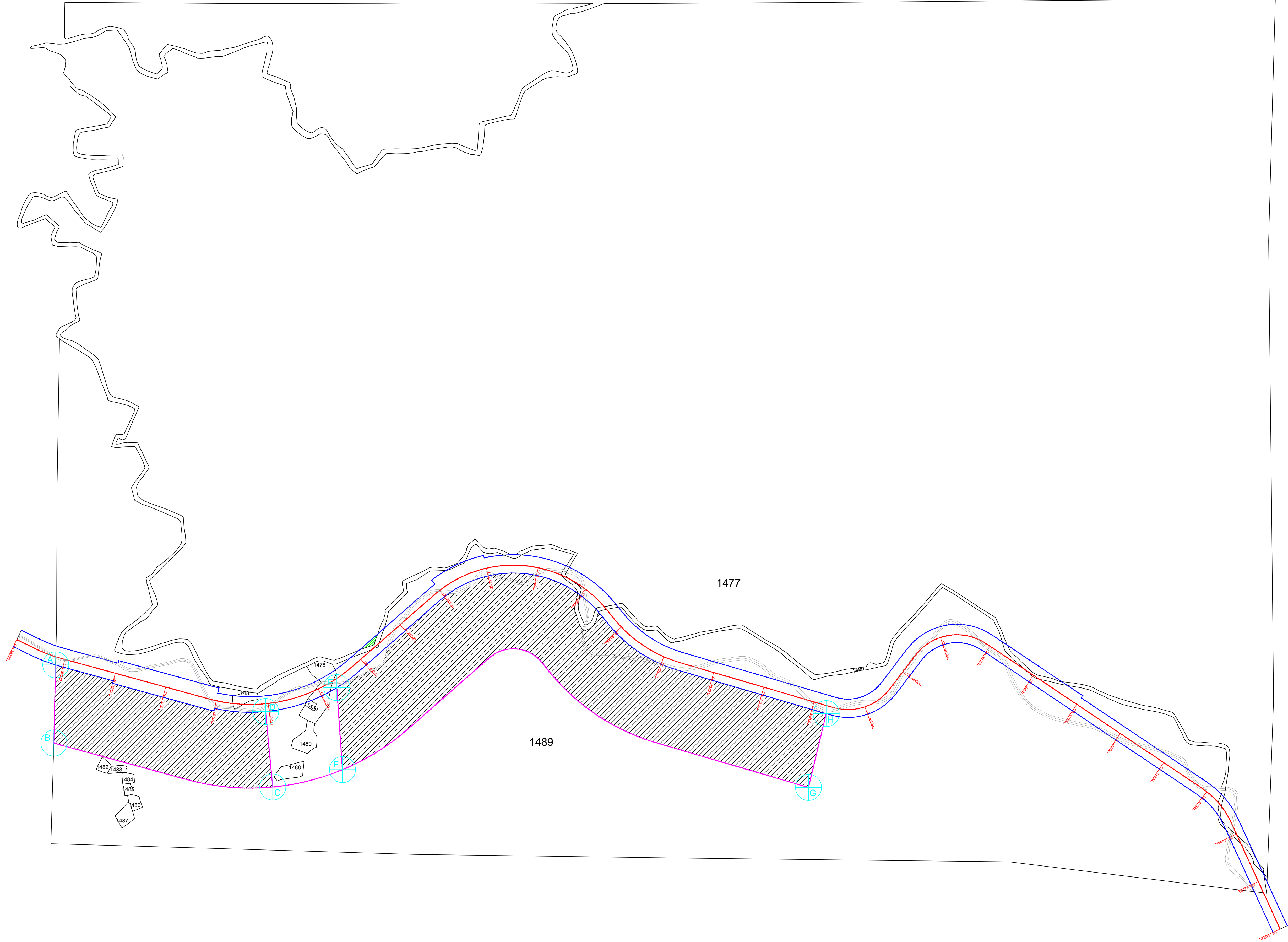
- i. Each layer shall be rolled compacted.
- ii. A layer of soil shall be spread on top of it to make it suitable for plantation.
- iii. Water testing facilities shall be set up for checking quality parameter of water.
- iv. Soil samples shall be regularly collected and tested for checking the level of contamination.
- v. Prescribed norms and approvals will be sought from MSPCB wherever necessary.
- vi. All norms of Forest department, MSPCB and MoEF and their acts related to muck disposal shall be complied with.
- vii. Plantation cannot be done as the land for Much disposal is Private land.

#### **1.7 RECOMMENDATIONS**

Following recommendations for smooth implementation of the Muck Disposal Plan are delineated below:

- The Dump sites may be marked at site with display boards.
- No water body will be blocked in dumping site.
- No tress shall be cut in the dumping areas unless essential for movement of earth dumping and rolling equipment.
- Project authorities should ensure frequent meetings with the project team to enable smooth implementation of the Plan.

MOUJA :- UJAN MACHMARA RF  
SHEET NO. :- 32  
TEHSIL :- UJAN MACHMARA  
REV. CIRCLE :- KANCHANPUR  
SUB-DIVISION :- KANCHANPUR  
DISTRICT :- NORTH TRIPURA  
SCALE:- 16" = 1MILE



Legend:-

Geo Ref. Point	-	
MUCK DISPOSAL LAND	-	
Proposed ROW	-	
Proposed Center line	-	
Existing Center line	-	



MAP SHOWING MUCK DISPOSAL ON SURVEY OF INDIA TOPOSHEET  
WITH FOREST LAND BOUNDARY & PROPOSED ALIGNMENT

