

Government as and when required. Monitoring agency may disseminate the results in any other forms.

1.1.3 Muck management plan

➤ GENERAL

For construction of different components of Chainage 83 Road and Tunnel to be evacuated, disposed of and roller compacted or laid on mild slopes with the excavation work, to such designated areas where the muck piles do not substantially interfere with either environment/ ecology or the river flow regime and cause turbidity impairing the quality of water. The disposal of muck has to be scientifically planned to keep in view the pecuniary aspects necessitating nearness to the generating component of work, which understandably reduce the travel time of dumpers, interference to surface flow and ground water aquifer, and disposition of habitation. In the present case, the total quantity of muck / debris, to be generated due to the project, shall be 1.29 lakh cum, out of which 3877 cum shall be consumed on project work leaving 1.26 Lakh cum, to be disposed-off away from sites so as to make available the clear site for construction activities. The muck which is suitable for use as aggregate material for concrete on non-wearing surface, backfill concrete and for widening of the road shall be properly stacked. The muck unsuitable for use in concrete etc. shall be dumped on slopes and treated to mix and match with the surrounding environment with least change in landscape. During construction of the project, huge quantities of excavation will be carried out from the Tunnel and Approach Road and shall be either roller compacted to provide stable terraces for erection of labor camps, job facilities and storage area, or dumped in designated areas to provide stable slopes.

The muck disposal sites were identified during course of survey and investigation of the project 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. The details of dumping sites along with their total capacity and amount of muck to be disposed are enumerated in Table.

➤ **Muck Disposal and Possible Sites**

A huge quantity of muck (about 129989 M³), which will be generated during the construction work, needs to be disposed of Table. The dumping of rock spoil can potentially be a cause for environmental problems and land degradation. It would cause landslides and be an aesthetical damage to the natural landscape.

All Highway works in India are to be in accordance with the MORTH specifications and guidelines of Indian Roads Congress (IRC). The MoRTH specifications have special provisions towards protection of environment under Clause 501, Annexure A and the contractor is to satisfy these provisions. Apart from this there are provisions for control of erosion, drainage, dust suppression, borrow area and haul road management under relevant sections.

Provisions of clause 501 Annexure A, cover the environmental aspects regarding the disposal of the muck, etc. For example, it is unambiguously clarified that

- a. The contractor shall take all necessary measures and precautions to carry out the work in conformity with the statutory and regulatory environmental requirements
- b. The contractor shall take all measures and precautions to avoid nuisance or disturbance from the work.
- c. In the event of any spoil, debris, waste or any deleterious material from site being deposited on adjacent land, the same shall be removed and affected area shall be restored to its original state
- d. The contractor shall prevent any interference with supply/abstraction of water



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resources

- e. Water used for dust suppression shall be reused after settlement of material in collected water
- f. Liquid waste products to be disposed of such that it does not cause pollution
- g. No debris is to be deposited or disposed into/adjacent to water courses

Table: Details Regarding the Utility of Muck Generated

Total Muck Generation	129989 Cu. m.
Consumable Muck Quantity	3877 Cu. m.
Balance Muck Requiring Disposal	126112 Cu. m.

Depending upon the characteristics of the excavated material, it can be used for different purposes after appropriate sorting from the areas where it is dumped. The following can be the chief reuses:

- Producing aggregate for construction purposes. Basalts and limestones can be used. The use as backfill material, material for road, dams as well as material for filter and drainage layers is most suitable. If the material has sufficient quality for use as in sub-base layers or as mineral aggregates for concrete has to be further investigated.
- Earth filling works. Slope debris material, slates and phyllites can only be used for unloaded/uncharged landfills.

TOTAL AREA FOR MUCK DISPOSAL			
Total Excavation	Total Disposal	Required Land	Identified disposal Land in Kanal
129989 m ³	126112 m ³	62.33 Kanal	291 Kanal
		31528 sqm.	147193 sqm.



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The muck to be generated shall have to be appropriately dumped in tips at various suitable locations so that it does not degrade the various elements of the natural environment.

SL. NO	AREA NAME	POCKET	APPROX. AREA IN KANAL (1 KANAL = 505.857 SQM)	LOCATION	COORDINATES
1	Chainage 83	M-1	16 X 505=8093 m ²	New Thatri, kistwar	574210.4400 E 3667781.3500 N
2		M-2	25x505.857=12645 m ²	Drabshalla	574210.4400 E 3667781.3500 N
3	Bhadarwah	M-3	250x505.857=126462 m ²	Bhaderwah road	557428.00 m E 3657946.00 m N

The details of Muck Disposal plan with Coordinates





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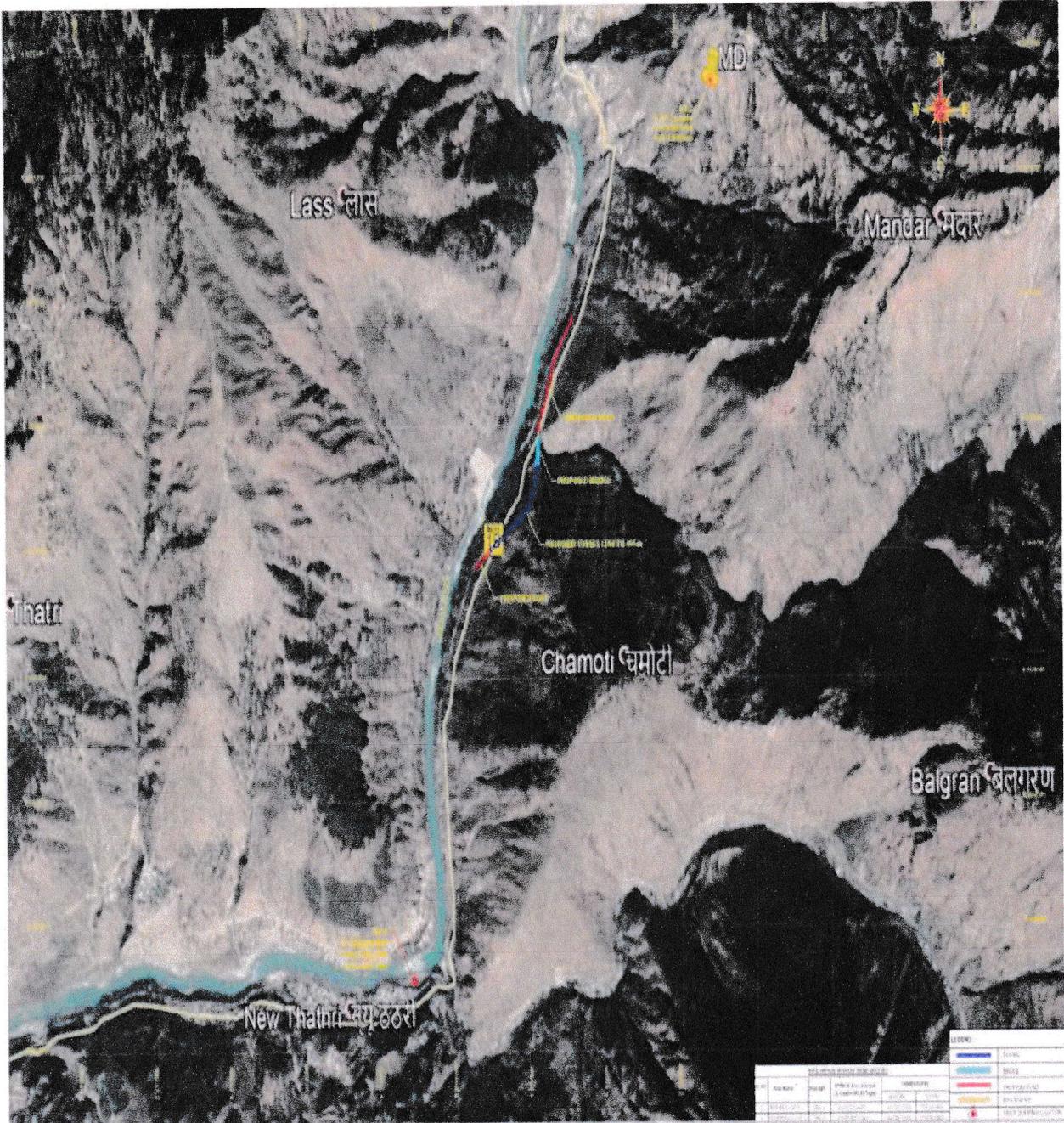
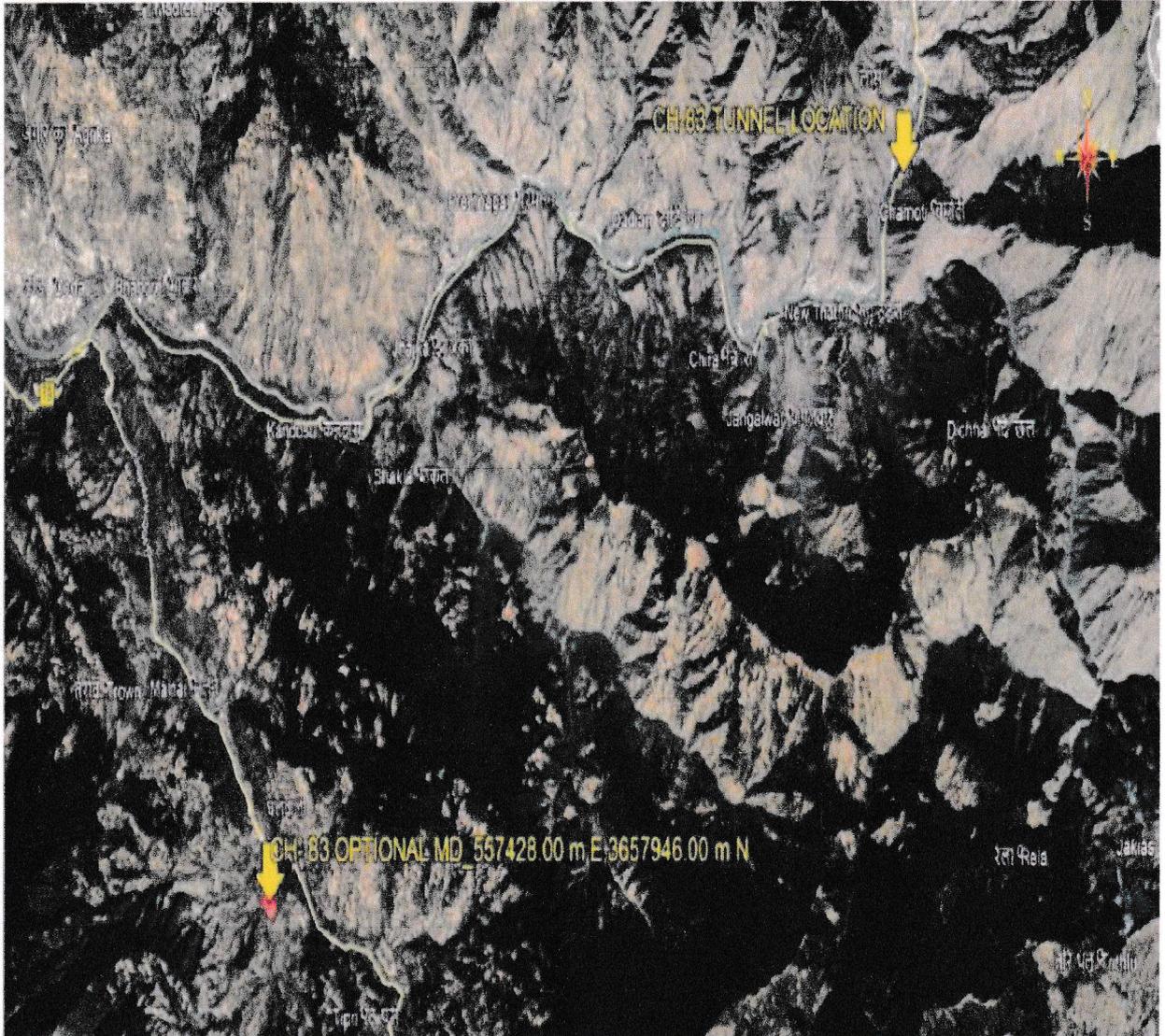


Figure: Muck area Identification with Coordinate



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Sawadell
 GOVT. OF JAMMU & KASHMIR
 M.H.D.C.L.

Legend	
[Blue line]	State Highway
[Red line]	District Road
[Yellow line]	Proposed Road
[Green area]	Forest Area
[Red area]	Water Body
[Black area]	Settlement Area
[Grey area]	Barren Land
[White area]	Open Land

Muck Area Identification with Co-ordinates on Google earth



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translation of Dasti map.
Dasti map of the Area proposed for dumping of left material from Kuligash Tunnel, village Dugga Tehsil Drabshalla Dist. Koshwar for the year 2019.

Scale: 1" = 40 Karam.

Details of Land owners.

- 1, Haji Mohd Amin Buojrah = 8 Kanals
- 2, Mohd Amin
- 3, Mohd Hussain
- Mohd Yaseen Sons
- Nagarna Begum s/o
- Gh. Heider and
- Firdous Ahmed s/o
- Mohd Ramzan

= 24 " (South)

- 3, Mohd Shafi s/o
- Sandia Guffar = 12 Kanals

- 4, Noor Hussain s/o
- Sabria = 6 "

- 5, Shabis Ahmed s/o = 10 "
- Gh. Mohd

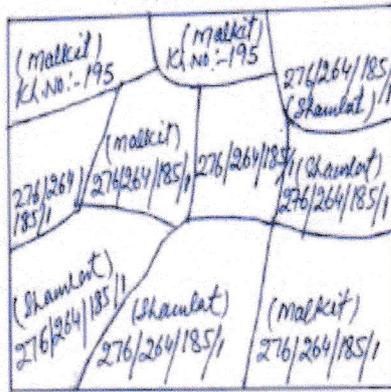
- 6, Fagir Ahmed s/o = 8 "
- Gh. Mohd

- 7, Bal Krishan s/o = 12 Kanals
- Nath Ram

Total = 80 Kanals.

(East)

144 Karam



(West)

Joint inspection of site conducted on 06/07/2019 by the rep. of NHIDCL / Forest / Revenue and Rodic Consultancy as the said land is private land.

Sd/-
Tehsildar
DRABSHALLA.

Area Calculations.

$$\frac{144 \times 100}{\text{Rectangle}} = 80 \text{ Kanals.}$$

Dastimap as per spot demarcated by NHIDCL

Sd/-
Patwari
Halka Sarosa
dt. 29/8/2019.
P/C Patwari.

Sd/-
Tehsildar
DRABSHALLA.
dt. 29/8/2019.

Translated Joint inspection of site conducted on 06.07.2019 by the rep NHIDCL/Forest/Revenue/Rodic as said land is private land.

