

Introduction

Diversion of 9.053 ha forest land for the construction and upgradation of existing road from Nanadprayag to Ghat motor road length 19.00 Km in Distt. chamoli.

1.Quantity of Material to be excavated:-

The construction activities would generate muck from excavation for various project Structures . The total Quantity of muck generated from soil and rock excavation is about 117928.25 cum(including the swell factor of 40 %) of the total muck generated, about 47171.30 cum is expected to be utilized for various construction activities. total quantity of muck proposed to be disposed in designated muck disposal area, after considering 40% swelling factor would be 165099.55 cum. the entire excavated material is proposed to be dumped at 19 locations identified specifically for this purpose.

2. Muck disposal Site:-

Criteria for selection of Dumping Site

The following points were considered and followed as guidelines for finalization of the areas to be used as dumping sites:

- (i) The dumping Sites have been selected as close as possible to the project area to avoid long distance transport of muck.
- (ii) The site is free from any landslides or creep and care has been taken that the sites do not have a possibility of toe erosion and slope instability.
- (iii) There is no active channel or stream flowing settlement areas.
- (iv) The site is away from human settlement areas.

For the disposal of 90000 cum of muck 19 sites have been identified with total area of 1.98 ha details are given with format.

Analysis for dumping yard

कार्ड का नाम— मा. मुखमंडी चौकण रोड 731/2017 के अन्तर्गत जलपट्टी के विस्तार तथा क्षेत्र भराली के विकासखण्ड घाट के अन्तर्गत अमरपुरा-घाट रोड मार्ग का जीर्णोद्धार एवं सुगमिकरण कार्य।

Material received due to Hill side cutting $3.00 \times 4.67/2 \times 19000.00 =$ 117928.25 Cum
 Add swell factor @ 40% = 47171.30 Cum
 Total = 165099.55 Cum

USE OF MATERIAL

S.No.	Length of Road (in Km.)	Item for Which material to be Used	Quantity of Muck Consumed	Unit
1	19.00	Stone masonry in cement sand mortar	6130.89	Cum
2	19.00	Stone masonry laid dry	6941.13	Cum
3	19.00	Hand packed stones filling	3173.12	Cum
4	19.00	Construction of Gabion/wire crate	850.90	Cum
5	19.00	Construction of parapets	914.41	Cum
6	19.00	Construction of side drain	389.42	Cum
7	19.00	Construction of scuppers	5687.06	Cum
8	19.00	Concrete works	315.51	Cum
9	19.00	Construction of Condit walling	977.63	Cum
10	19.00	Construction of edge stone	51.84	Cum
11	19.00	Construction of causeway	533.25	Cum
12	19.00	Granular sub-base (GSB)	9202.20	Cum
13	19.00	G2 work	10171.02	Cum
14	19.00	G3 (Grading to be done using to be granulator)	10171.02	Cum
15	19.00	Super elevation and patch filling	12400.19	Cum
16	19.00	Construction of muck dumping yard	7400.00	Cum
Total			75309.57	Cum

Material left for disposal $(165099.55-89789.98)$ 89789.98 Cum
 As per attached detailed capacity of dumping yard 89789.98 Cum
 Volume of the dumping yard 90000.00 Cum

प्रमाणित योजना
 प्रमुख एवं प्रमाण मंत्री
 (नगर)

नगर विकास
 नगरपालिका
 प्रमुख एवं प्रमाण मंत्री

Assistant Engineer
 P.D. P.W.D. Karanprayag

Assistant Engineer
 P.D. P.W.D. Karanprayag

Executive Engineer
 P.D. P.W.D. Karanprayag

Dumping Yard Planning

कार्य का नाम- नग नुख्यमंती घोषणा संख्या 797/2017 के अन्तर्गत जनपद चमोली के विधानसभा क्षेत्र थराली के विकासखण्ड घाट के अन्तर्गत नन्दप्रयाग-घाट मोटर मार्ग का चौड़ीकरण एवं सुधारीकरण कार्य।

S.No.	Location	Co-ordinates of Dumping Yard		Length (m)	Width (m)	Height (m)	Volume (Cum)
		Northing-Easting	Location				
1	Xs-00/24	30°19'18.91"N - 79°19'20.70"E	Sem	45.00	25.00	4.00	4500.00
2	Xs-01/04	30°19'06.40"N - 79°19'28.03"E	Mangroli	50.00	25.00	4.00	5000.00
3	Xs-02/06	30°18'34.44"N - 79°19'32.29"E	Tefna	35.00	25.00	4.00	3500.00
4	Xs-03/39	30°18'17.34"N - 79°20'30.97"E	Gwala	60.00	25.00	4.00	6000.00
5	Xs-04/26	30°18'18.73"N - 79°20'49.87"E	Thirpak	50.00	25.00	4.00	5000.00
6	Xs-05/18	30°18'22.91"N - 79°21'07.52"E	Thirpak	40.00	20.00	4.00	3200.00
7	Xs-06/36	30°18'02.03"N - 79°21'51.24"E	Khargoli	50.00	25.00	4.00	5000.00
8	Xs-07/33	30°17'39.02"N - 79°22'12.84"E	Khargoli	40.00	25.00	4.00	4000.00
9	Xs-08/30	30°17'33.06"N - 79°22'55.63"E	Khargoli	50.00	15.00	4.00	3000.00
10	Xs-09/18	30°17'22.87"N - 79°23'07.22"E	Kameda	50.00	25.00	4.00	5000.00
11	Xs-010/18	30°16'55.22"N - 79°23'17.87"E	Kameda	70.00	27.00	4.00	7560.00
12	Xs-11/11	30°16'48.53"N - 79°23'41.03"E	Chamtoli	70.00	23.00	4.00	6440.00
13	Xs-12/28	30°16'25.25"N - 79°24'18.04"E	Chamtoli chak Banawara	50.00	20.00	4.00	4000.00
14	Xs-13/02	30°16'25.68"N - 79°24'27.87"E	Chamtoli chak Banawara	70.00	20.00	4.00	5600.00
15	Xs-14/21	30°16'11.92"N - 79°25'14.39"E	Siyatoli lga Bazaar	50.00	25.00	4.00	5000.00
16	Xs-15/17	30°15'55.75"N - 79°16'17.83"E	Siyatoli lga Bazaar	50.00	20.00	4.00	4000.00
17	Xs-16/14	30°16'09.95"N - 79°25'37.09"E	Siyatoli lga Bazaar	50.00	25.00	4.00	5000.00
18	Xs-16/40	30°15'46.30"N - 79°26'31.12"E	Siyatoli lga Bazaar	50.00	25.00	4.00	5000.00
19	Xs-17/10	30°15'43.00"N - 79°26'43.65"E	Siyatoli lga Bazaar	40.00	20.00	4.00	3200.00
Total volume of dumping yard							90000.00

90,000.00 Cum.

प्रभागीय वनाधिकारी
बडीनाथ वन प्रभाग गोपेक्षर
(चमोली)

Junior Engineer
P.D. P.W.D. Karanprayag

Assistant Engineer
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बडीनाथ वन प्रभाग गोपेक्षर

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Rehabilitation of Muck Disposal Site:-

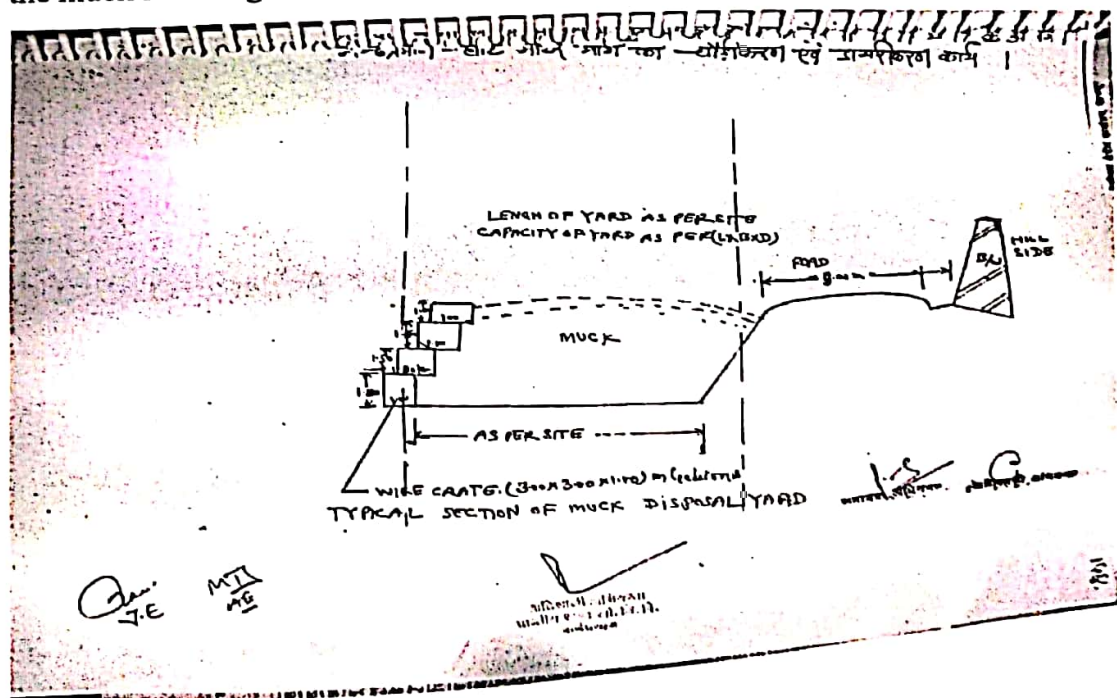
The Rehabilitation plan of muck dumping site includes engineering and biological measures. The project authorities would ensure that dumping yards blend with natural measures. The project authorities would ensure that dumping yards blend with natural landscape are developed with patches of greenery in and around it. The site can also be developed later as recreational park or any other purpose with sufficient greenery by planting ornamental plants with a view to develop bio-diversity park. The following engineering and biological measures have been proposed for the development of spoiled areas.

Following Engineering and biological measure have been proposed for the development of spoiled area.

1- Engineering Measures:-

(i) Wire crate Gabion wall

Total area for the dumping of muck is 1.981 ha which can easily accommodate 165099.55 cum muck. The height of the gabion block will be 1 meter and different layers of it will be installed simultaneously, as per requirements. A typical sketch of the muck retaining structure is attached as design/drawing and Site photographs.



कार्य का नाम— भागनीय मुक्तमंडी जी की प्रोशाना संस्था १९१७/२०१७ के अन्तर्गत जनपद चम्पली के विधानसभा क्षेत्र चम्पली के विकासखण्ड घाट के अन्तर्गत नन्दप्रसाग—घाट मोटर मार्ग के चौड़ीकरण एवं सुव्यवस्थापन कार्य।

कास सीकशन 0/24



Class: T.E. MII
Date: / /

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कार्य का नाम:- सारणीय मुख्यमंत्री जी की घोषणा संख्या 237/2017 के अन्तर्गत जनपद चम्पौली के विकास तथा क्षेत्र
भरारी की विकासखण्ड घाट के अन्तर्गत तन्त्रप्रयाग-घाट मोटर मार्ग के सीढ़ीकरण एवं सुव्यवस्था कार्य।

कास सीकसन 2/8



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પાઝીય કાન્યા સો. મિ. મિ.
સા. સંસ્થા

कार्य का नाम:- मलनीम मुकदमदी जी की घोराणा संख्या 797 / 2017 के अन्तर्गत जलपद समीची की किसानसमा सेवा
सहायी के विकासखण्ड शाद के अन्तर्गत नन्दप्रसाद-शाद भीटर मार्ग के चौकीकरण एवं सुधारीकरण कार्य।
कास लेखान 8 / 30

कास सीकान 8/30



Q.E.D.

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अभिषेकान्तरात् अत्राप्यत्र
प्राचीनं चण्डिका स्त. वि. वि.
मन्त्रादयः

कार्य का नाम- सार्वजनिक मुलासमती जी की धोरण सत्र 787/2017 की अन्तर्गत जनपद मन्गोली के विकासका क्षेत्र मन्गोली के विकासका सत्र की अन्तर्गत मन्व्यप्रदान-सात मोटर मार्ग के सीडीकरण एवं सुधारकरण कार्य।

काल सीमा 12/28

कास सीएसन 12/28



Q. 7 E

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कार्य का नाम— भागीधर पुष्पाजी जी की घोषणा संख्या ११७/२०१७ के अन्तर्गत जनपद भगीली के विधानसभा क्षेत्र भगीली के विधानसभा क्षेत्र के अन्तर्गत मन्दारबाग—घाट मोटर मार्ग की बिडिकरण एवं सुधारीकरण कार्य।

कास सीकशन 18/14



Q. 7

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अध्यापकजी के निवास पर
आचार्य काकाजी एवं. वि. वि.
अध्यापकजी

कार्य का नाम— माननीय मुख्यमंत्री जी की संस्था का संस्था 737/2017 के अन्तर्गत जनपद कन्नौज के विकास तथा क्षेत्र
कन्नौज के विकासकायक धारा के अन्तर्गत मन्त्रालय—धारा नोट्स मार्ग के भीतीकरण एवं सुधारकरण कार्य।

काल सीटान 14/21



Q.E

3/11

અભિજ્ઞાની અભિજ્ઞાન
પાસીને જાણ નહીં, જાણ
અભિજ્ઞાન

(ii) Compaction

Compaction is an engineering measure, which would reduce bulk density of muck thereby optimizing the use of muck disposal area and would make it suitable for plantation and other biological measures. Top surface would be levelled and graded and muck will be spread in layers of 500-700 mm thick layers.

2- Biological Measures:-

Vegetation cover controls the hydrological and mechanical effects on soils and slopes and helps to stabilize the loose soil. Accordingly, the muck disposal sites after proposed engineering measures as mentioned above, shall be treated with biological measures for the purpose of plantation. To implement the biological measures in dumping area, the following activities would be taken into account. The biological measures include the following:-

(i) Soil treatment

Muck dumped at various sites is not considered to be nutrient rich as it is excavated from Road surfaces and other structures. In order to make it suitable for the plantation it will be provided bio-treatment.

(ii) Plantation

After the process of compaction and Soil treatment, The dumping site will be available for the plantation. Appropriate local native species shall be selected in consultation with the horticultural department as well as forest department. For plantation, 1-2 year old saplings would be used. Grasses and herbaceous species would also be used in the inter space of tree and shrub species. They will help in providing the continuous chain of support in retaining debris, reinforcing soil and increasing the infiltration capacity of the area. The afforestation with indigenous plant species of high ecological and economic value which can adapt to local habitat will be undertaken with 500 plants per hectare depending upon the canopy cover required.

Dumping zone area (in ha)	No of sapling to uses in dumping zone (500 per ha.)	Amount per hectare in according to financial year. (when sapling to be planted)	Amount (in lakh.)	Name of plants Species
1.981	990	370302.00	7.34756	Local plants.

3- Monitoring & Compliance

Muck shall be dumped from bottom in layers of 500-700mm 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) All norms of Forest Department SPCB and MoEF & CC and their acts related to muck disposal shall be complied with.
- (iv) Design consultant shall be engaged for designing of retaining Structures.
- (v) Plantation shall be done on the reclaimed land and native variety of plants and trees shall be planted.

Junior Engineer (C)
Pro Div PWD
Karanprayag

अध्यासी जनसंख्या
प्रान्तीय सण्ड ली. जि. वि.
कनप्रयाग

गा. सेवाधिकारी
गन्धप्रयाग रोज
श्रीनाथ वन प्रभाग गोपेश्वर

प्रभागीय वनाधिकारी
चद्रीनाथ वन प्रभाग
गोपेश्वर