

**Government of Andhra Pradesh
Forest Department**

From

Sri M. Siva Prasad, IFS
Divisional Forest Officer,
KADAPA.

To

The Conservator of Forests (Central),
Ministry of Environment Forests &
Climate Change,
Regional Office (SEZ),
Chennai.

Rc.No.1851/2009/A8, Dated: 15.12.2018.

Sir,

- Sub :** APFD – F(C) Act, 1980 – SKD GNSS (Sri Krishnadevaraya Gaaleru, Nagari Sujala Sravanthi) Divisional No.7, Pulivendula – Phase-II - Package No.02/06 - Diversion of 101.24 Ha. of Forest land in Ganganapalli RF of Vempalli Range of Kadapa Forest Division for excavation GNSS main canal from Km.87.400 to Km.92.250 and from Km.93.450 to Km.94.800 in favour of Executive Engineer, SKD GNSS (Sri Krishnadevaraya Gaaleru, Nagari Sujala Sravanthi) Division No.7, Pulivendula – submission of replies to the points a to h – Reg.
- Ref :** 1. Prl. CCF (HoFF), A.P., Guntur Rc.No.5163/2016/FCA-1, Dt:22.11.2018.
2. This office Rc.No.1851/2009/A8, Dt.29.11.2018
3. Executive Engineer, GNSS (Sri Krishnadevaraya Gaaleru, Nagari Sujala Sravanthi) Division No.7, Pulivendula Lr.No.EE/GNSS Div.7/PLVD/DB/AEE411M, Dt.10.12.2018.



It is submitted that, the Prl. Chief Conservator of Forests, Andhra Pradesh, Guntur has issued instructions to submit the additional information on six (6) points i.e., a to f as called for excavation GNSS main canal (Package-02/06) from Km.87.400 to Km.92.250 and from Km.93.450 to Km.94.800 vide reference 1st cited.

In this connection it is submitted that, the Executive Engineer, GNSS (Sri Krishnadevaraya Gaaleru, Nagari Sujala Sravanthi) Division No.7, Pulivendula was prepared and submitted the information on six (6) i.e., a to f points as sought by the Chief Conservator of Forests (Central), Regional Office (SEZ), Chennai as per the site inspection Dt:13.11.2018 to 16.11.2018 communicated in the reference 1st cited pertaining to Package No.02/06 - Diversion of 101.24 Ha. of Forest land in Ganganapalli RF of Vempalli Range of Kadapa Forest Division for excavation GNSS main canal from Km.87.400 to Km.92.250 and from Km.93.450 to Km.94.800. A copy of the same is herewith enclosed for favour of perusal.

Encl: As above

Yours faithfully,

Divisional Forest Officer,
Kadapa.

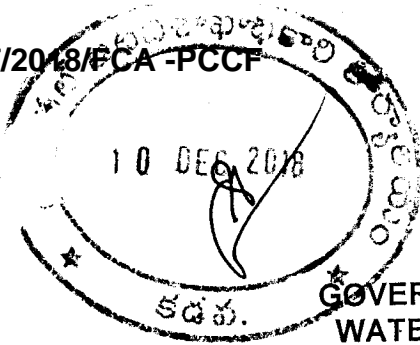
Copy submitted to the Prl. Chief Conservator of Forests, Andhra Pradesh, Guntur for favour of information

Copy submitted to the Chief Conservator of Forests, Kurnool Circle, Kurnool for favour of information

Copy to the Executive Engineer, GNSS (Sri Krishnadevaraya Gaaleru, Nagari Sujala Sravanthi) Division No.7, Pulivendula for information.

Copy to the Forest Range Officer, Vempalli for information.

Divisional Forest Officer,
Kadapa.



3224
11-12-18

GOVERNMENT OF ANDHRA PRADESH
WATER RESOURCES DEPARTMENT

From
Sri N. Ravikiran,
Executive Engineer,
GNSS Sub Division no. 7,
Pulivendula

To
The Divisional Forest Officer,
Kadapa,
YSR Kadapa District

Letter No. EE/GNSS Div. 7/PLVD/ DB/AEE ^M 4-11 Dated: 10-12-2018

Sub: - APFD - F (C) Act, 1980 - SKD GNSS Division No. 7, Pulivendula -
Phase II - Package No. 02/06 - Diversion of 101.24 Ha. Of Forest land in
Ganaganapalli RF of Vempalli Range of Kadapa Forest Division for
excavation of GNSS main canal from Km 87.400 to KM 92.250 and from
KM 93.450 to Km 94.800 - Additional information - Submission - Reg

Ref: - 1. Prl. CCF (HoFF), A.P., Guntur Rc. No. 5163/2016/FCA-1, Dt:22-11-
2018
2. DFO, Kadpa Rc. No. 1851/2009/A8, Dt. 29.11.18

Adverting to the reference cited, I herewith submit the point wise
information as follows:

1. In the KML file, it is uploaded in single file clearly mentioned as Bit-1 and Bit-2 for 2 patches because separately files not accepted/supported by the software
2. As per Approved Hydraulic particulars by the Chief Engineer, Central Designs organization, Hyderabad, typical cross sections approved and soil classification the widths are arrived and proposed at individual cross sections. Only at particular stretch where the depth of cut is maximum the width will be larger. The proposed widths are bare minimum and required.
3. Only single road i.e., C.K Dinne to Polathala is crossing at end point in package 2. As this road belongs Panchayat Raj Department necessary "No objection certificate" from the Panchayat raj department is obtained and herewith submitted. It is also certified that the existing B.T road will be regarded or re-laid by the Water resources department.
4. The Chief Engineer (Projects), Kadapa requested the Government of India for extension of Environmental clearance upto 30.6.2004 vide letter no. CE (P) & DWRO/WRD/KDP/TS-3/GNSS. ENV/95 Dt: 01-12-2018 (Copy enclosed). After receipt of the same it will be communicated.

have N/A
A

A 8

5. Provision for canal bank plantation is made in the estimate and will be taken up while executing works. There are no reservoirs in package 2 and it is only linear canal. Hence CAT plan does not arise. All along the canal catch drains are provided at both sides to collect rain water and proper disposal.

It is requested to obtain and communicate Stage 1 clearance for this proposal at early date. It is submitted that this package is under prioritized list of the projects in Andhra Pradesh and being reviewed by the Honorable Chief Minister of A.P on every Monday. Tenders are to be called for shortly. Hence urgent action is solicited.

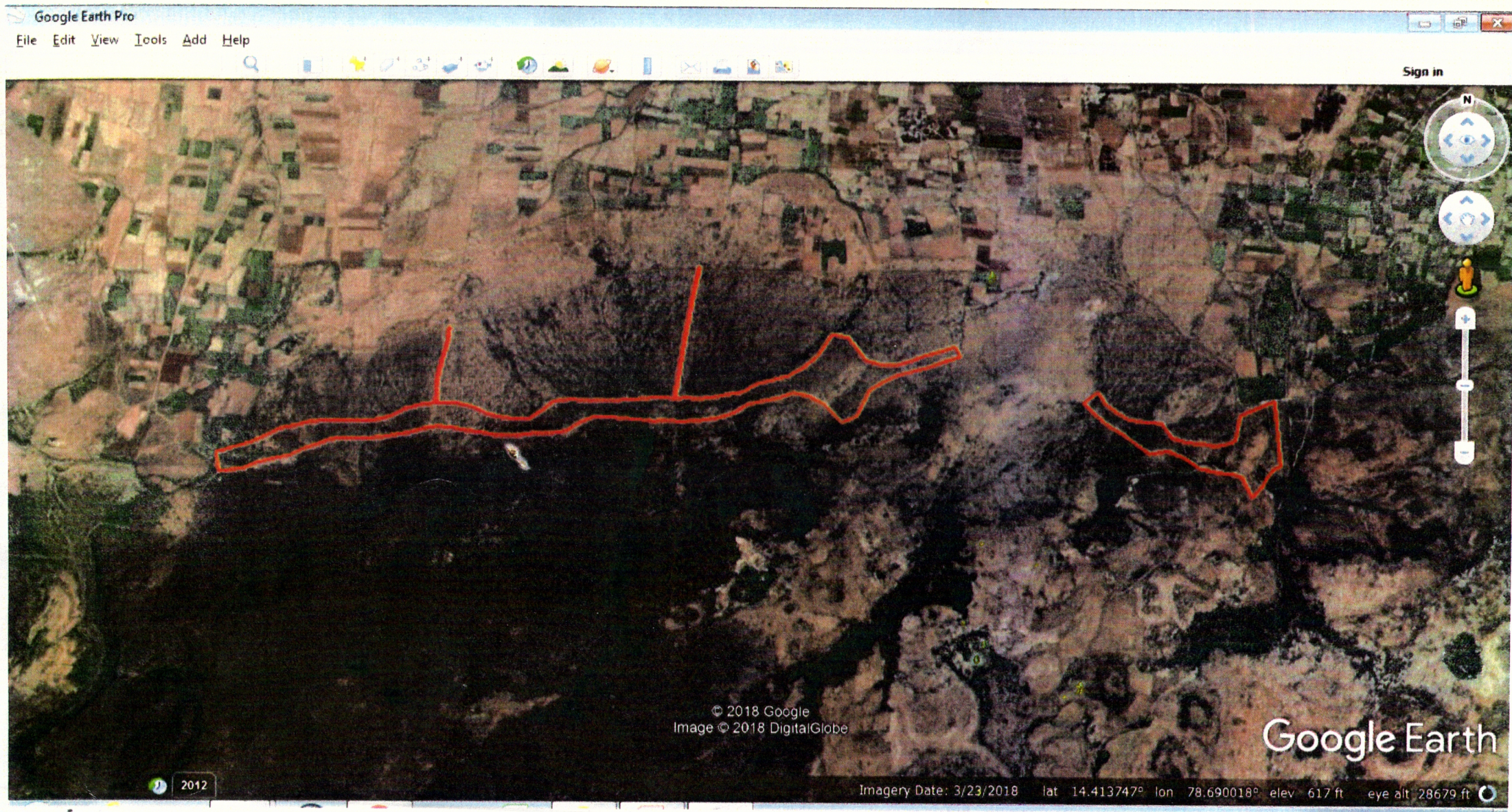
This is submitted for favor of information and necessary further action

Encls:-

1. KML file alignment
 2. LA width calculation sheet
 3. NOC from Panchayat Raj
 4. Lr from CE/KDP to Secretary to Government
Water resources department on Extension of Environmental
Clearance.
 5. Estimate showing the provision on plantation.
- Each in 5 sets

Yours faithfully,

N. Daini 10/12/18
EXECUTIVE ENGINEER
GNSS DIVISION NO. 7,
HOPULIVENDULA
10/12



Cross section @ K.M.

94.561 of G.N.S.S.Main Canal

T.B.L : 197.511

A.G.L : 221.628

Ht.of bank : 0.000

A.G.L: 221.628

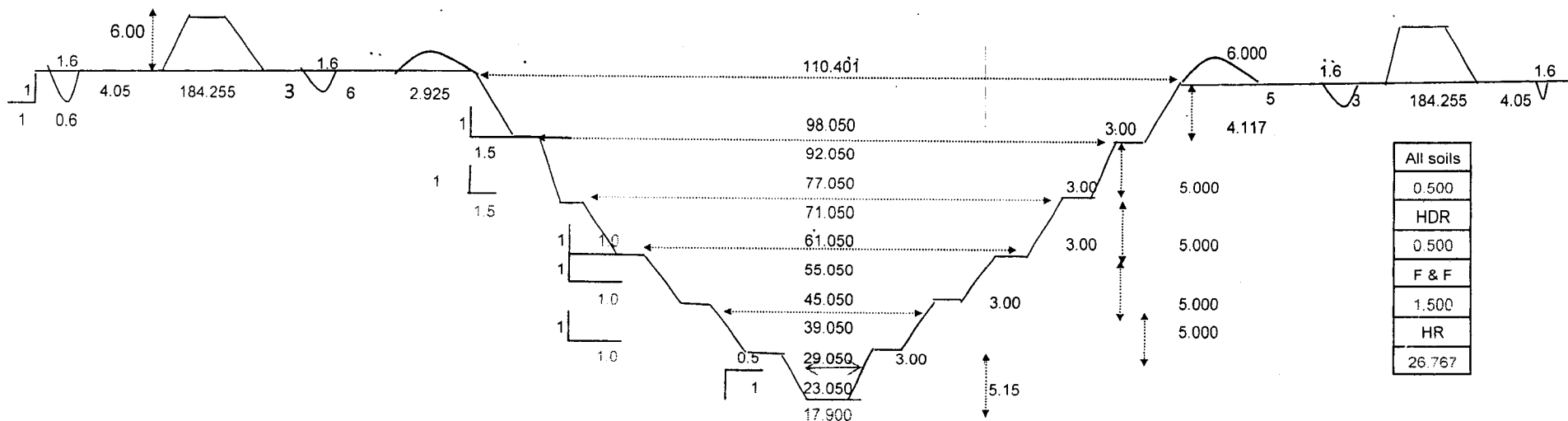
Bed level : 192.361

Depth of Cut : 29.267

T.B.L: 197.511

A.G.L: 221.628

Ht.of bank : 0.000


$$\text{In all soils : } \left(\frac{110.401 + 108.901}{2.000} \right) \times 0.500 = 54.826 \text{ Sq.m}$$

54.826 Sq.m

$$\text{In HDR : } \frac{(108.901 + 107.401)}{2.000} \times 0.500 = 54.076 \text{ Sq.m}$$

· **54.076** Sq.m

$$\text{in F\&F} \quad \left(\frac{107.401 + 102.901}{2.000} \right) \times 1.500 = 157.727 \text{ Sq.m}$$
$$\text{in F\&F} \quad (102.901 + 102.901) \times 0.000 = 0.000 \text{ Sq.m}$$

2nd point

2070297/2018/FCA -PCCF

2.000

In HR :	(	$\frac{102.901 + 98.050}{2.000}$	) x	1.617	=	157.727 Sq.m 162.469 Sq.m
In HR :	(	$\frac{92.050 + 77.050}{2.000}$	) x	5.000	=	422.750 Sq.m
In HR :	(	$\frac{71.050 + 66.050}{2.000}$	) x	5.000	=	342.750 Sq.m
In HR :	(	$\frac{60.050 + 55.050}{2.000}$	) x	5.000	=	287.750 Sq.m
In HR :	(	$\frac{49.050 + 44.050}{2.000}$	) x	5.000	=	232.750 Sq.m
In HR :	(	$\frac{38.050 + 32.900}{2.000}$	) x	5.150	=	182.696 Sq.m

1215.719 Sq.m**Spoil bank :**

All Soils :	54.826 x	1.250 =	68.532 Sq.m
HDR :	54.076 x	1.400 =	75.706 Sq.m
F & F :	157.727 x	1.400 =	220.817 Sq.m
H.R :	1215.719 x	1.400 =	1702.006 Sq.m
Total			2067.061 Sq.m

Area of each Spoil bank = $2067.061 / 2 =$ 1033.531 Sq.m

Hight of bank = 6.000 mts

Top width ($\frac{1033.531}{6.000} - 12.000$) = 160.255 mts

Bottom of spoil bank: = 184.255 mts

LA L/S 264.631 mts

LA R/S 254.706 mts

TOTAL LA Width**519.336 mt.**

Cutting (6 Berms)

Cross section @ K.M.

91.450 of G.N.S.S.Main Canal

Left side Bank :

T.B.L : 197.860

A.G.L : 227.155

Ht.of bank : 0.000

Canal Cutting:

A.G.L: 227.155

Bed level : 192 710

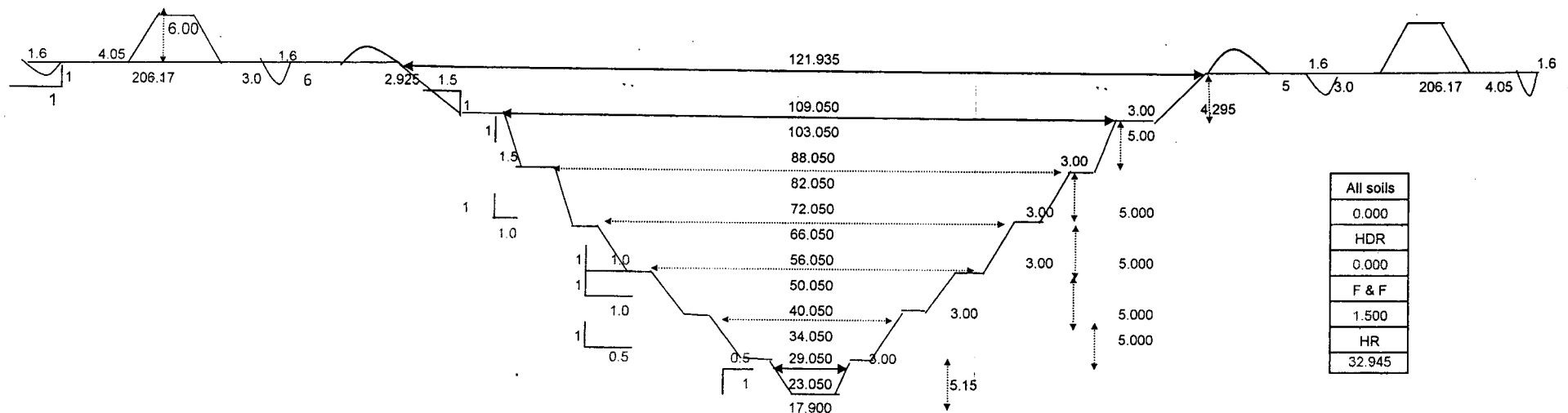
Depth of Cut : 34.445

Left side Bank :

T.B.L : 197.860

A.G.L : 227.155

Ht.of bank : 0.000



Area of Cutting :

$$\text{In HDR : } \frac{(121.935 + 121.935)}{2.000} \times 0.000 = 0.000 \text{ Sq.m}$$

$$\text{in F\&F} \quad \left(\frac{121.935 + 117.435}{2.000} \right) \times 1.500 = \begin{array}{r} 0.000 \text{ Sq.m} \\ 179.528 \text{ Sq.m} \end{array}$$

$$\text{In HR : } \left(\frac{117.435 + 109.050}{2.000} \right) \times 2.795 = \frac{179.528}{316.513} \text{ Sq.m}$$

$$\text{In HR : } \left(\frac{103.050 + 88.050}{2.000} \right) \times 5.000 = 477.750 \text{ Sq.m}$$

$$\text{In HR : } \left(\frac{82.050 + 72.050}{2.000} \right) \times 5.000 = 385.250 \text{ Sq.m}$$

All soils
0.000
HDR
0.000
F & F
1.500
HR
32.945

2070297/2018/FCA -PCCF

$$\begin{aligned}
 \text{In HR : } & \left(\frac{66.050 + 56.050}{2.000} \right) \times 5.000 = 305.250 \text{ Sq.m} \\
 \text{In HR : } & \left(\frac{50.050 + 40.050}{2.000} \right) \times 5.000 = 225.250 \text{ Sq.m} \\
 \text{In HR : } & \left(\frac{34.050 + 29.050}{2.000} \right) \times 5.000 = 157.750 \text{ Sq.m} \\
 \text{In HR : } & \left(\frac{23.050 + 17.900}{2.000} \right) \times 5.150 = 105.446 \text{ Sq.m}
 \end{aligned}$$

1484.76 Sq.m

Spoil bank :

$$\begin{aligned}
 \text{All Soils : } & 0.000 \times 1.250 = 0.000 \text{ Sq.m} \\
 \text{HDR : } & 0.000 \times 1.400 = 0.000 \text{ Sq.m} \\
 \text{F \& F : } & 179.528 \times 1.400 = 251.339 \text{ Sq.m} \\
 \text{H.R : } & 1484.763 \times 1.400 = 2078.668 \text{ Sq.m} \\
 & \text{Total} \quad 2330.006 \text{ Sq.m}
 \end{aligned}$$

$$\begin{aligned}
 \text{Area of each Spoil bank} & = 2330.006 / 2 = 1165.003 \text{ Sq.m} \\
 \text{Hight of bank} & = 6.000 \text{ mts} \\
 \text{Top width} & \left(\frac{1165.003}{6.000} - 12.000 \right) = 182.167 \text{ mts} \\
 \text{Bottom of spoil bank:} & = 206.167 \text{ mts}
 \end{aligned}$$

LA L/S 286.31 mts

LA R/S 282.38 mts

TOTAL LA Width

568.69 mts


K. H. Rao
10/12/18
AEE

N. Ravi Rao
10/12/18
Executive Engineer
G.N.S.S. Division No. 7
PULIVENDULA-516 390.


NO OBJECTION CERTIFICATE

This is to certify that there is **No Objection** from the P.R. Engineering Department for construction of structures to be taken up by the GNSS Division No.7, Pulivendula crossing the road C.K.Dinne to Polathala road in the forest area cleared for the road based on the certificate that the existing B.T. roads will be regraded or relaid by the Water Resources, Department as issued by Executive Engineer, GNSS Division No.7, Pulivendula.


Dy.Executive Engineer,
PIU Sub-Division, Kadapa.


Executive Engineer,
PIU Division, Kadapa.


Superintending Engineer,
Panchayat Raj: Kadapa.


5/12/18

GOVERNMENT OF ANDHRA PRADESH
WATER RESOURCES DEPARTMENT

From
Sri S.Magbul Ahmed, B.Tech.,
Chief Engineer(Projects) &
District Water Resources Officer,
Water Resources Department,
KADAPA.

To
The Secretary to Government,
Water Resources Department,
4th Block, 1st Floor,
A.P. Secretariat,
Velagapudi, Amaravathi
GUNTUR DISTRICT.

Letter No. CE (P) & DWRO/WRD/KDP/TS3/GNSS.ENV/95 Date: 01-12-2018.

Sir,

Sub:- Galeru Nagari Sujala Sravanthi (GNSS) Project - Andhra Pradesh -
Extension of Environmental clearance up to 30-6-2024 - Requested -
Regarding.

Ret:- Govt. of India Ministry of Environmental & Forests, New Delhi
No.J-12011/18/2006-1/1A-1.

* * *

I submit that the Stage-I Forest clearance for Package No.2 and Package No.3 of GNSS Phase-II were discussed in the 32nd meeting of Regional Empowerment Committee, Chennai on 27-11-2018. The inspection report was placed before the Regional Empowerment Committee and the Committee has decided to recommend the proposals i.e., Forest clearance stage-I. The Committee has pointed out that the Environment clearance for the Project has been expired.

In this connection it is to submit that the GNSS works are not completed due to land acquisition problem, non receipt of Forest clearance of GNSS Phase-II works and other administrative reasons etc.,

The Government of India, Ministry of Environment and Forest Department has accorded Environmental clearances in the reference 1st cited. As per the above approval the validity period of the clearance is 5 years from the date of issue of the letter for commencement of work, i.e., 21-06-2006. A copy of the same is here with enclosed.

In view of the reasons explained above the extension of Environmental clearance up to 30-06-2024 may please be obtained and communicated early to complete the GNSS Project works.

Encl:- Clarification made by the Committee
and questionnaires of MOEF
2 Booklets each 1 No.

Yours faithfully,
Sd/-S.Magbul Ahmed, 1/12,
Chief Engineer(Projects) &
District Water Resources Officer,
Water Resources Department,
Kadapa.

(p.t.o.)

Copy communicated to the Superintending Engineer, SKD GNSS Circle, Kadapa for information and requested to submit the proposals of laps of clearances obtained from the various Department etc., in advance in future.

Copy to Executive Engineer, GNSS Division No.7 Pulivendula for information and requested to depute the concerned responsible Officer to A.P. Secretariat and see that the proposals from the A.P. Government to Government of India immediately are submitted and obtain the extension at an early date.

Copy to Executive Engineer GNSS Division, Proddatur for information and extend necessary support to the GNSS Division No.7, Pulivendula.

Sd/-S.Magbul Ahmed, 1/12,
Chief Engineer(Projects) &
District Water Resources Officer,
Water Resources Department,
Kadapa.

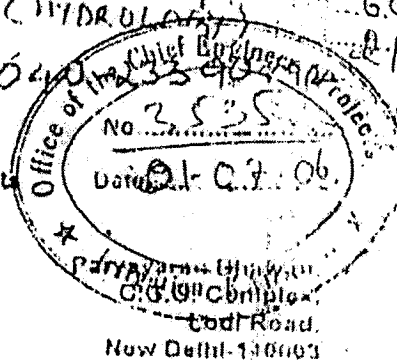
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DEPUTY EXECUTIVE ENGINEER

2070297/2018/FCA-PCCF

INDIAN E-IN-CHIEF (HYDROLOGY)

No. J-12011/18/2006-IA.1

Government of India
Ministry of Environment & ForestsDated 21st June, 2006Secretary (Irrigation)
RD Department
Secretariat
Hyderabad-500022Subject: Galeru Nagari Sujala Shrivanti (GNSS) Project in District Kurnool
Andhra Pradesh - Environmental Clearance req.

This has reference to your letter No. SE/GNSS Circle/KADAPA/NGP/Hydrabad, dated 12.04.2006 on the subject.

The above referred proposal was considered by the Expert Committee for River Valley & Hydroelectric projects at its meeting held on 18.04.2006 & reconsidered on 1.05.2006.

It has been noted that the proposed project contemplates drawl of 30.00 TMC of plus flood water from Krishna river to provide irrigation to 1.052 lakh ha. (2.00 lakh res) in two districts of Kadapa and Chittoor, drinking water to about 10 lakh people by using about 3.00 TMC of water and stabilisation of existing command of Pulivendula main canal to an extent of 24282 ha. The scheme consists of 11 (eleven) balancing/storage reservoir with 14 to 20 m high of dams. Total land requirement for the project is 10348.25 ha., of which 1104.43 ha is forest land. Forest clearance is yet to be obtained. Total 8570 families from 42 villages are likely to be affected due to this project. Public Hearing was conducted in two districts of Chittoor & Kadapa on 14.03.2006. Total cost of the project is 4562.33 crores.

The Ministry of Environment and Forests hereby accords environmental clearance as per the provision of Environmental Impact Assessment Notification-1984 subject to the strict compliance of the terms and conditions mentioned below -

(P.T.O.)

Total 6040 Families from 42 Villages are likely to be affected by this project. The affected families shall be rehabilitated as per Andhra Pradesh Government's R/R Policy-2005 & its amendment G.O.M.S. No. 78, dated 13th April, 2006.

Eleven balancing reservoir are proposed with different heights. Seismic design parameters for the dams need to be approved by National Commission on Geostatic Parameters (NCSDP), Central Water Commission, New Delhi.

A monitoring committee should be constituted which must include representatives of project affected persons from SC/ST category and a women member. The committee would also attend the Grievance Redressal of the affected.

Commitment made during Public hearing by the project authority on different should be fulfilled.

Forest Clearance should be obtained for acquiring 1104.45 hectare forest land & approved.

Water user association / co-operative and involvement of the whole community for disciplined use of available water should be provided.

Command Area Development, as proposed in the EIA / EMP should be implemented. Water logging should be treated through suitable drainage measures and conjunctive use of ground water and surface water, reclamation of saline lands and measures to improve the soil fertility should be ensured.

Occurrence of stagnant pools/slow moving water channels during construction and operation of the project provide breeding source for vector mosquitoes and other parasites. The canal should be properly channelised so that no small pools and poodles are allowed to be formed. Even after taking precaution, due to unforeseen situations, breeding of mosquito and resultant malaria or mosquito borne diseases may increase. If such a situation arises, it will be the responsibility of project authorities to take all corrective steps i.e. residual insecticidal spray in all the project affected areas and surrounding 3 Km. area, keeping the flight range of mosquitoes in consideration.

Any other clearance from any other organization if required should be obtained.

Part -B. General Conditions

Provision of supplying kerosene or cooking gas / Pressure Cooker to the labourers should be made instead of supplying fuel wood.

3

Fuel depot may be opened at the site to provide the fuel (kerosene/diesel A.P.C.) medical facilities as well as recreational facilities should also be provided to the labourers.

All the labourers to be engaged for construction works should be thoroughly examined by health personnel and adequately treated before issuing work permits.

Restoration of construction area, including dumping site of excavated materials from site & power house site, should be ensured by levelling, filling up of borrow pile, sweeping etc. The area should be properly afforested with suitable plantation.

A multidisciplinary environmental monitoring cell inclusive of the experts from Environment Management, Hydrogeologist, Agriculture, Socio-economist etc should be constituted immediately before the field activities of the project are undertaken.

Financial provision should be made in the budget of the project for implementation of the above suggested safeguard measures.

Six monthly monitoring reports should be submitted to the Ministry and its Regional Office, Bangalore for review.

Officials from Regional Office MOEF, Bangalore would be monitoring the implementation of environmental safeguards and they should be given full cooperation and documents / data by the project proponents during their inspections.

The responsibility of implementation of environmental safeguards rests fully with Irrigation Department and Government of Andhra Pradesh.

In case of change in the scope of the project, project would require a fresh clearance.

The Ministry reserves the right to add additional safeguard measures subsequently, if found necessary, and to take action including revoking the clearance, under the provisions of the Environmental (Protection) Act, 1986, to ensure effective implementation of the suggested safeguard measures in a time-bound and satisfactory manner.

This clearance letter is valid for a period of five years from the date of issue of order for commencement of construction work.

A copy of the clearance letter will be marked to concerned Panchayat, if any, in whom any suggestion/representation has been received while processing the proposal.

10. State Pollution Control Board / Committee should display a copy of the clearance letter at the regional office, district industries centre and collector's office / tehsildar's office for 30 days.

11. The project proponent should advertise within seven days at least in two local newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned informing that the project has been accorded environmental clearance and copies of clearance letters are available with the State Pollution Control Board/Committee and also at Website of the Ministry of Environment and Forests at <http://www.envfor.nic.in>.

R. Chandramohan

Joint Secretary to the Govt of India

Copy to

1. The Secretary, Ministry of Water Resources, Shram Shakti Bhawan, Rafi Marg, New Delhi - 110001.
2. Dr. Ravi Malju, Special representative of Govt. of Andhra Pradesh, 1-Ashoka Road, Andhra Bhawan, New Delhi - 110001.
3. Secretary, Department of Environment, Government of Andhra Pradesh, Hyderabad.
4. Secretary, Department of Irrigation, Government of Andhra Pradesh, Hyderabad.
5. The Advisor (I & CAD) Planning Commission, Yojana Bhawan, New Delhi - 110 001.
6. The Chief Engineer (PAD), Central Water Commission, Sewa Bhawan, R.K. Puram, New Delhi - 110062.
7. Member Secretary, Andhra Pradesh Pollution Control Board, Hyderabad
8. CCF, Regional Office, Ministry of Environment & Forests, Bangalore.
9. EI - Division, MOEF, New Delhi - 110001.
10. Guard file.

R. Chandramohan

Joint Secretary to the Govt. of India

ABSTRACT

Name of Work: Investigation, Design and earth work excavation of GNSS main canal from Km. 66.150 to Km. 96.500 for balance works including construction of CM & CD Works, and distributory system including field channels to feed an ayacut of 12,000 acres under package - 02/05 of GNSS Phase - II in Kadapa District.

I - Investigation, Design and estimation of GNSS main canal and distributory system**PART-A :- Working Items (ECV Items)**

Sl.No.	Quantity	Description of Item	Rate	Per	Amount
1	28.411 K.M	Conducting detailed survey of G.N.S.S. Main canal from K.M. 66.150 to K.M. 96.500 including chaining, compass Survey and taking L.S & C.S. at 25 M intervals and fixing of P.B.Ms. Conducting site surveys for C.M. and C.D works, preparation of designs, H.P. and estimates etc., complete.	As per sheet enclosed	/K.M	9345159
2	RM	Provision towards subsurface exploration and GSI charges & testing charges at structures locations	As per sheet enclosed	/RM	1392240
3	12000 Ac	Detailed investigation of distributory system from K.M. 66.150 to K.M. 96.500 of GNSS Canal including designs, drawings, preparation of plans and estimates etc., complete.	As per sheet enclosed	/Ac	17313426
4	Ha	Preparation of L.P. schedules and get the approval from the competent authority for land acquisition width required for Distributory canal.	As per sheet enclosed	/Ha	321549

Sub Total - I: 2637237 27558924

II - Excavation of GNSS main canal from Km.66.150 to Km. 96.500.

Sl.No.	Quantity	Description of Item	Rate	Per	Amount
1	527954 Cum	Excavation in all kinds of soil including boulders upto 0.3 m diameter for canal, seating of embankment, filter drains / catch water drains etc., including dressing bed and sides to required level and profile, cost of all materials, machinery, labour, placing the excavated soil neatly in dump area or for the formation of service road / embankment as complete with initial lead upto 1 km and all lifts directed etc.,	98.80	/Cum	52161855
2	546603 Cum	Earth work excavation in Hard disintegrated Rock in canal excavation and depositing the same on spoil banks or as directed by the Department with all leads and lifts including shoring, strutting, dewatering if necessary by machine including conveyance of spoil with a lead of 500 mts.	134.30	/Cum	73408783
3	740520 Cum	Earth work excavation in F&F in canal excavation and depositing the same on spoil banks or as directed by the Department with all leads and lifts including shoring, strutting, dewatering if necessary by machine including conveyance of spoil with a lead of 500 mts.	204.10	/Cum	151140132
4	1286752 Cum	Earth work excavation in Hard Rock in canal excavation and depositing the same on spoil banks or as directed by the Department with all leads and lifts including shoring, strutting, dewatering if necessary by machine including conveyance of spoil with a lead of 500 mts.	304.20	/Cum	391429958
5	585980 Cum	Excavation in hard rock of all toughness including boulders above 1.2 m dia. by approved controlled blasting methods for canals, cut-off trench of embankment etc., including controlling fly-rock by muffling arrangements such as placing 50 x 50 mm opening chain link mesh or waste tyres and sand bags, monitoring ground vibrations at specified locations, cost of all materials, machinery, labour, placing excavated rock neatly in approved dump area or other place as directed etc., complete with lead upto 1 km and all lifts. I) The rate under this item shall be adopted for canals designed for carrying capacity of more than 15 cumecs or where the average depth of excavation in hard rock is more than 3 m. II) The rate under this item shall be adopted where the control of fly-rock and ground vibrations is required.	442.40	/Cum	259237552

a)	158334 Cum	Providing semi-perforated / perforated casing /heaving embankment using soil collected in heaps in embankment area as part of disposal of excavated soil from canal including cost of all materials, machinery, labour, all operations such as sorting-out, spreading in layers of 25 cm before compaction, breaking clods, sectioning, watering and compacting each layer to density control of not less than 98 percent or as stipulated by Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with lead upto 1 km for water.	48.90 /Cum	10909350
b)	485411 Cum	Providing hearing / casing embankment with homogeneous soil from approved borrow areas Govt. Lands) in layers of 25 cm before compaction including cost of all materials, machinery, labour, all operations such as excavation, sorting out, transporting, spreading in layer of specified thickness, breaking clods, sectioning, watering, compacting each layer to density control of not less than 98 percent or as stipulated by Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with 6 KM lead and all lifts.	241.00 /Cum	117032251
c)	544489 Cum	Providing hearing / casing embankment with homogeneous soil from approved borrow areas (Patta/Casual lands) in layers of 25 cm before compaction including cost of all materials, machinery, labour, all operations such as excavation, sorting out, transporting, spreading in layer of specified thickness, breaking clods, sectioning, watering, compacting each layer to density control of not less than 98 percent or as stipulated by Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with 6 KM leads and lifts.	423.50 369.20 /Cum	230591092 201025339
d)	36846 Cum	Providing hearing / casing embankment with homogeneous soil from approved borrow areas Govt. Lands) in layers of 25 cm before compaction including cost of all materials, machinery, labour, all operations such as excavation, sorting out, transporting, spreading in layer of specified thickness, breaking clods, sectioning, watering, compacting each layer to density control of not less than 98 percent or as stipulated by Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with 8 KM lead and all lifts.	267.00 /Cum	9837882
e)	331611 Cum	Providing hearing / casing embankment with homogeneous soil from approved borrow areas (Patta/Casual lands) in layers of 25 cm before compaction including cost of all materials, machinery, labour, all operations such as excavation, sorting out, transporting, spreading in layer of specified thickness, breaking clods, sectioning, watering, compacting each layer to density control of not less than 98 percent or as stipulated by Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with 8 KM leads and lifts.	449.50 432.30 /Cum	149059145 143355435
7	61332 Cum	Providing Dowel Banks using soil collected in heaps in embankment area as part of disposal of excavated soil from canal including cost of all materials, machinery, labour, all operations such as sorting-out, spreading in layers of 25 cm before compaction, breaking clods, sectioning, watering and compacting each layer to density control of not less than 95 percent or as stipulated by Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with lead upto 1 km for water	63.60 /Cum	3900715

8(a)	51140 Cum	Providing Inspection Track using soil collected in heaps in embankment area as part of disposal of excavated soil from canal including cost of all materials, machinery, labour, all operations such as sorting-out, spreading in layers of 25 cm before compaction, breaking clods, sectioning, watering and compacting each layer to density control of not less than 95 percent or as stipulated by Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with load upto 1 km for water	63.60 /Cum	3252504
8(b)	38355 Cum	Providing Inspection Track with gravelly soil from approved borrow areas (Govt. Lands) in layers of 25 cm before compaction including cost of all materials, machinery, labour, all operations such as excavation, sorting out, transporting, spreading in layer of specified thickness, breaking clods, sectioning, watering, compacting each layer to density control of not less than 95 percent or as stipulated by Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete withall leads and lifts.	234.90 /Cum	9009590
9	228326 Cum	Dewatering for Earth work excavation in Hard Rock in canal excavation	15.20 /Cum	3470555

Sub Total - II: 1429171901 1464441364

III - Construction of CM & CD works on GNSS main canal from Km. 66.150 to Km.96.500

Sl.No.	Quantity	Description of Item	Rate	Per	Amount
1		Construction of Cm & CD Works - 56 Nos. (details enclosed)			2053336788

Sub Total - III: 2053336788 2062801748

IV - Construction of distributory system: Distributories, Minors, Sub-Minors and Field channels to feed an ayacut of 12,000 acres

Sl.No.	Quantity	Description of Item	Rate	Per	Amount
1	12000 Ac	Construction of distributory system from K.M. 66.150 to K.M. 96.500 of GNSS Canal including minors, sub minors and CM & CD works etc., complete.	10500.00 /Ac		126000000

Sub Total - IV: 126000000

ECV Value Total (I+II+III+IV): 3636881063 3680802036

PART-B (Reimburseble LS Provisions)

Sl.No.	Quantity	Description of Item	Rate	Per	Amount
1	Sheet enclosed	Seigniorage charges	3680802036		90173599
3		GST @ 12%	3636881063		436425728
2		Provision towards cess @ 1% on ECV value	3636881063		3636881
4		NAC @ 0.1%	3636881063		3636881
5	LS.	Provision towards Price adjustment at 5% on working items i.e.	3636881063		181844053
6	LS.	Provision towards variation in classification of Hard Rock which fall in category of quartzite Rate 530.71/-	Separate Sheet Enclosed		82019221

Sub Total - V: 830468293 83418813

PART-C (Department LS Provisions)

V - Miscellaneous provisions

Sl.No.	Quantity	Description of Item	Rate	Per	Amount
		1) Miscellaneous works to be done outside the contract			
1	280 Acres	Provision towards land acquisition for main canal	800000	Acre	224000000
2	478 Acres	Provision towards land acquisition for distributory canal	800000	Acre	542400000
3	252 Ac	Provision towards compensatory afforestation.	900000	Acre	226800000
4	28.411 KM	Provision for H.P boards KM & HM stones at Rs. 15000/Km	15000	1 km	426165

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