GOVERNMENT OF JAMMU AND KASHMIR

PUBLIC HEALTH ENGINEERING DEPARTMENT KASHMIR

DETAILED PROJECT REPORT

For

WATER SUPPLY SCHEME SUMBALI BALA [illegible] RAFRAW

Under

SALIENT FEATURES OF WATER SUPPLY SCHEME SUMBALI BALA

SORAFRAW

1.	Name of Scheme	:	WSS Sumbali Bala Sorafraw
2.	Authority	:	J & K Govt. PHE, I & F. C. Department.
3.	Agency	:	Kashmir PHE Department Through RWS Division, Ganderbal
4.	Location of the Project		
	a) Coordinates	:	34°-11'-57"W & 74°-49'-55"E.
	b) Name of District	:	Ganderbal
	c) Name of Constituency	:	Kangen
	d) Name of Tehsil	:	Gund
	e) Name of Block	:	Gund
5.	ESTIMATED COST OF SCHEME	:	₹.565.00 Lacs
6.	Year of Start	:	2017-18
7.	Anticipated Year of Completion	:	2021-22
8.	No. of Habitations	:	Two (2)
9.	Name of Habitations (Scope)	:	i) Sumbali Bala ii) Sorafraw
10.	POPULATION:		
	a) Present Population (2017)	:	7223 Souls
	b) Designed Population (2047)	:	15133 Souls
11.	Annual Growth Rate	:	3.65%
12.	Rate of Supply	:	70 LPCD
13.	Type of Scheme	:	Gravity
14.	Source of Scheme	:	Khich Grad Nallah

15.	PER CAPITA COST: a) As per Present Population b) As per Designed Population	: :	 ₹. 7,822.00 ₹.3,734.00
16.	Treatment Technology	:	Post Chlorination
17.	TIME OF COMPLETION	:	(03) THREE WORKING SEASONS
18.	RECOMMENDATION	:	Keeping in view the hardships faced by the people of the area due to absence of adequate potable drinking water supply, the implementation of the envisaged proposals are strongly recommended.

Jr. Engineer

Assistant Executive Engineer
R.W.S. Sub Division Kangen

Executive Engineer
R.W.S. Division Ganderbal

TECHNICAL REPORT FOR WATER SUPPLY SCHEME
SUMBALI BALA SORAFRAW

INTRODUCTION: The villages Sumbali Bala and Sorafraw proposed under Water Supply Scheme Sumbali Bala Sorafraw are located on the right side of Srinagar - Leh National Highway at a distance of about 40Kms from District Headquarter Ganderbal. The population of the area comprises of both Gujjar & Kashmiries living almost below the poverty line. The main agriculture is dry crops (Maize). The topography of the area is semi-hilly and experiences heavy snowfall during the winter season.

NECESSITY & NECESSITY: The village Sumbali Bala & Sorafraw were provided water from an very old scheme Water Supply Scheme Sorafraw executed more than 30 years back. The main pipe network is HDPE which has already outlived its design period and is not in a position to carry the required discharge. Moreover with the passage of time the population of the area has considerably increased besides change in the living standard of the people which has resulted in increase in the consumption of drinking water supply thus putting an additional thrust on the scheme. The existing pipe network and storage do not suffice the requirement of the area. The existing Filtration Plant and Servicer Reservoirs are also leaking resulting in further shortages of water supply which is inadequate and is only providing water to the extent of 10 to 20 LPCD against projected demand of 70LPCD, as such

the people of the area are facing acute shortage of drinking water.

To address the long genuine demand of the people for improving the quality and quantity of drinking water to the area, A new scheme has been proposed under LIC upto the design period of 30 years and is submitted for accord of administrative approval.

PROPOSALS: The following proposals are envisaged in the detailed project report:-

1) <u>Laying and Fitting of Pipe Network System:</u>

The Gravity Mains / Supply Mains and Distribution network has been proposed to be laid along the required alignment keeping in view the requirement / necessity. Proper design requirement has been kept to achieve the required residual heads at all nodal points. The pipe network has been designed as per modified William - Hazen's Method on a grid system.

2) <u>Construction of 0.90 & 1.30Lac Gallons Capacity Slow Sand Filtration Plant:</u>

To provide potable water supply facilities to the area under the scope of the scheme, it is proposed to construct additional Slow Sand Filtration Plant with all allied necessary features viz. under drainage system, filter media and control / sluice valves and necessary

interconnections between the inflow and outflow systems.

3) **Const. of 0.45 & 0.65Lac Gallons Capacity S.R.:**

An additional service reservoir of capacity 43000 Gallons is proposed to be constructed in order to suffice the needs of the inhabitants as per design requirement. So provision for the construction of new S. R. is envisaged in the scheme.

4) **Construction of Sluice Chambers:**

To safeguard the vital sluice valves of S.R/F.P. and for washouts, provision for construction of sluice valve chambers are envisaged in the DPR.

5) **Construction of Chain-Link Fencing around various structures:**

As the area is situated in forests the Gujars / Backwards arrive in large numbers with cattle / sheep during summer season having tendency to stay near water availability areas. To protect and safeguard the structures / assets of the scheme and to maintain the hygiene of the scheme, construction of chain link fencing around structures is envisaged in the proposal.

6) **Construction of Intake Chamber:**

It is proposed to construct an Intake Chamber near Off take point to ensure suitable driving head.

7) **Construction of Anchor/Thrust/Saddle Blocks:**

The proposed Raw Water Mains to villages has to pass gorges at many places because of topography of the area, so provision for construction of anchor/thrust/saddle blocks has been envisaged in the proposals to safe-guard the pipe network system of the scheme.

8) **Construction of Chowkidar Quarter**:-

It is proposed to construct a Chowkidars quarter to house the Chowkidar/staff to be deployed for proper watch and ward and regulation of water supply scheme.

9) **Revamping of Existing Filtration Plants**:-

The existing Filtration Plants is in a deteriorated conditions and needs complete revamping to make it fully functional to ensure safe and potable water supply.

10) **Bed Concreting/Plastering Existing Service Reservoirs**:-

The existing service reservoirs being very old has developed leaks in the bed and needs Bed Concreting to make it leak proof for efficient storage.

11) **Construction of Retaining Wall/Breast Wall near S.R/Filtration Plant:**

To safeguard the structures, Construction of Retaining Wall / Breast Wall has been incorporated in the DPR as per site requirements.

12) **Construction of Nallah Protection Works:**

Provision for construction of Nalah protection works is proposed at off take point to safe guard the Raw Water Main as the area is prone to floods and the Kulan Nallah is often hit by floods.

9) **Land Compensation:**

A provision of Rs.17.50 Lacs for 5Kanals has been envisaged as Land Compensation.

ESTIMATED COST:

The estimated cost of the scheme works out to ₹.565.00 Lacs as per the general abstract of cost enclosed.

TIME OF COMPLETION:

The scheme is proposed to be completed within two working seasons provided funds are made available well in time.

RECOMMENDATION:

The supply of safe, adequate and regular water supply is in fact yard stick while measuring the standard of living and development of any area. To improve the health of people and protect them from water borne diseases, it is recommended that the DPR may be accorded and funds released for implementation of scheme.

Junior Engineer

Assistant Executive Engineer
R.W.S. Sub Division Kangen

Executive Engineer
R.W.S. Division Ganderbal

GENERAL ABSTRACT OF COST FOR WATER SUPPLY SCHEME

SUMBALI BALA SORAFRAW UNDER LIC

S.No	Particulars of Items	Amount (₹. In Lacs)
01	Cost of Pipes and Pipe Specials.	197.76 193.58 =
02	Laying and Fitting of Pipes @ 25% of Pipe Cost	49.44 48.38
03	Construction of 0.90Lac Gallons Slow Sand Filtration Plant for Sumbali Bala	56.91
04	Construction of 1.30Lac Gallons Slow Sand Filtration Plant for Surafraw.	68.02
05	Construction of 0.45 Lac Gallons Service Reservoir	27.11
06.	Construction of 0.65 Lac Gallons Service Reservoir	32.64
07.	Construction of Sluice Chambers (06No's)	5.76
08.	Construction of Chain Link Fencing around various structures.	26.10
09.	Construction of Intake Chamber	7.29
10.	Construction of Retaining Wall / Breast Wall	10.05
11.	Construction of Chowkidar Quarter at Filtration Plant and S.R Sites.	10.04
12.	Construction of Saddle / Anchor Blocks.	3.56
13.	Revamping of Existing Filtration Plants.	4.32 4.32
14.	Bed Concreting & Plastering of existing 2 No. Service Reservoirs.	4.61
15.	Construction of Nallah Protection Works at off take point.	5.23
16.	Improvements to existing Sub-Main & distribution system.	4.41
17.	Plateform cutting for making way for Construction of Filtration Plants and S. R's.	10.86
18.	Land Compensation 05 Kanals @ ₹.3.50 Lacs	17.50
19.	Provision for Road Cuts.	5.00
20.	Provision for Preparation of DPR & Soil Testing.	1.00
	TOTAL	556.60 542.31
	Add 2.5% for Works Charges & Contingencies except item No. 1, 18, 19 & 20 i.e. on ₹.335.34 285.90 Lacs	8.38 7.14
	GRAND TOTAL	564.98
		Say ₹.565.00 555.44 Say 549.45

Junior Engineer

Assistant Executive Engineer
R.W.S. Sub Division Kangen

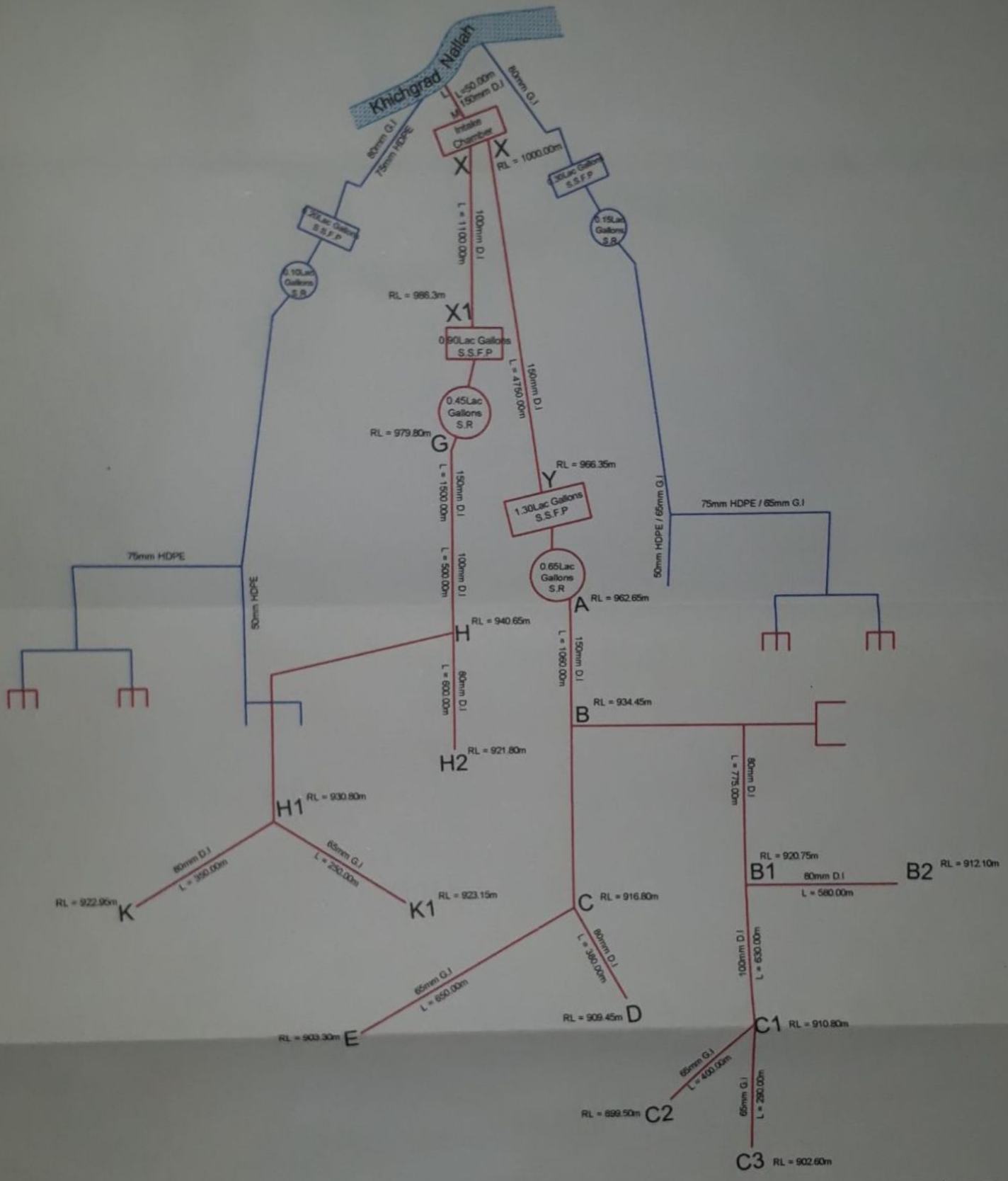
Executive Engineer
R.W.S. Division Ganderbal

Checked for 549.45 lacs only
Rupees five hundred fifty nine La
Sixty [illegible] Thousand only

Superintending Engineer
Hydraulic Circle Srinagar/Ganderbal

R.W.S. Division, Ganderbal

LINE PLAN FOR WATER SUPPLY SCHEME
SUMBALI BALA SORAFRAW



Existing	Proposed

J. E.

Executive Engineer
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