

ಕರ್ನಾಟಕ ಸರ್ಕಾರ  
ಸಣ್ಣ ನೀರಾವರಿ ಮತ್ತು ಅಂತರ್ಜಲ ಅಭಿವೃದ್ಧಿ ಇಲಾಖೆ

**GOVERNMENT OF KARNATAKA  
MINOR IRRIGATION & GROUND WATER DEVELOPMENT  
DEPARTMENT**

***VOLUME - IV  
PART - B***

**SCHEDULE OF RATES FOR MINOR IRRIGATION  
DEPARTMENT SPECIFIC ITEMS**

FOR THE YEAR : 2021-22

## FOREWORD

A Committee was constituted vide G.O.No. MID 372 MISU 2022, Bengaluru, dated 24th March 2022 under the chairmanship of Engineer in Chief, Minor Irrigation and Ground Water Development (south)zone, Bengaluru with the following members, for preparing the Draft Schedule of Rates for the year 2021-22.

1.	Engineer-in-Chief, Minor Irrigation and Ground Water Development (South), Bengaluru.	Chairman
2.	Sri C.Anantharamu, Chief Engineer (Retd), WRDO and member, Technical Working group, Bengaluru.	Member
3.	Chief Engineer, Minor Irrigation and Ground Water Development (North), Vijayapura.	Member
4.	Additional Commissioner, Commercial Tax department, Bengaluru.	Member
5.	Superintending Engineer, Minor Irrigation and Ground Water Development Circle, Bengaluru.	Member Secretary
6.	Superintending Engineer, Minor Irrigation and Ground Water Development Circle, Mysuru.	Member
7.	Superintending Engineer, Minor Irrigation and Ground Water Development Circle, Belagavi.	Member
8.	Superintending Engineer, Minor Irrigation and Ground Water Development Circle, Kalburgi.	Member
9.	Joint Labour Commissioner, Minimum wages and Child Labour, Labour dept., Bengaluru.	Special Invitee
10.	Executive Engineer, Monitoring and Evaluation Unit WRDO, Bengaluru.	Member

This Committee was entrusted with the task of finalising the Minor Irrigation department's specific item's Schedule of Rates and also formulating the standard rate analysis with detailed technical specifications for new items as per the Technical Working group templates.

The committee held meeting on 28-03-2022 to discuss the various matters regarding increase in market rates for labour, materials, GST etc., Specifications, additional items and rates for the following chapters and revision/updation was made.

- 1) Dam/barrage/Canal Allied and Canal Cross Drainage Works
- 2) Lift Irrigation Works
- 3) Gates/Hoists and Allied Works
- 4) Preparation DPR's by consultants

After detailed discussions / deliberations the Committee decided to adopt the Schedule of Rates, with latest labour wages and market rates for the year 2021-22 with rates as referred from Common SoR Volume I, II, III & IV part A.

Detailed data rate analysis were reviewed and the following were considered.

- Rates for Cement , Reinforcement Steel and Structural Steel FA, CA Stones etc., are obtained from PWD SR 2021-22 Vol-I, II, III, & IV part A
- Whole Sale Price Index of commodities obtained from official website of Economic Advisor, Ministry of Commerce & Industry, GOI.
- Royalty Charges : Commerece and Industries based on the notification of department No: MGD/DCB/2020-21, Bengaluru. Dated : 03-07-2020. Mines & Geology is adopted for the SoR 2021-22.
- Basic rates for materials which are available in Common SR of PWD Vol-I, II, III, & IV part A are considered.
- Further provision for the use of manufactured sand as per IS-383-2007 has been continued in the SoR 2021-22.
- The capital cost of machineries, hire charges of machineries are available in Common SR Vol-I, II, III, & IV part A.
- For the preparation of the Schedule of Rates 2021-22,the minimum wages of workers as notified by the Labour Department, Government of Kamataka vide Notification No : KAE/2/LMW/2015, dated: 06.01.2017 is adopted with current VDA.
- The VDA payable for the period 01.04.2021 to 31.03.2022 has been revised based on the increase in State average CP index for Industrial workers for 2017 as published by the State Labour Department,vide Notification No: DES/SIP/PWX/04/2021, Bangalore dated: 11.02.2021.
- For provisions in the data such as Watering charges, formwork Contractor's profit, overheads, as per the guidelines of Technical Working Group for Common SoR are considered. For Other charges the provisions considered in preparation of SoR for 2018-19 are continued for preparation of MI specific items SoR for 2021-22.
- Material rates and Machinery rates are exculsive of G.S.T., and are adopted in the MI specific items SoR for 2021-22 .
- For all items of works, brief descriptions are given in the SoR. For full details the data sheets shall be reffered.
- Area Weightages are applicable as in Common SoR of PWD Vol-I, II, III, & IV part A.

Sd/-  
(H.L.Prasanna)  
Chairman,  
Common SR Committee and  
Engineer-in-Chief, Minor Irrigation and  
Ground Water Development (South),  
Bengaluru.

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**GOVERNMENT OF KARNATAKA  
MINOR IRRIGATION & GROUND WATER DEVELOPMENT  
DEPARTMENT**

**SCHEDULE OF RATES FOR MINOR IRRIGATION  
DEPARTMENT SPECIFIC ITEMS**

**FOR THE YEAR : 2021-22**

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**GOVERNMENT OF KARNATAKA**  
**MINOR IRRIGATION & GROUND WATER DEVELOPMENT DEPARTMENT**

## **SCHEDULE OF RATES**

**BASIC DATA**  
**FOR THE YEAR : 2021-22**

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**GENERAL NOTES ON SCHEDULE OF RATES  
FOR THE YEAR : 2021-22**

1. These general notes are applicable to all sections / chapters of Schedule of Rates to the extent they are relevant.
2. All materials to be used on work shall conform to relevant specifications of Bureau of Indian standards.
3. The basic rates, except otherwise specified, are inclusive of all lead and all lifts.
4. The basic rates of items are inclusive of cost of all materials including finishing, wastage, machinery, labour, enabling works, small tools & plants, loss on stocks, contractor's profit and overheads charges.
5. The basic rates are inclusive of royalty charges on materials as per Direction mines and geology Notification No. MGd/DCB/2020-21 dt:03.07.2020
6. The basic rates for concrete items are inclusive of standard finishing for form work-refer from common SR Vol-II preface Si No-22.
- 7 The basic rates are exclusive of cost of site clearance, de-watering, working under watery situation, de-silting, river diversion arrangements etc., wherever applicable.
- 8 **Issue rates** : "The prevailing market rates of cement & steel will be assessed and the basic rates shall be approved by the Superintending Engineer PWD & published quarterly i.e., 1st April, 1st July, 1st October & 1st January whenever the variation in price is more/less than 10% over the previously approved rates". Rates are to be calculated and issued for OPC, PPC, PSC, TMT Bars, Mild Steel and Structural Steel and Bitumen etc., The Superintending Engineer shall issue office memorandum with wide publicity and obtain rate from GST registered vendors.
- 9 If there is any fluctuation in the prices of DI/MS/PVC/HDPE pipes @ (+/-) 10% over the schedule of rates, Market rates based on Price Indices may be derived from existing rates of CSR and shall be got approved by the Competent Authority.
- 10 Useful rubble and stone chips obtained from excavation shall be issued to the contractor for use on works ( including enabling works and aggregate crushing ) at the rates specified for these materials in the Schedule of Rates. A suitable clause shall be included in the tender in this regard.
- 11 The rates as provided in the common schedule of rates of WRD/PW,P & IWTD/ KUWS &DB/ KPCL/PRED/ ESCOM /BWSSB shall be adopted for the items not found in this Schedule of rates.

#### **GENERAL NOTES ON SCHEDULE OF RATES ( Contd )**

- 12** The material rates indicated in the SR are exclusive of GST but inclusive of all other charges.
- 13** The GST of 12% shall be added separately to the estimate as per Govt Order No. PWD 51'RDF 2019, Bengaluru Dated : 18-03-2022.
- 14** The basic rates for concrete items include cost of cleaning / green cutting top surface of previous lift of concrete and providing cement mortar layer before placing concrete for next lift. The proportion of cement mortar shall be same as that of mortar portion in concrete.
- 15** The basic rates are exclusive of cost of site clearing and river diversion arrangements such as coffer dams, bunds, diversion channels, dewatering etc. Separate provision shall be made for all types of coffer dams, bunds, diversion channels, dewatering etc.
- 16** All materials / bought out components for embedded parts, gates, hoists and allied works shall conform to relevant Indian standards / technical specifications and approved drawings.
- 17** The basic rates of Gates & Hoist & allied works are inclusive of preparation of designs / drawings / bill of materials etc., as per specifications and other technical data including revisions.
- 18** The basic rates are inclusive of cost of all materials, machinery, labour, and other related components as per technical specifications.
- 19** The basic rates are inclusive of rehandling at fabrication and erection sites.
- 20** Unless otherwise specified the basic rates are inclusive of standard finish required for all the fabricated and bought out gate and hoist components.
- 21** The basic rates are inclusive of preparatory works such as rectification of damages, repairing shop painting, cleaning, positioning and anchoring first stage embedments, cleaning surface for field painting etc.
- 22** Unless otherwise specified, in Gates & Hoist & allied works the basic rates for all items are on per tonne basis. The rate per set or per number shall be worked out on the basis of rate per tonne and the tonnage computed as per detailed designs or as per empirical formulae furnished in the " Note " under each item.
- 23** Minimum dry film thickness for zinc rich epoxy primer paint and coal tar epoxy paint shall be 40 microns per coat and 100 microns per coat respectively.
- 24** The area where jungle growth is thin or the area where the jungle growth is thick with noticeable vacant spots but not large enough to exclude them from measurements shall be classified as thin jungle.
- 25** The area where the jungle growth is thick without noticeable vacant spots shall be classified as thick jungle.
- 26** Areas of large vacant spots and areas occupied by structures shall be excluded from measurement for jungle clearance works.

**GENERAL NOTES ON SCHEDULE OF RATES ( Contd )**

- 27** In case of jauliflora clearance girth means spread of the bush.
- 28** The separate area specific loading for the works provided in Vol-1 Common SR PWD shall be considered while preparing the estimate.
- 29** General notes as in Common PWD SR Vol-I,II,III is also part of this SR where ever applicable.
- 30** The items or equivalent items available in Vol-I,II,& III of PWD common SR for earthwork excavation and concrete items shall be considered. This SR is prepared for MI specific items to be considered in case of non availability of items in any other volumes of common SR
- 31** Carriage of Materials shall be refered from commn SR Vol III.



**STATEMENT OF RATES FOR MATERIALS****FOR THE YEAR : 2021-22****FOR BELOW MATERIALS MINOR IRRIGATION  
SoR SHALL BE REFERRED**

SL.NO	MATERIAL DESCRIPTION	UNIT	RATE IN Rs.
1	Isophtholic Marine grade UV stabilized Gelcoat	Kg	279.5
2	Isophtholic Marine grade UV stabilized Resin	Kg	299
3	450 GSM E grade Fiber glass Chopped strand matt Owen cornings make	Kg	292.5
4	610 GSM Owen rowings E grade Owen cornings make	Kg	240.5
5	60*40 Tata make 360 GSM G.I. Pipe	Kg	179.4
6	Blue colour Pigment	Kg	486.2
7	Accelerator	Kg	728
8	Catalyst	Kg	273
9	Mould releasing agent	Kg	1560
10	EPDM Rubber seal	M	325
11	Aluminium paint per ltr	ltr	172
12	SAE 10 OIL	ltr	160
13	Transformer oil	ltr	120
14	Hard wood ( Kiral-bogi or similar variety ) planks	cum	36017
<b>15</b>	<b>RCC spun pipe P-2 Class ( IS : 458 ) :</b>		
	400 mm dia per Rm	M	762.00
	450 mm dia per Rm	M	933.00
	500 mm dia per Rm	M	1061.00
	600 mm dia per Rm	M	1356.00
	700 mm dia per Rm	M	1494.00
	800 mm dia per Rm	M	2066.00
	900 mm dia per Rm	M	2249.00
	1000 mm dia per Rm	M	2753.00
	1100 mm dia per Rm	M	3201.00
	1200 mm dia per Rm	M	3856.00
<b>16</b>	<b>RCC spun pipe P-3 Class ( IS : 458 ) :</b>		
	400 mm dia per Rm	M	1312.00
	450 mm dia per Rm	M	1653.00
	500 mm dia per Rm	M	1749.00
	600 mm dia per Rm	M	2465.00
	700 mm dia per Rm	M	2808.00
	800 mm dia per Rm	M	3486.00
	900 mm dia per Rm	M	4158.00
	1000 mm dia per Rm	M	4874.00
	1100 mm dia per Rm	M	5255.00
	1200 mm dia per Rm	M	6028.00
<b>17</b>	Silicon Sealent	Tube	140.00
<b>18</b>	Feviquick adhesive	Tube	60.00

**OTHER THAN ABOVE MATERIALS****Refer common SR Vol I, II ,III & volume IV Part -A**

**STATEMENT OF WAGES OF WORKERS**

Sl N O	CATEGORY OF WORKER	Common SR 2021-22			Variable DA /Day	TOTAL		
		Basic wage/day in Rs				ZONE-I	ZONE-II	ZONE-III
		ZONE-I	ZONE-II	ZONE-III				
<b>I . SKILLED CATEGORY:</b>								
1	Operator Concrete pump / Placer	405	395	375	<b>101.22</b>	<b>506.22</b>	496.22	476.22
2	Operator Crane / Tower crane / Cable way	405	395	375	<b>101.22</b>	<b>506.22</b>	496.22	476.22
3	Operator Jackhammer / Pneumatic tamper	405	395	375	<b>101.22</b>	<b>506.22</b>	496.22	476.22
4	Operator Pump / Ventilation fan	405	395	375	<b>101.22</b>	<b>506.22</b>	496.22	476.22
5	Operator Road roller	405	395	375	<b>101.22</b>	<b>506.22</b>	496.22	476.22
6	Operator Shovel / Scraper / Dozer	405	395	375	<b>101.22</b>	<b>506.22</b>	496.22	476.22
7	Plumber ( Licensed ) / Pipe fitter	405	395	375	<b>101.22</b>	<b>506.22</b>	496.22	476.22
<b>II . SEMI SKILLED CATEGORY:</b>								
8	Crowbarman / Jumperman	385	375	350	<b>101.22</b>	<b>486.22</b>	476.22	451.22
9	Helper Bending /Shearing /Planing machine	395	385	360	<b>101.22</b>	<b>496.22</b>	486.22	461.22
<b>II . SEMI SKILLED CATEGORY:</b>								
10	Patkari / Neeraganti / Sowdy	395	385	360	<b>101.22</b>	<b>496.22</b>	486.22	461.22
11	Stone Chiseller CI- II	395	385	360	<b>101.22</b>	<b>496.22</b>	486.22	461.22
12	Stone breaker / Hammerman	395	385	360	<b>101.22</b>	<b>496.22</b>	486.22	461.22
<b>III . UN-SKILLED CATEGORY:</b>								
13	Cement / Asphalt handling mazdoor	385	375	350	<b>101.22</b>	<b>486.22</b>	476.22	451.22
14	Civic worker	385	375	350	<b>101.22</b>	<b>486.22</b>	476.22	451.22
<b>IV . OTHER CATEGORY:</b>								
15	Boatman with boat	395	385	360	<b>101.22</b>	<b>496.22</b>	486.22	461.22
16	Care-taker / conductor / Lift attender	395	385	360	<b>101.22</b>	<b>496.22</b>	486.22	461.22

NOTES:

- The wages under Zone-I are applicable to :Bangalore city agglomeration area and all other corporation agglomeration area.
- The wages under Zone-II are applicable to : All District headquarters agglomeration area other than those listed in Zone-I
- The wages under Zone - III are applicable to : All areas other than those listed in Zone-I & Zone-II
- The wages of workmen of various categories are subject to revision during currency of SR for any revision in minimum daily wages and VDA by Govt of Karnataka.
- The daily rates of wages and VDA of different categories of workers are computed by dividing the total monthly wage by 26.
- For categories of workers for which provision has not been made in the list the rates prevailing in the Schedule of rates of other volumes of Common SR may be adopted.

**OTHER THAN ABOVE WAGES OF WORKERS**  
**Refer common SR Vol I, II ,III & volume IV Part -A**

CONVEYANCE CHARGES FOR MATERIALS BY HEAD LOAD  
FOR THE YEAR : 2021-22

*Refer common SR Vol I, II & III*

**CONVEYANCE CHARGES FOR MATERIALS BY ANY MODE  
FOR THE YEAR : 2021-22**

***Refer common SR Vol I, II & III***

**USAGE CHARGES FOR MACHINERY's  
FOR THE YEAR : 2021-22**

***Refer common SR Vol I, II, III, AND IV (PART -A)***

**LEAD, LIFT, LOADING AND UNLOADING CHARGES FOR MATERIALS  
FOR THE YEAR : 2021-22**

***Refer common SR Vol I, II, III, AND IV (PART -A)***

***Excluding Gates and Hoist chapter***

**ROYALTY RATES ON MATERIALS  
FOR THE YEAR : 2021-22**

**v. Royalty**

ಗೃಹೋದ್ಯಮ/ಡಿಪಿ/2020-21

ಕರ್ನಾಟಕ ಸರ್ಕಾರ

**ನಿರ್ದೇಶಕರ ಕಛೇರಿ,**  
ಗಣಿ ಮತ್ತು ಭೂವಿಜ್ಞಾನ ಇಲಾಖೆ,  
ನಂ. 49, ಖನಿಜ ಭವನ, ರೇಸ್ ಕೋರ್ಸ್ ರಸ್ತೆ,  
ಬೆಂಗಳೂರು - 560001, ದಿನಾಂಕ : 03.07.2020  
e-mail : dcbdmg@gmail.com

**ಸುತ್ತೋಲೆ**

**ವಿಷಯ:** ಕರ್ನಾಟಕ ಉಪ ಖನಿಜ ರಿಯಾಯಿತಿ ತಿದ್ದುಪಡಿ ನಿಯಮಾವಳಿಗಳು  
2020 ರನ್ವಯ ದಿನಾಂಕ: 30.06.2020 ರಿಂದ ಜಾರಿಗೆ ಬರುವಂತೆ ಉಪ  
ಖನಿಜಗಳ ರಾಜಧನ ದರಗಳನ್ನು ಪರಿಷ್ಕರಿಸಿರುವ ಕುರಿತು.

**ಉಲ್ಲೇಖ:** ಸರ್ಕಾರದ ಅಧಿಸೂಚನೆ ಸಂಖ್ಯೆ: ಸಿಐ 115 ಎಂಎಂಎನ್ 2019 ದಿನಾಂಕ: 30.06.2020

\* \* \* \* \*

ಮೇಲ್ಕಂಡ ವಿಷಯಕ್ಕೆ ಸಂಬಂಧಿಸಿದಂತೆ, ಉಲ್ಲೇಖಿತ ಸರ್ಕಾರದ ಅಧಿಸೂಚನೆ ಪತ್ರದಲ್ಲಿ ದಿನಾಂಕ: 30.06.2020 ರಿಂದ ಜಾರಿಗೆ ಬರುವಂತೆ ಕರ್ನಾಟಕ ಉಪ ಖನಿಜ ರಿಯಾಯಿತಿ ತಿದ್ದುಪಡಿ ನಿಯಮಾವಳಿಗಳು 2020 ರನ್ವಯ ಉಪ ಖನಿಜಗಳ ಮೇಲೆ ರಾಜಧನ ದರಗಳನ್ನು ಪರಿಷ್ಕರಿಸಲಾಗಿದೆ. ವಿವರಗಳು ಕೆಳಕಂಡಂತಿರುತ್ತವೆ.

ಕ್ರ. ಸಂ.	ಉಪ ಖನಿಜ	ರಾಜಧನ ಪ್ರತಿ ಮೆಟ್ರಿಕ್ ಟನ್ ಗೆ	ಪರಿವರ್ತನ ಕೋಷ್ಟಕ ಕ್ಯೂಬಿಕ್ ಮೀಟರ್ ನಂತೆ	ರಾಜಧನ ಪ್ರತಿ ಕ್ಯೂಬಿಕ್ ಮೀಟರ್ ಗೆ
1	ಕಟ್ಟಡ ಕಲ್ಲು	ರೂ. 70	1 ಕ್ಯೂಬಿಕ್ ಮೀಟರ್ ಗೆ = 2.63 ಟನ್	ರೂ. 184
2	ಲ್ಯಾಟರ್‌ಸೈಟ್ ಸ್ಟೋನ್	ರೂ. 60	1 ಕ್ಯೂಬಿಕ್ ಮೀಟರ್ ಗೆ = 1.80 ಟನ್	ರೂ. 108
3	ಜಲ್ಲಿ/ಮೆಟಲ್ ಎಲ್ಲಾ ವಿಧವಾದ (ಪುಡಿ ಗ್ರಾನ್ಯೈಟ್/ಕ್ವಾಜೈಟ್)	ರೂ. 70	1 ಕ್ಯೂಬಿಕ್ ಮೀಟರ್ ಗೆ = 1.80 ಟನ್	ರೂ. 126
4	ಮರಳು	ರೂ. 80	1 ಕ್ಯೂಬಿಕ್ ಮೀಟರ್ ಗೆ = 1.72 ಟನ್	ರೂ. 138
5	ಗ್ರಾವೆಲ್ (ಮುರಂ)	ರೂ. 40	1 ಕ್ಯೂಬಿಕ್ ಮೀಟರ್ ಗೆ = 1.50 ಟನ್	ರೂ. 60
6	ಮಣ್ಣು (ಎಲ್ಲಾ ತರಹದ ಹೆಂಚು ಮತ್ತು ಇಟ್ಟಿಗೆ ತಯಾರಿಕೆಗಾಗಿ)	ರೂ. 60	1 ಕ್ಯೂಬಿಕ್ ಮೀಟರ್ ಗೆ = 1.50 ಟನ್	ರೂ. 90

ಸದರಿ ತಿದ್ದುಪಡಿ ಅಧಿಸೂಚನೆ ಪ್ರತಿಯನ್ನು ಮಾಹಿತಿಗಾಗಿ ಈ ಪತ್ರದೊಂದಿಗೆ ಲಗತ್ತಿಸಿದೆ.

ಸಹಿ/-  
ನಿರ್ದೇಶಕರು

ಕರ್ನಾಟಕ ಸರ್ಕಾರ  
ಸಣ್ಣ ನೀರಾವರಿ ಮತ್ತು ಅಂತರ್ಜಲ ಅಭಿವೃದ್ಧಿ ಇಲಾಖೆ

**GOVERNMENT OF KARNATAKA**  
**MINOR IRRIGATION & GROUND WATER DEVELOPMENT DEPARTMENT**

**DAM / BARRAGE/CANAL ALLIED and CANAL CROSS  
DRAINAGE WORKS**

**SCHEDULE OF RATES**

**FOR THE YEAR : 2021-22**

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## DAM / BARRAGE/CANAL ALLIED and CANAL CROSS DRAINAGE WORKS

### QUANTITY OF MATERIALS REQUIRED

Item No.	Description of work	Unit	Quantity of materials required per unit quantity of work			
			Cement kg	Sand / FA cum	CA cum	Pipe/Steel kg
1.1	75 mm dia PVC pipe with porous CC for weep hole	Rm	1.10	0.007	0.003	---
			<b>Soil cum</b>	<b>Sand cum</b>	<b>CA cum</b>	<b>Stones cum</b>
1.2	Filling adjecents with available soil	cum	1.26	---	---	---
1.3	Embankment for kharland	cum	1.26	---	---	---
1.7	300 mm pitching over 250 mm filter backing	sqm	---	0.153	0.15	0.35
1.8	300 mm pitching with 150mm CA backing	sqm	---	---	0.15	0.35
1.9	constructing 350 mm thick hand packed with 100mm CA backing	sqm	---	---	0.1	0.25
			<b>Stone cum</b>	<b>Cement kg</b>	<b>Sand / FA cum</b>	<b>CA cum</b>
2.0	Rubble / boulder filling behind abutment	cum	1.020	---	---	---

**DAM / BARRAGE/CANAL ALLIED and CANAL CROSS DRAINAGE  
WORKS**

**SCHEDULE OF RATES**

**FOR THE YEAR : 2021-22**

<b>Item No.</b>	<b>Brief description of Item</b>	<b>Unit</b>	<b>Rate in Rs:</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
1.1	Providing and constructing 75 mm dia PVC <b>pipe weep holes</b> for concrete / masonry walls including providing 200 x 200 x 200 mm size porous concrete block made of cement and 20 mm down coarse aggregate in 1 : 4 proportion including 100 mm thick sand backing at the junction of wall and soil back fill, cost of all materials, machinery, labour etc., complete with <b>all lead and lifts</b> .	<b>M</b>	<b>310.00</b>
1.2	Providing <b>impervious filling adjacent to masonry / concrete</b> structure and <b>filling trial pits with soil available in adjacent area</b> in layers of 100 to 150 mm and compacting each layer to density control of not less than 95 percent using pneumatic tampers or by vibratory earth rammers including cost of all materials, machinery, labour, picking previous layer, spreading soil in layer, breaking clods, watering etc., complete with <b>all lead and lifts</b> .	<b>Cum</b>	<b>212.00</b>
1.3	Providing embankment for kharland and SWED works in coastal area with irrespective of any width and depth of bund including movement of vehicles for transportation of materials in any direction and any tidal variation condition ,watery situation for bund using soil from approved borrow area including cost of all materials, machinery, labour, all other operations such as excavation, sorting out, transportation, spreading soil in layer of 250 to 300 mm specified thickness, breaking clods, sectioning, watering to maintain OMC , compacting by power roller to density control of not less than 95 percent with all condition etc., complete with all lead and lifts as per specification.	<b>Cum</b>	<b>493.00</b>
1.4	Providing <b>sand cement bed with 5% cement</b> with all leads for all materials and lifts machine mixed, laid in layers of 15 cms. Thick and well compacted for foundation including curing cost, cost of all materials, machinery, labour including preparing surface, etc., complete as per specifications.	<b>Cum</b>	<b>3102.00</b>
1.5	Providing <b>sand cement bed with 10% cement</b> with all leads for all materials and lifts machine mixed, laid in layers of 15 cms. Thick and well compacted for foundation including curing cost, cost of all materials, machinery, labour including preparing surface, etc., complete as per specifications.	<b>Cum</b>	<b>3726.00</b>
1.6	Providing and laying <b>filter media consisting of 200 gsm poly-propeline non-woven filter fabric</b> and <b>20 mm down graded coarse aggregate</b> inbetween filter fabric layers for filter media / filter drains etc., ( excluding cost of providing 20 mm down coarse aggregate ) including cost of all materials, machinery, labour etc., complete with <b>all lead and lifts</b> .	<b>Sqm</b>	<b>275.00</b>

**DAM / BARRAGE/CANAL ALLIED and CANAL CROSS DRAINAGE WORKS**

<b>Item No.</b>	<b>Brief description of Item</b>	<b>Unit</b>	<b>Rate in Rs:</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>1.7</b>	Providing and constructing 550 mm thick <b>hand packed rough stone revetment</b> consisting of 300 mm thick rough stones with 400 to 450 mm long through stones at 1.5 m c / c over filter backing of 100 mm thick sand and 150 mm thick 40 mm down graded coarse aggregate layers including cost of all materials, machinery, labour, laying to specified slope, wedging with chips, finishing etc., complete with <b>all lead and lifts</b> .	<b>Sqm</b>	<b>895.00</b>
<b>1.8</b>	Providing and constructing 450 mm thick <b>hand packed rough stone revetment</b> consisting of 300 mm thick rough stones with 400 to 450 mm long through stones at 1.5 m c / c over a backing of 150 mm thick 40 mm down graded coarse aggregate layer including cost of all materials, machinery, labour, laying to specified slope, wedging with chips, finishing etc., complete with <b>all lead and lifts</b> .	<b>Sqm</b>	<b>695.00</b>
<b>1.9</b>	Providing and constructing 350 mm thick hand packed rough stone revetment consisting of 250 mm thick rough stones with 400 to 450 mm long through stones at 1.50 m c / c over a backing of 100 mm thick 40 mm down graded coarse aggregate for embankment used for kharland and SWED works in coastal area irrespective of any width and slant height of bund in any direction in any tidal variations conditions with watery situation including cost of all materials, transportation ,labour, hand packing, finishing etc., etc., complete with all lead and lifts.	<b>Sqm</b>	<b>819.00</b>
<b>2.0</b>	Providing <b>rubble stone / boulder filling behind abutment / below apron</b> including cost of all materials, labour, hand packing, finishing top surface etc., complete with <b>all lead and lifts</b> .	<b>Cum</b>	<b>1238.00</b>
<b>2.1</b>	<b>Available rubble stone / boulder filling behind abutment / below apron</b> including cost of labour, hand packing, finishing top surface etc., complete with <b>all lead and lifts</b> .	<b>Cum</b>	<b>424.00</b>

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**GOVERNMENT OF KARNATAKA**  
**MINOR IRRIGATION & GROUND WATER DEVELOPMENT DEPARTMENT**

**LIFT IRRIGATION WORKS**  
**SCHEDULE OF RATES**  
**FOR THE YEAR : 2021-22**

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**GOVERNMENT OF KARNATAKA**  
**MINOR IRRIGATION & GROUND WATER DEVELOPMENT DEPARTMENT**

**LIFT IRRIGATION WORKS**  
**SCHEDULE OF RATES**  
**FOR THE YEAR : 2021-22**

**GENERAL NOTES ON SCHEDULE OF RATES FOR LIS**

- 1 All notes under General Notes on Schedule of Rates and Notes on Lead, Lift, Loading and un-loading Charges are applicable to Lift Irrigation Works also to the extent they are relevant.
- 2 Unless otherwise specified the basic rates are inclusive of all lifts.
- 3 Unless otherwise specified the basic rates are inclusive of standard finishing required for concrete surface.
- 4 The basic rates for concrete items include cleaning the top surface of previous lift and providing cement mortar layer before placing the concrete for next lift. The proportion of cement mortar shall be same as that of mortar portion in concrete.
- 5 Cement content specified for cement concrete works in the item description is based on theoretical design mix computations and is exclusive of wastage and requirement for any incidentals. The actual cement content may vary based on Design Mix.
- 6 For diversion works such as coffer Dam, ring bund, island for river /stream /nala diversion wherever required, may be included in the estimate for these works.

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**GOVERNMENT OF KARNATAKA**  
**MINOR IRRIGATION & GROUND WATER DEVELOPMENT DEPARTMENT**

**LIFT IRRIGATION WORKS**  
**SCHEDULE OF RATES**  
**FOR THE YEAR : 2021-22**

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b Intake works	
c concrete works ( Refer Vol-I & III)	
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e outlet (Refer Vol -I,II,III IV & V)	

**QUANTITY OF MATERIALS REQUIRED  
LIFT IRRIGATION WORKS**

Item No.	Description of work	Unit	Quantity of materials required per unit quantity of work			
			Steel kg	Cement kg	Sand / FA cum	CA / Stone cum
4.1	15 mm thick inner guniting in CM 1:1.5	sqm	---	13.13	0.012	---
4.2	25 mm thick outer guniting in CM 1:3	sqm	---	15.91	0.031	0.006
			Quantity of materials required per unit quantity of work			
			Pipe kg	Cement kg	Sand / FA cum	CA / Stone cum
4.3.a	Supplying 400 mm P2 class spun pipe	Rm	180.00	---	---	---
4.3.b	Supplying 450 mm P2 class spun pipe	Rm	200.00	---	---	---
4.3.c	Supplying 500 mm P2 class spun pipe	Rm	230.00	---	---	---
4.3.d	Supplying 600 mm P2 class spun pipe	Rm	290.00	---	---	---
4.3.e	Supplying 700 mm P2 class spun pipe	Rm	350.00	---	---	---
4.3.f	Supplying 800 mm P2 class spun pipe	Rm	400.00	---	---	---
4.3.g	Supplying 900 mm P2 class spun pipe	Rm	460.00	---	---	---
4.3.h	Supplying 1000 mm P2 class spun pipe	Rm	520.00	---	---	---
4.3.i	Supplying 1100 mm P2 class spun pipe	Rm	580.00	---	---	---
4.3.j	Supplying 1200 mm P2 class spun pipe	Rm	650.00	---	---	---
4.4.a	Supplying 400 mm P3 class spun pipe	Rm	180.00	---	---	---
4.4.b	Supplying 450 mm P3 class spun pipe	Rm	200.00	---	---	---
4.4.c	Supplying 500 mm P3 class spun pipe	Rm	230.00	---	---	---
4.4.d	Supplying 600 mm P3 class spun pipe	Rm	290.00	---	---	---
4.4.e	Supplying 700 mm P3 class spun pipe	Rm	350.00	---	---	---
4.4.f	Supplying 800 mm P3 class spun pipe	Rm	400.00	---	---	---
4.4.g	Supplying 900 mm P3 class spun pipe	Rm	460.00	---	---	---
4.4.h	Supplying 1000 mm P3 class spun pipe	Rm	520.00	---	---	---
4.4.i	Supplying 1100 mm P3 class spun pipe	Rm	580.00	---	---	---
4.4.j	Supplying 1200 mm P3 class spun pipe	Rm	650.00	---	---	---
			Quantity of materials required per unit quantity of work			
			Pipe/ Steel kg	Cement kg	Sand / FA cum	CA / Stone cum
4.40	Acid resistant tiling / dadoing in CM 1:3	sqm	---	9.30	0.020	---
4.41	Chain link mesh fencing	Rm	8.80	6.00	0.012	0.024

**LIFT IRRIGATION WORKS**

**LIFT IRRIGATION WORKS  
SCHEDULE OF RATES  
FOR THE YEAR : 2021-22**

<b>Item No.</b>	<b>Brief description of Item</b>	<b>Unit</b>	<b>Rate in Rs:</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
	<b>GUNITING WORKS :</b>		
<b>4.1</b>	Providing 15 mm thick inner guniting to pipe in CM 1:1.5 proportion by volume including cost of all materials, machinery, labour, surface cleaning, finishing, curing, conveying to spot wherever required and all other ancillary operations etc., complete with all lead and lifts.	<b>Sqm</b>	<b>769.00</b>
<b>4.2</b>	Providing 25mm thick outer lining of CM 1:3 to pipe in proportion by volume ( aggregate for outer lining shall be mixture of 80 percent natural sand 20 percent 6 mm down crushed stone chips ) over 13 gauge 50 x 50 mm opening size weld mesh including cost of all materials, machinery, labour, surface cleaning, finishing, curing, conveying to spot wherever required and all other ancillary operations etc., complete with all lead and lifts.	<b>Sqm</b>	<b>1203.00</b>
<b>SUPPLY &amp; LAYING OF PIPES FOR RAISING MAIN / MANIFOLD /DELIVREY</b>			
<b>4.3</b>	Supplying P-2 Class R.C.C spun pipes ( safe for 4 kg / sqcm test pressure ) at pipe factory /sale depot including cost of all materials, machinery, labour, taxes, duties, levies, royalty etc.,as applicable with all lead and lifts.		
<b>a.</b>	400 mm dia P-2 Class R.C.C spun pipe	<b>M</b>	<b>762.00</b>
<b>b.</b>	450 mm dia P-2 Class R.C.C spun pipe	<b>M</b>	<b>933.00</b>
<b>c.</b>	500 mm dia P-2 Class R.C.C spun pipe	<b>M</b>	<b>1061.00</b>
<b>d.</b>	600 mm dia P-2 Class R.C.C spun pipe	<b>M</b>	<b>1356.00</b>
<b>e.</b>	700 mm dia P-2 Class R.C.C spun pipe	<b>M</b>	<b>1494.00</b>
<b>f.</b>	800 mm dia P-2 Class R.C.C spun pipe	<b>M</b>	<b>2066.00</b>
<b>g.</b>	900 mm dia P-2 Class R.C.C spun pipe	<b>M</b>	<b>2249.00</b>
<b>h.</b>	1000 mm dia P-2 Class R.C.C spun pipe	<b>M</b>	<b>2753.00</b>
<b>i.</b>	1100 mm dia P-2 Class R.C.C spun pipe	<b>M</b>	<b>3201.00</b>
<b>j.</b>	1200 mm dia P-2 Class R.C.C spun pipe	<b>M</b>	<b>3856.00</b>
<b>4.4</b>	Supplying P-3 Class R.C.C spun pipes ( safe for 6 kg / sqcm test pressure ) at pipe factory /sale depot including cost of all materials, machinery, labour, taxes, duties, levies, royalty etc.,as applicable with all lead and lifts		
<b>a.</b>	400 mm dia P-3 Class R.C.C spun pipe	<b>M</b>	<b>1312.00</b>
<b>b.</b>	450 mm dia P-3 Class R.C.C spun pipe	<b>M</b>	<b>1653.00</b>
<b>c.</b>	500 mm dia P-3 Class R.C.C spun pipe	<b>M</b>	<b>1749.00</b>
<b>d.</b>	600 mm dia P-3 Class R.C.C spun pipe	<b>M</b>	<b>2465.00</b>
<b>e.</b>	700 mm dia P-3 Class R.C.C spun pipe	<b>M</b>	<b>2808.00</b>
<b>f.</b>	800 mm dia P-3 Class R.C.C spun pipe	<b>M</b>	<b>3486.00</b>
<b>g.</b>	900 mm dia P-3 Class R.C.C spun pipe	<b>M</b>	<b>4158.00</b>
<b>h.</b>	1000 mm dia P-3 Class R.C.C spun pipe	<b>M</b>	<b>4874.00</b>
<b>i.</b>	1100 mm dia P-3 Class R.C.C spun pipe	<b>M</b>	<b>5255.00</b>
<b>j.</b>	1200 mm dia P-3 Class R.C.C spun pipe	<b>M</b>	<b>6028.00</b>



**LIFT IRRIGATION WORKS**

<b>Item No.</b>	<b>Brief description of Item</b>	<b>Unit</b>	<b>Rate in Rs:</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>4.5</b>	<b>Laying and jointing P-2 / P-3 class R.C.C spun pipes</b> true to line and level with perfect linking at joint including loading, unloading, rolling / lifting and lowering into trench, socket and spigot ends with soap solution, applying soft soap to spigot and spigot ends, cleaning inserting rubber sealing ring into correct position, jointing the pipes perfectly by jacking or other approved method, giving necessary hydraulic test at the specified pressure, cost of all jointing and water pressure testing materials, machinery, labour etc., complete with all lead and lifts		
<b>a.</b>	400 mm dia P-2 / P-3 class R.C.C spun pipes	<b>M</b>	<b>209.00</b>
<b>b.</b>	450 mm dia P-2 / P-3 class R.C.C spun pipes	<b>M</b>	<b>233.00</b>
<b>c.</b>	500 mm dia P-2 / P-3 class R.C.C spun pipes	<b>M</b>	<b>278.00</b>
<b>d.</b>	600 mm dia P-2 / P-3 class R.C.C spun pipes	<b>M</b>	<b>312.00</b>
<b>e.</b>	700 mm dia P-2 / P-3 class R.C.C spun pipes	<b>M</b>	<b>362.00</b>
<b>f.</b>	800 mm dia P-2 / P-3 class R.C.C spun pipes	<b>M</b>	<b>436.00</b>
<b>g.</b>	900 mm dia P-2 / P-3 class R.C.C spun pipes	<b>M</b>	<b>539.00</b>
<b>h.</b>	1000 mm dia P-2 / P-3 class R.C.C spun pipes	<b>M</b>	<b>607.00</b>
<b>i.</b>	1100 mm dia P-2 / P-3 class R.C.C spun pipes	<b>M</b>	<b>703.00</b>
<b>j.</b>	1200 mm dia P-2 / P-3 class R.C.C spun pipes	<b>M</b>	<b>820.00</b>
<b>4.6</b>	Manufacturing, supplying, laying in position, aligning, jointing, testing and commissioning of electric resistance welded / submerged arc welded mild steel ( Fe-410 grade ) <b>delivery pipes</b> of specified diameter and plate thickness with flanged ends wherever required and provided with 1 coat 40 micron thick zinc rich epoxy primer paint and 3 coats 100 micron thick each coat coal tar epoxy paint for inner surface and 1 coat of 40 micron thick zinc rich epoxy primer paint and 2 coats of 100 micron thick each coat coal tar epoxy paint for outer surface including cost of all materials, machinery, labour, cutting, bending, welding, finishing, painting, conveying to spot, lowering, aligning, jointing, arranging water for testing, hydraulic testing at fabrication site and after laying and jointing at specified test pressure etc., complete as per specifications and approved drawings with all lead and lift. <b>Diameter of delivery pipe : .....mm Thickness of plate : .....mm. Cost of MS Plate is considered as Rs.68,200.00 per MT.</b>	<b>Tonne</b>	<b>135400.00</b>
	<b>Note: Rate per Rm of pipe = Rate per tonne x Weight of pipe per Rm Weight of pipe per Rm for specified diameter and plate thickness = 0.373 x Diameter of pipe in mm x Plate thickness in mm / 14400</b>		
<b>4.7</b>	Manufacturing, supplying, laying in position, aligning, jointing, testing and commissioning of electric resistance welded /submerged arc welded mild steel (Fe-410 grade) <b>manifold pipe system</b> of specified diameter and plate thickness with flanged inlets / outlets at specified locations for connecting pump delivery pipes and rising mains and provided with 1 coat of 40 micron thick zinc rich epoxy primer paint and 3 coats of 100 micron thick each coat coal tar epoxy paint for inner surface and exposed outer surface including cost of all materials, machinery, labour, cutting, bending, welding, finishing, painting, conveying to spot, lowering, aligning, jointing, arranging water for testing, hydraulic testing at fabrication site and after laying and jointing at specified test pressure etc., complete as per specifications and approved drawings with all lead and lift. ( excluding cost of thrust block for anchoring / encasing manifold pipe ). <b>Diameter of manifold pipe : .....mm Thickness of plate : .....mm. Basic Cost of MS Plate is considered as Rs.68,200.00 per MT.</b>	<b>Tonne</b>	<b>122800.00</b>
	<b>Rate per Rm of pipe= Rate per tonne x Weight of pipe per Rm Weight of pipe per Rm for specified diameter and plate thickness = 0.976 x Diameter of pipe in mm x Plate thickness in mm / 30000</b>		

**LIFT IRRIGATION WORKS**

Item No.	Brief description of Item	Unit	Rate in Rs:
1	2	3	4
4.8	<p>Manufacturing, supplying, laying in position, aligning, jointing, testing and commissioning of electric resistance welded / submerged arc welded mild steel ( Fe-410 grade ) <b>raising main of specified diameter</b> and plate thickness provided with flanges / outlets wherever required for connecting to manifold system / for fixing valves and <b>provided with 15 mm thick inner lining of CM 1:1.5 proportion by volume and 25 mm thick outer lining of CM 1:3 proportion by volume</b> ( aggregate for outer lining shall be mixture of 80 percent natural sand and 20 percent 6 mm down crushed stone chips) over 13 gauge 50 x 50 mm opening size weld mesh including cost of all materials, machinery, labour, cutting, bending, welding, cement mortar lining, finishing, curing, conveying to spot, lowering, aligning, jointing, arranging water for testing, hydraulic testing at manufacturing site and after laying and jointing at specified test pressure etc., complete as per specifications and approved drawings with all lead and lift.</p> <p><b>Diameter of raising main pipe : .....mm Thickness of plate :.....mm.</b>  <b>Basic Cost of MS Plate is considered as Rs.68,200.00 per MT.</b></p> <p><b>NOTE: Rate per Rm of pipe = Rate per tonne x weight of pipe per Rm weight of pipe per Rm for specified diameter in mm and thickness of plate in mm</b>  <b>= 0.597 x diameter of pipe in mm x plate thickness in mm / 24000</b></p>	Tonne	132200.00
4.9	<p>Manufacturing, supplying, laying in position, aligning, jointing, testing and commissioning of electric resistance welded / submerged arc welded mild steel ( Fe-410 grade ) <b>raising main pipe</b> of specified diameter and plate thickness provided with flanges / outlets wherever required for connecting to manifold system / for fixing valves and provided with <b>625 micron thick coat of Polyurethane paint for inner lining and inner surface, 25mm thick outer lining of CM 1:3 proportion by volume</b> ( aggregate for outer lining shall be mixture of 80 percent natural sand and 20 percent 6 mm down crushed stone chips ) over 13 gauge 50 x 50 mm opening size weld mesh including cost of all materials, machinery, labour, cutting, bending, welding, cement mortar lining, finishing, curing, conveying to spot, lowering, aligning, jointing, arranging water for testing, hydraulic testing at manufacturing site and after laying and jointing at specified test pressure etc., complete as per specifications and approved drawings with all lead and lifts.</p> <p><b>NOTE: Rate per Rm of pipe = Rate per tonne x weight of pipe per Rm weight of pipe per Rm for specified diameter in mm and thickness of plate in mm</b>  <b>= 0.597 x diameter of pipe in mm x plate thickness in mm / 24000</b></p>	Tonne	135500.00
4.10	<p>Manufacturing, supplying, laying in position, aligning, jointing, testing and commissioning of electric resistance welded / submerged arc welded mild steel ( Fe-410 grade ) <b>raising main pipe</b> of specified diameter and plate thickness provided with flanges / outlets wherever required for connecting to manifold system /for fixing valves and provided with <b>2 coat of 60 micron thick Zinc epoxy primer paint and 3 coats of 100 micron thick each coal tar epoxy for inner surface</b> and 25mm thick outer lining of CM 1:3 proportion by volume ( aggregate for outer lining shall be mixture of 80 percent natural sand and 20 percent 6 mm down crushed stone chips ) over 13 gauge 50 x 50 mm opening size weld mesh including cost of all materials, machinery, labour, cutting, bending, welding, cement mortar lining, finishing, curing, conveying to spot, lowering, aligning, jointing, arranging water for testing, hydraulic testing at manufacturing site and after laying and jointing at specified test pressure etc., complete as per specifications and approved drawings with all lead and lifts.</p> <p><b>Diameter of raising main pipe : .....mm Thickness of plate :.....mm.</b>  <b>Basic Cost of MS Plate is considered as Rs.68,200.00 per MT.</b></p> <p><b>NOTE: Rate per Rm of pipe = Rate per tonne x weight of pipe per Rm weight of pipe per Rm for specified diameter in mm and thickness of plate in mm</b>  <b>= 0.597 x diameter of pipe in mm x plate thickness in mm / 24000</b></p>	Tonne	131700.00
	<p><b>NOTE: Rate per Rm of pipe = Rate per tonne x weight of pipe per Rm weight of pipe per Rm for specified diameter in mm and thickness of plate in mm</b>  <b>= 0.597 x diameter of pipe in mm x plate thickness in mm / 24000</b></p>		

**LIFT IRRIGATION WORKS**

<b>Item No.</b>	<b>Brief description of Item</b>	<b>Unit</b>	<b>Rate in Rs:</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
4.11	Providing <b>inside epoxy paint coating to M.S. pipes with 1 coat of 40 micron thick zinc rich epoxy primer paint of approved quality and 3 coats of 100 micron thick each coat approved quality coal tar epoxy paint for inner surface.</b> The rates are including removing all rust/dirt, other foreign matter, cleaning surface after blasting, cost of all materials, labour, machineries, testing etc.. complete as per specification and approved drawing with all lead and lifts.	<b>Sqm</b>	<b>327.00</b>
<b>PUMPS &amp; MOTORS / VALVES &amp; OTHER WORKS:</b>			
4.12	<b>Erection, testing, commissioning and trial running of centrifugal pump and motor</b> with all accessories necessary for satisfactory running of pump including cost of all materials, machinery, labour etc., complete as per terms and conditions of contract.		
	a. 15 to 30 hp with all accessories	<b>Each</b>	<b>18550.00</b>
	b. More than 30 upto 50 hp with all accessories	<b>Each</b>	<b>30200.00</b>
	c. More than 50 upto 75 hp with all accessories	<b>Each</b>	<b>45550.00</b>
	d. More than 75 upto 100 hp with all accessories	<b>Each</b>	<b>67500.00</b>
	e. More than 100 upto 150 hp with all accessories	<b>Each</b>	<b>84850.00</b>
	f. More than 150 upto 200 hp with all accessories	<b>Each</b>	<b>101250.00</b>
	g. More than 200 upto 250 hp with all accessories	<b>Each</b>	<b>132550.00</b>
	h. More than 250 upto 300 hp with all accessories	<b>Each</b>	<b>167150.00</b>
4.13	<b>Erection, testing, commissioning and trial running of turbine pump and motor</b> with all accessories necessary for satisfactory running of pump including cost of all materials, machinery, labour etc., complete as per terms and conditions of contract.		
	a. 15 to 30 hp with all accessories	<b>Each</b>	<b>30100.00</b>
	b. More than 30 upto 50 hp with all accessories	<b>Each</b>	<b>41600.00</b>
	c. More than 50 upto 75 hp with all accessories	<b>Each</b>	<b>64750.00</b>
	d. More than 75 upto 100 hp with all accessories	<b>Each</b>	<b>87250.00</b>
	e. More than 100 upto 150 hp with all accessories	<b>Each</b>	<b>107200.00</b>
	f. More than 150 upto 200 hp with all accessories	<b>Each</b>	<b>146850.00</b>
	g. More than 200 upto 250 hp with all accessories	<b>Each</b>	<b>186350.00</b>
	h. More than 250 upto 300 hp with all accessories	<b>Each</b>	<b>234650.00</b>
4.14	Design, manufacturing, supply, erection, trial running, performance test and commissioning of <b>vertical turbine pump</b> of approved make conforming to IS:1710(1989) having specified pump output under specified operating head coupled to HT/LT ,WITH motor of adequate HP rating operating at suitable KV with flexible coupling, self water lubricated thrust bearings, discharge Tee with flanged end for connecting delivery pipe with all other standard accessories and safety device etc..complete as per specification. <b>UPTO 3500 HP</b>	<b>Per HP</b>	<b>15500.00</b>
4.15	Design, manufacturing, supply, erection, trial running, performance test and commissioning of <b>centrifugal pump</b> of approved make conforming to IS:12699(1989) (Reaffirmed 2009) having specified pump output under specified operating head coupled to HT/LT ,WITH motor of adequate HP rating operating at suitable KV with flexible coupling, self water lubricated thrust bearings, discharge Tee with flanged end for connecting delivery pipe with all other standard accessories and safety device etc..complete as per specification. <b>UPTO 3500 HP</b>	<b>Per HP</b>	<b>10500.00</b>

**LIFT IRRIGATION WORKS**

<b>Item No.</b>	<b>Brief description of Item</b>	<b>Unit</b>	<b>Rate in Rs:</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>4.16</b>	<b>Conveying and fixing Sluice valve / Check valve</b> true to line and perfect linking with pipes on either side including loading, unloading, lifting and lowering into trench, cleaning ends, inserting gaskets into correct position, jointing pipes and valve to form water tight joints, cost of all jointing materials, machinery, labour etc., complete with all lead and lifts as per specification.		
<b>a.</b>	400 mm dia sluice valve / check valve	<b>Each</b>	<b>740.00</b>
<b>b.</b>	450 mm dia sluice valve / check valve	<b>Each</b>	<b>836.00</b>
<b>c.</b>	500 mm dia sluice valve / check valve	<b>Each</b>	<b>995.00</b>
<b>d.</b>	600 mm dia sluice valve / check valve	<b>Each</b>	<b>1177.00</b>
<b>e.</b>	700 mm dia sluice valve / check valve	<b>Each</b>	<b>1232.00</b>
<b>f.</b>	800 mm dia sluice valve / check valve	<b>Each</b>	<b>1287.00</b>
<b>g.</b>	900 mm dia sluice valve / check valve	<b>Each</b>	<b>1397.00</b>
<b>h.</b>	1000 mm dia sluice valve / check valve	<b>Each</b>	<b>1507.00</b>
<b>i.</b>	1100 mm dia sluice valve / check valve	<b>Each</b>	<b>1617.00</b>
<b>j.</b>	1200 mm dia sluice valve / check valve	<b>Each</b>	<b>1727.00</b>
<b>4.17</b>	Supplying, installing, testing and commissioning ( <b>SITC</b> ) <b>electrically actuated Wafer type flanged Butterfly valve PN 1.0 Class</b> conforming to BS : 5155 of specified diameter and approved make with gear box, electric motor and extension stem and all other accessories for perfect linking with pipes on either side including loading, unloading, lifting and placing in correct position, cleaning ends, inserting gaskets into correct position, jointing pipes and valve to form water tight joints, cost of all jointing materials, machinery, labour etc., complete with all leads and lifts.		
<b>a.</b>	400 mm diameter butterfly valve with accessories	<b>SET</b>	<b>46200.00</b>
<b>b.</b>	500 mm diameter butterfly valve with accessories	<b>SET</b>	<b>79500.00</b>
<b>c.</b>	600 mm diameter butterfly valve with accessories	<b>SET</b>	<b>114500.00</b>
<b>4.18</b>	Supplying, installing, testing and commissioning ( <b>SITC</b> ) <b>electrically actuated wafer type double flanged Butterfly valve PN 1.6 Class</b> conforming to BS:5156 of specified diameter of approved make with gear box, electric motor and extension stem and all other accessories for perfect linking with pipes on either side including loading, unloading, lifting and placing in correct position, cleaning ends, inserting gaskets into correct position, jointing pipes and valve to form water tight joints, cost of all jointing materials, machinery, labour etc., complete with all leads and lifts.		
<b>a.</b>	400 mm diameter butterfly valve with accessories	<b>SET</b>	<b>51100.00</b>
<b>b.</b>	500 mm diameter butterfly valve with accessories	<b>SET</b>	<b>84300.00</b>
<b>c.</b>	600 mm diameter butterfly valve with accessories	<b>SET</b>	<b>119300.00</b>
<b>4.19</b>	Supplying, installing, testing and commissioning ( <b>SITC</b> ) <b>electrically actuated double flanged Butterfly valve PN 1.0 Class</b> conforming to IS:13905 of specified diameter of approved make with gear box, electric motor and extension stem and all other accessories for perfect linking with pipes on either side including loading, unloading, lifting and placing in correct position, cleaning ends, inserting gaskets into correct position, jointing pipes and valve to form water tight joints, cost of all jointing materials, machinery, labour etc., complete with all leads and lifts.		
<b>a.</b>	700 mm diameter butterfly valve with accessories	<b>SET</b>	<b>376400.00</b>
<b>b.</b>	800 mm diameter butterfly valve with accessories	<b>SET</b>	<b>469600.00</b>
<b>c.</b>	900 mm diameter butterfly valve with accessories	<b>SET</b>	<b>562400.00</b>
<b>d.</b>	1000 mm diameter butterfly valve with accessories	<b>SET</b>	<b>673100.00</b>
<b>e.</b>	1100 mm diameter butterfly valve with accessories	<b>SET</b>	<b>840300.00</b>
<b>f.</b>	1200 mm diameter butterfly valve with accessories	<b>SET</b>	<b>1061300.0</b>

**LIFT IRRIGATION WORKS**

<b>Item No.</b>	<b>Brief description of Item</b>	<b>Unit</b>	<b>Rate in Rs:</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>4.20</b>	Supplying, installing, testing and commissioning ( <b>SITC</b> ) <b>electrically actuated Double flanged Butterfly valve PN 1.6 Class</b> conforming to IS:13905 of specified diameter of approved make with gear box, electric motor and extension stem and all other accessories for perfect linking with pipes on either side including loading, unloading, lifting and placing in correct position, cleaning ends, inserting gaskets into correct position, jointing pipes and valve to form water tight joints, cost of all jointing materials, machinery, labour etc., complete with all leads and lifts.		
<b>a.</b>	700 mm diameter butterfly valve with accessories	<b>SET</b>	<b>422300.00</b>
<b>b.</b>	800 mm diameter butterfly valve with accessories	<b>SET</b>	<b>517700.00</b>
<b>c.</b>	900 mm diameter butterfly valve with accessories	<b>SET</b>	<b>640100.00</b>
<b>d.</b>	1000 mm diameter butterfly valve with accessories	<b>SET</b>	<b>780300.00</b>
<b>e.</b>	1100 mm diameter butterfly valve with accessories	<b>SET</b>	<b>956300.00</b>
<b>f.</b>	1200 mm diameter butterfly valve with accessories	<b>SET</b>	<b>1174900.0</b>
<b>4.21</b>	Supplying and fixing <b>Butterfly valve actuator DOL panel board</b> with push button starter and all other accessories including wiring for specified number of valves etc complete with all leads and lifts.	<b>SET</b>	<b>376200.00</b>
<b>4.22</b>	Supplying, installing, testing and commissioning ( <b>SITC</b> ) <b>Cast steel double flanged dual plate Check valve Class 150</b> conforming to API 594 of approved make of specified diameter and to withstand specified water pressure with all accessories true to line and perfect linking with pipes on either side including loading, unloading, lifting and placing in correct position, cleaning ends, inserting gaskets into correct position, jointing pipes and valve to form water tight joints, cost of all jointing materials, machinery, labour etc., complete with all leads and lifts.		
<b>a.</b>	400 mm diameter check valve with accessories	<b>SET</b>	<b>110200.00</b>
<b>b.</b>	500 mm diameter check valve with accessories	<b>SET</b>	<b>137400.00</b>
<b>c.</b>	600 mm diameter check valve with accessories	<b>SET</b>	<b>171500.00</b>
<b>d.</b>	700 mm diameter check valve with accessories	<b>SET</b>	<b>230500.00</b>
<b>e.</b>	800 mm diameter check valve with accessories	<b>SET</b>	<b>312000.00</b>
<b>f.</b>	900 mm diameter check valve with accessories	<b>SET</b>	<b>419300.00</b>
<b>g.</b>	1000 mm diameter check valve with accessories	<b>SET</b>	<b>564800.00</b>
<b>h.</b>	1100 mm diameter check valve with accessories	<b>SET</b>	<b>760900.00</b>
<b>i.</b>	1200 mm diameter check valve with accessories	<b>SET</b>	<b>1027100.0</b>
<b>4.23</b>	Supplying, installing, testing and commissioning ( <b>SITC</b> ) <b>Cast steel double flanged dual plate Check valve Class 300</b> conforming to API 594 of approved make of specified diameter and to withstand specified water pressure with all accessories true to line and perfect linking with pipes on either side including loading, unloading, lifting and placing in correct position, cleaning ends, inserting gaskets into correct position, jointing pipes and valve to form water tight joints, cost of all jointing materials, machinery, labour etc., complete with all leads and lifts.		
<b>a.</b>	400 mm diameter check valve with accessories	<b>SET</b>	<b>121700.00</b>
<b>b.</b>	500 mm diameter check valve with accessories	<b>SET</b>	<b>151200.00</b>
<b>c.</b>	600 mm diameter check valve with accessories	<b>SET</b>	<b>189800.00</b>
<b>d.</b>	700 mm diameter check valve with accessories	<b>SET</b>	<b>255500.00</b>

**LIFT IRRIGATION WORKS**

<b>Item No.</b>	<b>Brief description of Item</b>	<b>Unit</b>	<b>Rate in Rs:</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
e.	800 mm diameter check valve with accessories	SET	343900.00
f.	900 mm diameter check valve with accessories	SET	463600.00
g.	1000 mm diameter check valve with accessories	SET	623800.00
h.	1100 mm diameter check valve with accessories	SET	841300.00
i.	1200 mm diameter check valve with accessories	SET	1133500.0
<b>4.24</b>	Supplying, fixing and commissioning <b>C.I Scour valve (sluice valve) of approved make body and seat ring of bronze PN 1.0</b> conforming to IS: 14846 of specified diameter and to withstand specified pressure with all accessories true to line and perfect linking with pipes on either side including loading, unloading, lifting and placing in position, cleaning ends, inserting gaskets into correct position, jointing pipes and valve to form water tight joint, cost of all jointing materials, machinery, labour etc., complete with all leads and lifts.		
a.	100 mm diameter scour valve with accessories	SET	9680.00
b.	150 mm diameter scour valve with accessories	SET	15000.00
c.	200 mm diameter scour valve with accessories	SET	26490.00
d.	250 mm diameter scour valve with accessories	SET	37690.00
<b>4.25</b>	Supplying, fixing and commissioning <b>C.I Tamper proof Air valve of approved make, body and seat ring of bronze, PN 1.0</b> class conforming to IS: 14845 of specified diameter with all fixtures including cost of all materials, machinery, labour etc., complete with all leads and lifts.		
a.	80 mm diameter air valve with accessories	SET	22070.00
b.	100 mm diameter air valve with accessories	SET	25810.00
c.	150 mm diameter air valve with accessories	SET	47500.00
d.	200 mm diameter air valve with accessories	SET	51160.00
<b>4.26</b>	Supplying, fixing and commissioning <b>C.I Tamper proof Air valve of approved make body and seat ring of bronze PN 1.6</b> conforming to IS: 14845 of specified diameter with all fixtures including cost of all materials, machinery, labour etc., complete with all leads and lifts.		
a.	80 mm diameter air valve with accessories	SET	23290.00
b.	100 mm diameter air valve with accessories	SET	28780.00
c.	150 mm diameter air valve with accessories	SET	48190.00
d.	200 mm diameter air valve with accessories	SET	52070.00
<b>4.27</b>	Design, fabrication, supply, assembling, testing and commissioning of <b>HT pump panel board made of sheet metal duly</b> painted with recess for cable entries at bottom suitable for 6.6 KV equipped with vacuum circuit breaker of suitable capacity for 1 number incoming 1600A and 2 numbers 630A outgoing of suitable capacity with aluminium bus bars of 1600 Amp metering panel, protection relays and all other accessories complete with wiring as per specifications and approved drawings.		
a	<b>Panel board with VCBs and fittings common to all pumps</b>	SET	1485000.0
	<b>Additional VCB including sheet metal enclosure, extension bus bars, metering and relays complete for each additional pump for mounting on common panel board</b>	SET	524700.00
	<b>NOTE: Rate for complete set of HTpump panel board = Rate for common VCBs and fittings + ( Rate for additional VCB per pump x Number of additional pumps )</b>		

**LIFT IRRIGATION WORKS**

<b>Item No.</b>	<b>Brief description of Item</b>	<b>Unit</b>	<b>Rate in Rs:</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>4.28</b>	Design, fabrication, supply, assembling, testing and commissioning of <b>Remote control panel made of sheet metal</b> in desk type configuration duly painted with recess for cable entries at the bottom equipped with operating consoles, indicators, annunciation windows, hooters and all other accessories assembled and ready to receive control wires and other connections etc., complete as per specifications and approved drawings.  <b>Note: Rate per complete set of Remote control panel = Rate for Remote control panel for each pump x Number of pumps</b>	<b>Each pump</b>	<b>44550.00</b>
<b>4.29</b>	Supply, installation and commissioning of <b>High tension Power factor capacitor bank</b> operating at 6.6 KV of specified KVA rating with all accessories complete as per specifications, terms and conditions of contract. <b>Note: Rate for Power Factor Capacitor Bank set per pump = Specified KVA rating x Rate per 50 KVA / 50</b>	<b>50 KVA</b>	<b>39600.00</b>
<b>4.30</b>	Supply, installation and commissioning of Load Break Switch with HRO fuses, CBCT and ELR in painted sheet metal enclosure with operating console complete for use along with Power Factor capacitor bank as per specifications, terms and conditions of contract.	<b>SET</b>	<b>374970.00</b>
<b>4.31</b>	Supply and installation of Axillary DC supply system of approved make with battery charger cum DCDB with batteries for 110 A hour complete with all accessories.	<b>SET</b>	<b>678150.00</b>
<b>4.32</b>	Supplying and installing Temperature scanner suitable for operating at 110 V DC or 230 V AC mounted in a duly painted sheet metal enclosure provided with NO / NC relays for transmitting signal to VCBs for tripping with audible alarm for both windings and bearings RTDs with all other accessories for satisfactory functioning of the system etc., complete as per specifications, terms and conditions of contract.	<b>SET</b>	<b>76730.00</b>
<b>4.33</b>	Supplying, installing and commissioning electrode actuated water level transmitter of approved make with all accessories to protect against dry running of pump.	<b>SET</b>	<b>155930.00</b>
<b>4.34</b>	Supplying, installing and commissioning electro-magnetic type flow meter of approved make with all accessories including display panel in the pump house.	<b>SET</b>	<b>1188000.00</b>
<b>4.35</b>	Supply and installation of floor mounting type LTAC panel of approved make fabricated from sheet metal and painted with provision for suitable incoming and specified number of outgoing feeder inlets with metering panel and all other accessories complete for auxiliary supply as per specifications.	<b>Each</b>	<b>376200.00</b>
<b>4.36</b>	Supply and installation of Auxiliary transformer 6.6 KV / 433 Volts 160 KVA copper wound, insulating oil filled with all accessories complete as per specifications.	<b>SET</b>	<b>321750.00</b>
<b>4.37</b>	Fabricating, supplying, erecting, testing and commissioning 6.6 KV 2500A capacity wall entry type bus duct with flexible end connectors to connect transformer and HT motor panel inside pump house with all accessories, supports etc., complete as per specifications and drawings.	<b>M</b>	<b>39600.00</b>

**LIFT IRRIGATION WORKS**

<b>Item No.</b>	<b>Brief description of Item</b>	<b>Unit</b>	<b>Rate in Rs:</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>4.38</b>	Supplying, laying and connecting xLPE 6.6 KV(E) 3 core cable suitable for 28 KA short circuit rating with end connectors from HT panel to motor, starters, capacitor panels etc., complete as per directions. 3 core 95 sqmm cable with end connectors 3 core 120 sqmm cable with end connectors 3 core 240 sqmm cable with end connectors 3 core 400 sqmm cable with end connectors	<b>M</b> <b>M</b> <b>M</b> <b>M</b>	<b>607.00</b> <b>941.00</b> <b>1090.00</b> <b>1684.00</b>
<b>4.39</b>	Supply, installation and commissioning of soft starter for specified kW load operating at 6.6 KV with load break switch, metering, protection by-pass vacuum contactor with all accessories complete housed in painted sheet metal enclosure. <b>Note: Rate for Soft starter set per pump = Specified kW load x Rate per 500 kW / 500</b>	<b>500 KW</b>	<b>742500</b>
<b>4.40</b>	Providing and fixing <b>acid resistant tiles</b> of approved quality for flooring / dadoing for battery room set over a bed of 20 mm thick CM 1 : 3 proportion including cost of all materials, machinery, labour, grouting joints with acid resistant mortar mix, curing etc., complete with <b>all lead and lifts.</b>	<b>Sqm</b>	<b>3130.00</b>
<b>4.41</b>	Providing and fixing <b>chain link fencing</b> consisting of 3 m long 65 x 65 x 6 mm M.S angles with top 50 cm bent at 30 degree to vertical fixed at 2.5 m intervals in C.C 1 : 3 : 6 proportion using 20 mm down graded coarse aggregate for 70 cm depth, fixing 50 x 50 mm opening 8 gauge G.I chain link mesh upto 1.8 m height of poles using 8 gauge stretcher wire at top and bottom and 30 x 30 x 5 mm M.S angles with bolts /nuts / washers ( 4 bolts for each pole ), fixing 3 rows of 12 gauge ( 4 barbs at 7.5 cm c/c ) G.I barbed wire for top bent portion of poles, including cost of all materials, machinery, labour, excavation of pit, mixing and laying concrete, curing, drilling holes in angles, cleaning angles, painting angles and Chain links with 2 coats of synthetic enamel paint over a <b>coat of primer etc.</b> , complete with <b>all lead and lifts.</b>	<b>M</b>	<b>1376.00</b>
<b>4.42</b>	<b>Providing and placing sand bags</b> consisting of empty cement bags filled with 35 to 40 kg locally available sand <b>for forming ring bund</b> including plugging the joints with selected earth, cost of all labour, materials etc., complete with <b>all lead and lifts.</b>	<b>Each</b>	<b>49.00</b>
<b>4.43</b>	<b>Filling clayey soil between two rows of sand bags</b> placed for forming ring bund including tamping, plugging leakage points etc., complete with <b>all lead and lifts.</b>	<b>Cum</b>	<b>263.00</b>



**GOVERNMENT OF KARNATAKA**  
**MINOR IRRIGATION & GROUND WATER DEVELOPMENT DEPARTMENT**

**GATE / HOIST AND ALLIED WORKS**  
**SCHEDULE OF RATES**  
**FOR THE YEAR : 2021-22**

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**GATE / HOIST AND ALLIED WORKS**  
**SCHEDULE OF RATES**  
**FOR THE YEAR : 2021-22**

Item No.	Brief description of Item	Unit	Rate in Rs:
1	2	3	4
	<b>GATES AND HOISTS FOR DAM :</b>		
5.1	Design, fabrication, supply, erection, testing and commissioning adequate capacity manually operated <b>moving gantry crane</b> consisting of wheel mounted gantry frame, roller mounted chain and pulley cross travel system moving along beam fixed to gantry top frame with all accessories for operating barrage stoplog elements including cost of all materials, machinery, labour, cutting, bending, aligning, welding, finishing, cleaning, applying two coats of zinc chromate red oxide primer and three coats of approved synthetic enamel paint etc., complete with <b>all leads and lifts.</b>	<b>Tonne capacity</b>	<b>130900.00</b>
<b>Note:</b>	Capacity of gantry crane in tonnes including 25 % reserve capacity = 2.5 x ( Weight of 1 set of stoplog gate / Number of elements ). ( Hoist capacity shall be rounded off to next 5 tonne ) Weight of moving gantry crane : 1.25 tonne per tonne capacity of gantry.		
5.2	Fabrication, supply, erection, testing and commissioning of <b>sliding type</b> vertical lift gate consisting of skin plate, horizontal and vertical stiffeners, seal seats, sponge rubber seals lifting handles etc., with all accessories <b>for vented dam / field channel</b> including cost of all materials, labour, cutting, aligning, welding, finishing, cleaning, applying two coats of anti-corrosive bituminous black paint over a coat of zinc chromate red oxide primer paint, seal fixing etc., complete as per specifications and approved drawings with <b>all leads and lifts.</b>	<b>Kg</b>	<b>196.00</b>
5.3	Fabrication, supply, erection, testing and commissioning of <b>plug and rod type hoist assembly</b> consisting of truncated upright cone type cast iron plug fixed to alloy steel screw hoist with supporting structure <b>for</b> operating circular sluice openings including cost of all materials, labour, machinery, cutting, aligning, anchoring, welding, finishing, cleaning, applying one coat zinc chromate red oxide primer and three coats anti-corrosive bituminous black paint etc., complete with <b>all leads and lifts.</b>	<b>Kg</b>	<b>224.00</b>
5.4	Supplying and fixing FRP Needles made out of concealed GI tubes of suitable size & thickness. Zinc coating of not less than 360GSM, I.S make hot rolled from any reputed pipe manufacturing company. FRP wrapping all-round the pipe minimum thickness of 4mm and wall thickness of plates not less than 6mm. made out of Isophtholic polyester resin UV stabilized marine grade and fibre glass chopped strands of 450 GSM electrical grade with gel coat finish. The water seals to be made out of synthetic rubber (EPDM) and housed in anodized aluminium housing as per design and drawing issued according to site conditions with the warranty of 5 years for any manufacturing defects, complete with all lead and lift loading and unloading charges as per the direction of Engineer in charge.		
	<b>For 0 to 2.20m width</b>		
a	For 0 to 2.00 m Height	<b>Sqm</b>	<b>25763.00</b>
b	For 2.00m to 3.00 m Height	<b>Sqm</b>	<b>30093.00</b>
c	For 3.00 to 4.00 m Height	<b>Sqm</b>	<b>35056.00</b>
	<b>For 2.20m to 4.20m width</b>		
d	For 0 to 2.00 m Height	<b>Sqm</b>	<b>28381.00</b>
e	For 2.00m to 3.00 m Height	<b>Sqm</b>	<b>32711.00</b>
f	For 3.00 to 4.00 m Height	<b>Sqm</b>	<b>37674.00</b>

**GATE / HOIST AND ALLIED WORKS**

<b>Item</b>	<b>Brief description of Item</b>	<b>Unit</b>	<b>Rate</b>
<b>No.</b>			<b>in Rs:</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>5.5</b>	Supply and fixing of FRP "C" section frame of size 100mm and wall thickness of 8mm (#1mm) and Rib thickness of 12mm smooth finish with marine grade gel coat, with side projections at every 1 Mtr. interval to hold the frame firmly in concrete including tie bar at top and key holes provided to tie the binding wire with reinforcement to maintain the alignment. FRP frames should be flushed to the top of the pier level after concreting to avoid damages of frames by debris of flood water. Binding of glass fibre mat must be Isophtholic polyester resin of marine grade with UV stabilizer to withstand all weather conditions and saline water (For any size). Anchor brackets to be provided to avoid the uplift of needles on either side of the groove, complete with all lead and lift loading and unloading charge.	<b>M</b>	<b>3658.00</b>
<b>5.6</b>	Providing and fixing "Molded Fiber Composite Flap Gate" made of composite material fiberglass reinforced plastic sandwiched with MS prefabricated hinge structure assembled on outer ring fixed on hume pipe, polypropylene glass lined, operating on Non-Return valve principle, embedded in polyester resin and glass roving and covered MS structure from all sides in molding by contact molding process, gate shall withstand for minimum 4.50 meter water head against hydrostatics presser, engraved and molded project name etc. complete as directed by engineer-in-charge.		
	For 600mm Dia Pipe	<b>No.</b>	<b>45833.00</b>
	For 900mm Dia Pipe	<b>No.</b>	<b>55657.00</b>
	For 1200mm Dia Pipe	<b>No.</b>	<b>65495.00</b>
	For 1500mm Dia Pipe	<b>No.</b>	<b>110645.00</b>
<b>5.7</b>	Providing ,Supplying and fixing <b>M.S. gates of size 1.62m*1.2m with 6mm thick M.S. plate with and stiffners (2 Nos)</b> horizontal bracing 6 Nos. of ISMC 75*40 including providing rubber guard of ISA 20*4 for providing rubber of approved Quality for bottom & two sides fixed to grove of M.S. gate of size 25 mm . 25mm with machine screw nuts and bolts of size 6mm dia & 35mm long and providing 16mm dia MS bar handles (4 Nos) suitably welded to horizontal bracing including two coats of anticorrosive bituminous paint over a cost of primer complete with all lead and lifts	<b>Kg</b>	<b>164.00</b>
<b>5.8</b>	Providing and fixing <b>M.S. Channel frame to suite the suitable size of gates.</b> The side channels with suitable height with hold fasts 12mm dia and 0.5m long M.S. Bar at 0.50 m c/c with suitable size bottom channel including cost of all materials including two coats of anti corrosive paint over a coat of primer etc., complete with all lead and lifts	<b>Kg</b>	<b>85.00</b>
<b>5.9</b>	Removing the MS element stoplog Gate for Barrages/ Vented Dam including conveying of gates to Store Yard and Stacking as directed including cost of labour, etc., complete with all lead and lifts.		
	a) Water storage height upto 3.00m	<b>Kg</b>	<b>5.00</b>
	b) Water storage height 3.00m to 4.00m	<b>Kg</b>	<b>3.00</b>
	c) Water storage height above 4.00m	<b>Kg</b>	<b>2.00</b>
<b>5.10</b>	Inserting the MS element stoplog Gate for Barrages/ Vented Dam including conveying of gates from Store Yard to Barrage/ Vented Dam as directed including cost of labour, etc., complete with all lead and lifts.		
	a) Water storage height upto 3.00m	<b>Kg</b>	<b>4.00</b>
	b) Water storage height 3.00m to 4.00m	<b>Kg</b>	<b>2.00</b>
	c) Water storage height above 4.00m	<b>Kg</b>	<b>1.00</b>

**ಕರ್ನಾಟಕ ಸರ್ಕಾರ**  
**ಸಣ್ಣ ನೀರಾವರಿ ಮತ್ತು ಅಂತರ್ಜಲ ಅಭಿವೃದ್ಧಿ ಇಲಾಖೆ**

**GOVERNMENT OF KARNATAKA**  
**MINOR IRRIGATION & GROUND WATER DEVELOPMENT DEPARTMENT**

**PRILIMINARY AND MAINTENANCE WORKS**  
**SCHEDULE OF RATES**  
**FOR THE YEAR : 2021-22**

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**PRILIMINARY AND MAINTENANCE WORKS**

**QUANTITY OF MATERIALS REQUIRED  
PRELIMINARY & MAINTENANCE WORKS**

Item No.	Description of work	Unit	Quantity of materials required per unit quantity of work			
			Stone cum	Cement kg	Sand / FA cum	CA cum
6.2	Reconstruction of revetment 300 mm thick	sqm	---	---	---	0.153
6.3	Strengthening pitching by wedging CA	sqm	---	---	---	0.010
			Soil cum	Cement kg	Sand / FA cum	CA cum
6.80	New embankment abutting existing bund	cum	1.20	---	---	---
6.16	New embankment abutting existing bund	cum	1.20	---	---	---
6.17	Construction of Masonry available stone	cum	---	115.20	0.41	---

**PRELIMINARY AND MAINTENANCE WORKS**

**PRELIMINARY AND MAINTENANCE WORKS  
SCHEDULE OF RATES  
FOR THE YEAR : 2021-22**

Item No.	Brief description of Item	Unit	Rate in Rs:
1	2	3	4
	<b>MAINTENANCE WORKS :</b>		
<b>6.1</b>	Removing disturbed rough / size <b>stone revetment</b> 300 mm thick with 150 mm thick 40 mm down aggregate backing and <b>resetting</b> the same using the available stones and aggregate including packing, wedging, finishing etc., complete with <b>all lead and lifts.</b>	<b>Sqm</b>	<b>105.00</b>
<b>6.2</b>	Removing disturbed rough / size <b>stone revetment</b> 300 mm thick with 150 mm thick 40 mm down aggregate backing and <b>resetting</b> the same using the <b>available stones</b> and <b>fresh aggregate</b> from quarry including handpacking, wedging, finishing etc., complete with <b>all lead and lifts.</b>	<b>Sqm</b>	<b>336.00</b>
<b>6.3</b>	<b>Strengthening</b> existing <b>revetment / pitching by wedging</b> with 40-20 mm size <b>aggregate</b> including cost of all materials, machinery, labour, surface finishing etc., complete with <b>all lead and lifts.</b>	<b>Sqm</b>	<b>37.00</b>
<b>6.4</b>	<b>Dismantling reinforced cement concrete</b> including disposing off the dismantled concrete, stacking released steel as directed, cleaning the area, cost of all materials, machinery, labour etc., complete with <b>all lead and lifts.</b>	<b>Cum</b>	<b>1177.00</b>
<b>6.5</b>	<b>Cutting open existing bund by manual means</b> and forming temporary diversion channel including placing the excavated soil in specified dump area or as directed with <b>all lead and lifts.</b>	<b>Cum</b>	<b>302.00</b>
<b>6.6</b>	<b>Re-constructing the cut open bund</b> portion, for forming temporary diversion channel, <b>using soil obtained from bund cutting</b> in layers of 150 to 200 mm thickness before compaction including cost of all labour, materials, machinery, all operations such as sorting out, spreading in layers of specified thickness, breaking clods, sectioning, watering, compacting each layer to density control of not less than 95 percent or as directed using mechanical tampers or by manual labour etc., complete with <b>all lead and lifts.</b>	<b>Cum</b>	<b>415.00</b>

**PRELIMINARY AND MAINTENANCE WORKS**

<b>Item</b>	<b>Brief description of Item</b>	<b>Unit</b>	<b>Rate</b>
<b>No.</b>			<b>in Rs:</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>6.7</b>	<b>Preparing slope of existing bund</b> ( without pitching ) for abutting fresh embankment to strengthen the existing bund by removing grass and other vegetation including disposing off the material as directed with <b>all lead and lifts.</b>	<b>Sqm</b>	<b>2.20</b>
<b>6.8</b>	Providing <b>new embankment</b> abutting to existing bund to <b>strengthen the existing bund</b> using soil from approved <b>borrow area</b> in layers of 200 to 250 mm and compacting each layer to <b>density control of not less than 95 percent</b> by vibrating plate compactor or pneumatic tamper including cost of all materials, machinery, labour, picking previous layer, spreading soil in layer, breaking clods, watering etc., complete with <b>all lead and lifts.</b>	<b>Cum</b>	<b>343.00</b>
<b>6.9</b>	Providing <b>new embankment</b> abutting to existing bund to <b>strengthen the existing bund using soil</b> available in <b>adjacent area</b> in layers of 200 to 250 mm and compacting each layer to <b>density control of not less than 95 percent</b> by vibrating plate compactor or pneumatic tamper including cost of all materials, machinery, labour, picking previous layer, spreading soil in layer, breaking clods, watering etc., complete with <b>all lead and lifts.</b>	<b>Cum</b>	<b>181.00</b>
<b>6.10</b>	<b>Removing damaged rubber seal from gate and fixing new rubber seal</b> ( excluding cost of rubber seal and bolts ) including cleaning seal seat, vulcanizing seal wherever necessary, forming holes in seal, fixing in place as directed etc., complete with <b>all leads and lifts.</b>	<b>M</b>	<b>186.00</b>
<b>6.11</b>	<b>Supplying hard wood</b> ( Kiral-bogi or similar variety ) <b>planks</b> of specified length and thickness for vents of vented dam including cost of all material, machinery, labour etc complete with <b>all leads and lifts.</b>	<b>Cum</b>	<b>48019.00</b>
<b>6.12</b>	<b>Conveying and fixing hard wood</b> ( Kiral-bogi or similar variety ) <b>planks</b> of specified size for vents of vented dam including applying 2 coats of approved quality asphalt, cost of all materials, machinery, labour etc., complete with <b>all leads and lifts.</b>	<b>Sqm</b>	<b>219.00</b>

**PRELIMINARY AND MAINTENANCE WORKS**

<b>Item No.</b>	<b>Brief description of Item</b>	<b>Unit</b>	<b>Rate in Rs:</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>6.13</b>	<b>De-silting tank bed/Feeder Channel/Canal in dry condition</b> by excavating the deposited bed material and loading the same to transport vehicle ( excluding cost of transportation ) including cost of all <b>machinery, labour etc., complete with all lead and all lifts</b>	<b>Cum</b>	<b>46.00</b>
<b>6.14</b>	<b>De-silting tank bed/Feeder Channel/Canal in dry condition</b> by excavating the deposited bed material and disposing off the same by stacking/ formation of Embankment or as directed including cost of all machinery, labour etc., complete with all lead and all lifts	<b>Cum</b>	<b>80.00</b>
<b>6.15</b>	<b>Replacing old / damaged 25 x 25 mm sponge rubber seals and bolt / nut / washers</b> of gate and <b>fixing new seals / bolts / nuts / washers</b> including cost of all materials, labour, adhesive etc., complete with <b>all leads and lifts.</b>	<b>M</b>	<b>257.00</b>
<b>6.16</b>	Providing <b>new embankment</b> to <b>slopes of the existing bund to strength the existing bund</b> using soil from approved <b>borrow area</b> in layers of 200 to 250 mm and compacting each layer <b>manually</b> to meet required <b>density</b> including cost of all materials, machinery, labour, picking previous layer, spreading soil in layer, breaking clods, watering , loading and Unloading with <b>all lead and lifts.</b>	<b>Cum</b>	<b>351.00</b>
<b>6.17</b>	Providing and constructing <b>Size Stone/Coursed/ uncoursed rubble</b> stone masonry in CM 1 : 5 proportion <b>using available stones</b> including cost of all materials, machinery, labour, forming weep holes at specified intervals, finishing, curing etc., complete with <b>all lead and lifts.</b>	<b>Cum</b>	<b>1803.00</b>
<b>6.18</b>	<b>Removing / refixing the Barrage / dam, gates / vents including</b> Conveying the gates to store yard and stacking all materials separately and same as to be re inserted as directed including cost of all materials, machinery, labour etc., loading & Unloading complete with all leads and lifts	<b>Sqm</b>	<b>591.00</b>
<b>6.19</b>	Lifting of lowered mechanically operated vertical lift gates from vents of vented dam and dogging the gates on resting platform including Power supply arrangements, hire charges of DG set, Mobile crane to handle the gates in case of Mechanical Failure, cost of laboures for operating the gates,removal of weeds & debries accumulated around the gates, transportation charges, including cost of all machinery, labour, cleaning etc.. complete with all lead and lift.	<b>Sqm</b>	<b>718.00</b>



**PRELIMINARY AND MAINTENANCE WORKS**

<b>Item No.</b>	<b>Brief description of Item</b>	<b>Unit</b>	<b>Rate in Rs:</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>6.2</b>	Lowering of the vertical lift gates from the vents of vented dam from dogging position for storing the water to its capacity by ensuring complete sealing of the gate without any leakages includes Power supply arrangements, Hiring Charges for DG set, Mobile crane to handle the gates in case of mechanical Failure, Cost of laboures for operating gates, roller & gate alignments, minor Mechanical repairs, groove cleaning, Gates cleaning, Spargear assembly cleaning, Removal of stumps & due roots of bamboo clusters, debries & weeds around the gates, Underwater diving expert with all Diving Equipment for proper sealing of the gate, transportation charges, Charges for Ensuring complete sealing till lifting of gates before commencement of mansoon, Charges for operating the gates in case of <b>Sudden floods in the catchment area including cost of all machinery, labour, cleaning etc.. complete with all lead and lifts.</b>	<b>Sqm</b>	<b>2069.00</b>
<b>6.21</b>	Providing homogeneous embankment using soil from approved borrow area mixed with 5% cement with machine mixed and laid in layer of 0.3 cms thick and well compacted for ground stabilisation including cost of all materials, machinery, labour, all operations such as excavation, sorting out, transportation, spreading treated soil in layer of specified thickness, breaking clods, sectioning, watering, compacting to density control of not less than 95 percent using power roller etc., complete with all lead and lifts	<b>Cum</b>	<b>1113.00</b>
<b>6.22</b>	Clearing <b>thick jungle</b> growth ( less than 50 percent open space ) including bushes upto upto 300 mm / parthenium and other weeds including burning or disposing off the same as directed etc., complete.	<b>Sqm</b>	<b>3.00</b>
<b>6.23</b>	Removing stumps, tree roots, roots of bamboo clusters etc., upto 1.50 m girth including excavation, stacking the materials neatly and levelling the surface etc., complete with all lead and lifts as per specification.	<b>Each</b>	<b>69.00</b>
<b>6.24</b>	Removing stumps, tree roots, roots of bamboo cluster etc., with girth above 1.50 m and upto 3.0 m including excavation, stacking the materials neatly and levelling the area etc., complete with all lead and lifts as per specification.	<b>Each</b>	<b>155.00</b>
<b>6.25</b>	Removing stumps, tree roots, roots of bamboo cluster etc., with girth above 3.0 m and upto 5.0 m including excavation, stacking the materials neatly and levelling the area etc., complete with all lead and lifts as per specification.	<b>Each</b>	<b>494.00</b>
	For every 0.5m increase in girth beyond 5m add	<b>Each</b>	<b>77.00</b>
<b>6.26</b>	Earthwork excavation for trial pits / borrow pits and other investigation works in all kinds of soil including boulders upto 0.30 m dia and disposing off excavated soil as directed with all lead and lifts as per specification.	<b>Cum</b>	<b>302.00</b>
<b>6.27</b>	Removing dry stone revetment and stacking the released materials as directed with all lead and lifts as per specification.	<b>Cum</b>	<b>220.00</b>
<b>6.28</b>	<b>Removing the FRP Gates/needles</b> including cleaning both side and Conveying the gates from vents to store yard and stacking all materials seperately including cost of all materials, machinery, labour etc., complete with all leads and lifts.	<b>Sqm</b>	<b>546.00</b>
<b>6.29</b>	<b>Refixing the FRP Gates/needles</b> in position including cleaning the bottom of the channel to seat the needles properly replacing the damaged rubber seals if any using adhesive, refilling the grooves of the rubber seal with silicone sealant, driving of the wooden pegs not less than 4 nos in each FRP needles from upstream side, including cost of all materials, machinery, labour etc., complete with all leads and lifts.	<b>Sqm</b>	<b>650.00</b>

**PRELIMINARY AND MAINTENANCE WORKS**

<b>Item</b>	<b>Brief description of Item</b>	<b>Unit</b>	<b>Rate</b>
<b>No.</b>			<b>in Rs:</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>6.30</b>	<b>Removing old planks from vents of Vented Dam</b> , cleaning both sides of planks & applying two coats of approved quality asphalt and stacking in store shed including cost of all materials,machinery, labour etc., complete with all leads and lifts.	<b>Sqm</b>	<b>444.00</b>
<b>6.31</b>	<b>Refixing of old planks</b> stacked in store shed, to the vents of Vented Dam as per the directions of Engineer in charge of the work including cost of all materials,machinery, labour etc., complete with all leads and lifts.	<b>Sqm</b>	<b>383.00</b>

**Detailed specification for Entrustment of preparation of DPR to Consultants.**

**Preparation of Detailed Project Report (D.P.R) which comprises of following aspects ( FOR IRRIGATION WORKS )**

- Conducting Reconnaissance and detailed survey at the project site taking L/s, C/s of river/stream/halla at 100m intervals both on upstream and downstream side of the site, for a distance of 500m.
- The index map showing the location of project site and indicating the project site on a topo sheet showing the catchment area.
- Preparation of plan, sectional elevational drawing of all the components as per detailed Designs computations bases on Trial pit/Trial Bore details.
- Preparation of Estimates as per the direction of Site Engineers.
- Supplying Require Numbers ) about 15 to 20 copies ) of DPRs for placing before TAC and attending to the observations of TAC/TSC, till it accords clearance to the Project and supplying the finalized DPR in required numbers (about 6 copies) to accord Administrative approval and technical sanction etc., complete as per the directions of Engineer-in-charge.

Sl.No	Description	Maximum Percentage
1	Estimate costing upto Rs.100.00 lakhs	Shall be prepared by the Departmental Engineers only
2	Estimate costing more than 100.00 lakhs upto Rs. 500.00 lakhs	0.50% of the Estimated Cost
3	Estimate costing more than 500.00 lakhs upto Rs. 1000.00 lakhs	0.40% of the Estimated cost or Rs.2.5 Lakhs whichever is more
4	Estimate costing more than Rs.1000.00 Lakhs	0.20% of the Estimated Cost or Rs.4.00 lakhs whichever is more

**NOTE :**

1. The Karnataka Transparency Act 1999 and procurements rules 2000 and subsequent amendments should be followed while entrusting the above work to approved consultants.
2. Estimated cost is applicable to the work portion only. (Excluding Lump sum provisions, miscellaneous, Land acquisition etc.,)
3. The above consultant percentage is applicable to new project only. (Excluding Improvements/ Renovations work)