

SCHEDULE OF QUANTITY

Job No.3

Estimated Cost :- 777095
 Earnest Money:- 15542
 Time Limit:- 3 Months

DRAFT SCHEDULE OF QUANTITIES

Name of Work :- C/O Flood protection Work on various Khads under Jaswan Pragpur Constituency (Phase-1) Distt. Kangra H.P (S.H :- C/O Preparation of

Sr.No	Description of items	Qty.	Rate	Unit.	Amount
1	2	3		4	5
1	Providing consultancy services for preparation of DPR for Spure, Embankment, Gabion structure to check soil inundation & flood protection at the both bank of various Khad under Jaswan Pragpur constituency including carrying out toographical Survey (with total station /GPS) plotting and preparation of drawings on Auto CAD at the suitable scales & approval of the same from competent authority of the department including c/o temporary bench marks at 1 Km. interval, complete in all respect to the entire satisfaction of the Engineer-in-charge. with in all leads, lifts . As per attached in phase-1	19	Km.	Per Km.	
Scope of work:					
1	Data Collection.				
a)	Preparation of Index Plan, detailed contour map of proposed reach for anti Erosion structure /Flood Protection measures.				
b)	Preparation of L-section and Cross section of Main Khad & Its Tributaries as per HPIPH/ CWC/CWPRS Pune guidelines.				
c)	Data on Flood discharge and damages including area affected cultivated area, house damaged live stock etc. with the help of HPIPH & other related department. (lost damage to public utilitiesd, important towns affected etc. shall be couter signed from the revenue authorities).				
d)	Sieve analysis & silt factor determination & report from the approved institutions be collected & DPR be prepared accordingly,				
e)	Any other Data required for the study and Preparation of DPR.				
2	Field Visit:				
	The required field visit be conducted by the consultants for collection of the necessary data including carrying out the necessary Topographical Survey works.				
3	Field Studies.				
	Design of Flood protection measures shall cover the following main aspects:-				
i)	Mathematical model studies & Technical report shall be prepared by CWPRS, Pune (if required by STAC). The consultant should provide the necessary information and survey for speedy preparation of these studies/reports by CWPRS Pune)				
ii)	Topographical Survey of area along the alignment of Proposed Flood Protction works should be carried out as per standard norms of Central Water Commission/Ministry of Water Resources .				
iii)	Assessment of carrying capacity of River based on the results of the Topographical Survey, L section data and cross sectional details.				
iv)	Carrying capacity of the channel				
4	Design of Flood Control Structures				
i)	Determination of Silt factor on the basis of sieve analysis				
ii)	STAC approval must be obtained.				
iii)	Design of Flood control /Anti erosion structures shall be based on CWPRS model studies/other relevant IS code/Manual.				
iv)	The report shall be nicely printed alongwith neat sketches , drawings and whole report should be in presentable form				
Total					

Terms & Conditions

- 1 The work shall be executed strictly in accordance with IPH/HPPWD and BIS specifications & standards
- 2 The Contour Plan, L-section shall be prepared at suitable and readable scale .
- 3 The existing structures within the HFL, Flood zone shall be marked
- 4 The X-section of the Vulnerable sites upto the HFL shall be prepared.
- 5 The quantity shall be increase or decrease as per site conditions.
- 6 Department's field staff shall accompany the consultant during Traversing & investigation.
- 7 Taxes & securities shall be deducted as per norms
- 8 Tender shall be issued to only such contractors,those having the relevant experience in same kind of works .
- 9 Any kind of No-Objection Certificate , Mathematical model studies etc. (if required) & Flood Damage reports shall be provided by the department.
- 10 Payment Schedule
 - a) On Submission of Survey/Field data ---20% of awarded amount
 - b) On submission of Draft DPR for STAC approval --40% of awarded amount
 - c) On STAC approval & submission of DPR --20% of awarded amount
 - d) On Clearance from E-in-C office Shimla--10% of awarded amount
 - e) On TAC from Competent authority--10% of awarded amount

**Executive Engineer,
HPIPH Division-Dehra**

Schedule of Quantity

Name of Work :-

C/O Rain Water Harvesting Structure (Check Dam) on various Nallahs/Khads under Jaswan Pragpur Constituency(Phase-1) in Distt Kangra (HP) (SH :- preparation of detailed project report).

Job No.1

Estimated cost:- Rs. 750,000 /-only
 Earnest money:- Rs. 15000 /-only
 Time Limit:- 03 months

Sr. No.	Description of item	Qty	Rate		Unit	Amount
			In Figures	In Words		
1	Deployment of consultants for the preparation of detailed project report including project feasibility, Hydraulic studies, studies related to soil investigation, structural stability and other related field work for the construction of Check Dam/ Rain Water Harvesting Structure on various Nallahs/Khads under Jaswan Pragpur Constituency in Distt Kangra (HP)	1			Job	
Scope of Work :- Data calculation shall include following activities -						
1	Detailed map of project depicting . Topography.					
a)	Topography.					
b)	Gelological features.					
c)	Avilability of adequate water of irrigate available area on the down stream of the structure (The water avilability studies should be based on the avilable hydrological data and capacity if the reservoir)					
2	Preparation of L- section of all the Nallah.					
3	Contour map of the project area.					
4	The consultants may also keep in view the sites already identified by IPH Department in this repect.					
5	Estimation and study of necessary topography, soil surveys and geological investigations required for determining the sites for the proposed structures.					
6	Study and Estimation of the silt load from the catchment and the life span of the structure. Suitable water shed management techniques shall be used to maximize the life span with a detailed contour map of the catchment area of the project report.					
7	The Availability of water for the project shall be ascertained from the locally available source viz, khads/reservoirs by proposing suitable intake points/water harvesting sturcture.					
8	The approval of the competent authority for drawal of water from the source proposed in the project shall be the entire responsibility of the consultants/bidder/tenderer.					
9	The agronomic and climatological data for determining the post-project cropping patten will be adopted in consultantion with the Agriculture and Horticulture Departments of Himachal Pradesh. Documantry proof in this regard shall be attached with offer, otherwise offer shall be rejected summarily.					
10	The planning/design of water harvesting sturcture/ intake points/pumping machinery/pump house/gravity main/ditribution mains shall be done and also got vetted from IIT Roorkee /PEC chandigarh/NIT Hamirpur and the consultant's charges for vetting design and drawings shall be paid extra by the Department.					
11	The prelimanry cost of the project shall be worked out by the consultants as per issued by CWC/Ministry of Water re-sources Govt. of India.					
a)	Detailes of vunerable sites in the study area.					
b)	Any other related data required rom the study.					
c)	Field visits:- The necessary field visit shall be conducted by the consultants for collection of the necessary data including carrying out of the survey work.Revenue data shall be provided by department.					
14	The report shall be forwarded through the HPI&PH Department to be concerned technical authorities of NABARD/Govt. of India. The consultant shall under-take liassion of this technical report with the concerned authorities for obtaining speedy technical approval and all the meeting and discussions with the NABARD/Govt. of India officials shall be attended by the consultants onbehalf of IPH Deptt. and the report be got technically cleared/approved from the competent authority.					
15	The detailed project report should contain specification of each competent of the work giving latest code reference etc. The contour map of the catchment as well as of the distribution system for irrigation land from the proposed sturcture including other details such as L-section of Rising main, Gravity main, Location of pump house, position of outlets, grades of distribution system and field channels.					

Terms & Conditions

- 1 The work shall be executed strictly in accordance with IPH/HPPWD and BIS specifications & standards
- 2 The Contour Plan, L-section shall be prepared at suitable and readable scale .
- 3 The existing structures within the HFL, Flood zone shall be marked
- 4 The X-section of the Vulanerable sites upto the HFL shall be prepared.
- 5 The quantity shall be increase or decrease as per site conditions.
- 6 Department's field staff shall accompany the consultant during Traversing & investigation.
- 7 Taxes & securities shall be deducted as per norms
- 8 Tender shall be issued to only such contractors,those having the relevant experience in same kind of works .
- 9 Any kind of No-Objection Certificate , Mathematical model studies etc. (if required) & Flood Damage reports shall be provided by the department.
- 10 Payament Schedule
 - a) On Submission of Survey/Field data ---20% of awarded amount
 - b) On submission of Draft DPR for STAC approval --40% of awarded amount
 - c) On STAC approval & submission of DPR --20% of awarded amount
 - d) On Clearance from E-in-C office Shimla--10% of awarded amount
 - e) On TAC from Competent authority--10% of awarded amount

**Executive Engineer,
 HPIPH Division-Dehra**

Job No.2Name of work:-
(Sub-Head:-**SCHEDULE OF QUANTITY**
Imp. and Aug. of LWSS for Village Guer and Haripur in tehsil Dehra Distt. Kangra (HP)
C/O 2 Nos RCC sector tank of 20000 Ltr. Cap. Node No. 9 & 15000 Ltr. Cap. Node No12 Phase Ist).Estim 429325/-
Earn 8590/-
Time limit:- Three mor

Sr. No.	Description of Items	Qty.	Rate in Rs.		Unit	Amount
			Figures/	Words		
1	Excavation in foundation, trenches etc. in earth work in all kinds of soil lift upto all height, stacking the excavated soil not more then 3 mtrs. clear from the edge of excavation & then returning the stacked soil in 15cm layers when required into plinth sides of foundation etc. consolidating each deposited layer by ramming & watering and then disposing of all surplus excavated earth as directed within all leads and lifts.	26.41 Cum			Per cubic meter.	
2	Providing and laying cement concrete 1:3:6(One cement :three sand : six graded stone aggregate 40mm nominal size and curing complete excluding the cost of centering & shuttering in foundation and plinth within all leads and lifts.	2.25 Cum			Per cubic meter.	
3	Providing and laying cement concrete 1:1.5:3 (One cement:one & half sand:three graded stone aggregate 20mm nominal size) and curing complete excluding the cost of form work and reinforcement for reinforced concrete work in:-					
a)	Foundation, footing bases of columns and the like and mass concrete within all leads and lifts .	33.70 Cum			Per cubic meter.	
b)	Wall (any thickness but not less than 0.10 mtrs.thickness) attached pillasters, buttresses plinth & string courses etc. from top of foundation level upto floor two level within all leads and lifts.	8.96 Cum			Per cubic meter.	
c)	Suspended floor, roofs, landing & shelves & their support balconies, beams, girder, bressumers & cantilever upto floor level.	2.41 Cum			Per cubic meter.	
4	Providing form work with steel plates 3.15mm thick welded with angle iron in frame 30x30x5mm, so as to give a fair finish including centring, shuttering, strutting and propping etc. with wooden battons and ballies, height of propping and centring below supporting floor to ceiling not exceeding 4.00mtrs. and removal of the same for in-situ-reinforced and plain concrete work in:-					
a)	Vertical surface such as walls (any thickness) partitions and the like including attached pillasters,buttresses, plinth and string courses and the like within all leads and lifts.	111.91 Sqm			Per square meter.	
b)	Flat surfaces such as soffits of suspended floor, roofs, landings and the like floor etc. upto 200mm thickness within all leads and lifts.	17.60 Sqm			Per square meter.	

--2--

Sr. No.	Description of Items	Qty.	Rate in Rs.		Unit	Amount
			Figures/	Words		
5	Providing in RCC work smooth finishing of the exposed surface with cement motor 1:3(One cement:Three sand) within all leads and lifts.	111.91 Sqm			Per square meter.	
6	Providing tor steel reinforcement for RCC work including bending, binding and placing in position complete upto floor two level within all leads and lifts .	809.13 Kgs.			Per Kgs.	
7	Steel work welded in built up sections, trusses & framed work including cutting, hoisting and fixing in position and applying a priming coat of red paint:- In grating, framed, guards bars, ladders,railing, brackets & similar works within all leads and lifts.	89.75 Kgs.			Per Kg.	
8	Laying in trenches GMS pipe (L/M class) tube fitting of following dia (earth work in trenches to be measured and paid for separately) complete within all leads and lifts .					
	i) 50mm dia	21.00 Rmt.			Per Rmt	
	ii) 80mm dia	21.00 Rmt.			Per Rmt	
9	Providing & fixing of Kirloskar/Leader make Cast Iron sluice valve of following dia Class-PN-1.0 with M.S.flange table-5 conforming to IS:780-1984 latest with uptodate ammendments having seat pressure 10.20Kg./cm ² including nut, bolts and gasket sheet within all leads and lifts.					
	i) 50mm dia	4.00 Nos.			Each	
	ii) 80mm dia	4.00 Nos.			Each	
10	Constructing chamber for sluice valve, with C.I.surface box 100mm top dia,160mm bottom dia & 180mm deep(inside) with chained lid RCC top 1:2:4 mix (One cement : Two sand :Four graded stone aggregate 20mm nominal size)100mm thick foundation concrete 1:5:10 (One cement : Five sand : Ten graded stone aggregate 40mm nominal size) and in side plastering with cement mortar 1:3 (One cemet : Three sand) finished with a floating coat of neat cement including	6.00 Nos.			Each	

--3--

Sr. No.	Description of Items	Qty.	Rate in Rs.		Unit	Amount
			Figures/	Words		
11	Providing and fixing of precast concrete SFRC manhole cover with internal frame & cover system conforming to IS specifications code-12592-Part-I & II with latest ammendments having size of 560mm internal dia within all leads and lifts.	4.00 Nos.			Each	

Total:-

TERMS & CONDITIONS.

- 1 The work shall be executed as per PWD/IPH specifications.
- 2 Security, sale tax & Income tax shall be deducted from the bill as per prevalent rules.
- 3 Nothing shall be paid for rejected work/material.
- 4 The cement and steel shall be issued by the Department @ Rs.267/- per bag and Steel @ Rs.5046/ per quintal from Divisional Store Dehra.
- 5 The G.I.pipe will be issued free of cost from Divisional Store Dehra.
- 6 1% cess on account of building and other construction workers as per Act-1996.
- 7 The final payment made to the contractor after completion of work and to the entire satisfaction of Engineer-in-Charge.

Executive Engineer
IPH Division, Dehr

Job No.4

Name of work:-
(Sub-Head:-

SCHEDULE OF QUANTITY

Imp. and Aug. of LWSS for Village Guer and Haripur in tehsil Dehra Distt. Kangra (HP)
C/O 2 Nos RCC main tank of 35000 Ltr. Cap. Node No. 8 & 10000 Ltr. Cap. Node No7 Phase Ist).

Estim 279985/-
Earne 5600/-
Time limit:- Three mtr

Sr. No.	Description of Items	Qty.	Rate in Rs.		Unit	Amount
			Figures/	Words		
1	Excavation in foundation, trenches etc. in earth work in all kinds of soil lift upto all height, stacking the excavated soil not more than 3 mtrs. clear from the edge of excavation & then returning the stacked soil in 15cm layers when required into plinth sides of foundation etc. consolidating each deposited layer by ramming & watering and then disposing of all surplus excavated earth as directed within all leads and lifts.	30.42 Cum			Per cubic meter.	
2	Providing and laying cement concrete 1:3:6(One cement :three sand : six graded stone aggregate 40mm nominal size and curing complete excluding the cost of centering & shuttering in foundation and plinth within all leads and lifts.	2.65 Cum			Per cubic meter.	
3	Providing and laying cement concrete 1:1.5:3 (One cement:one & half sand:three graded stone aggregate 20mm nominal size) and curing complete excluding the cost of form work and reinforcement for reinforced concrete work in:-.					
a)	Foundation, footing bases of columns and the like and mass concrete within all leads and lifts .	3.98 Cum			Per cubic meter.	
b)	Wall (any thickness but not less than 0.10 mtrs.thickness) attached pillasters, buttresses plinth & string courses etc. from top of foundation level upto floor two level within all leads and lifts.	12.70 Cum			Per cubic meter.	
c)	Suspended floor, roofs, landing & shelves & their support balconies, beams, girder, bressumers & cantilever upto floor level.	3.14 Cum			Per cubic meter.	
4	Providing form work with steel plates 3.15mm thick welded with angle iron in frame 30x30x5mm, so as to give a fair finish including centring, shuttering, strutting and propping etc. with wooden battons and ballies, height of propping and centring below supporting floor to ceiling not exceeding 4.00mtrs. and removal of the same for in-situ-reinforced and plain concrete work in:-.					
a)	Vertical surface such as walls (any thickness) partitions and the like including attached pillasters,buttresses, plinth and string courses and the like within all leads and lifts.	126.95 Sqm			Per square meter.	
b)	Flat surfaces such as soffits of suspended floor, roofs, landings and the like floor etc. upto 200mm thickness within all leads and lifts.	21.35 Sqm			Per square meter.	

--2--

Sr. No.	Description of Items	Qty.	Rate in Rs.		Unit	Amount
			Figures/	Words		
5	Providing in RCC work smooth finishing of the exposed surface with cement motor 1:3(One cement:Three sand) within all leads and lifts.	126.95 Sqm			Per square meter.	
6	Providing tor steel reinforcement for RCC work including bending, binding and placing in position complete upto floor two level within all leads and lifts .	960.34 Kgs.			Per Kgs.	
7	Steel work welded in built up sections, trusses & framed work including cutting, hoisting and fixing in position and applying a priming coat of red paint:- In grating, framed, guards bars, ladders,railing, brackets & similar works within all leads and lifts.	92.84 Kgs.			Per Kg.	
8	Laying in trenches GMS pipe (L/M class) tube fitting of following dia (earth work in trenches to be measured and paid for separately) complete within all leads and lifts .					
	i) 150mm dia	27.00 Rmt.			Per Rmt	
	ii) 50mm dia	15.00 Rmt.			Per Rmt	
9	Providing & fixing of Kirloskar/Leader make Cast Iron sluice valve of following dia Class-PN-1.0 with M.S.flange table-5 conforming to IS:780-1984 latest with uptodate ammendments having seat pressure 10.20Kg./cm ² including nut, bolts and gasket sheet within all leads and lifts.					
	i) 150mm dia	1.00 Nos.			Each	
	ii) 50mm dia	5.00 Nos.			Each	
10	Constructing chamber for sluice valve, with C.I.surface box 100mm top dia,160mm bottom dia & 180mm deep(inside) with chained lid RCC top 1:2:4 mix (One cement : Two sand :Four graded stone aggregate 20mm nominal size)100mm thick foundation concrete 1:5:10 (One cement : Five sand : Ten graded stone aggregate 40mm nominal size) and in side plastering with cement mortar 1:3 (One cemet : Three sand) finished with a floating coat of neat cement including	4.00 Nos.			Each	

--3--

Sr. No.	Description of Items	Qty.	Rate in Rs.		Unit	Amount
			Figures/	Words		
11	Providing and fixing of precast concrete SFRC manhole cover with internal frame & cover system conforming to IS specifications code-12592-Part-I & II with latest ammendments having size of 560mm internal dia within all leads and lifts.	3.00 Nos.			Each	

Total:-

TERMS & CONDITIONS.

- 1 The work shall be executed as per PWD/IPH specifications.
- 2 Security, sale tax & Income tax shall be deducted from the bill as per prevalent rules.
- 3 Nothing shall be paid for rejected work/material.
- 4 The cement and steel shall be issued by the Department @ Rs.267/- per bag and Steel @ Rs.5046/ per quintal from Divisional Store Dehra.
- 5 The G.I.pipe will be issued free of cost from Divisional Store Dehra.
- 6 1% cess on account of building and other construction workers as per Act-1996.
- 7 The final payment made to the contractor after completion of work and to the entire satisfaction of Engineer-in-Charge.

**Executive Engineer
IPH Division, Dehr**

Job No.5

Name of work:-

(Sub-Head:-

SCHEDULE OF QUANTITY

Providing distribution system for Tube well at Adhwani, Dol Adhwani, Bangehar & Digger in Tehsil Jawalamukhi District Kangra (H.P)

Laying, jointing & testing of Rising main at Tube well Bangehar & Digger)

Estimat 285753/-

Earnes 5715/-

Time limit:- Thn

Sr. No.	Description of Items	Qty.	Rate in Rs.		Unit	Amount
			Figures/	Words		
1	Excavation in foundations ,trenches etc. (in pipes and pits) in all kinds of soils such as pick work, jumper work, blasting in soft/hard rock, chiselling/wedging out of rock/ where blasting work is prohibited saturated soil stcking the excavated earth within all leads and lifts clear from the edge of excavation and then returning the stacked soil in 15cm layers when required into plinth sides of foundation etc. consolidating each deposited layer by ramming and watering and	666.90 Cum			Per cubic meter.	
2	Laying , jointing & testing of bevelled ended G.I.pipe with circumferential butt welded joints where ever required by electrical arc welding (welding thickness shall be equal to pipe wall thickness)and testing of G.I.pipe make of following dia meters confirming to IS-1239-1990 (part-II), having wall thickness as specified below capable of withstanding required test pressure, including manufacturing and fabrication of reducers/tapers, all short pieces, bends etc. as per less than five times the dia of pipe. The welding electrodes shall be as per IS-814 of Advani Oreikon/L&T of Isl marked make. The damagted portion of the pipes (if damaged during laying & jointing operation of pipe) and all other specials made from the parent tube shall be provided with anticorrosive treatment					
Tube well at Bangehar						
i)	G.M.S. pipe (Medium class) 150mm dia Table-5 from RD-0 to RD-330	330.00 Rmt.			Per Rmt.	
Tube well at Digger						
i)	G.M.S. pipe (Medium class) 150mm dia Table-5 from RD-0 to RD-810	810.00 Rmt.			Per Rmt.	

--2--

Sr. No.	Description of Items	Qty.	Rate in Rs.		Unit	Amount
			Figures/	Words		
3	Providing M.S. flanges (in pairs) for the joints of G.I. pipes mentioned as below and same shall conform to BIS-6392-1971 (latest with upto date ammendments) including the cost of nuts and bolts of required sizes, 3mm thick compressed asbestos fiber/synthetic rubber gaskets conforming to relevant BIS standards and it shall also include carriage of materials within all leads and lifts complete in all respect and to the best satisfaction and direction of					
Tube well at Bangehar & Digger						
i)	G.I.pipe 150mm dia Flange Table-5 (Booster stage)	11.00 pairs			Per pair	

Total:-**TERMS AND CONDITIONS.**

- 1 The work will be carried out as per HPIPH specification and to the entire satisfaction of the Engineer-in-Charge.
- 2 Security, Income tax, sale tax and surcharge as applicable under various clause of form PW 6 & 8 will be deducted from the each running bill of the contractor.
- 3 The final payment will be made to the contractor after completion of work and testing of pipe line at site of work.
- 4 The rates for all items should be inclusive of the carriage of all material within all leads and lifts to the site of work by all means of transport i.e. on rails by road and head load.
- 5 Bends of required degrees shall be fabricated from parent pipe and shall have minimum three cuts with a bending radius of five time pipe dia shall be prescribed with suitable flanges as required at site.
- 6 The G.I.pipe will be issued by the Deptt. free of cost against indent from Divisional Store Dehra & all other fitting as required at site will be provided by the contractor in his quoted rate.
- 7 Alignment of pipe line can be shifted/changed as per site condition for which nothing extra shall be paid beyond the approved rates.
- 8 All machineries/equipments required for laying of pipe line will be arranged by the contractor/firms.
- 9 The pipe laying shall be done as per ISI standard and as per water supply manual.
- 10 The testing of pipe line will be carried out by the firm at its own cost for which 5% amount will be withheld and same should be released after successful commissioning/functioning. This amount will be in addition to the security amount.
- 11 Nothing shall be paid for rejected work/material.
- 12 1% cess on account of building and other construction workers as per Act-1996.

Executive E
IPH Divisor