#### National Bank for Agriculture and Rural Development Madhya Pradesh Regional Office E-5, Arera Colony, Bhopal



### "EXTERNAL CIVIL & STRUCTURAL REPAIRS TO NABARD REGIONAL OFFICE BUILDING" AT NABARD, BHOPAL (M.P.)

#### **PART II (PRICE BID)**

Name of t	the Tenderer	:	 	
Address:			 	 

Date of Pre-bid Meeting : 03:00 PM on 10<sup>th</sup> April 2019 Last date of submission : 03.00 PM on 23<sup>th</sup> April 2019

Date of opening of Part-I

(Techno Commercial Bid) : 04:00 PM on 23<sup>th</sup> April 2019

(This tender document consists of pages 1 to 15)

#### **CONSULTANT:**



### **Advice Consultants**

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#### **GENERAL INTRODUCTION**

- 1. The Bill of Quantities shall be read in conjunction with Conditions of Contract and Specifications as these documents are jointly explanatory and descriptive of the works included in the contract.
- 2. Special Condition of contract Specifications and descriptions of work and materials given elsewhere in the contract documents are not necessarily repeated in the bill of quantities and form part of Bill of Quantities. Reference is to be made to the other documents for information.
- 3. The Contractor shall be deemed to have visited the site before preparing his Tender and to have examined for himself the conditions under which the work will be priced and all other factors affecting the execution of the work and the cost thereof.
- 4. The Quantities of work and material in the "Bill Of Quantities" are not to be Considered as limiting or extending the scope of work to be done and materials to be supplied by the Contractor. The quantities in the "Bill of Quantities" are an estimate of the amount of work but the work will be measured on complete and the contractor will be paid on the actual measurement of work approved by the Consultant.
- 5. Any special methods of measurements used are stated at the head of or in text of the Bills of Quantities for the items affected. All other items are measured net in accordance with instructions of the Consultant and no allowance has been made for wastage. Unless otherwise specified measurements shall be as per relevant Indian Standard.
- 6. A price or rate in figures is to be entered against the item in the Bill of Quantities, whether Quantities are stated or not. Item against which no price is entered will be considered as covered by other prices or rates in the Bills.
- 7. The Prices and rates inserted are to be full inclusive value of the works described under the various items, including all costs and expenses which may be required for the completion of the described, together with all cost and obligations set forth or implied in the Conditions of Contract and Specifications.
- 8. Some finishing items may have variations in quantities which shall not affect any rates quoted.
- 9. Where prices have been entered against Lump sum items, payment for such affected items shall be made in proportion to the extent of which at the time of billing, works have been done at the discretion of the Consultant.
- 10. Providing and fixing shall mean that the contractor has to provide such materials not being procured and borne by the Owner, but which are required for the items and if no material need be provided by the Contractor, the rate shall be only for fixing of the component covered in the item.

The acronyms used in the Bill of Quantities.

a) Cu. Mt.
b) Sq. Mt.
c) R.Mt.
d) Kg.
: Cubic Metre
: Square Metre
: Running Metre
: Kilogram

e) LS : Lump sum f) Nos. : Numbers

g) Q.R.O. : Quoted Rate Onlyh) C.E. : Consultant's Engineer

## SCHEDULE OF RATES PART-A (PREPARATORY WORKS)

Sr. No.	Descriptions	Unit	Total Quantity	Rate	Amount
A	Preparatory works.				
1	Barricading: Providing barricade along the demarked periphery of site using MS pipes/posts and suitable GI sheets up to 1.8 m height temporarily with all warning signs and removing the same after the completion of job. Complete including all necessary fitting as per instructions of the consultant.	Rmt	72		
2	Providing and erecting the Safety nets above all those areas where any kind of man-movement is anticipated. The safety net shall be made up of minimum 10 mm dia nylon ropes spaced not greater than 75 mm apart. The net shall be tied in such a way that no area is left out at the edges as well as at the overlap portions to prevent the debris falling on ground during progress of work and keeping the same in position during the entire period of work. The net shall be covered with the fishermen net so as not to allow any particles through the same. The fishermen net shall be maintained from time to time, by replacing the damaged portion. The same shall also be cleaned at regular interval so as not to accumulate the debris.	Sq. M	100		
3	Providing and fixing double scaffolding system (cup lock type) on the exterior side of building/structure, up to 25 metre height, above ground level, including additional rows of scaffolding in stepped manner as per requirement of site, made with 40mm dia M.S. tube, placed 1.5 metre centre to centre, horizontal & vertical tubes joint with cup & lock system with M.S. Tubes, M.S. tube challis, M.S. clamps and staircase system in the scaffolding for working platform etc. and maintaining it in a serviceable condition for execution of work of cleaning and/ or pointing and/ or applying chemical and removing it thereafter. The scaffolding system shall be stiffened with bracings, runners, connecting with the building etc., wherever required, if feasible, for inspection of work at required locations with essential safety features for the workmen etc., complete as per directions and approval of Engineer-in-	Sq. M	3250		

	charge. Note: - (1) The elevational area of the scaffolding shall be measured for payment purpose.  (2) The payment will be made once only for execution of all items for such works.			
4	Removal of external plaster from Column, beams and walls & redoing it (Removing & redoing external plaster)  Identifying loose plaster by tapping and carefully, breaking and removing damaged plaster of external facade of bldg. by chiselling including any other finishing layer including removing loose material etc. of any thickness at any / all level with help of small chisel and hammer weighing not more than 5 pounds and as directed, lowering down debris, stacking and carting away the same from the site and disposing the same etc. complete and Providing 15mm thick external cement plaster using cement and graded, processed, silt free & clay free sand in ratio 1:4, finishing etc. all complete.	Sq. M	10	
5	Internal Plaster (Removing & redoing internal plaster) '-do- all as above but internal plaster using Cement Sand Mortar 1:4, 12 mm thick, including finishing with POP	Sq. M	50	
6	Removal of waterproofing Breaking and removing the top layer of existing waterproofing of terrace using light hammer wherever loose, without causing vibration up to mother slab including cleaning the surface of dirt, dust, greasy material, laitance, carting away debris to any lead, etc. complete to the satisfaction of Consultant.	Sq. M	1067	
	SUB TOTAL (A)			
	GST as applicable ( 18% ) TOTAL (A)			
	IOIAL (A)		I	l

Total amount (Rupees		
	Only)	
Place:		Signature
Date: Address:		Name & Seal

## SCHEDULE OF RATES PART-B (PROTECTION WORKS)

Sr. No.	Descriptions	Unit	Total Quantity	Rate	Amount
В	Protection works.				
1	Providing and erecting steel props (up to 3 M height, braced at centre and supporting a continuous 2" x 3" wooden runner, resting on wedge and block minimum capacity 3 Ton) to support the structure provisionally during repair and jacketing etc. and maintaining them in position till required as directed by the consultant.	Each	25		
2	Protection works to Switch boards, windows / glass panes etc. using 6 mm thick plywood wherever required.	Sq. M	1800		
3	Covering the existing flooring with tarpaulin sheet before dismantling/exposing the column, removing the same after repair and plaster, painting work etc., & polishing the floor thereafter to the satisfaction of consultant.	Sq. M	15		
4	'Protection works to large size electrical equipment, meters etc. using suitable plastic cover, tying and securing all complete at all floor levels.	Each	25		
	SUB TOTAL (B)				
	GST as applicable (18%)				
	TOTAL (B)				

Total amount (Rupees		
	Only)	
Place:		Signature
Date: Address:		Name & Seal

## SCHEDULE OF RATES PART-C (RETORFITTING WORKS)

Sr. No.	Descriptions	Unit	Total Quantity	Rate	Amount
С	Retrofitting works.				
1	Chipping of concrete Identifying and marking carefully the damaged reinforced concrete by tapping with light hammer and chipping the same with chisel after demarking. Note - Mechanical breaker shall not be used.	Sq. M	329.26		
2	<b>Injection Grouting:</b> Providing and applying injection grouting through the nozzles provided into the cracks/honeycombed areas by suitable grouting pump under pressure till the refusal including all labour, supervision, tools and tackles and transportation etc., complete as per specification and as directed.				
a	Cement slurry mixed with non-shrink additive like Master Flow 150 of BASF / Cebex 100 of Fosroc / Intraplast EP of Sika or equivalent.  - For water tank walls and slab	Each	10		
b	Low viscous (200 CPS) Epoxy Resin like BASF Master Inject 1315/ Nitofil UR63 of Fosroc / Dr Fixit Plain Injection or equivalent material For RCC columns / beams	Each	50		
c	Readymade high strength, non-shrink cementitious grout like Master Flow 915 or equivalent material. For other RCC areas	Each	50		
3	Removal of RustProviding & Applying approved Rust remover to the cleaned reinforcement bars & allowing it to react for specified time and cleaning the reinforcement of total rust by tapping or using mechanical wire brush or any other suitable way including from behind and around the reinforcement bars to give it a totally rust free finished steel surface using suitable tools and equipment inclusive of Material, Manpower and Equipment.  Make - Sunanada or equivalent	Sq. M	329.26		

	(Mode of measurementconcrete surface area with exposed reinforcement)			
4	Steel reinforcement using TMT bars for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete for column and slab.	Kg	150	
5	Tack welding the new rebars to existing new rebars with minimum 4" lap (No. of tack weld shall be counted)	Each	40	
6	Passivator coat on reinforcement Providing and applying the one component, Polymer modified, cementitious anti-corrosive primer (having the technical parameters mentioned in material specifications) formulated to provide dual protection of a polymeric barrier and an integral corrosion-inhibiting system, to the existing steel and additional steel provided before patching of damaged areas, using suitable tools and equipment inclusive of Material, Manpower and Equipment BASF Master Emaco P130 / Fosroc Nitoprime Zincrich / Sika Rustoff 100 or other equivalent (Mode of measurementconcrete surface area with exposed reinforcement)	Sq. M	329.26	
7	Polymer Modified Mortar (PMM) treatment 25 mm  Providing and Repairing the damaged concrete portion with single component, fibre reinforced, duel shrinkage-compensated, thixotropic, cementitious patch repair mortar (having the technical parameters mentioned in material specifications) capable of applying 25mm thick in single layer initially by hand and finishing with trowel carefully compacting the same around the rebars and finishing to bring it in line with existing concrete surface with an average thickness of 25mm inclusive of Manpower, Material and Equipment Master Emaco S348 of BASF / Renderoc HB-60 of Fosroc / Sikadur 41 of Sika or equivalent	Sq. M	263.408	
8	Providing and application of bond coat on the concrete surface by mixing high dispersion SBR latex like Master Emaco SBR2 of BASF with white cement in the ratio of 2:3. The mixing should be done to a lump free consistency for the bond coat and the screed / mortar should be applied once the bond coat is tacky.	Sq. M	65.852	

	Master Emaco SBR 2 of BASF or Nitobond SBR (Latex) of Fosroc or equivalent			
9	Micro Concrete Providing and laying of prepacked dual shrinkage compensated polymer modified micro-concrete like Master Emaco S346 of BASF/Renderoc LA 55 of Fosroc/ SikaRep Microcrete-4 of Sika or equivalent material. Pouring in narrow locations. (Rate INCLUDES the formwork. Measurement on the basis of actual consumption of micro concrete)	Kg	6585.2	
10	Providing new RCC chajja of size matching the existing size and design, using M-20 grade concrete and reinforcement at 10 mm dia @ 150 c/c both ways, including formwork all complete	Sq. M	36	
11	Crack filling in plaster Open up all visible cracks in the plaster, in a V- groove fashion using an electric cutter machine. Fill up these cracks with a paste of very fine quartz sand mixed with, cement and polymer in ratio-1(polymer):5(cement):15(sand) Finish the same so as to ensure that the filled crack matches the level of the plaster. Recommended Brand: Asian.	Sq. M	10	
12	Providing and Applying 2 or more coats of oil bound distemper paint of Asian or equivalent in Berger or Nerolac on wall and ceiling as per design and approved shade by the Bank officials. Rate to include preparing the surface, applying one coat of primer and touch up putty for levelling, all jambs, trims, edges, grooves, plywood etc. complete.  The existing surface to be prepared after scrapping the existing paint and disposing the waste material.  The rate is inclusive of materials, labour, transportation, scaffolding, taxes etc.	Sq. M	50	
13	Enamel paint for grill: providing and applying two or more coats of enamel paint of Asian or equivalent in Berger or Nerolac for already painted grill, baluster etc. to give an even surface after cleaning the existing surface for dirt, dust or any foreign matter. The rate to include preparing the surface, applying primer etc. The surface should be a smooth dry and matt surface. The rate is including cost of materials, labour etc. to complete the work. As per specifications. The measurements will be considered for length and breadth for	Sq. M	5	

	both way. The coefficient for one side will be 0.5.		
14	Providing and applying two coats of Acrylic Exterior paint over a coat of primer on exterior surfaces of walls and ceilings of Make - Asian Paint Apex Ultima or equivalent	3250	
	SUB TOTAL (C)		
	GST as applicable ( 18% )		
	TOTAL (C)		

Total amount (Rupees		
	Only)	
Place:	Siş	gnature
Date: Address:	N	ame & Seal

## SCHEDULE OF RATES PART-D (PLUMBING WORKS)

Sr. No.	Descriptions	Unit	Total Quantity	Rate	Amount
D	Plumbing works.				
1	Dismantling C.I. pipes from walls / trenches (including excavation and refilling trenches if required) after taking out the pipes, manually/ by mechanical means breaking lead caulked joints, melting of lead and making into blocks including stacking of pipes & lead at site within 50 metre lead as per direction of Engineer-incharge:	Rmt.	300		
2	Supply and fix in position ISI Marked PVC soil, waste and vent pipes all complete for:				
a	75 mm dia	Rmt.	200		
b	110 mm dia.	Rmt.	100		
	SUB TOTAL (D)				
	GST as applicable ( 18% )				
	TOTAL (D)				

Total amount (Rupees		
	Only)	
Place:		Signature
Date: Address:		Name & Seal

## SCHEDULE OF RATES PART-E (WATERPROOFING WORKS)

Sr. No.	Descriptions	Unit	Total Quantity	Rate	Amount
E	Waterproofing works.				
1	Repairing the top of existing waterproofing layer by PCC 1:2:4 and Providing and laying APP (Atactic Polypropylene Polymer) modified prefabricated five layer, 3 mm thick water proofing membrane, black finished reinforced with glass fibre matt consisting of a coat of bitumen primer for bitumen membrane @ 0.40 litre/Sqm by the same membrane manufactured of density at 25°C, 0.87 - 0.89 kg/litre and viscosity 70 - 160 cps. Over the primer coat the layer of membrane shall be laid using butane torch and sealing all joints etc., and preparing the surface complete. The vital physical and chemical parameters of the membrane shall be as under: Joint strength in longitudinal and transverse direction at 23°C as 350/300 N/5 cm. Tear strength in longitudinal and transverse direction as 60/80N. Softening point of membrane not less than 150°C. Cold flexibility shall be up to -2°C when tested in accordance with ASTM, D - 5147. Thelaying of membrane shall be got done through the authorised applicator of the manufacturer of membrane:	Sq. M	1067		
2	Removing and redoing Internal waterproof plaster of water tank Emptying the tank, cleaning, washing the same, Breaking/Removing existing treatment to expose the RCC walls/ Brick-walls of the tank, cement grouting at appropriate locations (if required) as directed, hacking the old surface, cleaning, and applying waterproofed cement plaster in CM 1:3 with approved waterproofing agents, finishing with neat cement, champhering at the junctions and testing for water tightness, complete, as directed.  The rate shall also include cost of Temporary Diversion/s of pipes,	Sq. M	75		

providing Temporary standby Tanks, etc., to keep the water-supply un-interrupted, while the Tanks are emptied for waterproofing. Rate includes removing, stacking, carting and disposal of debris from site. (Over Head Tank)	
SUB TOTAL (E)	
GST as applicable ( 18% )	
TOTAL (E)	

Total amount in words (Rupees

Only	
Place:	Signature
Date: Address:	Name & Seal

## SCHEDULE OF RATES PART-F (MISC. REPAIR WORKS)

Sr. No.	Descriptions	Unit	Total Quant ity	Ra te	Amo unt
F	Misc. Repair works.				
1	Repairs to grills by removing from location and re-fixing after repairs	Job	1		
2	Repairs to PCC waterproofing over chajjas by removing old concrete and then relaying the same with new PCC 1:2:4, 40 mm thick complete	Sq. M	108		
	SUB TOTAL (F)				
	GST as applicable ( 18% )				
	TOTAL (F)				
Total amoun	t in words (Rupees				
	Only)				

Place:	Signature
Date: Address:	Name & Seal

#### **SUMMARY AT GLANCE**

SR.		AMOUNT in
NO.	DESCRIPTION OF WORK	₹
A	PREPARATORY WORKS	
В	PROTECTION WORKS	
C	RETROFITTING WORKS	
D	PLUMBING WORKS	
Е	WATERPROOFING WOKRS	
F	MISC. REPAIR WORKS	
	GRAND TOTAL	
	alue in Words ₹	
Only)		

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NOTE: The item not covered in the Bill of quantities of this contract document shall be paid as per rate analysis based on documentary proof with 15% towards contractor's overhead profit and all applicable taxes. The rate analysis shall be submitted by the contractor for scrutiny and approval of the PMC/NABARD