

### Schedule of Quantity

**Name of work :- Providing flood protection for Thunag Bazar and adjoining area and Tirthan khad for protection** Estimated cost : ₹ 2,46,558.00  
**Balichowki Bazar and adjoining area in District Mandi (HP) (SH: - Providing and supplying of Survey Total Station with all accessories)** Earnest money : ₹ 4,940.00  
 Time:- One Months

Sr.No.	Description	Qty	Rate	Unit	Amount
1.00	Providing & supplying of Survey Total Station of make Leica, Electronic, Topcon, Sokkia etc. having specification as under :-	1	No.	Each	
	<b>Angular Measurement :-</b>				
	Angle measurement accuracy				2 second
	Method				Absolute, continuous & diametrical
	Display resolution / least count				0.1 second
	Compensation				Dual axis
	compensator setting accuracy				1.5 second
	<b>Distance measurement :-</b>				
	Distance measurement with reflector prism with single prism				5000 meter
	Accuracy in distance measurement with reflector prism				$\leq (2.0 \text{ mm} + 2 \text{ ppm})$
	Distance measurement without reflector prism				400 meter
	Accuracy in distance measurement without reflector prism upto 250 m				$\leq (4 \text{ mm} + 2 \text{ ppm})$
	Typical measurement time				1 second
	<b>Telescope :-</b>				
	Image Type				Erect
	Magnification (X)				30
	Resolving Power				3 Second
	Field of view @ 1000 meter				100 meter
	Minimum Focus Distance				1 meter
	Reticule				Illuminated, 10 brightness level
	<b>Plummet :-</b>				
	Plummet Type				Laser Based
	Optical Plummet Magnification				3X
	Laser Plummet Centering accuracy @ 1.5 mtr instrument height				1.5

<b>Data Storage / Interface / Keyboard and Display : -</b>						
	Storage Capacity (in terms of number of measurement entries)	50000				
	Data storage - internal memory	1 gigabyte				
	External storage type	USB Drive, SD Card, Micro SD card				
	Data downloading facility through interface	USB Cable, SD card, RS 232 Port, Bluetooth				
	alphanumeric keyboard and Touchscreen display on both side	No				
	display features	Capability of displaying point, lines or polygons, Day light readable, Direct and low sunlight readability, Display illumination				
<b>Software characteristics : -</b>						
	Operating System	Linux Based				
	Data formats support	ASCII, DXF, LandXML, FBK, RW5, RAW, SHP, CSV, GSI				
	Auto power-off option	Yes				
	Onboard Software functions	Survey & coding with Line works, Cross Section, Reference Plane, Sets of Angles Determine Coordinate Systems, Traverse, Cogo, Reference Line / Arc, Hidden Point offset, Remote Heights, Surface & volumes, DTM Stakeout Station Setup, Stakeout, compatibility for downloading and processing 2D and 3D data, Data compatibility to GIS, Automatic drafting from feature code, Traverse adjustment and report generation, Geo referencing of Raster maps, Vector maps, Direct printout option and CAD option				
	Onboard Application software for processing the field data and creating the field report	Yes				
<b>Physical Characteristic : -</b>						
	Ingress protection	IP 54				
	weight	5.4 Kilogram				
	Dimensions (mm x mm x mm)	440x370x275				
	Vertical tilt sensor monitors the tilt angle in X-axis	Yes				
	Vertical angle measuring provides three different options plus percentage of grade	Yes				
	Removable tribrach for multiple set-ups	Yes				

	Guide Light (EGL) working Range (average atmospheric conditions)	NA					
	Guide Light (ELG) - Positioning accuracy @ 100 m	1 meter					
	Capability to track the location of instrument (GPS)	No.					
	Additional features, if any	Reflector less Total Station ETS 362R6 (600 M Conditional) with laser centering, Bluetooth Data Transfer & OTG Pan Drive (Robust) Having 30X Magnification, 1" Least count and 2" Accuracy, Dual Axis Compensator, 32 BIT CPU, Absolute Encoding Systems & 40000 Points Internal memory points, 4 GB memory CARD External memory, COGO program, Distance measurement Range of 4 Km. With Single Prism, Alphanumeric key board (Dual display), Road Alignment Programmers along with following accessories : - Accessories with Total Station Battery Charger (01 No.), Batteries (02 Nos.), Operation Manual (01 No.), Tool Kit (01 No.), Carrying Case (01 No.), Plum bob (01 No.), Pan Drive (01 No.), Data downloading cable (01 No.), Data downloading software (01 No.), Prism with holder & target (01 No.) Prism pole (01 No.) and Heavy duty wooden / Aluminium tripod (01 No.)					
<b>Operating Conditions :-</b>							
	Minimum operating Temperature	-20 centidegree Celsius					
	Maximum Operating Temperature	50 centidegree Celsius					
	Non condensing Humidity (Rh) (%)	95 Percent					
<b>Power Supply :-</b>							
	Power source	Rechargeable batteries					
	Number of rechargeable batteries	1					
	Number of Extra rechargeable batteries	1					
	Chemistry of rechargeable battery	Li-ion					
	Capacity of rechargeable battery	3000					
	Voltage of rechargeable battery (DC)	7.4 volt					
	Battery Operating time (Backup time)	12 hour					
	Recharge time	3 hour					

	Suitable battery charger / Adapter working on 230 V AC +- 10%; 50 Hz +- 10%	Yes					
<b>Warranty :-</b>							
	Warranty	1 Year					
<b>Accessories :-</b>							
	Software for Transfer data to PC	Yes					
	Instruction Manual	Yes					
	Data Transfer cable	Yes					
	SD Card / USE Pendrive of Size	32 GB					
	Number to Tripod	1					
	Type of Tripod Available	Wooden, Plastic, Metallic					
	No. of Detachable Tribach	1					
	No. of Single prism with target plate	2					
	Number of Range pole	2					
	Lens cover Set	Yes					
	Shock absorbing carrying case with shoulder strap	Yes					
	Instrument height meter	Yes					
<b>Warranty :-</b>							
	Type approval and calibration from NABL / ILAC / Govt Laboratory	No					
	Type of Test Certificate number and date	NA					
	Name and address of Lab	NA					
							<b>Total :-</b>

**Terms and conditions :-**

- 1 Damage material shall no be accepted.
- 2 The rate should be inclusive with GST, carriage and FOR Thunag.
- 3 Labour cess & GST will be deduct from each bill of the contractor as applicable.
- 4 The Survey Total Station should be with one year warranty.
- 5 The supplier shall have to impart training to department officials at Thunag, Distt. Mandi (HP).

**Executive Engineer  
I&PH Division Thunag**