

**OFFICE OF THE SPECIAL DIRECTOR GENERAL OF POLICE
SPECIAL BRANCH :: MEGHALAYA :: SHILLONG**

TENDER NOTICE

2016-2017

Sealed tender affixing non-refundable Court Fee Stamp as under:

Where the tender value:

- (a) Not exceeding Rs. 5,000/- = Rs. 25/- only
- (b) Exceeding Rs. 5,000/- but not exceeding Rs. 50,000/- only. = Rs.50/-only
- (c) Exceeding Rs. 50,000/- but not exceeding Rs. 1, 00,000/- only = Rs.100/- only.
- (d) Exceeding Rs. 1,00,000/- but not exceeding Rs. 5,00,000/- only= Rs.200/- only.
- (e) Exceeding Rs. 5,00,000/- but not exceeding Rs. 15,00,000/- only= Rs.300/- only.
- (f) Exceeding Rs. 15,00,000/-but not exceeding Rs.25,00,000/- only= Rs.400/- only.
- (g) Exceeding Rs.25,00,000/-but not exceeding Rs.1,00,00,000/-only= Rs.1000/- only
- (h) Exceeding Rs.1,00,00,000/- -----only = Rs.2000/ only

are invited from bonafide, established, reputed manufacturers and registered reputed intending firms and supplier(s) for entering into rate contract for supply of Security/BDD equipments under Modernization Scheme, 2016-2017 as per list at Annexure " A ", and terms and conditions laid down in the Tender Notice. Tender should be in 2 (two) Bids system i.e.

- i) Technical Bid and**
- ii) Price Bid**

1. Terms and Conditions:

Items offered must be of reputed companies/manufacturers and should meet with all the Technical Specifications as given in Annexure" B". Tender should be accompanied with catalogues/Brochures/ warranty/guarantee and will be received up to 1200 hrs on the 25th **November, 2016 (Friday)** by hand or by post. These will be opened on the same day at **1500 hrs**. Tenderers or their authorized representatives are invited at the time of opening of the tender.

2. (i) Tender must be accompanied by the following documents in Technical Bid

- a) Affixed non-refundable court fee stamp as required above.
- b) Authenticated copy of rate contract with DGS & D if tenders have any existing and valid rate contract with DGS & D.
- c) Attested Passport Size photograph of the bidder.
- d) Authenticated copy of authorised Dealership Certificate from the Manufacturers or Principals who has authorised dealers specifically certifying that the tenderer is authorized to deal with the equipments quoted in the tender notice. Separate Dealership Certificate will be required to be furnished by the tenderer if asked for in the list of items.
- e) Attested copy of SC/ST Certificate issued by the concerned competent authority (For Tribal tenderer).
- f) Earnest money at the rate of 5% (Five percent) in case of non-tribal and at the rate of 2 % (Two percent) in case of tribal from the total value of the items tendered, in any one of the following forms only:

- (i) Crossed bank draft; or,
- (ii) Deposit at Call.
- (iii) NSC.

Payable to `Special Director General of Police, Special Branch, Meghalaya, Shillong, at any Nationalised Bank at Shillong.

- g) Attested copy of valid VAT Clearance Certificate and VAT Registration.TIN of the tenderer should be enclosed.
- h) Financial stability Certificate from any Nationalized Bank or Deputy Commissioner concerned.
- i) Catalogues/Brochures with detailed Technical Specifications from the manufacturers for each item quoted.
- j) Attested copy of valid Professional Tax Clearance Certificate.
- k) **Attested copy of valid Trading Licence from any of the District Councils in Meghalaya, namely (1) Khasi Hills Autonomous District Council (KHADC) (2) Jaintia Hills Autonomous District Council (JHADC) (3) Garo Hills Autonomous District Council (GHADC) will have to be furnished by Non-Tribal and Non- Indigenous Tenderer.**
- l) All documents from Sl No. b to e and g, h, j and k should be duly attested by a Gazetted Officer.

Note: - Failure to enclose any one of those above documents or any invalid documents may result in rejection of the quotation.

2. (ii) Tender must be accompanied by the following document/detail in Price Bid :

- a) ***Rate of each item quoted should be placed in separate sealed envelopes.**

3. The following information must be mentioned on the body of the envelope containing the quotations, failing which the sealed envelope of the quoting firm will not be opened:

- (a) Sales Tax/VAT certificate whatsoever is applicable, _____ is enclosed.
(b) Earnest Money _____ is enclosed.
(c) Court Fees Stamps _____ is enclosed.
(d) Dealership Certificate from the Principal manufacturers. --- is enclosed
(e) SC/ST Certificate (for Tribal). --- is enclosed
(f) Passport size photograph of the bidder -is enclosed
(g) "Technical Bid "on the body of the of the sealed envelope of Technical Bid and
"Price Bid for.....(name of the item)" on each sealed envelope of item quoted.

4. Rates quoted:

- (a) Should be inclusive of all taxes, levies, charges, packing, insurance, taxes and other installation/incidental charges up to the Office of the Special Director General of Police, Special Branch, Meghalaya, Shillong. Only local taxes should be shown separately, if applicable.
- (b) **Should be inclusive of the cost of all the accessories for each item up to March, 2018.**
- (c) Should be valid for 1 (one) calendar year from the date of acceptance of tender.
- (d) Should be quoted separately for each item and in words and rates should be for 1 (One) item 1 (One) rate basis. **Same items with optional rates and optional quality will not be entertained and out rightly rejected.**
- (e) Should be quoted F.O.R. destination the Special Director General of Police, Special Branch, Meghalaya, Shillong.
- (f) Should be written clearly in figures and in words and all values should be in Indian Currency. Any alterations or over writing must be fully signed by the tenderer along with the date.

(g) Once the rates offered in the quotation are accepted, no enhancement will be entertained at any circumstances and tenderers will be liable to supply the items at the rate accepted by the Special Director General of Police (SB) Meghalaya, Shillong. Failure to supply the items at the accepted rates will entail the offer being cancelled and the Security Money will be forfeited to the Govt. of Meghalaya.

(h) For import items rate should indicate separately i.e rates with **Custom duty and rates without Custom Duty.**

5. Tenderer must sign all pages of the Bid (Both Technical and Price Bid) and also submit the signed Undertaking Certificate at Annexure - 'C', as a proof of the tenderer having fully understood the terms and conditions mentioned in the NIT.

6. Tender/quotation should be addressed to the undersigned by designation and not by name. Sealed envelopes containing the quotation must be super-scribed as, '**Tender for Supply of Equipments for two Nos. of BDDS Squads in Williamnagar and Baghmara for the year , 2016-2017**' and sent by registered post or hand delivery. The tenderer should affix his full address on the left bottom of the envelope containing the tender documents.

7. In no case tenders received after due date and time shall be accepted and the Special Director General of Police, Special Branch, Meghalaya, Shillong shall not be responsible for any delay in submission of tender. All Tenders received after the due date and time shall be returned to the respective tenderer without opening the same.

8. Due to any unavoidable reason(s) if the office of the Special Director General of Police (SB) remains closed on the date prescribed for submission/opening of the tenders, the tenders will be received during the next working day at the same venue and the same timing.

9. **The successful tenderer will be:**

a) Intimated by letter of acceptance/ Supply Order of Special Director General of Police, SB, Meghalaya, Shillong. Till then, no bidder has any right to assume that his/her quotation has been accepted. There shall be no claim for compensation for any expenditure incurred by any tenderer, in anticipation of acceptance/ Supply Order letter.

b) Required to furnish a Security Deposit as per rates mentioned below and execute the Contract Agreement to fulfillment of the terms and conditions of the contract, which

successful tender(s) will have to enter into. Such Security Deposit will be subjected to forfeiture in case of non-fulfillment of terms and conditions of the tender notice on the Contract Agreement. The Earnest money of the successful tenderer will not be released till the Security Deposit is furnished. Earnest Money of the successful tenderer(s) will be forfeited to the Govt. of Meghalaya in case of failure to furnish security money.

10. Rates of Security Deposit in the form of (i) Deposit at call (ii) NSC/KVP (III)

Fixed Deposit:-

- a) For contract up to Rs. 20,000/- 2% from local and 3% from non-local.
- b) For contract up to Rs. 50,000/- 3 % from local and 4 % from non-local.
- c) For contract up to Rs.1,00,000/-..... 4 % from local and 5% from non-local.
- d) For contract over to Rs.1,00,000/- 10% for all categories.(As per decision of DPB held on 4/4/2009)

11. The Special Director General of Police, Special Branch, Meghalaya, may rescind forthwith the contract in writing if:

- (a) A contractor assigns or sub-lets any contract in respect of any other entered into with the Government.
- (b) Tenderer or his agent or servants are found guilty of fraud of this contract or any other contract.
- (c) Declines, neglect or delays to comply with demand/requisition or in any other way fails to perform or observe any condition of or all conditions of the Contract Agreement.

12. In case of such rescission, the Security Deposit, in full, shall stand forfeited and absolutely be at the disposal of Government without prejudice to any other remedy or action that the Government shall be entitled to recover from the successful Tenderer any extra expenses Government may deem necessary in obtaining the supplies.

- i) In the event of the successful Tenderer failing to perform his/her part of any or all the contract agreement to the satisfaction of the Department of disregarding terms and conditions of the Tender Notice and or the contract agreement the successful Tenderer shall be liable to any of or all of the following action at the discretion of the Special Director General of Police (SB) Meghalaya, Shillong on behalf of the Government of Meghalaya.
- ii) Forfeiture of security deposit in whole or part.

- iii) Making good the loss caused to the Government through the liability, neglect.
 - iv) Delay in complying with the demand.
 - v) Cancellation of the contract without any prior notice to the contractor.
13. If the successful Tenderers willfully neglects, fails to perform or observe any or all conditions of the contract agreement or attempts to cheat or indulge in foul practices, the Special Director General of Police (SB), Meghalaya, Shillong may impose a ban upon such Tender(s) for future business within the Department.
 14. Quantities mentioned in the list are only illustrative and may be increased/ reduced on finalizations of order depending on the availability of fund and actual requirements.
 15. Once the Model is approved, no change of brand name, shape, pattern, quality or specification will be entertained even on the plea on non-availability offer of the same quality or alternative offer of the same quality.
 16. The store supplied must be of the same models/specifications as approved by the Departmental Purchase Board as well as in the Supply order. The Special Director General of Police (SB) Meghalaya, Shillong reserves the right of non-acceptance of items which are not found as per the prescribed specification.
 17. Delivery & Installation must be completed within 60(Sixty) Days from the date of receipt of firm orders, risk of transportation will be borne by the successful tenders themselves. No extension of delivery period will be entertained.
 18. Payment will be made to the suppliers directly, only on completion of supplies, installation and on correct receipt of goods by the respective consignee in good condition. Documents/vouchers/P.R Bills etc. routed through Banks will not be accepted. Consignment will dispatch by the firm after payment of all freight charges at the sources. Freight to pay P.R Bill will not be accepted.
 19. Risk of transportation will be borne by the Tenderer themselves.
 20. Comprehensive onsite warranty should be indicated along with after sale services facilities.
 21. One set of manual of (Instruction and Maintenance) should be supplied free of cost for each item wherever applicable.
 22. The purchase Board reserves the right to reject the lowest rate or any of the tender without assigning any reason.

23. Any dispute arising out of or in respect of these terms and conditions of the Contract Agreement shall be in the jurisdiction of the Courts in Meghalaya.
24. The items for which the tenderers would be quoting must fulfill the given technical specifications the samples of which have to be produced at their own cost and free from all liabilities by the tenderers before the Technical Committee for technical evaluation/ vetting at the specified place and time, which will be intimidated to the tenderers. Items which do not fulfill the required specification and not produced before the technical committee will not be accepted.
25. If the trade enquiry reveals that the item being offered is being manufactured by a Public Sector Undertaking (PSU), the Purchase Board reserves the right to reject the tenders and purchase the item directly from the Public Sector Undertaking (PSU).
26. **The Tender should be in 2(two) Bids i.e. (1) Technical Bid and (2) Price Bid.** Tenderer should submit separate sealed cover for Technical Bid and separate for Price Bid. Price Bid should be submitted in a separate sealed cover for each item quoted. Tender Opening Committee of the Office of the Special Director General of Police, Special Branch, Meghalaya, Shillong will open the Technical bid in the presence of the representatives of the tenderers if any. The Technical Bids will be properly evaluated by the Committee and only that quotations/Bids which fully complies with the terms and conditions prescribed in NIT and also the prescribed Technical Specifications enclosed with the NIT of this office will be accepted. Price Bids of only those Technical Bids which fully conforms to our required Technical specifications will be opened.
27. The tenderer should quote only 1(one) Offer per item, tenderers quoting different options of the same item will be summarily be rejected.
- N.B:** Details can be obtained from the office of the undersigned on any of the working days between 10:00 AM to 4:30 PM. Tenderers are requested to visit megpolice.gov.in for details and download of NIT and specifications

-Sd-
Special Director General of Police (SB),
Meghalaya, Shillong.

Copy to:

1. The Secretary to the Govt. of Meghalaya (Home/Police) Department Shillong for information.
 2. The Assistant Inspector General of Police, (A) Meghalaya, Shillong for information.
 3. The Director Government Press, Meghalaya, Shillong with copies for publication in two consecutive issues of Meghalaya Gazette.
 4. The Director Information & Public Relation with a request to publish a brief gist of the tender notice in one Local Newspaper & National Newspaper (One impression), in brief:
 5. All Superintendents of Police/Commandants, Meghalaya for information and necessary action.
 6. The Superintendent of Police (SCRB), Meghalaya, Shillong, with a request to reflect it in Meghalaya Police Website.
 7. Local firms/ Dealers for information and necessary action.
 8. Notice Board.
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-Sd-
Special Superintendent of Police, (SB-II),
Meghalaya, Shillong.

CERTIFICATE OF ACCEPTANCE OF TERMS AND CONDITIONS
(To be furnished along with the tender documents)

I/We have read and fully understood the terms and conditions as laid down in the NIT. Vide No. MSB/VI/Tech/Tender/GHBDD/ 2016-2017/42 dt. 25/10/ 2016 in respect of supply of Security equipments to the Office of the Special Director General of Police, Special Branch, Meghalaya, Shillong due to be opened on 25th November, 2016.

I/We agree to abide by the same.

I/ We have signed all the pages of the tender documents as laid down.

Signature and seal of the Tenderer or
his/her Authorized signatory.

Dated.....

Name

Address

.....

Phone No.....

LIST OF EQUIPMENTS PROPOSED TO BE PURCHASED.

A. 2016-2017

<u>Sl. No.</u>	<u>Item.</u>
1.	Bomb Suit with Cooling System.
2.	Real Time Viewing System (RTVS).
3.	Deep Search Mine Detector (DSMD)
4.	Bomb Blanket with Safety Circle
5.	Bomb Trailer Indigenous
6.	Bomb Basket
7.	Digital Camera
8.	Cable Locator
9.	Telescopic Prodder Metallic
10.	Hook and Line Set
11.	Telescopic Search Mirror
12.	Bomb Truck (TATA 407)
13.	RSP Tool Kit
14.	LED Search Light
15.	Explosive Vapor Detector
16.	Water Jet Disrupter
17.	Drilling Machine
18.	Search Kit Tool (SKT)
19.	Telescopic Manipulator
20.	Non Magnetic Tool Kit
21.	Portable Generator Set (small)
22.	Halogen Lamp
23.	Mega Phone
24.	Swiss Army Knife
25.	Multimeter

Specifications for the above are enclosed in Annexure 'B'

ANNEXURE “B”

(Technical Specifications)

QRS BOMB SUIT (NSG SPECIFICATIONS)

1. The suit should consist of the following items, which collectively make a complete garment:-

- (a) Jacket with collar, Chest and Groin Plates.
- (b) Trousers- adjustable and Back Protector.
- (c) Boot protector/Over shoes.
- (d) Helmet with EOD and Breathing Apparatus (BA) Visors.
- (e) Hand Gloves.
- (f) Transit bag.
- (g) Integrated Groin Protector (IGP).
- (h) Hydration bag.
- (j) Complete Cooling Suit.

2(a). The suit protection performance figures should be for the NATO Stanag 2920 or MIL Standard 662F, 17 grain fragment simulator-V-50 (Firm to submit lab test report from National/International accredited Lab):-

- (i) Front Chest – 1600 M/Sec or better.
- (ii) Front Groin – 1600 M/Sec or better.

2(b). The suit protection performance figures should be for the NATO Stanag 2920 or MIL Standard 662F, 17 grain fragment simulator- V-50 (Firm to submit lab test report from National/International accredited Lab):-

- (j) Sleeves Front – 560 M/Sec or better.
- (ii) Collar Front - 850 M/Sec or better.
- (iii) Trousers Front Thighs – 690 M/Sec or better.
- (iv) Trousers Front Shins – 620 M/Sec or better.
- (v) Boot Cover – 450 M/Sec or better.

3. Cooling Suit.

- (a) The Fabric should be washable.
- (b) The heat removal rate should be at least 270 watt (full suit) or better
(Firm to submit lab test report from National/International accredited lab).
- (c) Should enable the operator to wear it comfortably for minimum of 30 minutes with ambient temperature at 350 C or more.
- (d) The pump should be operable by a Dry/rechargeable battery.

- (e) Should be available in different sizes to suit users requirement.
- (f) A second water/ice bottle should be supplied for standby.
- (g) The cooling source should be ice and water.

4. Ballistic EOD Helmet Protection performance (Firm to submit lab test report from National/International accredited lab).

- (a) V 50 (helmet) 600 M/Sec or better.
- (b) V 50 EOD & BA visor 700 M/Sec or better.
- (c) Weight with EOD & BA visors not more than 8.50 Kgs.
- (d) The system should have an arrangement to accommodate full face mask inside the visor for breathing in an NBC environment
- (e) **Ventilation and Demisting:** A helmet mount fan should provide effective ventilation and replaceable demisting arrangement with control unit within easy reach of the user.
- (f) **Environmental Awareness.** The helmet should have built in microphone for operator to hear all the conversation taking place in the vicinity.
- (g) **Two way Communication.** It should provide a two way communication whether on radio or wired between operator and officer in charge upto a distance of 100 meters.(Wired communication being optional depending on user requirements)
- (h) **Search Light.** The helmet must be fitted with a search light mounted on the visor for working in dark conditions.
- (i) **Live Video Camera:** Helmet must have a integrated facility into its visor for Live Video transmission to a command post located at a distance of 200 mtrs LOS and 100 mtrs in BUA. (Non line of sight)
- (j) The system must have voice activated, hands free controls of electronic features including light, audio levels, ventilation and demisting. However, these electronic features should also be operated through a separate console ergonomically located on suit.

5. (a) Immediate removal/quick release of the jacket should be achieved

- (b) The jacket should have an arrangement for keeping working tools.
- (c) All soft ballistic pouches must be removable in order to maintain outer Shell.

6. Trousers.

- (a) The trousers should be adjustable catering for different sizes.
- (b) Immediate removable/quick release of the trouser should be achieved.
- (c) Back protector should be fitted to the trouser.
- (d) Trouser boot should be adjustable and also removable.

7. **Power Pack.**
 - (a) A rechargeable power pack should be suitably placed.
 - (b) It should have battery level indicator.
 - (c) Recharging. A suitable charger should be provided for rechargeable

 8. **Weight.** Overall operating weight including helmet, cooling suit, complete suit , communication support and live audio video system etc should not exceed 50 Kgs.

 9. **Back Bone Protection.** The suit should provide a high impact back bone protection arrangement (Firm to submit lab test report from National / International accredited Lab).

 10. **Operational Time.** It should not take more than 10 minutes to wear the suit with all accessories, when assisted by a trained technician

 11. **Static Discharge.** The bomb suit should have protection against static charge.

 12. **Miscellaneous.** The firm should be able to provide the following as applicable, along with the equipment:-
 - (a) Sets of all kinds of spare rechargeable batteries used in suit, cleaning kit.
 - (b) SMT (Special Maintenance Tools), if any.
 - (c) Training aids – charts, slides, training brochure, training work model, blow up diagram, video films etc, if any.
 - (c) Proof schedule to include details of inspection and acceptance criteria.
 - (d) Technical Manual in English giving full description of the item.
 - (e) User Hand Book in English.
 - (f) Literature on preservation/maintenance in English.
 - (g) Specification for packing, handling/transportation/storage.
 - (h) Details regarding periodical inspection by the user.
-

QRS OF REAL TIME VIEWING SYSTEM (RTVS) (MHA)

TECHNICAL SPECIFICATIONS AS PER MHA

1. The system should be as lightweight in weight as possible. The system should be compact and easy to set up.
2. All components should be portable.
3. The system should be able to function with both pulsed and continuous X-ray source.
4. Real time measurement of any object on screen should be possible.
5. The system should have a laptop based control and display unit along with a compatible video camera unit.
6. X-Ray Generator should be light in weight and capable of being operated remotely.
7. The RTVS should be mountable/ suspend able from the ROV and Mini ROV and the mounts be included in the equipment.
8. To facilitate the off site study the system should be supported by a hardware and software capable of image recording on a storage media i.e., CD, Pen Drive, etc.
9. The software be menu driven and should facilitate the operator to choose from the wide range of functions provided by the software.
10. The software should have the facility of zooming the image along with the ability to scroll the full image (200 to 400%).

11. The system should be able to store minimum 1000 images in its data base library with the capability of annotation.
12. The software should provide image enhancement facilities as under:-
 - (a) Polarity and Pseudo coloring facility.
 - (b) Brightness & Contrast control.
 - (c) Split screen capability.
 - (d) Sharpening of images.
 - (e) 3D effect of a image.
 - (f) Tilting/Rotation of an image.
 - (g) On screen measurement facility (both inches and mm)
 - (h) Over Lay capability should be supported.
 - i) Multiple Undo/Redo and Restore original functions.
13. The system should have an option for wireless operation.
14. For easy field use the system should be operated with rechargeable battery and should have additional facility of operating with AC power supply.
15. The system should have a battery low-level indicator.
16. The system should have an anti virus software to protect stored data.
17. The system should be capable of operating in the temperature range of -15°C to $+45^{\circ}\text{C}$.
18. Exposure time for X-ray (1-99 Pulses or better) should be adjustable depending on type of object to be viewed on X-Ray and these controls should be available in the software as well as X -Ray Generator. Accumulation of pulses on Image Capture Unit should be possible.

19. The laptop should be configured with the latest version of software
20. Audio and visual warning during the X-Ray activation should be available
21. Image Capture Unit (ICU) should be available in different sizes i.e small / medium / large (Ranging from 150 mm to 330 mm x 110 mm to 440 mm)
22. All types of accessories and consumable items required for functioning of the equipment should be available in the market.
23. **Laptop Specifications:**
 - (a) Screen: at least 14" TFT with 1024x768 Resolution, 16.7 million colours, 256 gray levels.
 - (b) Processor: PIV 1.66 GHz or Higher 1 MB Cache. (c) Hard Disk: 80 GB or Higher.
 - (d) Drives: 3.5" Floppy Drive, CD RW or higher, Card Slot, USB 2.0 Slots x 2 (Or Better Specifications)
 - (e) Operating System: Windows XP Professional or Later version.
 - (f) Visual Database: Storage of at least 10,000 images including data, user name, date, time, category, place, filename, project name, type of ICU, type of X-Ray and Description. Capability to backup and restore the database. Quick save and project functions.
 - (g) Split screen with synchronized scrolling capabilities. (h) Built in email access.
 - (k) Audible and visual warning during 'X-Ray activation, incorrect setup, etc.
24. **Misc:** The firm should be able to provide the following as applicable, along with the equipment-
 - (a) Technical Manual giving full description of the item.
 - (b) User's Hand Book.
 - (c) Literature on preservation technique, as applicable.
 - (d) Specification for packing, handling/transportation/storage.
 - (e) Details regarding proof/periodical inspection by the user.
 - (f) All the above tools should be packed in a pelican case with wheels and the equipment should fit into space provided inside.
25. There is no limit on the positive tolerance.

QUALITATIVE REQUIREMENTS: DEEP SEARCH MINE/METAL DETECTOR (DSMD)
TECHNICAL SPECIFICATIONS AS PER MHA

1. **Physical Characteristic:** The detector and its accessories should be lightweight and made of non corrosive (exceptionally corrosion protective) materials should have proven reliability and durability.

2. **Weight and Dimension**
 - (A) **Length of Telescopic rod.** Search head should be connected with a telescopic rod, which should also be prolonged by the operator in kneeling. Standing and lying position without causing under fatigue for both minimum and maximum extension. The length of telescopic rod should be :
 - i) Collapses 700mm (+- 10%)
 - ii) Extended 160 mm (+- 10%)

 - (B) **Weight**
 - (i) Telescopic pole and search head (maximum) 2kgs
 - (ii) Electronic control unit (maximum) 2kgs
 - (iii) The maximum operating weight of the Equipment including telescopic pole, search Head and control unit (maximum) 4kgs
 - (iv) Bag weight including accessories of detector 4.5 kgs
 - (v) Total weight of the equipment including carrying Case (maximum) 11 kgs

 - (c) **Search Head:** The search head may be in any shape, i.e, circular, oval rectangular etc. However, the total area of search head should be between 210 Sq cm to 710 Sq cm.

3. The electronic circuit should be hermetically sealed and separate from batteries so that in case of battery leakage the electronic circuit is not damaged. The manufacturer shall provide a compliance certificate for the same.

4. Detector design should allow its use both with and without earphone. The equipment must have volume control facility. Detector must give detection sound when operated without earphone. If earphone is used the detection sound should not be heard in open but only in earphone.

5. Must have a power control and sensitivity control to detect all type ferrous/non ferrous metals.

6. Must have a visual display to indicate detection and proximity of targets metal. The LEDs should be bright enough to be visual in day light (preferably on the hand grip or on search head).
7. Must have self- compensating capability to detect in different types of terrain/ soil/water (including salt water), Compliance Certificate shall be provided by the manufacturer for the same.

8. **Detection Capabilities**

- (a) Should detect all ferrous and non ferrous metals
- (b) Must be capable of detecting buried mines/metals in:-
 - (i) All types of soils including laterite (Ferrous and aluminum oxides)
Compliance Certificate shall be provided by the manufacturer for the same.
 - (ii) Under water 1ft
 - (iii) In all weather condition from arid to pouring rain. The equipment should meet international standard IP-67 Compliance Certificate shall be provided by the manufacturer for the same.
 - (iv) Over the temperature range of 20° to 55°C. Compliance Certificate shall be provided by manufacturer for the same.
 - (v) **Metal to Metal**. The equipment should be able to differentially detect two detonators No.27/33 placed at a distance of 01ft apart.

9. **Detection Setting Procedure**: The detector should be operational and capable of being set for operation in air/metal free soil within 30 seconds of switching on of setting switch. Trigger level threshold control to be provided.

10. **Detection Sensitivity**

- (a) The size and shape of the object with which the tests will be conducted are as under:-

(i) 0.15 gm metal -	1 inch x 1 inch tin foil.
(ii) 50mm nail -	Thickness 03 mm and dia of head 06 mm
(iii) Salty water -	03gm Iodized common salt in 01 ltrs of water

- (b) The sensitivity of the detector must meet the following specifications:-

(i) **In free air**

- | | |
|------------------------------|------|
| (aa) 0.15gm metal - | 15cm |
| (ab) 50mm nail vertical - | 29cm |
| (ac) 50 mm nail horizontal - | 23cm |

(ii) **Under Ground**

- | | |
|------------------------------|------|
| (aa) 0.15 gm - | 11cm |
| (ab) 50 mm nail vertical - | 27cm |
| (ac) 50 mm nail horizontal - | 17cm |

(iii) **In Clear Water**

(aa)	0.15 gm metal -	11 cm
(ab)	50mm nail vertical –	28 cm
(ac)	50 mm nail horizontal -	19 cm

(iv) **In Salty Water**

(aa)	0.15 gm metal -	11 cm
(ab)	50mm nail vertical –	28 cm
(ac)	50 mm nail horizontal -	19 cm

(C) Detector must be capable of pinpointing detected metal to +/- 5cm range.
The distance will be taken from the center of the search head to the object.

(d) Detection tone should be distance from the working tone. The instrument should be free from radio and static interference.

11. **Electrical Parameter** :- The detector must be powered by standard size commercially available dry cells for 20 hours and rechargeable cell for 12 hours. Must have a facility to indicate low battery.

12. **Transport Storage and Transit.** The detector together with its accessories must come in a height weight durable compact back pack carry bag that is capable of surviving in all adverse environment conditions. The back pack carry bag weight inclusive of detector accessories must not exceed 4.5 kgs.

13. Weight of the complete detector in its bag transport box must not exceed 11 kgs transport box should be ruggedized enough to withstand and drop from a 3 mtr height. Without suffering any damage to the transport box body or equipment (detector) kept inside it.

14. Period of warranty of supplied equipment minimum 2 years.

15. Manufacturer should undertake to provide spares for 10 years.

QRS AND TRIAL DIRECTIVES OF BOMB BLANKET (AS PER NSG)

1. The Bomb Blanket should offer protection against Blast, thermal and fragmentation effect resulting from the detonation of explosives. The firm will have to produce certificate from a National/ international accredited lab certifying compliance with STAGNAG 2920 V 50 @ not less than 665 Mts/ Sec.
 2. The Bomb Blanket should be made with multiple layers of suitable aramid fabric and should conform to the protection level required and then sewn into a fire retardant with repellent cover.
 3. The Bomb Blanket should consist of integral Blast containment ring to deter side fragmentation discharge and to direct the force of blast up wards.
 4. The Bomb Blanket design and material used for manufacture should permit X- Ray of the suspected device, without being lifted.
 5. The Bomb Blanket should easily cover a suspected device of min size of 40cmx30cm x 40cm without making any contacts
 6. The Bomb Blanket should provide easy lifting facility and should have no filling or strapping of blanket while deployment.
 7. Weight of Bomb Blanket should not be more than 40 kgs including blast containment ring.
 8. The Bomb Blanket should offer protection against blast, thermal and fragmentation effect resulting out of blast effect of 2 Kg TNT equivalent explosive along with min 100 gms of nail/nuts as fragments
 9. The Storage life of the Bomb Blanket should be 7 Years.
 10. **Miscellaneous:** The Firm should be able to provide the following as applicable along with the equipment.
 - (a) Cleaning kit, if any
 - (b) Users hand book & technical manual giving full description of the item.
 - (c) Literature on preservation technique as applicable.
 - (d) Suitable ruggedized carrying case.
-

BOMB TRAILER (INDIGENOUS) SB/ HQR SPECIFICATIONS

1. The bomb trailer should be a complete system for putting suspected IEDs object into the trailer. It should be able to allow quick and safe transportation of suspected IEDs to a safe distance so that no harm or damage to life and property take place.
2. Should be able to withstand up to 4 kgs of TNT. The Bomb Disposal and transportation container should be certified to safely contain and transport a suspected explosive object containing 4 Kg of TNT, with no penetration of containment vessel that is placed on the Cart. The firm should provide a Power Point presentation.
3. Firms should enclose Test Result from an accredited National/ International Lab.
4. The Bomb Trailer should be provided with hook and should be able to latch into pick up vehicles using the hook.
5. The Trailer tyres should be 15 inch with braking system.

QRS/ SPECIFICATIONS OF **BOMB BASKET** AS PER **MHA** SPECIFICATIONS:

1. System- Made of non- fragmentation ballistic fiberglass with a minimum of 24 inch diameter, 36 inches height.
 2. Must have nylon holding net inside basket.
 3. Withstand a blast of minimum of 220gm TNT with splinters.
 4. Weight – Not more than 55 Kgs.
 5. One sample to be given for trial for destructive testing at no cost no commitment basis.
 6. **Miscellaneous:** the firm should be able to provide the following, as applicable along with the equipment.
 - a. Technical Manual giving full description of the item.
 - b. User's Hand Book.
 - c. Literature on preservation technique, as applicable.
 - d. Specifications for packing, handling/transportation/storage.
 - e. Details regarding proof/periodical Inspection by the user.
-

Digital Camera (SB/ Hqrs Specifications)

1. The Digital Camera should be 12 Megapixel or higher.
 2. Should have Night Snap Capabilities with built in Flash.
 3. Should operate on re chargeable Li- Ion battery.
 4. Separate charger for charging of Li- Ion battery should be provided
 5. 8 x optical zoom or better.
 6. 12 x digital zoom or better.
 7. 2 years onsite warranty should be provided

 - 8. Miscellaneous:**
 - a. Separate hand strap for holding for camera should be provided.
 - b. Soft cover for safe storage of camera should be provided.
 - c. Owner's Manual and literature for operating the camera should be provided.
-

QRS OF CABLE AND WIRE LOCATOR (MHA)

SI No.	Technical Specifications
1.	It should be battery operated hand held search device for the detection of command wires leading to remote control IEDs.
2.	Detection: It should be able to detect and locate cable of at least 50 meter length which is buried at the depth of minimum 20 Cms. It should be able to detect such cables in all weather and soil conditions (dry soil, moist soil, soil with high metallic content) in active and passive modes both.
3.	The detector & its accessories should be made of non corrosive material (Certificate from the OEM to be provided by the firm)
4.	The electronic circuit should be hermetically sealed. In case of battery leakage the electronic circuit should not get damaged. (Certificate from the OEM to be provided by the firm)
5.	The equipment should have low battery indicator (audio and visual)
6.	False alarm rate should be less than < 1%
7.	Length of the shaft should be adjustable + - 20 %
8.	Manual controls for power on /off & for adjusting (i) Volume (ii) Sensitivity (iii)Gain
9.	The equipment should give an audible alarm even when head phones are not used
10.	Accessories. Along with the standard accessories the equipment must have the following. (a) Set of Spare batteries (dry rechargeable) (b) Battery Charger for rechargeable batteries. (c) Field back pack (d) Ruggedized transit case
11.	Components. The equipment should contain sensing head shaft, test piece, headphone (full ear covering headphone) battery carrier and any other item required for smooth operation of the equipment.
12.	Alarm. Audio and visual

13.	Power Supply. Dry rechargeable and non rechargeable battery. Minimum life of the battery 8 Hours on full power mode under operational conditions.
14.	Operation time. Minimum 12 Hours on full power mode in operational conditions
15.	Operating temperature range. -10° to + 50° Celsius (Certificate from a National/ International accredited lab to be provided by the firm)
16.	Operational weight with batteries. Maximum 4 Kgs
17.	Protection. Equipment should be IP-67 complaint (Certificate from a National/ International accredited lab to be provided by the firm)
18.	Misc. (a) Tech Manual giving full description of the of the item (b) User's handbook & literature on packing handling operation, maintenance, transportation & storage of equipment

QRs/ Specifications of **Telescopic Prodder foldable Metallic** as per **MHA**

1. The Prodder should be sturdy and have a tapered tip to prevent damage from hard objects during insertion.
 2. Length should be in the order of:-
 - a. Short assembled 500 mm (+ - 10 %)
 - b. Long Assembled 1200 mm (+ - 10 %)
 3. The Prodder should be made of non corrosive material or a coating applied to prevent corrosion.
 4. Hand grip should be made of non conducting material.
 5. Light weight (less than 1.5 Kgs).
 6. It should have LED torch light fitted with rechargeable battery for night viewing.
 7. **Miscellaneous:** The firm should be able to provide the following as applicable, along with the equipment.
 - i. User's Hand Book and Technical Manual giving full description of the item.
-

QRS OF **TELESCOPIC SEARCH MIRROR** (as per SB/ Hqrs Specifications)
 The following are the requirements for Telescopic Search Mirror

Sl No.	Parameters	Qualitative Requirements
1.	Format	Hand Held Inspection Mirror
2.	View	4"x 6" of 5 " Diameter Convex Mirror
3.	Arm Length	Extendable up to 2 Mts (Telescopic & Locking Type)
4.	Application	Inspection of inaccessible Places
5.	Features	Fast Viewing
6.	Accessories	Provision for attachment of Torch Light
7.	Manual	Operation/ owner's manual to be provided
8.	Warranty	2 Years

ORS : TATA 407 IED RESPONSE VEHICLE (BDDS SB/HQ, SHILLONG SPECIFICATIONS)

Physical Requirement

1. Should be a Hard Top body with: (i) 1 (one) sliding door on the left hand side behind passenger door (ii) 2 (two) rear door opening with lock facility.
2. Should have 1 (one) foldable working table of size 60 X 60 cm for lab/spot tests, attached to the side frame of the vehicle. The tables should have stainless steel top.
3. Should have 3 x 3 adjustable Shelves/rack of size 60 x 30 cm for keeping all PBI Equipments.
4. Should have provision of fire extinguisher 5 Ltrs. Foam type.
5. Provision of revolving orange/blue lights and siren fitted on the vehicle top.
6. Should have 3 (three) small tube lights fitted inside the vehicle.
7. Should have 2 (two) Steel safe/storage compartments of wooden inner lining, of sizes (i) 50 x 60 x 40 Cms and (ii) 40 x 40 x 30 Cms, with Lock facility for keeping explosives etc.
8. Should have 1(one) immovable, seat for the PBI team members to sit inside the cabin.
9. Should have 2 (two) steel chair foldable for Bomb Technicians

Technical Requirements

10. Should have a small 1KVA Gen Set for power supply***
11. Should have facility of 6 x 220 V x 5 Amp Power plugs for charging the equipments.
12. Should have 3 Rechargeable Emergency lights.

Additional Features

13. The vehicle should be under warranty for a period of one year or 5000 Kms whichever is earlier.
14. Should provide at least three free services.
15. Should be preferably four wheeled vehicle.
16. Spare parts for the modification for a period of minimum three years should be provided.
17. The Gen set should have the following QRS***:-
 - a. Should be of 1 KVA capacity.
 - b. Should be able to run continuously for 12 Hrs.
 - c. Minimum maintenance should be required.

Justification.

18. A mobile platform which can move to the place of incident at the earliest with all the facilities and the latest equipment for faster Render Safe Procedures in IED Threat Situations and Post Blast Investigations by doing on spot testing/ analysis of debris and fragments.
19. The operating efficiency of PBI teams will be enhanced tremendously.
20. The vehicle can be moved to nearby places within a very short time.

Optional requirement:

1. Provision of foldable Ramp for loading and unloading of Mobile Robotic Operated Vehicle (MROV).

Note: Details regarding fabrication of vehicle can be obtained from SB Headquarters on any working day between 10:00 AM to 4:00 PM.

QRs/Specification of the RSP TOOL KIT (BPR & D/ MHA)

1	Doctor stethoscope.
2	BP Handle 6'' \pm 1'' with BP Blade set
3	Scissors 6'',7'',8 \pm 1''
4	Dental mirror 6'' \pm 1'',10'' \pm 1''
5	Scalpel 8'' \pm 1''
6	Artery Forceps 6'' \pm 7''8'',9'' \pm 1''
7	Torch with two pencil cells.
8	Torch medium with two cells
9	Hammer sledge and ball pane (2Kg \pm 10%) with claw Hammer.
10	Pipe wrench 10'' \pm 1''
11	Hand vice Grip 6'' \pm 1''
12	Magnifying Glass
13	Nipper cutter
14	Tin cutter
15	Nose Plier
16	Knife 80 mm Blade
17	C Clamp 4'' \pm 1''
18	Spanner Adjustable 15mm \pm 5mm
19	Spanner Adjustable 30mm \pm 5mm
20	Hawk Saw 7'' \pm 1 '' with blade
21	Screw Drive set consisting of :- a)Flat 2mm \pm 1mm blade width b)Flat 4mm \pm 1mm blade width c)Flat 6mm \pm 1mm blade width d)Flat 8mm \pm 1mm blade width e)Flat 10mm \pm 1mm blade width f)Flat off set 6mm \pm 1mm blade width g)Flat offset 7mm \pm 1mm blade width h)Flat offset 10 mm \pm 1mm blade width i)Cross point 75mm \pm 10mm j)Cross point 150mm \pm 10mm k)Cross point 200mm \pm 10mm l)Cross point 250 mm \pm 10mm
22	Hand drill with drill bit set
23	Spanner 10 piece metric set
24	Spanner 10 piece imperial set
25	Soldering iron 6'' with soldering paste& soldering wire 50 gms
26	Sponge holder 10'' \pm 1''
27	Can opener 6'' \pm 1''

28	Tape cello
29	Tape black
30	Tape paper
31	Punch 5''+1
32	Cold chisel 6''+1''
33	Cold chisel 8'' + 1''
34	Screw driver set (watch maker)
35	Screw driver alignment
36	Super glue adhesive
37	Pliers cutter with grip long point nose
38	Pliers cutter / grip combination
39	Pliers flat jaw
40	Pliers round jaw
41	Cutter side 160mm +10mm
42	Cutter side 120mm +10mm
43	Fish line with Hook
44	Tweezers
45	Probe (straight & angular)
46	Wire brush
47	Swiss Army knife
48	Tape measuring 4mtr ± 1mtr
49	Non metallic probe
50	Hand gloves
51	Fire extinguisher (BCF Type) 600gm + 100gm
52	Bar lever spike & cranked chisel ends 445mm ± 10 mm
53	Bar lever crack from & wedge ends 260mm ± 10mm
54	Square driver socked set
55	Pick 560mm + 10mm head
56	Pray bar
57	Thermal Cutter
58	Shovel round nose
59	Folding ladder (optional – subject to requirement of the user) a)Should be made of ruggedized material b)Should be foldable & capable for storage in a backpack c)Minimum length 12 feet d)Minimum width 1 foot e)Weight – maximum 15 kgs f)Capacity 85 kgs ± 10 kgs
60	Miscellaneous The Farm should be able to provide the following, as applicable, along with the equipment :- a)Cleaning kit, wherever applicable. b)User's Handbook
All the above tools should be packed in a suitcase type carrying case with proper stowage	
All the above tools should be ISI marked / manufactured by and standard and reputed	
Warranty – On site comprehensive for 2 (Two) Years.	

Technical Specification of LED Search Light. (SB/ HQRS)

- 1) It should have Variable Focus Reflector.
- 2) It should work as Spot and Flood Light.
- 3) It should have Non Slip Handles.
- 4) It should be waterproof and shock proof.
- 5) It should have at brilliant white light at least up to 300 Mts. range.
- 6) It should have a powerful LED bulb having life span of minimum 2000 Hrs.
- 7) The LED Bulb should be between 2-5 Watts
- 8) It should be provided with On/ Off and Flashing facility
- 9) It should have and in built charger working with re- chargeable batteries.
- 10) When fully charged the LED search light should be capable of working for 5-6 Hrs in ON mode.
- 11) Provision for working with dry cell batteries during emergency should also be provided.
- 12) There should be Automatic Deep Discharge and Over Charge protection.
- 13) Comprehensive On- Site Warranty should be provided for 2 years.
- 14) Owner's manual and warranty card with weather proof casing should be provided.

TECHNICAL SPECIFICATION OF **EXPLOSIVE VAPOR DETECTOR (EVD)/MHA**
SPECIFICATIONS

Sl No.	Technical specifications of SB/ Headquarters, Shillong. (as per BPR & D) MHA.
1.	Sensitivity: the detector should be able to detect all types of explosives in vapour mode at room temperature.
2.	Selectivity: System should not respond to odour of non- explosive substances.
3.	Specificity: False alarm rate should be less than 1%
4.	Detector Capability: should be able to detect all types of explosive including explosives with low vapour pressure explosive in mixture form.
5.	Carrier Gas: Detector should not require the use of carrier gas.
6.	Auto Calibration: Adjustment/ Resetting for further operation should be automatic.
7.	Warm UP Time: Should be less than 10 minutes.
8.	Analysis time: less than 6 seconds.
9.	EMI: Operation should not be affected by electromagnetic interference or other electronic/electrical devices.
10.	Versatility: Equipment should allow the search of all places example field area automobiles, aircraft etc.
11.	Ease of Operation: Controls should be simple and easy to operate by bomb technician. Should not involve technician making or interpretation at the operator level, Grand Learn Capability.
12.	Operating Temperature: (a) Minimum - -10° (b) Maximum - + 55°
13.	Endurance: On 230V AC supply equipment should work continuously on battery, continuous operation should give more than 3 hours of operation.
14.	It should be one man portable and complete equipment should fit into one hand carrying case. Maximum operating weight should not exceed 4 Kgs.
15.	Indication: Both Visual and audio alarm system.
16.	Power Supply: Should Operate both on battery as well as external power source.
17.	Safety: The equipment should be safe to handle and free from radiation hazards to the operator.
18.	Should be to function both on vapour and particle mode.
19.	Spares and Service: User hand book, tech service manual, spare kit comprising of battery charger, test samples and spare battery should be provided with the equipment.

Technical Specifications: Water Jet Disrupters (MHA)

1. Should be capable of performing both to disarm and to disrupt.
2. Should have recoilless operation.
3. Should have capability of stand- off operation.
4. The mounting should be stable and should permit movement of disrupter in all angles.
5. Should have flexibility in selection of velocities of low and high velocity jets.
6. Should have an aiming device for stand –off operation with laser and Telescopic sites.
7. Should be light weight not more than 15 Kgs.
8. Operating temp -5° C to + 55° C.
9. Body of metallic rust proof material.
10. It should be capable of firing at least the following projectiles:-
 - a. Blade Projectile
 - b. Bloster Projectile
 - c. Chisel Projectile
 - d. Fin/Spin stabilised
 - e. Fork Projectile.

11. Accessories

- a. Operators Manual.
- b. Carrying Case with harness.
- c. Training material / Aid

The above are the Technical Specifications/ Qualitative Requirements of **MHA** for Water Jet Disrupters.

12. OPTIONAL REQUIREMENT

It is desirable that the Disrupter should be capable of firing electrically initiated 0.5 Calibre Power Cartridges of High, Medium and Low velocities.

Warranty – On site comprehensive for 2 (Two) Years.

QRS AND TECHNICAL SPECIFICATIONS OF DRILLING MACHINE (SB/ HQRS)

1. The drilling machine should be from a reputed company
2. DC Operated Motor - DC Operated Motor 6v to 24v
3. Weight with battery - Not more than 4 kg
4. Drilling capability-
 - a) Up to 10 mm dia in concrete
 - (a) Up to 10mm dia in steel
 - (c) Up to 20 mm dia in wood.
5. Power input - 400 w + - 50w
6. **Bits** Wood, Concrete and Steel (Maximum up to 20mm as per BIS specification or equivalent).
7. Miscellaneous: (a) Cleaning kit
 - (b) Users Hand Book cum Technical manual
 - (d) Packing / transportation/ storage case.

QRS OF SEARCH KIT TOOLS (MHA SPECIFICATIONS)

List of standard 52 items of Tool Kit

1. Lamp, florescent, Battery operated.
2. Gloves leather.
3. Cord, Nylon.
4. Tape measuring length 3 mts.
5. Knife Retractable.
6. Knife Linoleum
7. Tape Insulation, 2 Reel
8. Scissor (Tailor Type)
9. Padsaw
10. Hacksaw junior
11. Blade set of Hacksaw junior
12. Hammer claw
13. Hammer club, 4lbs.
14. Cold Chisel
15. Bar wrecking
16. Cutter, capacity 0.9mm Mild steel

17. Cutter, capacity 1.2 mm Mild steel
18. Bolt cutter
19. Screw Driver Cross Head 6"
20. Screw Driver Cross Head 7"
21. Screw Driver Cross Head 9"
22. Screw Driver Cross Head 13"
23. Screw Driver Flat Head 6"
24. Screw Driver Flat Head 9"
25. Screw Driver Flat Head 13"
26. Wrench Hexagonal, Imperial set
27. Wrench Hexagonal, Metric set
28. Wrench adjustable 150 mm
29. Wrench adjustable 300 mm
30. Wrench Strap, Wise
31. Plier, Adjustable, Vice Grip, 254 mm
32. Plier, combination
33. Plier long nosed
34. Plier, side cutting
35. Plier, slip joint
36. Tweezer
37. Centre Punch
38. Releasing fluid
39. Clamping seizer
40. Socket set square drive A/F & Imperial
41. Drill Machine
42. Drill bit HSS 9 mm, flat
43. Drill bit HSS 8 mm, flat
44. Drill bit HSS 7 mm, flat
45. Drill bit HSS 7 mm,
46. Drill bit, flat 5 mm
47. Drill bit, flat 4 mm
48. Drill bit, masonry 300 x 10 mm
49. Drill bit, masonry 300 x 06 mm
50. Fire extinguisher
51. Cable electric, Extension length 5 Mts.
52. Suit case modified

QRS TELESCOPIC MANIPULATOR (NSG SPECIFICATIONS)

1. Dimensions

- (a) It should have minimum length of 4.5 mtrs when fully extended.
- (b) It should provide a minimum stand-off distance of 4 mtr from the tip of the claw when fully extended.
- (c) It should have a min stand-off distance of 1.5 mtrs when telescopic pole is in collapsed position.
- (d) Dimension of carrying case length 125 cm (max), width 45 cm (max) height 20 cm (max).
- (e) The carrying case should be Pelican or equivalent case with wheels.

2. Weight

- (a) It should not weigh more than 22 Kgs when assembled and ready for operation including wheel assembly & complete counter wt attached.
- (b) It should not weigh more than 9 Kg when assembled & ready for operations without wheel assembly & counter weight.
- (c) Total transportable weight of the eqpt should be less than 32 Kgs.
- (d) Carrying case should not weigh more than 10 Kgs. It should have wheels to drag it easily while transporting. It should have a carrying handle to hold it.
- (e) It should have provision of using varying counter weights either Single or in combination.

3. Lifting Capacity

- (a) It should be able to lift 10 kgs of weight without any imbalance or toppling effect when fully extended with or without wheel assembly ensuring easy mobility for Bomb Tech in a Bomb Suit.
- (b) It should facilitate to lift suspected device from a height.

4. Claw

- (a) The claw should have 360 degree rotation in both clock and anti-clock wise direction.
- (b) The claw and rod/pole must be stable in all directions and should not slip or rotate during the operation. It should hold suspected device intact to facilitate easy carriage by the Bomb Tech.
- (c) L-shaped and straight rubber grip pads must be provided as attachments for claw to pick up or hold tightly circular, smooth, flat and rectangular objects.
- (d) Claw should open to a min of 20 cm.

5. Battery

- (a) It should be operational with commercially available rechargeable and disposable batteries.
- (b) Batteries should have a minimum of 60 minutes continuous operating time.

- (c) The equipment should be provided with one set of spare rechargeable battery with a charger
- (d) The battery compartment should be inside the telescopic pole.

6. Shoulder strap

- (a) It should have a comfortable and adjustable shoulder strap for operator to wear and handle it while wearing a Bomb Suit.

7. Material

- (a) The equipment pole should be made of high strength light weight and non corrosive material with a shelf life of min 10 yrs.

8. Miscellaneous

- (a) The telescopic manipulator should have a breakaway tip arrangement, so that in case of a possible explosion, only the tip is damaged and reduce the recoil effect almost to nil.
- (b) The equipment should be able to function at extreme range of temperature ie -20 degree C to +55 degree C.
- (c) The equipment should be water resistant and should comply to IP 67 std.
- (d) It should have a safety switch mechanism to open the claw so that it does not open accidentally.
- (e) It should be easily operationally collapsible and extendable by 01 operating bomb tech wearing bomb suit.
- (f) It should be possible to deliver water jet disrupter using this manipulator.

Certifications:

1. Firm / OEM to provide self certification Certificate to be checked by the Tendering Authority in case of 1 (e).
2. Firm/ OEM to provide certificate from a National/ International accredited lab to be checked by the Tendering Authority in case of 7 (a), 8 (a), 8 (b) and 8 (c).

**TECHNICAL SPECIFICATION/QUALITATIVE REQUIREMENTS OF NON MAGNETIC
TOOL KIT (As per MHA SPECIFICATIONS)**

SI No.	Qualitative Requirements	Trial Directives
1.	Screwdriver, flat, 2mm x 150 mm Blade Width.	The Physical dimensions to be checked with measuring instruments and its physical properties through magnet.
2.	Screwdriver, flat 4mm blade Width, 170 mm	---DO---
3.	Screwdriver, flat 6mm blade Width, 240 mm	---DO---
4.	Screwdriver, flat 8mm blade Width, 295 mm	---DO---
5.	Screwdriver, flat 9mm blade Width, 380 mm	---DO---
6.	Screwdriver, flat offset 6mm blade Width, 75 mm	---DO---
7.	Screwdriver, flat offset 7mm blade Width, 120 mm	---DO---
8.	Screwdriver, flat offset 10mm blade Width, 195 mm	---DO---
9.	Screwdriver, crosspoint No. 1, 150 mm	---DO---
10.	Screwdriver, crosspoint No. 2, 255 mm	---DO---
11.	Screwdriver, crosspoint No. 3, 260 mm	---DO---
12.	Screwdriver, crosspoint No. 4, 380 mm	---DO---
13.	Scissors, No. 150 mm	---DO---
14.	Spanner, adjustable 19 mm, max 160 mm	---DO---
15.	Spanner, adjustable 28 mm, max 255 mm	---DO---
16.	Hammer, ball pin, 680g, 355 mm	---DO---
17.	Hammer, Club, 910g, 225 mm	---DO---
18.	Pliers, cutters/ grips, combination, 205 mm	---DO---
19.	Pliers, flat jaw, flat nose, 135mm	---DO---
20.	Pliers, cutters/grip, long point nose, 165 mm	---DO---
21.	Pliers, round jaw point nose, 130 mm	---DO---
22.	Probe, straight and right angle, 150mm	---DO---
23.	Cullers, side 150 mm	---DO---
24.	Cullers, side 120 mm	---DO---
25.	Bar, Lever cranked form and wedge ends 260 mm	---DO---
26.	Chisel flat 15 mm, cutting edge 165 mm	---DO---
27.	Chisel flat 22 mm, cutting edge 230 mm	---DO---
28.	Tweezers 200 mm	---DO---
29.	Knife, 80 mm, blade 210 mm	---DO---
30.	Hacksaw, blade length 300 mm, blade 300 mm to fit hacksaw	---DO---
31.	Scraper, 25 mm blade width, stiff 250 mm	---DO---
32.	Wire brush 305 mm	---DO---
33.	Wrench pipe adjustable, 38 mm, max 355 mm	---DO---
34.	Case carrying	To be Physically Checked
35.	Bar, Lever, spike & cranked chisel ends 445 mm	The Physical dimensions to be checked with measuring instruments and its physical properties through magnet.
36.	The tools should be beryllium copper alloy	OEM to provide manufacturing certificate and to be checked.
37.	The tools must conform to stanag 2897 Annex C	---DO---
38.	All tools should be suitable for contact use and should be individually certified	---DO---

39.	The equipment should be supplied with a robust packing and carrying case which also should be non magnetic	To be physically checked through magnet
40.	The equipment along with carrying case should not weigh more than 16 kgs	To be physically checked through weighing machine

**TECHNICAL SPECIFICATIONS OF PORTABLE GENERATOR SET (SMALL)
(SB/HQRS SPECIFICATIONS)**

1. Rated A.C Output 500 Va.
2. Max A.C Output 600 Va.
3. Rated Voltage 220 Volts.
4. A.C Frequency 50 Hz.
5. Engine – Single Cylinder air cooled gasoline or kerosene.
6. Engine Capacity 60 cc or better.
7. Starting system- Recoil Start.
8. Max output 2.0 Hp at 3000 RPM.
9. Ignition System- CDI
10. Fuel capacity- 4 Lts or better.
11. Continuous running time – 6 Hrs. or better.
12. Weight- 16- 18 Kgs.
13. Warranty- 2 Yrs.

TECHNICAL SPECIFICATIONS OF HALOGEN LAMP (SB/HQRS SPECIFICATIONS)

1. The halogen lamp should be hand held operated by 12 volts D.C Current.
2. It should be provided with a 3 Mts cable with 12 Volts male socket for connection to the 12 Volts power supply of vehicle.

TECHNICAL SPECIFICATIONS OF MEGA PHONE (SB/HQRS SPECIFICATIONS)

The Megaphone should be:-

1. Compact, lightweight megaphone offers 15 watts of power and appx 200M range.
2. Should have Built-in siren, volume control, power on/off switch with LED indicator, siren and music control, and a convenient carry strap.
3. Should Run on 4 D Size batteries, Power: 15 Watts.
4. Record and Play Function is desirable.
5. Should cover upto 200M range indoors and outdoors.
6. Should have variable volume control and built in Mic.
7. Warranty 2 Years.

TECHNICAL SPECIFICATIONS OF SWISS ARMY KNIFE (SB/ HQRS SPECIFICATIONS)

1. The multipurpose knife should be a compact, robust, hand held, multipurpose personal kit item intended for use by a soldier in the performance of broad range of daily field activities.
2. **Operational & Physical Characteristics** The multipurpose tool should have the following minimum components with their specified functional capability.
 - A. Drop Point Blade.
 - B. Serrated Sheep Foot Blade
 - C. Flat Blade Screw Driver
 - D. Cross Tip Screw Driver
 - E. Wire Cutter
 - F. Bottle Opener
 - G. Can Opener
 - H. Nose Pliers
 - I. Combination File
3. **Material** : Stainless Steel
4. **Carriage.** It should have a durable sheath with loop to fit on standard issue belts of Military/ Para Military Forces.
5. **Maintenance.** It should require minimal user maintenance, lubricating and tightening of assemble screw (s). It should be capable of maintaining its performance in sand and dust.

TECHNICAL SPECIFICATIONS OF MULTIMETER (SB/HQRS SPECIFICATIONS)

1. The multimeter should be able to measure AC/DC Current and Voltages.
2. The multimeter should be able to measure AC/ DC current
3. The multimeter should be able to measure Resistance and continuity
4. The multimeter should be battery operated with interchangeable battery.
5. The multimeter should have a digital display.

SI No.	QRS/ TECHNICAL PARAMETER FOR HOOK & LINE SET (NSG approved specifications)	QUANTITY
1.	The Hook and Line set should comprise of the following items and their quantities as given below	
a.	Reel 300mm dia with handle and should hold the line provided with the kit.	02 Nos.
b.	Line 5.5mm dia length 120m	02 Nos.
c.	Pulling Handle	02 Nos.
d.	HOOKS: (i) Hook, Small Single Plain 12mm	02 Nos.
	(ii) Hook Single Plain 25 mm	02 Nos.
	(iii) Hook Single Plain 50 mm	02 Nos.
	(iv) Hook double plain 25mm	02 Nos.
	(v) Hook double plain 50mm	02 Nos.
	(vi) Hook single barbed 25 mm	02 Nos.
	(vii) Hook single barbed 50 mm	02 Nos.
	(viii) Hook single barbed 12 mm	02 Nos.
	(ix) Hook double barbed 25mm	02 Nos.
	(x) Hook double barbed 50mm	02 Nos.
	(xi) Spring Gate Hook	01 No.
	(xii) Self Locking Hook	01 No.
e.	Rod extension 3m	01 No.
f.	Belt sling	
	(i) 7.5 Cms	01 No.
	(ii) 10 Cms	01 No.
g.	Snatch Block self opening	04 Nos.
h.	Karabiners	
	(i) 12 mm	02 Nos.
	(ii) 18 mm	02 Nos.
	(iii) 25 mm	02 Nos.
h.	Pitons	
	(i) 50 mm	06 Nos.
	(ii) 100 mm	06 Nos.
i.	Self adhesive anchor	10 Nos.
j.	Suction pad single and double	Single 02 Nos. Double 01 No.
k.	Telescopic pole with self locking hook	01 No.
l.	Grips	
	(i) Spring- Max opening of 25 mm	01 No.

	(ii) Vice	01 No.
m.	Door stopper (rubber)	04 Nos.
n.	Through wall anchor with ring	01 No.
o.	Rope Sling	
	(i) 3mm diameter and 2 m long	02 Nos. Minimum
	(ii) 5 mm diameter and 2 m long	02 Nos. Minimum
p.	Wedge with eye	02 Nos.
q.	Screw with eye	10 Nos.
r.	Wire sling 1.5 mm- 3 mm diameter and 2 m long	04 Nos.
s.	Pocket tool kit	02 Nos.
t.	Door way anchor min 700-1100 mm with eyes	02 Nos.
u.	D Shackle at least 13 mm gate and 1000 kgs load	02 Nos.
v.	Standard snatch block	02 Nos.
w.	Ground Anchor	06 Nos.
x.	Webbing sling- 50 mm width and (1m-2m) length	02 Nos. Minimum
y.	Round Sling	
	(i) 1 m length	02 Nos.
	(ii) 3 m length	02 Nos.
	(iii) 5 m length	02 Nos.
z.	Snatch block heavy duty with swivel	04 Nos.
aa.	Splitter ball	02 Nos.
ab.	Snatch block, one way lock	01 No.
ac.	Fish hook	02 Nos.
ad.	Hook 120 mm opening fixed eye	02 Nos.
ae.	Remote window breaker	01 No.
af.	Seizer lock jaw 85 mm length 175 mm	01 No.
ag.	Tripod lifting capacity minimum 250 Kgs & minimum 2 mtr lifting range	01 No.
2.	The items should come complete in a rugged carrying case fitted with rubberized foam	