

QRs/ TDs OF ARTIFICIAL CLIMBING WALL - Revision
Technical Specification (4 Face Wall)

<u>As per old Qualitative Requirement (QR)</u>	<u>Proposed Changes in Qualitative Requirement(QR)</u>
<p>All parameters/ specifications mentioned in QRs will be checked by the Board of Officers by ascertaining/verifying following checks in the presence of Vendor/Supplier/Manufacturer. In case of any discrepancies/problem, the vendor/rep of firm will demonstrate the features to the Board of Officers of the force concerned. Further, if proper testing instrument for testing these parameters is not available with user, same will be arranged by the vender.</p> <p>i) <u>Physical Checks</u> : - In this category, specification of the equipment will be checked physically as per QR.</p> <p>ii) <u>Functional Checks:</u> - The vendor will show all the features/ configuration of the equipment functioning on ground to the Board of Officers during trial.</p> <p>Submission of certificates: - Specification which cannot be checked due to lack of testing facilities/expertise, self-certificate of OEM has to be provided by the vendor/bidder during trial.</p>	<p><u>General</u></p> <p>The construction/setting up of a Four face Artificial Climbing Wall will assist Forces to train the personnel of CAPF in basic, intermediate and advance training in wall climbing, slithering and rappelling etc.</p> <p>As part of construction/setting up of Artificial Climbing Wall, the vendor will submit following during technical evaluation :-</p> <p>(a) Samples of various constructing materials of Artificial Climbing Wall alongwith their respective OEM certificates.</p> <p>(b) 3D design presentation, structural, working, and architectural drawings of the proposed structure, duly vetted by Indian Institute of Technology (IIT) / National Institute of Technology (NIT) or an equivalent government institute before the BOOs.</p> <p>(c) Documentary proof regarding having experience/competency to execute the construction of Artificial Climbing Wall.</p> <p>(d) <u>Trial/Demonstration (Optional)</u> :- The vendor may mention the details of any already existing facility with similar specifications for the BOOs to visit and ascertain capability of the vendor.</p>

S/No	Specification	Qualitative Requirement (QR)	Trial Directives	Proposed QRs.	Justification	Proposed changes in Trial Directives	Comments from vendors
FACE-1 (Tactical Climbing Wall)							
1.	Vertical height of wall	18.0 Meter (60 Feet)	The Board will carry out physical check as well as functional test of height of wall. In case of any discrepancy, the vendor/rep of firm will demonstrate the features to the Board of Officers.	15 Mtr.	During deliberation with concerned agencies, it is pointed out that 18 Mtr. height steel structure of 6 x 3 Mtr. width would be unsafe considering the wind loads and seismic loads etc. Therefore, either height of structure be reduced or size of base be increased to 6 x 4 Mtr.	This procurement is of “works” nature. (A) At the STEC stage, the BOOs may:- i. Check the 3D design presentation, structural, working, and architectural drawings of the proposed structure, which should be vetted by Indian Institute of Technology (IIT), National Institute of Technology(NIT), or an equivalent government institute, as produced by the bidder. ii. Obtain an undertaking along with relevant documents and certificates from the participating bidder, stating that all required norms prescribed by International Federation of Sports Climbing(IFSC), Indian Mountaineering Foundation(IMF), etc., have been incorporated into the proposed design of the structure. iii. Visit the existing facilities of bidders and examine their features, specifications, and drawings to ascertain the competency of the participating bidder (Optional). (B) At JRI/CRAC/Handing taking over stage:- i.During pre-construction, the detailed BOOs will ensure that all the construction material bought by the vendor is in accordance with the specifications mentioned in the contract. ii.During post construction, the detailed BOOs will physically check and measure all the specifications/ parameters, quantities of items utilised as per the contract.	-
2.	Width of faces	6.0 Meter	The Board will carry out physical check as well as functional test of width of wall. In case of any discrepancy, the vendor/rep of firm will demonstrate the features to the Board of Officers.	There is no change.			
3.	Number of face of wall	1 Face 6.0 Meter wide with Lead Climbing Panels	The Board will carry out physical check as well as functional test of face of wall. In case of any discrepancy, the vendor/rep of firm will demonstrate the features to the Board of Officers.	There is no change.			
4.	Total climbing surface	Single face minimum 120 Sq. meter including side cover panels	The Board will carry out physical check as well as functional test of climbing surface. In case of any discrepancy, the vendor/rep of firm will demonstrate the features to the Board of Officers.	Single face minimum 100 Sq. meter including side cover panels			

S/ No	Specification	Qualitative Requirement (QR)	Trial Directives	Proposed QRs.	Justification	Proposed changes in Trial Directives	Comments from vendors
5.	Usage	Multipurpose training (beginners, as well as intermediate/advance level climbers)	The Board will carry out physical check as well as functional test of usage of mentioned parameters. Also the Board of Officer will check the OEM compliance Certificate submitted by the vendor. In case of any discrepancy, the vendor/rep of firm will demonstrate the features to the Board of Officers.	There is no change.	To have a broader vendor base and healthy competition between vendors.	The BOOs will obtain an undertaking during STEC from the vendor that, parameters mentioned in the QR will be complied with.	-
6.	Number of climbers	At least 3 climbers simultaneously per face	The Board will carry out physical check as well as functional test of climbing surface. Also the Board of Officer will check the OEM compliance Certificate submitted by the vendor. In case of any discrepancy, the vendor/rep of firm will demonstrate the features to the Board of Officers.	There is no change.	-do-		

S/No	Specification	Qualitative Requirement (QR)	Trial Directives	Proposed QRs.	Justification	Proposed changes in Trial Directives	Comments from vendors
7.	Support Structure	Self-Standing M.S. Structure as per IS:800	The Board will carry out physical check as well as functional test of support structure. Also the Board of Officer will check the OEM compliance Certificate submitted by the vendor for IS: 800 Certificate.	There is no change.	To have a broader vendor base and healthy competition between vendors.	<p>During STEC stage :-</p> <p>i. The vendor will submit the structural drawing of the proposed MS structure and the drawing should be vetted by the concerned structural engineering department of Govt. Institute like NIT/IIT etc. The drawings should also contains shape/size/ weight/ features of structural members of MS support structure.</p> <p>ii. The vendor will produce sample of 1 Kg or 1 meter length of each structural component to be used in the proposed structure.</p> <p>iii. Obtain an undertaking from the participating vendor stating that, all steel structure work will be executed according to the specifications mentioned in CPWD Specifications Manual-2019 Vol.1 and II and IS:800-2007 Code.</p> <p>iv. During post construction, the detailedBOOs will physically check all the joints, workmanship and measure quantities of steel related items of structure as per the contract.</p>	

S/No	Specification	Qualitative Requirement (QR)	Trial Directives	Proposed QRs.	Justification	Proposed changes in Trial Directives	Comments from vendors
8.	Surface	Climbing surface of wall EN:12572-2017 certified 3D and 2D polyester resin panel having SAND FINISH on outer face minimum 10 mm thick on flanges and 6mm in the center thickness with provision of fixing external movable holds @ min.4 Nos./Sq. Mtr meant for outdoor use to take loading and reaction force as per Climbing Standard.	The Board will carry out physical check as well as functional test of the provided specification and also check the EN certificate of the panels provided by the vender. Further, in case of any discrepancy, the vendor/rep of firm will demonstrate the features to the Board of Officers.	There is no change.	To have a broader vendor base and healthy competition between vendors.	<p>During STEC stage:-</p> <p>a. The vendor will produce the sample of 1 x 1 meter wall panel of offered product before the BOOs .</p> <p>b. The BOOs will obtain an undertaking from the participating vendor stating that, the wall panel using for proposed structure is in accordance with the parameters mentioned in QRs.</p> <p>c. The BOOs will also check the EN Certificate of the panels submitted by the vendor is in order.</p>	-

S/No	Specification	Qualitative Requirement (QR)	Trial Directives	Proposed QRs.	Justification	Proposed changes in Trial Directives	Comments from vendors
9.	Safety Top Rope Anchor	4 Nos. Fixed Top per face. Anchors security system EN:12572-2017 Certified	The Board will carry out physical check as well as functional test of mentioned parameters. Also the Board of Officer will check the OEM Certificate Submitted by the vendor for EN:12572-2017 certification.	There is no change.	To have a broader vendor base and healthy competition between vendors.	During STEC stage:- i. The BOOs will carry out physical check as well as functional test of mentioned parameters of these items i.e. Safety rope anchor, holds, bolts & nuts, lead protection/ anchors loading in an existing facility of the Vendor. Or ii. The vendor will produce one each of these sample items before the BOOs during trial. iii. BOOs will also check the OEM Certificate Submitted by the vendor for EN:12572-2017 certification	-
10.	TUV/UIAA/UL/ EN:12572-2017 Certified Holds with certificatory	250 Nos. TUV/ UIAA/UL/ EN:12572-2017 Certified Holds.	The Board will carry out physical check as well as functional test of mentioned parameters. Also the Board of Officers will check the OEM compliance Certificate submitted by the vendor for TUV/UIAA/UL/EN:12572 -2017 certification.	There is no change.			
11.	Bolts and Nuts	Hot dip galvanized or Zinc plated TUV/UIAA/UL/ IS code certified.	The Board will carry out physical check as well as functional test of mentioned specification. Also check the OEM/ IS code certification provided by the vendor for material used in Bolts & Nuts.	There is no change.			
12.	Lead protection/ anchors loading	Individual Protection Point (IPP) to take loading as per EN 12572-2017.	The Board will carry out physical check as well as functional test of mentioned parameters. Also the Board of Officer will check the OEM Certificate submitted by the vendor for EN: 12572-2017 certification.	There is no change.			

S/No	Specification	Qualitative Requirement (QR)	Trial Directives	Proposed QRs.	Justification	Proposed changes in Trial Directives	Comments from vendors
13.	Foundation	2.0 Meter depth RCC as per IS 456 :2000. May vary as per soil condition /site condition.	The Board of Officer will check the OEM Certificate submitted by the vendor for RCC construction and IS 456:2000 Certificate for certifying prescribed construction norms.	There is no change.	To have a broader vendor base and healthy competition between vendors.	<p>i.The Board of Officer will check the Undertaking submitted by the vendor for construction certifying that prescribed construction norms as per the site conditions of the location as well as applicable loads by the structure will be followed.</p> <p>ii.The drawing of foundation should be vetted by IIT/NIT or an equivalent government institute.</p> <p>iii.Construction of foundation should be as per specifications mentioned in CPWD Specification Manual-2019 Vol.1 & II and IS 456:2000. Equivalent.</p>	-

S/No	Specification	Qualitative Requirement (QR)	Trial Directives	Proposed QRs.	Justification	Proposed changes in Trial Directives	Comments from vendors
<u>FACE-2 (IFSC Standard Speed Climbing Wall)</u>							
1.	Vertical height of wall face wise specifications	15.7 meter for Speed Wall Panels and remaining 2.3 Meter part of structure should be covered with 10 mm thick FRP Panels.	The Board will carry out physical check as well as functional test of height of wall. In case of any discrepancy, the vendor/rep of firm will demonstrate the features to the Board of Officers.	15 Meter .	15 Mtr. is standard height of Speed Climbing Wall as approved by IFSC (International Federation of Sport Climbing).	Same as trial procedures mentioned against Sl.No.1 to 4 of Face-1 (Tactical Climbing Wall) above.	
2.	Width of faces	6 meters	The Board will carry out physical check as well as functional test of width of wall. In case of any discrepancy, the vendor/rep of firm will demonstrate the features to the Board of Officers.	There is no change.			
3.	Number of face of wall	1 Face 6.0 meter wide	The Board will carry out physical check as well as functional test of face of wall. In case of any discrepancy, the vendor/rep of firm will demonstrate the features to the Board of Officers.	There is no change.			
4.	Total Climbing surface	93.0 Sq. meter	The Board will carry out physical check as well as functional test of climbing surface. In case of any discrepancy, the vendor/rep of firm will demonstrate the features to the Board of Officers.	There is no change			

S/No	Specification	Qualitative Requirement (QR)	Trial Directives	Proposed QRs.	Justification	Proposed changes in Trial Directives	Comments from vendors
5.	Usage	Multipurpose training (beginners, as well as intermediate/ advance level climbers)	The Board will carry out physical check as well as functional test of usage of mentioned parameters. Also the Board of Officer will check the OEM compliance Certificate submitted by the vender. In case of any discrepancy, the vendor/rep of firm will demonstrate the features to the Board of Officers.	There is no change.	To have a broader vendor base and healthy competition between vendors.	Same as trial procedures mentioned against Sl. No.5 and 6 of Face-1 (Tactical Climbing Wall) above.	-.
6.	Number of climbers	2 Climbers simultaneously.	The Board will carry out physical check as well as functional test of climbing surface. Also the Board of Officer will check the OEM compliance Certificate submitted by the vender. In case of any discrepancy, the vender/rep of firm will demonstrate the features to the Board of Officers.	There is no change.	-do-		
7.	Support Structure	Self-Standing M.S. Structure as per IS:800	The Board will carry out physical check as well as functional test of support structure. Also the Board of Officers will check the OEM compliance Certificate submitted by the vendor for IS: 800 certificate.	There is no change.	-do-	Same as trial procedures mentioned against Sl. No.7 of Face-1 (Tactical Climbing Wall) above.	-do-

S/No	Specification	Qualitative Requirement (QR)	Trial Directives	Proposed QRs.	Justification	Proposed changes in Trial Directives	Comments from vendors
8.	Surface	Climbing surface of wall EN: 12572-2017 certified 2D FRP (fiber reinforced plastic) panels with top and bottom layer of chopped and woven roving fiber glass and resin and a polyvinyl chloride core and shape with minimum 18mm thickness. Panels shall have provision of insert holes @ minimum 110 no's per panels for fixing holds. The panels should be able to withstand climbers weight, weather proof for outdoor use and meet norms as per EN12572:2017 STANDARDS.	The Board will carry out physical check as well as functional test of the provided specification and also check the EN: 12572-2017 certification provided by the vendor. Further, in case of any discrepancy, the vendor/rep of firm will demonstrate the features to the Board of Officers.	There is no change.	To have a broader vendor base and healthy competition between vendors.	Same as trial procedures mentioned against Sl. No.8 of Face-1 (Tactical Climbing Wall) above.	-

S/No	Specification	Qualitative Requirement (QR)	Trial Directives	Proposed QRs.	Justification	Proposed changes in Trial Directives	Comments from vendors
9.	Safety Top Rope Anchor	2 Nos. Fixed Top Anchors security system EN: 12572-2017 Certified	The Board will carry out physical check as Well as functional test of mentioned parameters. Also the Board of Officer will check the OEM Certificate submitted by the vendor for EN:12572-2017 certification.	There is no change.	-	Same as trial procedures mentioned against Sl. No.9 to 12 of Face-1 (Tactical Climbing Wall) above.	-
10.	Speed Holds	IFSC certified speed Climbing Holds. 40 Nos. Hand Holds 22 Nos. Foot Holds TUV/ UIAA/ UL / EN: 12572-2017 Certified Holds.	The Board will carry out physical check as well as functional test of mentioned parameters. Also the Board of Officer will check the OEM compliance Certificate submitted by the vendor for TUV/UIAA/UL/ EN: 12572-2017 certification.	There is no change.	-		
11.	Bolts and Nuts	Hot dip galvanized or Zinc plated . TUV/UIAA/UL/IS Code Certified	The Board will carry out physical check as well as functional test of mentioned specification. Also check the OEM/ IS Code certification provided by the vendor for material used in Bolts & Nuts.	There is no change.	-		
12	Lead protection/ anchors loading	Individual Protection Point (IPP) to take loading as per EN 12572-2017	The Board will carry out physical check as well as functional test of mentioned parameter. Also the Board of Officer will check the OEM Certificate submitted by the vendor for EN:12572-2017 certification.	There is no change.	-		
13.	Foundation	2.0 Meter depth RCC as per IS 456 :2000. May vary as per soil condition /site condition.	The Board of Officer will check the OEM Certificate submitted by the vendor for RCC construction and IS 456:2000 Certificate for certifying prescribed construction norms.	There is no change.	-	Same as trial procedures mentioned against Sl.No.13 of Face-1 (Tactical Climbing Wall) above.	-do-

S/No	Specification	Qualitative Requirement (QR)	Trial Directives	Proposed QRs.	Justification	Proposed changes in Trial Directives	Comments from vendors
	<u>FACE-3 (Rappelling Climbing Wall)</u>						
1.	Vertical height of wall face wise specifications	18 Meter (60 feet)	The Board will carry out physical check as well as functional test of height of wall. In case of any discrepancy, the vendor/rep of firm will demonstrate the features to the Board of Officers.	15 Meter.	The 18 Mtr. height steel structure of 6 x 3 Mtr. width would be unsafe considering the wind loads and seismic loads etc. Therefore, either height of structure be reduced or size of base be increased to 6 x 4 Mtr.	Same as trial procedures mentioned against SI.No.1 to 4 of Face-1(Tactical Climbing Wall) above.	-
2.	Width of faces	3 meters	The Board will carry out physical check as well as functional test of width of wall. In case of any discrepancy, the vendor/rep of firm will demonstrate the features to the Board of Officers.	There is no change.			
3.	Number of face of wall	1 Face 3.0 meter wide	The Board will carry out physical check as well as functional test of face of wall. In case of any discrepancy, the vendor/rep of firm will demonstrate the features to the Board of Officers.	There is no change.			
4.	Total Climbing surface	Minimum 60.0 Sq. meter including side cover Panels	The Board will carry out physical check as well as functional test of climbing surface. In case of any discrepancy, the vendor/rep of firm will demonstrate the features to the Board of Officers.	Minimum 50.0 Sq. Meter including side cover Panels			

S/ No	Specification	Qualitative Requirement (QR)	Trial Directives	Proposed QRs.	Justification	Proposed changes in Trial Directives	Comments from vendors
5.	Usage	Multipurpose training (beginners, as well as intermediate/advance level climbers).	The Board will carry out physical check as well as functional test of usage of mentioned parameters. Also the Board of Officer will check the OEM compliance Certificate submitted by the vender. In case of any discrepancy, the vendor/rep of firm will demonstrate the features to the Board of Officers.	There is no change.	To have a broader vendor base and healthy competition between vendors.	Same as trial procedures mentioned against Sl. No.5 and 6 of Face-1 (Tactical Climbing Wall) above.	-
6.	Number of climbers	1 Climber.	The Board will carry out physical check as well as functional test of climbing surface. Also the Board of Officer will check the OEM compliance Certificate submitted by the vender. In case of any discrepancy, the vendor/rep of firm will demonstrate the features to the Board of Officers.	There is no change.	-		
7.	Support Structure	Self-Standing M.S. Structure as per IS:800	The Board will carry out physical check as well as functional test of support structure. Also the Board of Officers will check the OEM compliance Certificate submitted by the vendor for IS: 800 certificate.	There is no change.	-	Same as trial procedures mentioned against Sl. No.7 of Face-1 (Tactical Climbing Wall) above.	-

S/No	Specification	Qualitative Requirement (QR)	Trial Directives	Proposed QRs.	Justification	Proposed changes in Trial Directives	Comments from vendors
8.	Surface	Climbing surface of wall EN:12572-2017 certified 3D and 2D polyester resin panel having SAND FINISH on outer face minimum 10mm thick on flanges and 6mm in the center thickness with provision of fixing external movable holds @ min.4 Nos./ Sq.Mtr meant for outdoor use to take loading and reaction force as per Climbing Standard.	The Board will carry out physical check as well as functional test of the provided specification and also check the EN: 12572-2017 certification provided by the vender. Further, in case of any discrepancy, the vendor/rep of firm will demonstrate the features to the Board of Officers.	There is no change.	-	Same as trial procedures mentioned against Sl. No.8 of Face-1 (Tactical Climbing Wall) above.	-
9.	Safety Top Rope Anchor	1 Nos. Fixed Top Anchors security system EN: 12572-2017 Certified	The Board will carry out physical check as Well as functional test of mentioned parameters. Also the Board of Officer will check the OEM Certificate submitted by the vendor for EN:12572-2017 certification.	There is no change.	-	Same as trial procedures mentioned against Sl. No.9 to 11 of Face-1 (Tactical Climbing Wall) above.	-
10.	Bolts and Nuts	Hot dip galvanized or Zinc plated. TUV/UIAA/UL/ IS Code Certified	The Board will carry out physical check as well as functional test of mentioned specification. Also check the OEM/ IS Code certification provided by the vendor for material used in Bolts & Nuts.	There is no change.	-		-
11.	Lead protection/ anchors loading	Individual Protection Point (IPP) to take loading as per EN 12572-2017	The Board will carry out physical check as well as functional test of mentioned parameter. Also the Board of Officer will check the OEM Certificate submitted by the vendor for EN:12572-2017 certification.	There is no change.	-		-
12	Foundation	-	-	2.0 Meter depth RCC as per IS 456 :2000. May vary as per soil condition /site	This point is missed in the existing QRs/TDs. of Artificial Climbing Wall. Hence,	Same as trial procedures mentioned against Sl. No.13 of Face-1 (Tactical Climbing Wall) above.	-

				condition.	included.		
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S/No	Specification	Qualitative Requirement (QR)	Trial Directives	Proposed QRs.	Justification	Proposed changes in Trial Directives	Comments from vendors
	FACE-4 (Lead Climbing Wall)						
1.	Vertical height of wall	18 Meter (60 feet)	The Board will carry out physical check as well as functional test of height of wall. In case of any discrepancy, the vendor/rep of firm will demonstrate the features to the Board of Officers.	15 Meter	The 18 Mtr. height steel structure of 6 x 3 Mtr. width would be unsafe considering the wind loads and seismic loads etc. Therefore, either height of structure be reduced or size of base be increased to 6 x 4 Mtr.	Same as trial procedures mentioned against Sl. No.1 to 4 of Face-1 (Tactical Climbing Wall) above.	-
2.	Width of faces	3.0 Meter	The Board will carry out physical check as well as functional test of width of wall. In case of any discrepancy, the vendor/rep of firm will demonstrate the features to the Board of Officers.	There is no change.			
3.	Number of face of wall	1 Face 3.0 Meter wide with Lead Climbing Panels	The Board will carry out physical check as well as functional test of face of wall. In case of any discrepancy, the vendor/rep of firm will demonstrate the features to the Board of Officers.	There is no change.			
4.	Total climbing surface	Minimum 60.0 Sq. meter including side cover Panels	The Board will carry out physical check as well as functional test of climbing surface. In case of any discrepancy, the vendor/rep of firm will demonstrate the features to the Board of Officers.	Minimum 50.0 Sq. meter including side cover Panels	According to the height		

S/No	Specification	Qualitative Requirement (QR)	Trial Directives	Proposed QRs.	Justification	Proposed changes in Trial Directives	Comments from vendors
5.	Usage	Multipurpose training (beginners, as well as intermediate/advance level climbers)	The Board will carry out physical check as well as functional test of usage of mentioned parameters. Also the Board of Officer will check the OEM compliance Certificate submitted by the vender. In case of any discrepancy, the vendor/rep of firm will demonstrate the features to the Board of Officers.	There is no change.	To have a broader vendor base and healthy competition between vendors.	Same as trial procedures mentioned against Sl. No.5 and 6 of Face-1 (Tactical Climbing Wall) above.	-
6.	Number of climbers Support	At 1 climber simultaneously per face	The Board will carry out physical check as well as functional test of climbing surface. Also the Board of Officer will check the OEM compliance Certificate submitted by the vendor. In case of any discrepancy, the vendor/rep of firm will demonstrate the features to the Board of Officers.	There is no change.	-do-		
7.	Structure	Self-Standing M.S. Structure as per IS:800	The Board will carry out physical check as well as functional test of support structure. Also the Board of Officer will check the OEM compliance Certificate submitted by the vendor for IS: 800 Certificate.	There is no change.	-do-	Same as trial procedures mentioned against Sl. No.7 of Face-1 (Tactical Climbing Wall) above.	-
8.	Surface	Climbing surface of wall EN:12572-2017 certified 2D polyester resin panel having SAND FINISH on outer face minimum 10mm thick on flanges and 6mm in the centre thickness with provision of fixing external movable holds @ min.4 Nos./Sq.Mtr meant for outdoor use to take loading and reaction force as per Climbing Standard.	The Board will carry out physical check as well as functional test of the provided specification and also check the EN certificate of the panels provided by the vender. Further, in case of any discrepancy, the vendor/rep of firm will demonstrate the features to the Board of Officers.	There is no change.	-do-	Same as trial procedures mentioned against Sl. No.8 of Face-1 (Tactical Climbing Wall) above.	-

S/No	Specification	Qualitative Requirement (QR)	Trial Directives	Proposed QRs.	Justification	Proposed changes in Trial Directives	Comments from vendors
9.	Safety Top Rope Anchor	2 Nos. Fixed Top per face. Anchors security system EN:12572-2017 Certified	The Board will carry out physical check as well as functional test of mentioned parameters. Also the Board of Officer will check the OEM Certificate Submitted by the vender for EN:12752-2017 certification.	There is no change.	To have a broader vendor base and healthy competition between vendors.	Same as trial procedures mentioned against Sl. No.9 to 12 of Face-1 (Tactical Climbing Wall) above.	-
10.	TUV/UIAA/UL/EN:12572-2017 Certified Holds with certificatory	125 No.s. TUV/UIAA/UL/EN:12572-2017 Certified Holds.	The Board will carry out physical check as well as functional test of mentioned parameters. Also the Board of Officers will check the OEM compliance Certificate submitted by the vender for TUV/UIAA/UL/EN:12572-2017 certification.	There is no change.	-		
11.	Bolts and Nuts	Hot dip galvanized or Zinc plated. TUV/UIAA/UL/IS Code Certified	The Board will carry out physical check as well as functional test of mentioned specification. Also check the OEM/ IS Code certification provided by the vender for material used in Bolts & Nuts.	There is no change.	-		
12.	Lead protection/anchors loading	Individual Protection Point (IPP) to take loading as per EN 12572-2017.	The Board will carry out physical check as well as functional test of mentioned parameters. Also the Board of Officer will check the OEM Certificate submitted by the vender for EN: 12572-2017 certification.	There is no change.	-		
13	Foundation	2.0 Meter depth RCC as per IS 456:2000. May vary as per soil condition /site condition.	The Board of Officer will check the OEM Certificate submitted by the vender for RCC construction and IS 456:2000 Certificate for certifying prescribed construction norms.	There is no change.	-	As per trial procedures mentioned against "Foundation" of Face-1 (Tactical Climbing Wall) above.	-do-

S/ No	Specification	Qualitative Requirement (QR)	Proposed QRs.	Justification	Proposed changes in Trial Directives	Comments from vendors
Miscellaneous						
14	List of Equipment/Accessories :- Prospective bidder should provide and fix:	<ul style="list-style-type: none"> a) SS Belay anchor point – 8 nos. b) Climbing holds (Imported) – 250 nos. (with nut-bolt) c) Speed climbing holds (20 Hand Holds + 11 Feet Holds) – 2 set d) Dynamic climbing rope of 10.1 mm – 400 meter. e) Sports climbing seat harness – 15 nos. f) D-shaped screw carabineer – 25 nos. g) Steel Quick Draw – 30 Nos. h) Belay device – 10 nos. i) GRIGRI – 4 nos. j) Mittens – 20 Pair k) Allen Keys – 5 Nos. l) Auto belay system m) Timing Device <p>Note: The above equipment/accessories must be CE, EN/UIAA/ UL/ IFSC certified.</p> <p>Any additional tools/ accessories required for the project may be quoted by the vendor.</p>	<p>No change.</p> <p>However, the under mentioned items should be IFSC Certified.</p> <ul style="list-style-type: none"> a) Auto belay system (IFSC certified) b) Timing Device(IFSC certified) 	<p>To have a broader vendor base and healthy competition between vendors.</p>	<ul style="list-style-type: none"> 1. The BOOs will carry out physical check of these items in an existing facility of the Vendor during trial. Or 2. The Vendor will produce one each of these sample items before the BOOs during trial. 3. The BOOs will also check the product certification i.e. EN/UIAA/ IFSC etc. during STEC period. 	-

S/No	Specification	Qualitative Requirement (QR)	Trial Directives	Proposed QRs.	Justification	Proposed changes in Trial Directives	Comments from vendors
15	Design & performance Criteria:-	Walls shall withstand the effects of gravity loads, wind loads (130 km/hr wind load) and live loads determined according to ASCE/SE17. (NIT/IIT Vetted)	The vendor / firm will submit Third party i.e. NIT/IIT vetted Steel structure and foundation drawing certificate.	There is no change.	-	1. The Vendor will submit the structural drawing of the proposed structure and it should be vetted by the concerned structural Engineering Department of Govt. Institute like NIT/IIT or equivalent. 2. The drawings should contains shape/size/weight of structural members of structure. 3. The Vendor will submit 3D design presentation during TEC of proposed structure. 4. The vendor will also submit an undertaking stating that, all the civil work will be executed according to the specifications mentioned in CPWD Specifications Manual-2019 Vol.1 and II and relevant IS Codes. 5. The vendor/firm will submit OEM certificate with regard to performance of surface material and allied accessories as per QRs.	
		Walls shall withstand the effects of earthquake motions as per ASCE/SE 17. (NIT/ IIT vetted)	The vendor / firm will submit Third party i.e. NIT/IIT vetted Steel structure and foundation drawing certificate.	There is no change.	-		
		Walls to allow for thermal movements from ambient and surface temperature changes for temperature change of 40 deg. C to 100 deg. C, material surfaces.	The vendor/firm will submit certificate from OEM in this regard.	There is no change.	-		

S/No	Specification	Qualitative Requirement (QR)	Trial Directives	Proposed QRs.	Justification	Proposed changes in Trial Directives	Comments from vendors
16	<u>Training & risk management</u>	Manufacturers shall have a minimum of 03 years of experience working in the design and manufacturing of climbing wall.	Past performance/experience certificate to be produced before the board of officers in conformity of experience.	There is no change.	-	-	-
		The manufacturer shall provide risk management procedures in the form of a procedures manual designed specifically for the facility.	The vendor/ firm will produce manual as required.	There is no change.	-	-	-
		The manufacturer shall provide onsite training for the Owner's personnel on risk management operations and maintenance.	The vendor/firm will arrange training of 20 Master trainers for 2 weeks. 8 Hours per day.	There is no change.	-	The vendor/firm will arrange training of 20 Master trainers for 2 weeks. 8 Hours per day. An undertaking in this regard will provide the vendor during STEC.	-
		All training shall be managed by personnel holding certifications from Climbing Wall association (CWA)/ IMF	The vendor/firm will submit CWA/ IMF approved certificate before the Board of Officers for checking.	There is no change.	-	The vendor will submit an undertaking in this regard before the BOOs during STEC.	-
17	-	Platform for slithering and rappelling shall be as per organizational requirement with provision of shed kept optional.	-	Platform for Artificial Climbing Wall (04 Face) should have the provision of a Shed.	For Safety and durability	During post construction, the detailed BOOs will physically check and measure all the specifications/ parameters, quantities of items utilised as per the contract.	-

S/No	Specification	Qualitative Requirement (QR)	Trial Directives	Proposed QRs.	Justification	Proposed changes in Trial Directives	Comments from vendors
18	-	-	-	<u>Service Life:-</u> The service Life of the Product shall be minimum 25 Years.	For safety and durability.	The BOOs should obtain an Undertaking Certificate in this regard from the Vendor during STEC.	
19	-	-	-	<u>Warranty:-</u> Warranty period of the product shall be 03 years from the date of completion of installation, commissioning & testing of goods at consignee location.	-do-	The OEM warranty /undertaking Certificate should be submitted by the Vendor during JRI	
20	-	-	-	<u>Post installation warranty and maintenance:-</u> a. Post installation comprehensive warranty of at least 05 years. However, CMC/AMC to be decided by the user Department.	For better maintenance and durability of the product.	Firm to provide undertaking for the following before the BOOs during STEC:- i. Uninterrupted product support for minimum 10 years. ii. Maximum time to repair shall not exceed 15 days from the date of intimation by any communication means to make the product functional during the guarantee period.	

Landing Area around the climbing structure

S/No	Items	Dimensions
1	Height of perimeter wall	2 ft 4 inch
2	Length	21.8 Mtr
3	Breadth	21.8 Mtr

Gymnastic Landing Mats optional for additional safety to avoid injuries .

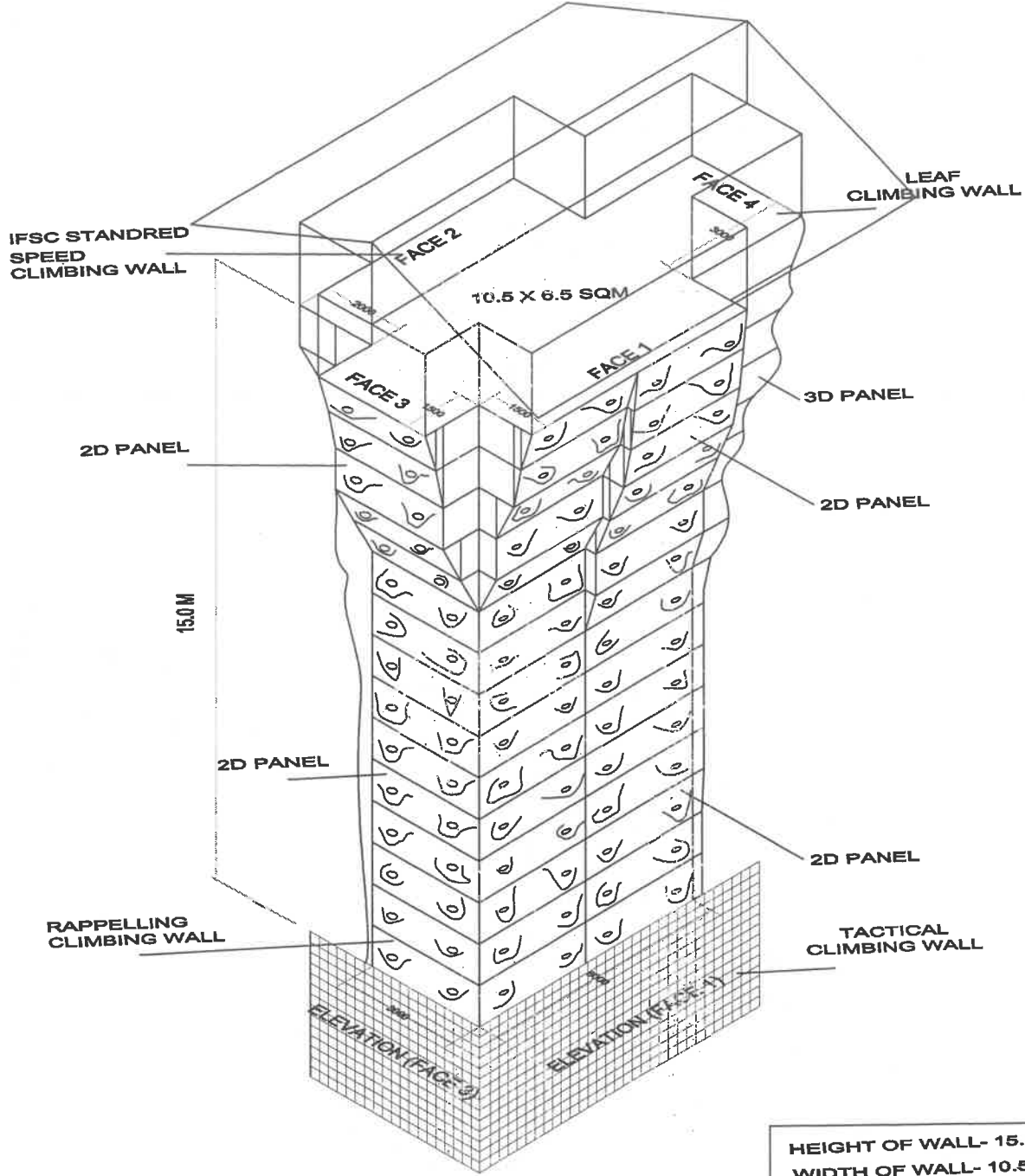
Photographs attached are symbolic and may vary with the customization/ requirements of individual organization.

Note :-

Different configurations have been worked out keeping in view the general requirements. However, the artificial climbing wall may be customized i.e. **different height, width, type and number of faces**, depending on following:-

- 1) Organizational specific combat requirements.
- 2) Institutions training capacity and requirements.
- 3) Infrastructure for training to participate in Wall climbing competitions.

SCHEMATIC DIAGRAM OF ARTIFICIAL ROCK CLIMBING WALL



HEIGHT OF WALL- 15.0 M
 WIDTH OF WALL- 10.5X6.5
 SQM ON TOP
 WIDTH OF WALL- 6.0X3.0
 SQM ON BOTTOM
 DEPTH OF BASE- 2.0 M