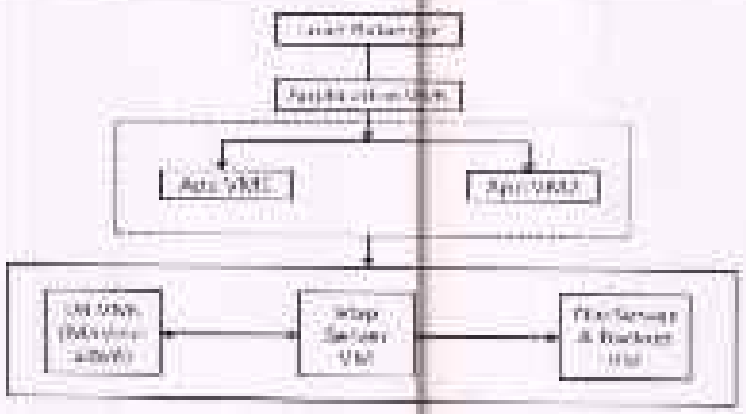
Appx 'A'

CHECKLIST: PRE APVL STQ

S No	Mandatory Details	Remarks
1.	Name of Proj (inc ver)	Integration of eNAR and Surveyakshak
2.	Name of sponsor	428 (I) Fd Coy
3.	Type of SW (Bespoke/ COTS/ Customized)	Customized
4.	Brief justification/ endorsement on reqmt for devp of Sw appl	The present software for digitization of e NAR has certain inherent limitations. The software is compatible only on systems containing Windows 8 Operating System or lower, requires manual entry of data of each asset, does not permit analysis of data and the data on standalone PC cannot be shared on Army Data Network. Surveyakshak software and data held with the formation does not have operational works assets marked and updated record for analysis at higher formation level and visualization with respect to terrain. Presently e-NAR is docu maintained in excel format where in all Op Wks assets details are compiled. Separately surveykshak platform is used to visualize & plot various assets & locs etc on maps for ready ref & ease of planning. However there is no integrated s/w which can have automated system to map assets from e-NAR to Surveykshak platform. Hence to assist ease of mapping & in order to assist Cdrs at all levels for immaculate infra planning as well as decision making during HW Scenario wrt loc of permt def & mov of lps there is an inescapable reqmt of developing such software.
5.	Aim & Scope purpose incl utility, beneficiaries and tgt users	**AIM**: - To develope s/w which can integrate e-NAR with Surveykshak platform. **Scope**:- It will include developing software platform with the help of govt institute BISAG-N, Ahmedabad, which can have an integrated module to plot e-NAR data on Surveykshak with other additional alteration, addition & mapping tools. It also has accesstolllity rights defined at all levels for updation & monitoring purpose. The ideal solution should cater for operational necessity of all user units and provide accurate data for siting, maintenance analysis and report generation. Moreover, it should be ADN compatible and ensure data security, facilitate higher Headquarters to analyse, visualize and corroborate information with respect to operational assets at higher level. **Tgt user**:- All engr units as well frm HQ at all levels can utilise this s/w to analyse infra devp plg as well as op plg & subsequently assist in decision making.

19.	Brief details of Proposed Database Engine To Be Used In The Appl	PostgreSQL is an ACID-compliant Object Relational Database Management System, or ORDBMS (quite a mouthful!). It runs on nearly any operating system including Linux, Unix, and Windows. It is high performance and highly scalable, capable of handling huge amounts of data and high-load internet applications with thousands of concurrent users.
20.	Details of Sw architecture and COTS Sw proposed to be utilized	(a) Framework to be Used: Spring Framework, Java (b) Frontend Tool: HTML, CSS, JavaScript (c) Database: PostgreSQL (d) Web hosting Tool: Tomcat (Application Server), Nginx (Web Server) (e) Operating System : Ubuntu. (f) Supporting Browsers: Firefox, Edge, Chrome
21.	Details of proposed architecture – Centralised/ Federated/ Hybrid	Centralised
22.	Brief details of proposed utilization of Public Key Infra (PKI) and Iden and Access Mgt (IMA)	IAM will be integrated at the Remote Testing
23.	Technology dependences (if any)	Nil
24.	Database reqmts	PostgreSQL Ver 16
25.	Enhancement/ upgradation (incl patch mgt/ Sw updt procedure and mechanism	Ctrl/cron-occurrence
26	Details of licensing (if any)	-NA-
27	Deployment Architecture	

6.	To be hosted on internet/ ADN with brief justification	Hosting on ADN will enable access of data at all levels with specific access rights. Thus higher HQ will also have access to all data for monitoring, planning & decision making purpose.
7.	Being devp in house or through IT funds	N/A
8.	Usability of proposed appln by other arms/ services/ org est	Nil
9.	Hw and IT infrastructure reqd	

	Quantity	# of cores	RAM (GB)	Storage
Application VM	2	8	16	1 TB
Database VM	2	16	64	100 GB
Map Server VM	1	16	16	2 TB
File Server& Backup VM	1	8	8	2 TB

10.	Brief details of content of the proposed Sw appl	The s/w contains layers of Surveykashak alongwith e-NAR inputs which can be mapped on Surveykashak platform. Key features are as below: - Plotting & mapping of all types of infra. mobility analysis, surface analysis and properties of the physical environment, such as gradient, aspect and visibility.
11.	Endorsement by Head of Br/ Svc/ Fmn	HQ 136 (I) Inf Bde Gp/ 426 (I) Fd Coy
12.	Details of user base	Fmn HQs & Engr units
Addl Details (Optional in Pre Apvl Stg : Mandatory in Post Apvl Stg)		
13.	Envisaged cost of entire proj incl license fees and maint	Nil (copy att)
14.	Projected dt of completion incl maj timelines	(i) Development - 15 Sep 2024 (ii) User Trials & compatibility – 30 Sep 2024 (iii) Vetting post whitelisting – 15 Oct 2024 (iv) PDC – 30 Oct 2024
15.	Brief details of Sw platform and tech stack proposed for devp of appl incl op sys dependencies (if any)	Spring Framework, JAVA. The application will be deployed on the virtual Machines on two Physical Servers. The backup VM will be configured on a separate machine located far from the production systems.
16.	Brief details of proposed network and bandwidth reqmts	ADN, minimum 1Mbps.
17.	Brief details of OS & Sys software reqmts	The S/W will be hosted on a server running Ubuntu OS. However, the clients can access the S/W using any OS presently in use with Indian Army
18.	Brief details of proposed data security measures incl backup of data	Use of SSL (Secure Sockets Layer) and TLS(Transport Layer Security) for Data Security and also using Column Encryption at Database side. Data Backup Every Day Automatically, 7 Day Rotation Policy