



LOS ANGELES REGIONAL INTEROPERABLE COMMUNICATIONS SYSTEM AUTHORITY

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JOHN RADELEFF
INTERIM EXECUTIVE DIRECTOR

SENT CORRESPONDENCE BY:
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April 7, 2016

ADDENDUM C REQUEST FOR STATEMENT OF QUALIFICATIONS LOS ANGELES REGIONAL INTEROPERABLE COMMUNICATIONS SYSTEM – PUBLIC SAFETY BROADBAND NETWORK (PSBN) DEVICES RSFQ NO. LA-RICS 010

This Addendum C forms a part of the Request for Statement of Qualifications (RFSQ) for the Los Angeles Regional Interoperable Communications System (LA-RICS) – Public Safety Broadband Network (PSBN) Devices (RFSQ No. LA-RICS 010), issued May 14, 2015.

REVISIONS

1. RFSQ, Section 1.9.2 shall be deleted in its entirety and replaced with the following language:

1.9.2 In the event that a Vendor's device meets the Minimum Qualifications for a particular PSBN Device Category(ies) but does not have the requisite Certifications/Test Results pursuant to Appendix B (PSBN Device Categories) at the time of SOQ submission, the Authority will issue the Vendor a Master Agreement provided Vendor agrees to **each** of the following requirements:

1. Vendor shall secure the requisite Certifications/Test Results for each device the Vendor is qualified for, pursuant to Appendix B (PSBN Device Categories), by no later than June 30, 2017.
2. Vendor shall guarantee that the Warranty Period for any PSBN Devices purchased under the Request for Bid process will be extended by the time period it takes Vendor to complete all the

Minimum Qualifications regarding Certifications/Test Results pursuant to Appendix B (PSBN Device Categories), and such Certifications/Test Results are received and approved by the Authority.

3. Vendor shall be responsible at its sole cost, with providing the Authority with compliant PSBN Devices that pass certification, and will be responsible for making any changes needed to devices already deployed to meet certification, which may include but is not limited to, field modification of any deployed devices, or a complete replacement of a device if needed.
 4. Vendor shall be responsible for any harm the PSBN Devices cause to the PSBN System, and Vendor shall be responsible for all costs associated with restoring the PSBN System to a fully operational condition.
 5. Vendor agrees that any and all costs associated with device Certifications/Test Results shall be borne solely of the Vendor.
 6. Failure of Vendor to secure said Certification/Test Results by no later than June 30, 2017, to bring its device(s) into compliance with the Minimum Qualifications pursuant to Appendix B (PSBN Device Categories), may result in Vendor's Master Agreement being terminated in accordance with Paragraph 47.0 (Termination for Default) of Appendix D (Sample Master Agreement). Additionally, Vendor may be required to refund the Authority and/or Permitted Purchaser, as set forth in the Work Order, in full for the Total Maximum Amount of PSBN Devices purchased under a Work Order, within sixty (60) business days of notification from the Authority that Vendor's Master Agreement is being Terminated for Default in accordance with Paragraph 47.0 (Termination for Default) of Appendix D (Sample Master Agreement).
2. RFSQ, Section 2.5.5.2 (PSBN Device Categories Compliance Matrix) shall be deleted in its entirety and replaced with the following language:

2.5.5.2 PSBN Device Categories Compliance Matrix

SOQ Form 3 (PSBN Device Categories Compliance Matrix) of Appendix A (Required Forms) is comprised of a separate compliance matrix for each PSBN Device Category as follows:

- **Category 1** – In-Vehicle Routers
- **Category 2** – USB Modems
- **Category 3** – Smartphones
- **Category 4** – Tablets
- **Category 5** – Outdoor Units
- **Category 6** – Portable Hotspots
- **Category 7** – mPCIe LTE Modems
- **Category 8** – Universal Integrated Circuit Cards (UICC)

Vendors shall complete in its entirety and submit the appropriate SOQ Form 3 (PSBN Device Categories Compliance Matrix) of Appendix A (Required Forms) for **each** device and **each** PSBN Device Category for which the Vendor intends to qualify for. For example, if a Vendor intends to qualify a device for Category 1 (In-Vehicle Routers) and an additional device for Category 6 (Portable Hotspots), then the Vendor must complete the respective PSBN Device Matrix for Category 1 (In-Vehicle Routers) **and** Category 6 (Portable Hotspots) **only**. The Vendor **does not** need to submit a PSBN Device Matrix for the remaining Categories.

Vendors shall use SOQ Form 3 (PSBN Device Categories Compliance Matrix) to demonstrate that **each** device it intends to qualify for meet the requisite Minimum Qualifications and the requisite certification/testing for **each** PSBN Device Category that the Vendor intends to qualify for pursuant to Appendix B (PSBN Device Categories) and Section 1.7 (PSBN Device Categories Minimum Qualifications) of this RFSQ. Vendors may submit additional PSBN Device Compliance Matrices at some future date should a new device(s) meet the requirements become available.

The Authority, in its sole discretion, will determine whether the information provided by the Vendor in SOQ Form 3 (PSBN Device Compliance Matrix), for the specific device(s) the Vendor is seeking to qualify for, demonstrates that the Vendor's device(s) qualifies under that specific PSBN Device Category as set forth in Appendix B (PSBN Device Categories).

Vendors whose devices meet the Minimum Qualifications for a particular PSBN Device Category(ies) **and** meet the requisite Certifications/Test Results at the time of SOQ submission for the PSBN Device Category(ies) that the Vendor is seeking to qualify for as set forth in Appendix B (PSBN Device Categories) will qualify for a Master Agreement.

However, in the event that a Vendor's device meets the Minimum Qualifications for a particular PSBN Device Category(ies), but does not have the requisite Certifications/Test Results pursuant to Appendix B (PSBN Device Categories) at the time of SOQ submission, the Vendor will qualify for a Master Agreement provided Vendor agrees to **each** of the following requirements:

1. Vendor shall secure the requisite Certifications/Test Results for each device the Vendor is qualified for, pursuant to Appendix B (PSBN Device Categories), by no later than June 30, 2017.
2. Vendor shall guarantee that the Warranty Period for any PSBN Devices purchased under the Request for Bid process will be extended by the time period it takes Vendor to complete all the Minimum Qualifications regarding Certifications/Test Results pursuant to Appendix B (PSBN Device Categories), and such Certifications/Test Results are received and approved by the Authority.
3. Vendor shall be responsible at its sole cost, with providing the Authority with compliant PSBN Devices that pass certification, and will be responsible for making any changes needed to devices already deployed to meet certification, which may include but is not limited to, field modification of any deployed devices, or a complete replacement of a device if needed.
4. Vendor shall be responsible for any harm the PSBN Devices cause to the PSBN System, and Vendor shall be responsible for all costs associated with restoring the PSBN System to a fully operational condition.
5. Vendor agrees that any and all costs associated with device Certifications/Test Results shall be borne solely of the Vendor.

6. Failure of Vendor to secure said Certification/Test Results by no later than June 30, 2017, to bring its device(s) into compliance with the Minimum Qualifications pursuant to Appendix B (PSBN Device Categories), may result in Vendor's Master Agreement being terminated in accordance with Paragraph 47.0 (Termination for Default) of Appendix D (Sample Master Agreement). Additionally, Vendor may be required to refund the Authority and/or Permitted Purchaser, as set forth in the Work Order, in full for the Total Maximum Amount of PSBN Devices purchased under a Work Order, within sixty (60) business days of notification from the Authority that Vendor's Master Agreement is being Terminated for Default in accordance with Paragraph 47.0 (Termination for Default) of Appendix D (Sample Master Agreement).

Failure to complete the SOQ Form 3 (PSBN Device Categories Compliance Matrix) for the specific category(ies) which the Vendor is seeking to qualify for may result in the SOQ being disqualified without further consideration in the Authority's sole discretion. If an SOQ is disqualified, and a Vendor remains interested in becoming a Qualified Contractor, Vendor shall resubmit the SOQ package in its entirety in accordance with this RFSQ.

3. Appendix A (Required Forms), SOQ Form 3.3 (PSBN Device Categories Compliance Matrix – Category 3 [Smartphones]), is deleted in its entirety and replaced with Enclosure 1 (Appendix A, SOQ Form 3.3, PSBN Device Categories Compliance Matrix – Category 3 [Smartphones]) enclosed with this Addendum C. Please note that there have been changes to the Device Mandatory Minimum Qualifications.
4. Appendix B (PSBN Device Categories, Category 3 [Smartphones]) is deleted in its entirety and replaced with Enclosure 2 (Appendix B, PSBN Device Categories, Category 3 [Smartphones]) attached to this Addendum C. Please note that there have been changes to the Device Mandatory Minimum Qualifications.
5. Appendix D (Sample Master Agreement), Sub-Paragraph 3.3 (PSBN Device Categories/Test Results) to Paragraph 3.0 (Work) is deleted in its entirety and replaced with the following language:

3.3 PSBN Device Certifications/Test Results

In the event that Contractor's device(s) met the Minimum Qualifications for a particular PSBN Device Category(ies) but did not have the requisite Certifications/Tests pursuant to Exhibit A (PSBN Device Categories) at the time this Master Agreement was issued, Contractor shall meet **each** of the following requirements:

- 3.3.1 Contractor shall secure the requisite Certifications/Test Results for each device the Contractor is qualified for under this Master Agreement, pursuant to Exhibit A (PSBN Device Categories), by no later than June 30, 2017.
- 3.3.2 Contractor shall guarantee that the Warranty Period for any PSBN Devices purchased under the Request for Bid process will be extended by the time period it takes Contractor to complete all the Minimum Qualifications regarding Certifications/Test Results pursuant to Exhibit A (PSBN Device Categories), and such Certifications/Test Results are received and approved by the Authority.
- 3.3.3 Contractor shall be responsible at its sole cost, with providing the Authority with compliant PSBN Devices that pass certification, and will be responsible for making any changes needed to devices already deployed to meet certification, which may include but is not limited to, field modification of any deployed devices, or a complete replacement of a device if needed.
- 3.3.4 Contractor shall be responsible for any harm the PSBN Devices cause to the PSBN System, and Contractor shall be responsible for all costs associated with restoring the PSBN System to a fully operational condition.
- 3.3.5 Contractor agrees that any and all costs associated with device Certifications/Test Results shall be borne solely of the Contractor.
- 3.3.6 Failure of Contractor to secure said Certification/Test Results by no later than June 30, 2017, to bring its device(s) into compliance with the Minimum Qualifications pursuant to Exhibit A (PSBN Device Categories), may result in Contractor's Master Agreement

being terminated in accordance with Paragraph 47.0 (Termination for Default) of this Master Agreement. Additionally, Contractor may be required to refund the Authority and/or Permitted Purchaser, as set forth in the Work Order, in full for the Total Maximum Amount of PSBN Devices purchased under a Work Order, within sixty (60) business days of notification from the Authority that Contractor's Master Agreement is being Terminated for Default in accordance with Paragraph 47.0 (Termination for Default) of this Master Agreement.

6. Appendix D (Sample Master Agreement), Paragraph 47.1, a sub-paragraph of Paragraph 47.0 (Termination for Default) is deleted in its entirety and replaced with the following language:

47.1 The Authority may, by written notice to the Contractor, terminate the whole or any part of this Master Agreement, if, in the judgment of Authority's MAPD:

- Contractor has materially breached this Master Agreement;
- Contractor fails to timely provide and/or satisfactorily perform any task, deliverable, service, or other work required either under this Master Agreement or any Work Order issued hereunder;
- Contractor fails to demonstrate a high probability of timely fulfillment of performance requirements of any Work Order issued under this Master Agreement, or of any obligations of this Master Agreement and in either case, fails to demonstrate convincing progress toward a cure within five (5) working days (or such longer period as the Authority may authorize in writing) after receipt of written notice from the Authority specifying such failure;
- Contractor fails to secure the requisite Certifications/Test Results for each device the Contractor is qualified for under this Master Agreement, pursuant to Exhibit A (PSBN Device Categories), by no later than June 30, 2017. In the event that Contractor fails to secure the requisite Certifications/Test Results for each device the Contractor is qualified for within six (6) months from the date of execution of this Master Agreement, Contractor may be required to refund the Authority and/or Permitted Purchaser, as set forth in the Work Order, in full for the Total Maximum Amount of PSBN Devices

purchased under a Work Order, within sixty (60) business days of notification from the Authority that Contractor's Master Agreement is being Terminated for Default in accordance with this Paragraph 47.0;

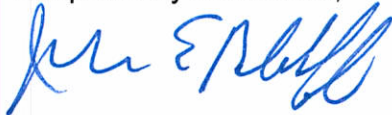
- Contractor fails to provide a Warranty Period for any PSBN Devices, purchased under the Request for Bid process, that is extended by the time period it takes Contractor to complete all the Minimum Qualifications regarding Certifications/Test Results pursuant to Exhibit A (PSBN Device Categories), and such Certifications/Test Results were received and approved by the Authority;
- Contractor fails to be responsible at its sole cost, with providing the Authority with compliant PSBN Devices that pass certification, and fails to be responsible for making any changes needed to devices already deployed to meet certification, which may include but is not limited to, field modification of any deployed devices, or a complete replacement of a device if needed;
- Contractor fails to be responsible for any harm the PSBN Devices cause to the PSBN System, and Contractor fails to be responsible for all costs associated with restoring the PSBN System to a fully operational condition; or
- Contractor fails to be solely responsible for any and all costs associated with device Certifications/Test Results.

Since the Authority will accept Statements of Qualifications (SOQs) on an ongoing basis throughout the duration of the Master Agreement to qualify Vendors, it is in a Vendor's and/or Qualified Contractor's best interest to check www.la-rics.org and <http://camisvr.co.la.ca.us/lacobids/> for any updates to this RFSQ. In addition, all changes to the RFSQ from this Addendum C will be reflected on www.la-rics.org and <http://camisvr.co.la.ca.us/lacobids/>. Except as expressly modified by this Addendum C, all other terms and conditions of this RFSQ shall remain unchanged.

Addendum C
April 7, 2016
Page 9

If you have any questions, please contact Ms. Melissa Saradpon at (323) 881-8289 or at Melissa.Saradpon@la-rics.org.

Respectfully submitted,



JOHN RADELEFF
INTERIM EXECUTIVE DIRECTOR

Enclosure

MS:mbc

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PSBN DEVICE CATEGORIES COMPLIANCE MATRIX

CATEGORY 3 – SMARTPHONES

Description	Device Form Factor	Use
LTE Smart Phone that operates on Band Class 14 as well as at least one other carriers networks.	<ul style="list-style-type: none"> Typical: 5.55 x 2.97 x 0.53 inches Minimum 4.7 inch touch screen. Ports for Audio headphones Micro USB Controls for volume, power, etc. Hardened Case and screen Speakerphone capability 	Handheld smart phone for data and non-mission critical voice services. <ul style="list-style-type: none"> Hardened for rugged use

VENDOR NAME: _____

DEVICE NAME: _____

DEVICE MODEL: _____

DEVICE VERSION: _____

Reference No.	Smartphone Requirements	Device Mandatory Minimum Qualifications (X = Yes)	Vendor's Device Compliant? (Vendor shall mark column with X)		Vendor Comments
			YES	NO	
LTE RF Elements					
3.0	Device must support Band Class 14 (BC14_UE).	X			
3.1	Device is a Power Class 3 UE.	X			
3.2	BC14_UE is a 3GPP Category 3 or 4 device.				
3.3	BC14_UE has external antenna ports to allow for vehicle rooftop mounting of antenna for all functions – MIMO LTE, Wi-Fi and GPS				
3.4	Device supports B14 and one commercial wireless carrier operations as an alternate when B14 is not available	X			
3.5a	Device can support B14 and two or more commercial wireless carrier operations as alternates when B14 is not available (desired). Identify each carrier supported.				
3.5b	Device can simultaneously support two commercial wireless carriers. Identify each carrier supported.				
3.6	Device accessories: Device is supplied with docking station, Antenna Kit, cables, and other associated parts to complete installation of the device in a vehicle: motorcycle, car, SUV or truck as specified by agency.				
UE Characteristics					
3.7	UICC(s) can be installed in the device in the field without voiding its warranty.	X			
3.8	There is a unique UICC for each mobile service provider (LTE band) supported in the device.				
3.9	The device should be able to support virtual SIMs (multiple profiles) on a single UICC slot.				
3.10	Device supports interworking with the USIM/USAT applications in the UICC per 3GPP 31.101, 31.102 and 31.111.	X			

Reference No.	Smartphone Requirements	Device Mandatory Minimum Qualifications (X = Yes)	Vendor's Device Compliant? (Vendor shall mark column with X)		Vendor Comments
			YES	NO	
3.11	Device is fully compliant with all FCC Technical Advisory Board minimum requirements. Ref: http://apps.fcc.gov/ecfs/document/view?id=7021919873	X			
3.12	Device meets operational conditions of ambient temperature of 0 to 130 degrees Fahrenheit. MIL SPEC 810G. Test certification must be on record with the LA-RICS Authority.	X			
3.13	Device meets operational ambient conditions of temperature of -22 to 140 degrees Fahrenheit or better. MIL SPEC 810G. Test certification must be on record with the LA-RICS Authority.				
3.14	Device must pass MIL SPEC 810 G test for shock resistant to 90 cm drop on any of six sides. Test certification must be on record with the LA-RICS Authority.	X			
3.15	Device must be certified vibration resistant for light truck transportation model using MIL STD-810G, or equivalent. Test certification must be on record with the LA-RICS Authority.				
3.16	Device has one or more Micro-USB, USB 2.0, or USB 3.0 connector.	X			
3.17	Device must be certified IEC 60529 for intrusion protection (IP) of IP54 or better without the use of a third party enclosure. IEC test certification must be on record with the LA-RICS Authority.				
3.18	Device must be certified IEC 60529 for IP66 or better without the use of a third-party enclosure. IEC test certification must be on record with the LA-RICS Authority.				
3.19	Power accessories: All necessary parts for powering device including AC/DC power adapter brick and cord for 100-240 VAC, 50-60Hz power source. Specify your minimum and maximum battery life during idle and working conditions and recharging time.	X			
3.20	Power accessories: additional replaceable battery and battery charger.				

Reference No.	Smartphone Requirements	Device Mandatory Minimum Qualifications (X = Yes)	Vendor's Device Compliant? <small>(Vendor shall mark column with X)</small>		Vendor Comments
			YES	NO	
3.21	Identify and recommend accessories that work with and support of the unit such as 1.) Micro USB cable 2.) Wired head phones 3.) Bluetooth head phones 4.) Vehicle charger 5.) Vehicle cradle 6.) External cases 7.) Screen covers 8.) Holster smartphone holder 9.) External port extender cradle to enable connection to external antenna 10.) External antenna 11.) Installation kit				
3.22	Warranty and any offerings for extended warranties for the device must be on record with the LA-RICS Authority.				
3.23	Identify the processor and memory configuration (and options) used in the device. LA-RICS would prefer to internal memory storage at least 32GB that is expandable up to 128GB.				
3.24	Identify the current OS (operating system) used with the smartphone device. LA-RICS recommends that the smartphone device support the current OS and be software upgradable to the next OS.				
Wi-Fi and Bluetooth					
3.25	Device supports Wi-Fi station (STA) protocol IEEE 802.11b/g/n in the 2.4GHz band.				
3.26	Device supports Wi-Fi station (STA) protocol IEEE 802.11b/g/n with operations in both 2.4 and 5.8 GHz bands.				
3.27	Device supports Wi-Fi offload and may or may not support session persistence.				

Reference No.	Smartphone Requirements	Device Mandatory Minimum Qualifications (X = Yes)	Vendor's Device Compliant? (Vendor shall mark column with X)		Vendor Comments
			YES	NO	
3.28	EIRP of device exceeds 17 dBm with supported MIMO configuration				
3.29	EIRP of device exceeds 24 dBm with supported MIMO configuration				
3.30	The device supports Wi-Fi Access Point (STA) protocol IEEE 802.11a in the 4.9 GHz band.				
3.31	Device supports Wi-Fi station (AP) protocol IEEE 802.11b/g/n with operations in dual bands, 2.4 and 5.8 GHz.				
3.32	EIRP of device exceeds 17 dBm with supported MIMO configuration				
3.33	EIRP of device exceeds 24 dBm with supported MIMO configuration				
3.34	The device supports Wi-Fi Access Point (AP) protocol IEEE 802.11a in the 4.9 GHz band.				
3.35	The device may support Wi-Fi Station (STA) protocol IEEE 802.11a in the 4.9 GHz band.				
3.36	The device supports WPA2-Enterprise				
3.37	If the device has WPS capability, it must support disabling that feature.	X			
3.38	The device supports at least one SSID				
3.39	The device supports multiple SSIDs				
3.40	The device is capable of non-broadcast or hidden SSIDs.				
3.41	The device supports Bluetooth 4.0 or higher.				
GPS					
3.42	The device supports autonomous (standalone) 3-channel, or higher GPS solution.				
3.43	The device supports autonomous (standalone) 3-channel, or higher GPS solution and at least one other satellite system (e.g. GLONASS).	X			
3.44	The device supports autonomous 12-channel, or higher GPS and GPS augmentation (WAAS).				
3.45	The device support autonomous GPS (USA GPS) and at least one other satellite system (e.g., Galileo, European GPS) and GPS augmentation.				

APPENDIX A
SOQ FORM 3.3

RFSQ NO. LA-RICS 010

Amended and Restated in Addendum C

Reference No.	Smartphone Requirements	Device Mandatory Minimum Qualifications (X = Yes)	Vendor's Device Compliant? <small>(Vendor shall mark column with X)</small>		Vendor Comments
			YES	NO	
3.46	The GPS position is refreshed at a rate of 5 Hz or faster. High sampling rate required for high-speed vehicles.				
3.47	The GPS position is refreshed rate of 1 Hz or faster.				
Device Management					
3.48	The device policies are settable via OMA-DM 1.2v (or higher) compliant managers.				
3.49	Device supports LA-RICS certified extensions to the OMA DM Management Information Bases (MIBs).				
3.50	The device provisioning may be settable via vendor's proprietary Web-based management.				
Applications					
3.51	Device is compatible and tested with NetMotion's Locality software.				
3.52	An LTE performance application is supported by the device supplier				
3.53	Vendor supported push-to-talk (PTT) device client is managed by OMA-DM 1.2v compliant server.				
3.54	Vendor supported Automatic Vehicular Location (AVL) device client. Management may be via OMA-DM 1.2v, or Web based.				
3.55	Vendor supported weather client.				
3.56	Vendor supported Internet Browser.				
3.57	Circuit switched voice or VoLTE.	X			
3.58	Vendor supported VoIP application (SIP based).				
3.59	Vendor supported Messaging (SMS and MMS).	X			
3.60	Vendor supported CMAS client.	X			
3.61	Vendor supported email client.	X			
UE Security					
3.62	The device utilizes a trusted boot.				
3.63	The device utilizes a hardware root of trust and trusted boot.				

Reference No.	Smartphone Requirements	Device Mandatory Minimum Qualifications (X = Yes)	Vendor's Device Compliant? (Vendor shall mark column with X)		Vendor Comments
			YES	NO	
3.64	The device utilizes a hardware root of trust and trusted boot, and attestation				
3.65	The UE supports Advanced Authentication (AA) as defined by CJIS security policies. Ref: http://www.fbi.gov/about-us/cjis/RequirementsDocument.pdf				
3.66	The device is FIPS 140-2 security class level 1 certified by an accredited Cryptographic Module Testing laboratory. Test certification must be on record with the LA-RICS Authority.				
3.67	The device must meet FIPS 140-2 security class level 2 certified by an accredited Cryptographic Module Testing laboratory. Test certification must be on record with the LA-RICS Authority.				
UI Interface					
3.68	Device includes an integral speaker(s) that is louder than customary in consumer devices. Describe the Decibels of your handset	X			
3.69	Device uses noise cancellation technology.	X			
3.70	User interface (UI) display is designed for outdoor use with brighter screen than found on consumer devices.	X			
3.71	Device touchscreen operates successfully with gloves on.				
Certification					
3.72	Device must be FCC Part 90 certified. Test certification must be on record with the LA-RICS Authority.	X			
3.73	Device must be FCC Part 15 certified. Test certification must be on record with the LA-RICS Authority.	X			
3.74	Device is PTCRB certified for Band 14 operations. Test certification must be on record with the LA-RICS Authority.	X			
3.75	Device is certified for operation on the alternate carriers to be used in the operation of the device. Test certification must be on record with the LA-RICS Authority.	X			

Reference No.	Smartphone Requirements	Device Mandatory Minimum Qualifications (X = Yes)	Vendor's Device Compliant? (Vendor shall mark column with X)		Vendor Comments
			YES	NO	
3.76	Device must be IOT certified with Ericsson RAN. The IOT test plan will be consistent with published CTIA Certification Test Plans. The expectation is that the tests should be executed by a CTIA Authorized Test Lab. Specific test suites to be provided by LARICS. Normative Reference: http://www.ctia.org/policy-initiatives/wireless-device-certification/certification-test-plans	X			
3.77	Device must be interoperable with the device management system. Test cases will be consistent with Interoperability test cases in the OMA document: “Enabler Test Specification for Device Management”, Jan 2008 Normative reference: http://technical.openmobilealliance.org/Technical/Release_Program/docs/ETS/OMA-ETS-DM-V1_2-20110128-C.pdf	X			
3.78	Device must be <i>conformance</i> tested on the LA-RICS network by the vendor under the observation and approval of LA-RICS personnel or its agents. The base conformance test plan will follow CTIA’s, “Certification Program Test Plan”, see link below. The detailed step-by-step IOT plan will be developed by the vendor, then reviewed and approved by LA-RICS. Normative Reference: http://www.ctia.org/docs/default-source/default-document-library/ctia-test-plan-for-lte-interoperability.pdf?sfvrsn=0	X			
3.79	Device must be <i>acceptance</i> tested by LA-RICS. Test plan may be based upon all processes from device ordering through drive tests on the LA-RICS network. The purpose of the tests is to operationalize the device and ensure a good quality user experience.	X			

PSBN DEVICE CATEGORIES

CATEGORY 3 – SMARTPHONES

Description	Device Form Factor	Use
LTE Smart Phone that operates on Band Class 14 as well as at least one other carriers networks.	<ul style="list-style-type: none"> • Typical: 5.55 x 2.97 x 0.53 inches • Minimum 4.7 inch touch screen. • Ports for Audio headphones • Micro USB • Controls for volume, power, etc. • Hardened Case and screen • Speakerphone capability 	Handheld smart phone for data and non-mission critical voice services. <ul style="list-style-type: none"> • Hardened for rugged use

Reference No.	Smartphone Requirements	Device Mandatory Minimum Qualifications (X = Yes)
LTE RF Elements		
3.0	Device must support Band Class 14 (BC14_UE).	X
3.1	Device is a Power Class 3 UE.	X
3.2	BC14_UE is a 3GPP Category 3 or 4 device.	
3.3	BC14_UE has external antenna ports to allow for vehicle rooftop mounting of antenna for all functions – MIMO LTE, Wi-Fi and GPS	
3.4	Device supports B14 and one commercial wireless carrier operations as an alternate when B14 is not available	X
3.5a	Device can support B14 and two or more commercial wireless carrier operations as alternates when B14 is not available (desired). Identify each carrier supported.	
3.5b	Device can simultaneously support two commercial wireless carriers. Identify each carrier supported.	
3.6	Device accessories: Device is supplied with docking station, Antenna Kit, cables, and other associated parts to complete installation of the device in a vehicle: motorcycle, car, SUV or truck as specified by agency.	
UE Characteristics		
3.7	UICC(s) can be installed in the device in the field without voiding its warranty	X
3.8	There is a unique UICC for each mobile service provider (LTE band) supported in the device.	
3.9	The device should be able to support virtual SIMs (multiple profiles) on a single UICC slot.	

Reference No.	Smartphone Requirements	Device Mandatory Minimum Qualifications (X = Yes)
3.10	Device supports interworking with the USIM/USAT applications in the UICC per 3GPP 31.101, 31.102 and 31.111.	X
3.11	Device is fully compliant with all FCC Technical Advisory Board minimum requirements. Ref: http://apps.fcc.gov/ecfs/document/view?id=7021919873	X
3.12	Device meets operational conditions of ambient temperature of 0 to 130 degrees Fahrenheit. MIL SPEC 810G. Test certification must be on record with the LA-RICS Authority.	X
3.13	Device meets operational ambient conditions of temperature of -22 to 140 degrees Fahrenheit or better. MIL SPEC 810G. Test certification must be on record with the LA-RICS Authority.	
3.14	Device must pass MIL SPEC 810 G test for shock resistant to 90 cm drop on any of six sides. Test certification must be on record with the LA-RICS Authority.	X
3.15	Device must be certified vibration resistant for light truck transportation model using MIL STD-810G, or equivalent. Test certification must be on record with the LA-RICS Authority.	
3.16	Device has one or more Micro-USB, USB 2.0, or USB 3.0 connector.	X
3.17	Device must be certified IEC 60529 for intrusion protection (IP) of IP54 or better without the use of a third party enclosure. IEC test certification must be on record with the LA-RICS Authority.	
3.18	Device must be certified IEC 60529 for IP66 or better without the use of a third-party enclosure. IEC test certification must be on record with the LA-RICS Authority.	
3.19	Power accessories: All necessary parts for powering device including AC/DC power adapter brick and cord for 100-240 VAC, 50-60Hz power source. Specify your minimum and maximum battery life during idle and working conditions and recharging time.	X
3.20	Power accessories: additional replaceable battery and battery charger.	
3.21	Identify and recommend accessories that work with and support of the unit such as <ol style="list-style-type: none"> 1.) Micro USB cable 2.) Wired head phones 3.) Bluetooth head phones 4.) Vehicle charger 5.) Vehicle cradle 6.) External cases 7.) Screen covers 8.) Holster smartphone holder 9.) External port extender cradle to enable connection to external antenna 10.) External antenna 11.) Installation kit 	

Reference No.	Smartphone Requirements	Device Mandatory Minimum Qualifications (X = Yes)
3.22	Warranty and any offerings for extended warranties for the device must be on record with the LA-RICS Authority.	
3.23	Identify the processor and memory configuration (and options) used in the device. LA-RICS would prefer to internal memory storage at least 32GB that is expandable up to 128GB.	
3.24	Identify the current OS (operating system) used with the smartphone device. LA-RICS recommends that the smartphone device support the current OS and be software upgradable to the next OS.	
Wi-Fi and Bluetooth		
3.25	Device supports Wi-Fi station (STA) protocol IEEE 802.11b/g/n in the 2.4GHz band.	
3.26	Device supports Wi-Fi station (STA) protocol IEEE 802.11b/g/n with operations in both 2.4 and 5.8 GHz bands.	
3.27	Device supports Wi-Fi offload and may or may not support session persistence.	
3.28	EIRP of device exceeds 17 dBm with supported MIMO configuration	
3.29	EIRP of device exceeds 24 dBm with supported MIMO configuration	
3.30	The device supports Wi-Fi Access Point (STA) protocol IEEE 802.11a in the 4.9 GHz band.	
3.31	Device supports Wi-Fi station (AP) protocol IEEE 802.11b/g/n with operations in dual bands, 2.4 and 5.8 GHz.	
3.32	EIRP of device exceeds 17 dBm with supported MIMO configuration	
3.33	EIRP of device exceeds 24 dBm with supported MIMO configuration	
3.34	The device supports Wi-Fi Access Point (AP) protocol IEEE 802.11a in the 4.9 GHz band.	
3.35	The device may support Wi-Fi Station (STA) protocol IEEE 802.11a in the 4.9 GHz band.	
3.36	The device supports WPA2-Enterprise	
3.37	If the device has WPS capability, it must support disabling that feature.	X
3.38	The device supports at least one SSID	
3.39	The device supports multiple SSIDs	
3.40	The device is capable of non-broadcast or hidden SSIDs.	
3.41	The device supports Bluetooth 4.0 or higher.	
GPS		
3.42	The device supports autonomous (standalone) 3-channel, or higher GPS solution.	
3.43	The device supports autonomous (standalone) 3-channel, or higher GPS solution and at least one other satellite system (e.g. GLONASS).	X
3.44	The device supports autonomous 12-channel, or higher GPS and GPS augmentation (WAAS).	
3.45	The device support autonomous GPS (USA GPS) and at least one other satellite system (e.g., Galileo, European GPS) and GPS augmentation	

Reference No.	Smartphone Requirements	Device Mandatory Minimum Qualifications (X = Yes)
3.46	The GPS position is refreshed at a rate of 5 Hz or faster. High sampling rate required for high-speed vehicles.	
3.47	The GPS position is refreshed rate of 1 Hz or faster.	
Device Management		
3.48	The device policies are settable via OMA-DM 1.2v (or higher) compliant managers.	
3.49	Device supports LA-RICS certified extensions to the OMA DM Management Information Bases (MIBs).	
3.50	The device provisioning may be settable via Contractor's proprietary Web-based management.	
Applications		
3.51	Device is compatible and tested with NetMotion's Locality software.	
3.52	An LTE performance application is supported by the device supplier	
3.53	Contractor supported push-to-talk (PTT) device client is managed by OMA-DM 1.2v compliant server.	
3.54	Contractor supported Automatic Vehicular Location (AVL) device client. Management may be via OMA-DM 1.2v, or Web based.	
3.55	Contractor supported weather client.	
3.56	Contractor supported Internet Browser.	
3.57	Circuit switched voice or VoLTE.	X
3.58	Contractor supported VoIP application (SIP based).	
3.59	Contractor supported Messaging (SMS and MMS).	X
3.60	Contractor supported CMAS client.	X
3.61	Contractor supported email client	X
UE Security		
3.62	The device utilizes a trusted boot.	
3.63	The device utilizes a hardware root of trust and trusted boot.	
3.64	The device utilizes a hardware root of trust and trusted boot, and attestation	
3.65	The UE supports Advanced Authentication (AA) as defined by CJIS security policies. Ref: http://www.fbi.gov/about-us/cjis/RequirementsDocument.pdf	
3.66	The device is FIPS 140-2 security class level 1 certified by an accredited Cryptographic Module Testing laboratory. Test certification must be on record with the LA-RICS Authority.	
3.67	The device must meet FIPS 140-2 security class level 2 certified by an accredited Cryptographic Module Testing laboratory. Test certification must be on record with the LA-RICS Authority.	
UI Interface		
3.68	Device includes an integral speaker(s) that is louder than customary in consumer devices. Describe the Decibels of your handset	X

Reference No.	Smartphone Requirements	Device Mandatory Minimum Qualifications (X = Yes)
3.69	Device uses noise cancellation technology.	X
3.70	User interface (UI) display is designed for outdoor use with brighter screen than found on consumer devices.	X
3.71	Device touchscreen operates successfully with gloves on.	
Certification		
3.72	Device must be FCC Part 90 certified. Test certification must be on record with the LA-RICS Authority.	X
3.73	Device must be FCC Part 15 certified. Test certification must be on record with the LA-RICS Authority.	X
3.74	Device is PTCRB certified for Band 14 operations. Test certification must be on record with the LA-RICS Authority.	X
3.75	Device is certified for operation on the alternate carriers to be used in the operation of the device. Test certification must be on record with the LA-RICS Authority.	X
3.76	Device must be IOT certified with Ericsson RAN. The IOT test plan will be consistent with published CTIA Certification Test Plans. The expectation is that the tests should be executed by a CTIA Authorized Test Lab. Specific test suites to be provided by LARICS. Normative Reference: http://www.ctia.org/policy-initiatives/wireless-device-certification/certification-test-plans	X
3.77	Device must be interoperable with the device management system. Test cases will be consistent with Interoperability test cases in the OMA document: “Enabler Test Specification for Device Management”, Jan 2008 Normative reference: http://technical.openmobilealliance.org/Technical/Release_Program/docs/ETS/OMA-ETS-DM-V1_2-20110128-C.pdf	X
3.78	Device must be <i>conformance</i> tested on the LA-RICS network by the Contractor under the observation and approval of LA-RICS personnel or its agents. The base conformance test plan will follow CTIA’s, “Certification Program Test Plan”, see link below. The detailed step-by-step IOT plan will be developed by the Contractor, then reviewed and approved by LA-RICS. Normative Reference: http://www.ctia.org/docs/default-source/default-document-library/ctia-test-plan-for-lte-interoperability.pdf?sfvrsn=0	X
3.79	Device must be <i>acceptance</i> tested by LA-RICS. Test plan may be based upon all processes from device ordering through drive tests on the LA-RICS network. The purpose of the tests is to operationalize the device and ensure a good quality user experience.	X