

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE QP0022174	PAGE OF PAGES 1 12
2. AMENDMENT/MODIFICATION NO. P00450	3. EFFECTIVE DATE See Block 16B	4. REQUISITION/PURCHASE REQ. NO. PR201707210007		5. PROJECT NO. (If applicable)
6. ISSUED BY General Services Administration/FAS/ITC Office of Acquisition Operations, Interagency Contracts 1800 F Street, NW Washington DC 20405 Andrea Lane 703-306-6825		7. ADMINISTERED BY (If other than Item 6)		
8. NAME AND ADDRESS OF CONTRACTOR Manhattan Telecommunications 55 Water Street, 32 nd Floor New York, NY. 10041		(D)	9A. AMENDMENT OF SOLICITATION NO.	
			9B. DATED (SEE ITEM 11)	
		X	10A. MODIFICATION OF CONTRACT/ORDER NO. GS00Q17NSD3007	
			10B. DATED (SEE ITEM 13) 7/31/2017	
CODE	FACILITY CODE			

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers is extended, is not extended.

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:

(a) By completing Items 8 and 15, and returning ___ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or electronic communication which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATA SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by letter or electronic communication, provided each letter or electronic communication makes reference to the solicitation and this amendment, and is received prior to the opening hour and data specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)

N/A


**13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS,
IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.**

(D)	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
X	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF: Mutual Agreement of Both Parties (FAR 43.103(a)(3))
	OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor ___ is not, X is required to sign this document and return 1 copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

SEE CONTINUATION PAGES

15A. NAME AND TITLE OF SIGNER (Type or print) Andoni Economou, COO/EVP		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Andrea Lane Contracting Officer	
15B. CONTRACTOR/OFFEROR 	15C. DATE SIGNED 05/05/2022	16B. UNITED STATES OF AMERICA	16C. DATE SIGNED

1. The purpose of this modification is to:
 - a. Revise the EIS Wireless Service and Managed Mobility Service sections to reflect enhancements to the current mobility offerings available on EIS.
 - b. Add a Mobility-as-a-Service (MaaS) technical capability under the Managed Mobility Service.
 - c. Update the wireless interfaces throughout Section C to specifically mention 5G and future evolutions of wireless service.

2. The contract is modified as follows:

Section B Changes:

1. **TABLE OF CONTENTS:** Sections updated, and pages renumbered.
2. Section B.2.1.7 beneath table B.2.1.7.3.2 removed LTE from second note.
3. Section B.2.6.1.2 Domestic Mobile Voice Pricing Instructions Table was changed to add a “Notes” column and to add an Optional CLIN for Emergency Service Plans.

CLIN	Frequency	Description	Charging Unit	Notes
WL00009	MRC	Emergency Service Plan	Line	Optional ICB

4. Section B.2.8.6.1 Mobile Device Management – section heading was updated to add “(MDM)” for consistency with Section C.2.8.6.1.4.1 where (MDM) is listed in the section heading.
5. Section B.2.8.6.2 Mobile Application Management– section heading was updated to add “(MAM)” for consistency with Section C.2.8.6.1.4.2 where (MAM) is listed in the section heading.
6. Section B.2.8.6.3 Mobile Content Management– section heading was updated to add “(MCM)” for consistency with Section C.2.8.6.1.4.3 where (MCM) is listed in the section heading.
7. Deleted an extra heading for B.2.8.6.4.1 which was in between Section B.2.8.6.4.1 and Section B.2.8.6.4.2.
8. Added Sections B.2.8.6.5 through B.2.8.6.6.2 with the following content to support Mobility-as-a-Service (MaaS) and the added Features for Managed Mobility Service.

B.2.8.6.5 Mobility-as-a-Service (MaaS)

Many providers offer an array of potential services and service variations, as well as special tailored services, which use or span the MMS and MWS services. For MaaS pricing purposes, the contractor shall provide an MMS MaaS Catalog consistent with the service requirements in Section C.2.8.6 and Section C.2.6, and with the pricing catalog requirements in Section B.1.3.

B.2.8.6.5.1 Mobility-as-a-Service Catalog Requirements for Pricing Information

MaaS pricing shall be determined from the catalog based on the information required as shown in Table B.2.8.6.5.2 below. Charging mechanisms are defined in Table B.2.8.6.5.4.

B.2.8.6.5.2 Mobility-as-a-Service Catalog Specification Table

CLIN	Case Number	Service Description*	OLP	No List Price**	Service Class ID	Start Date	Stop Date	End of Sale Date***	End of Life Date****	Notes
					(from Table B.2.8.6.5.3)					

* Descriptions shall be sufficiently complete that all capabilities and limitations of the MaaS, as priced, are clear to the government

** "T" if the price appearing in the OLP column is not an official list price, "F" otherwise

*** End of Sale Date shall be the effective date after which an item may no longer be purchased. Stop Date shall not be later than End of Sale Date.

**** End of Life Date shall be the effective date after which an item is no longer supported by the contractor

The discount to be applied to the OLP is determined by the Service Class, as shown in Table B.2.8.6.5.3. The contractor shall identify the trade name(s) for the OLP. The MaaS price shall be the OLP, less the discount for the service class. If no OLP exists, the contractor shall specify its price in the OLP column, populate the No List Price column with "T", and assign a Service Class ID where the discount is 0% (i.e., Service Class 7000).

B.2.8.6.5.3 Mobility as-a-Service Class Discount Table

Service Class ID*	Service Class Description**	Task Order Number	Percentage Discount from OLP	Start Date	Stop Date
7000	(e.g., No discount)		0		
7001					
...					
7999					

* The number of service classes shall be selected by the contractor from within the range shown

** The service class description and percentage discount for each service class shall be fixed through the life of the contract, unless changed by contract modification. The Start and Stop Dates shall only apply when a change is caused by contract modification.

The Service Class discount and catalog price shall not vary by geographic location.

B.2.8.6.5.4 Mobility as-a-Service Instruction Table

CLIN	Frequency	Description	Charging Unit	Notes
MM90001	NRC	MaaS Catalog Item	ICB	ICB
MM90002	MRC	MaaS Catalog Item	ICB	ICB
MM90003	Usage	MaaS Catalog Item	ICB	ICB

B.2.8.6.6 MMS Feature Prices

Features for MMS shall be priced ICB. Table B.2.8.6.6.1 provides the formats for pricing information for MMS features. Table B.2.8.6.6.2 provides applicable charging mechanisms and charging units.

B.2.8.6.6.1 MMS Feature Price Table

CLIN	Case Number	Task Order Number	Price	Price Start Date	Price Stop Date

B.2.8.6.6.2 MMS Feature Pricing Instruction Table

NRC CLIN	MRC CLIN	Usage CLIN	Description	Charging Unit	Notes
MM80001	MM80101	MM80201	Mobile Threat Protection (MTP)	ICB	ICB; Optional
MM80002	MM80102	MM80202	Mobile Application Vetting	ICB	ICB; Optional
MM80003	MM80103	MM80203	Mobile Identity Management	ICB	ICB; Optional
MM80004	MM80104	MM80204	Mobile Backend-as-a-Service (MBaaS)	ICB	ICB; Optional
MM80005	MM80105	MM80205	Internet of Things (IoT)	ICB	ICB; Optional

Section C Changes:

1. **TABLE OF CONTENTS:** Sections updated, and pages renumbered.
2. Section C.2.1.1.1.4, 8, d, i. – added “, 5G and future evolutions”
3. Section C.2.1.1.3 – added “, 5G” to UNI Type 6, in the Network-Side Interface column within #2.

4. Section C.2.1.7.3 – under the number 7 listed UNI Type in the Network-Side Interface column in #1. “4G” was added in front of LTE and “,5G” was added after LTE.
5. Section C.2.1.8.3 – under the number 5 listed UNI Type in the Network-Side Interface column in #1 “4G” was added in front of LTE.
6. Section C.2.6.1.1 – “and fixed” was added to the first sentence.
7. Section C.2.6.1.1 – the third sentence had words removed and was changed to the following: “The services and bandwidth provided depend on the characteristics of the terminals and the technology used in the contractor’s wireless network and service platforms.”
8. C.2.6.1.2 Standards – the list was renumbered to add in #4 “5G” and to remove the previous #8 “5G Future”. #9 was updated to replace “4” with “5” to acknowledge that 5G is the current version and standard.

4. 5G
 - a) IMT-2020 Standard
 - b) 3GPP ITU-R M [IMT-2020 SPECS]
 - c) Future Generation of cellular radios and other SRE

9. Section C.2.6.1.3 - in #4 added "tablets,"

10. Section C.2.6.1.4 - in #2 added ", tablets" and a "s" after cellular phone

11. Section C.2.6.1.4 – 2. a) added list items iv. - ix. as follows

- iv. AC Charger
- v. (Optional) Headset/hands-free device
- vi. (Optional) Protective case
- vii. (Optional) Car Charger
- viii. (Optional) Spare or extra battery
- ix. (Optional) Holster

12. Section C.2.6.1.4 – list 2. b) was replaced to add “and Tablets” and to add items and be renumbered as follows.

b) Smartphones and Tablets:

- i. Built-in available features
- ii. Short Messaging Services (SMS) (i.e., text messaging)
- iii. Multimedia Messaging Services (MMS)
- iv. Email
- v. Web browser
- vi. Personal Information Management (PIM), including contact and calendar information and documents/notes
- vii. Ability to sync with leading email, contact/address, and calendar platforms
- viii. Vibrate alert to emails and text messages
- ix. Ring alert to emails and text messages
- x. Ability to transfer photos/pictures directly to computer
- xi. Remote kill (as available)
- xii. Remote wipe (as available)
- xiii. Ability to disable audio, video, and all recording functionality (as available)

- xiv. Transmit and receive data (e.g., run an agency specific app, access the Internet) while conducting a voice session (as available)
- xv. AC Charger
- xvi. (Optional) Headset/hands-free device
- xvii. (Optional) Protective case
- xviii. (Optional) Car Charger
- xix. (Optional) Spare or extra battery
- xx. (Optional) Holster

13. Section C.2.6.1.4 –Modified the former f) to split out Domestic from Non-Domestic roaming to correct a conflict in Section B.2.6.6 where Non-Domestic roaming is Optional.

f) Domestic Mobile Roaming is included in all Domestic calling plans at no additional charge to the government and will include voice calls, messaging, multimedia, and data.

g) (Optional) Non-Domestic Mobile Roaming Plans shall cover voice calls, messaging, multimedia, and data.

14. Section C.2.6.1.4 – added the following technical capabilities (5 through 14):

5. No Additional Charge Items: There shall not be any additional charges for the following:

- a. International charges if the transmission originates and terminates at domestic locations, regardless of whether international roaming is activated (as available).
- b. Third-party direct billing
- c. In-network mobile-to-mobile minutes
- d. Contractor owned Wireless Local Area Network (WLAN) (e.g., Wi-Fi) usage. The use of non-domestic/international Wi-Fi calling will generate additional charges per the associated voice plan of the line.
- e. Activation/establishment or service restoration including internal/external porting of telephone numbers, telephone number changes, and/or to change or activate/deactivate service features
- f. Termination

6. (Optional) Emergency service plans will be offered for devices that typically are not used except during emergencies.

7. (Optional) SRE capable of supporting multiple SIM cards or one SIM card and one ESIM.

8. (Optional) SCIF friendly mode feature SRE will, with a press of a single button or key, and as verified with a SCIF-mode indicator LED or icon, enable SCIF friendly mode. The transmit and receive functions can be 'turned off' to enable use in a secure space when policy allows. In "SCIF Friendly" mode, all transmitters, receivers, microphones, speakers, transducers, GPS, and recording capabilities in the device are shutdown while still allowing the user to access the PDA functions like appointment/schedule calendars, contacts, checking previously downloaded email, and viewing documents. SCIF Friendly mode smartphones shall not be equipped with a camera.

9. (Optional) Software licenses and support services that enable maintenance, encryption, and security compliance services (including FIPS 140-2/3 compliance) for use with the provided SRE.
10. (Optional) Cellular connectivity to a wide area network (WAN)
11. SRE Replacement/Refresh
 - a. Warranty: The Contractor shall state its warranty policy, which shall include a minimum of a 30 day SRE return policy following receipt during which period the user may return the SRE and obtain an equivalent replacement without penalty.
 - b. Device Refresh: The Contractor shall offer refresh SRE after no more than 20 months of activation. An Ordering Entity may refresh SRE with the device options and obligations of a new activation. For SRE activated less than 20 months, the Contractor shall publish its method for determining the refresh price.
12. Support Interface
 - a. The interface shall support the following requests/commands being sent to the Contractor. The Contractor shall state the target and maximum amount of time that the below commands shall take.
 - i. Activate and deactivate devices
 - ii. Reset voicemail passwords
 - iii. Suspend/resume a line of service
 - iv. (Optional) Kill a device
 - v. (Optional) Wipe a device
 - vi. Submit trouble tickets
 - b. The Contractor shall provide acknowledgements of all requests/command completions, which shall be sent to the agency designated point of contact. Trouble ticket updates shall be updated as the agency requires.
13. Usage Data and Notifications. The Contractor shall provide usage data information and excessive usage notifications. This includes a summary of how much data has been used within an ongoing billing period to potentially provide an agency with an advanced indication that it may run over its allocated pooling GBs.
14. The Government will own all user privacy data, including the name of the individual using the service, all contact information, usage information and inventory data. The Government will also own all content sent to the Government including emails, text messages, data, and voicemails.

15. Section C.2.6.2 - #4 added the following sentence: "International long distance and international roaming prices shall be "add-ons" to existing voice or data pricing."

16. Section C.2.6.3.1 – updated the Wireless Service Interfaces table to remove the outdated Air Link: (Std:XXX) references, on UNI Type 6 under Protocol Type an incorrect standard reference was removed, and UNI Type 7 was added for 5G and future evolutions.

UNI Type	Interface Type and Standard	Payload Data Rate or Bandwidth	Protocol Type
1	GSM and IS-136 TDMA	Up to 116 Kbps	1. Transparent 2. IP v4 3. IP v6
2	CDMA 1xRTT	Up to 144 Kbps	1. Transparent 2. IP v4 3. IP v6
3	3G WCDMA	Up to 384 Kbps	1. Transparent 2. IP v4 3. IP v6
4	CDMA EVDO	Up to 500 Kbps	1. Transparent 2. IP v4 3. IP v6
5	WCDMA-HSDPA [Optional]	Up to 14.4 Mbps	1. Transparent 2. IP v4 3. IP v6
6	4G LTE	Up to 100 Mbps (maximum 300 Mbps)	1. Transparent 2. IP v4 3. IP v6
7	5G and future evolutions	Up to 20 Gbps (Depending on configuration)	1. Transparent 2. IP v4 3. IP v6

17. Section C.2.8.5.1.1 – added the word “Security” to correctly spell out the agency acronym for CISA.

18. Section C.2.8.6.1.1 – changed the last sentence in the first paragraph to include the addition of Mobility-as-a-Service as a MMS technical capability.

“MMS supports mobile device management (MDM), mobile application management (MAM), mobile content management (MCM), mobile security, deployment support, and Mobility-as-a-Service (MaaS).”

19. Section C.2.8.6.1.3 – updated the first two bullets to include 5G and connectivity support for laptops and other mobile devices:

1. 3G/4G/5G and future evolutions of Cellular Service, based on standards for CDMA, GSM, LTE, and NR
2. Laptops, Smartphones, Tablets, and other mobile devices

20. Section C.2.8.6.1.4 – updated the first sentence to include MaaS as a technical capability of MMS. Deleted “and,” in front of Deployment Support and added “, and MaaS” after Deployment Support.

21. Section C.2.8.6.1.4.1 – 2. a) added “Microsoft Windows,” to the list of target platforms listed.

22. Section C.2.8.6.1.4.1 – 2. k) added “OAuth, etc.” to the list of federated authentication examples.

23. Section C.2.8.6.1.4.1 – 10. c) added “and/or derived credentials” after the mention of PIV/CAC card support.
 24. Section C.2.8.6.1.4.3 - added "(MCM)" in the Mobile Content Management heading to be consistent with the other MMS Technical Capability headings.
 25. Section C.2.8.6.1.4.6 for Mobility-as-a-Service (MaaS) was added.
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C.2.8.6.1.4.6 Mobility-as-a-Service (MaaS)

Mobility-as-a-Service (MaaS) is a subscription-based service enabling mobile endpoints to be delivered and securely managed as a consumable service. In this context a mobile endpoint is a user interface that requires wireless connectivity to communicate with an enterprise or carrier network. The service provider retains asset ownership of the endpoint(s) and provides services regarding asset issuance, endpoint performance management, service plan management, the mobility management software, and customer support services into a full solution that minimizes prior device-centric costs and operations. Under MaaS, third-party mobility providers are responsible for the mobility of your organization, from device staging and kitting, to replacement and protection, to managing cross-carrier wireless access and pooling. MaaS includes end-to-end service delivery and management with respect to:

- Planning and management of agency MaaS needs and solutions
- Provisioning, kitting, and service delivery
- Enterprise Mobility Management (EMM) or Unified Endpoint Management (UEM)
- Ongoing customer support
- Logistics for device refresh and end-of-life disposal/recycling

The following capabilities are mandatory unless marked optional:

1. Solutions shall adhere to the EIS Wireless Service (MWS) Standards, Technical Capabilities and Features in Section C.2.6 for the underlying wireless services proposed as part of the MaaS.
2. Solutions shall meet or exceed the EIS MMS Section C.2.8.6.1.4 Technical Capabilities within the MDM, MAM, MCM, Mobile Security, and Deployment Support subsections.
 - a. Based on agency requirements, contractors may propose additional MMS Features listed in Section 2.8.6.2 to supplement and enhance their MaaS offerings.
3. The contractor shall implement mobile device management, mobile application management, mobile identity management/integration, mobile content management, and data containerization (separating corporate and personal data).
4. The contractor shall manage device issuance to and retrieval from end users. This support shall include staging and kitting, depot repair, advanced replacement, recycling, and device refresh in accordance with Section C.2.6 of the EIS contract.
5. The contractor shall implement and manage secure access to corporate resources and content through authentication, encryption, containerization, and enterprise file synchronization and sharing (EFSS) capabilities.
6. Sourcing management leveraged to purchase, provision and activate network services, applications, and devices.

7. Financial management capabilities which include sourcing, ordering, provisioning, inventory, usage, and invoice management and reporting.
8. The contractor shall provide program management services to manage the MaaS capabilities, service requests, account(s), and third-party providers the contractor may leverage to deliver their solution.

26. Section C.2.8.6.2 – removed the word “None” and added the following table of MMS Features:

The MMS features are mandatory unless marked optional.

ID Number	Name of Feature	Description
1 (Optional)	Mobile Threat Protection (MTP)	Mobile Threat Protection (MTP) is a component of a layered Mobile Endpoint Protection Strategy that covers the major areas not addressed by the MDM, MAM, MCM or Mobile Security technical capabilities. MTP solutions monitor the mobile device in real-time to identify mobile threats that may compromise the device, mobile applications, or data residing on the device. MTP integrates with a MDM system deployed on devices resulting in remediation or quarantining of the threat. The MTP solution evaluates an application threat and compliance against a set of pre-defined agency policies based upon acceptable risks, it validates operating system (OS) integrity against any compromise, it detects network threats such as MITM (Man-in-the-Middle) attacks and will detect device configuration risks.
2 (Optional)	Mobile Application Vetting	Mobile Application Vetting (also referred to as app threat intelligence or threat protection services) refers to software, processes, and tools required to test, validate, and verify mobile apps against a baseline of security, privacy, and organization-specific requirements and policies. Vendors may provide on premise, cloud-based, or outsourced app vetting solutions that run static and/or dynamic analysis tests and reporting on apps to detect security vulnerabilities and malicious or privacy violating behaviors.

ID Number	Name of Feature	Description
3 (Optional)	Mobile Identity Management	<p>Mobile Identity Management is the secure integration of the attributes that unerringly identify a person in the physical and online environments, within the mobile device. MIM is a set of complementary products and solutions that issue and maintain certificates, which may include Derived PIV Credential (DPC) usage. Once issued, credentials on a mobile device will support:</p> <ul style="list-style-type: none"> • Wi-Fi authentication • Virtual Private Networking • User authentication to Commercial off the Shelf (COTS), Software-as-a-Service (SaaS), and other applications and services • Data in Transit • Data Encryption • Signing of individual documents and records
4 (Optional)	Mobile Backend-as-a-Service (MBaaS)	<p>MBaaS represents mobile application delivery solutions that provide mobile application developers with a platform, tools, and libraries to develop, integrate, test and publish their applications to backend cloud storage and processing resources while also providing common features such as user management, push notifications, social networking integration, and other features demanded by mobile users.</p>
5 (Optional)	Internet of Things (IoT)	<p>Internet of Things (IoT) service providers engage with those who design, develop, operate, secure, or maintain an infrastructure of networked components comprised of computing resources, digital sensors, actuators, and human interfaces that are combined into systems to achieve specific goal(s).</p>

27. Section C.2.8.6.3 – updated the first sentence to state the following:

“The MMS shall support the UNIs for all Smartphones and Tablets (based on smartphone OSs) operating under 3G/4G/5G and future evolutions of Cellular Service (based on standards for CDMA, GSM, LTE, and NR) as required.”

28. Section C.2.8.6.4.1 - added the following two Managed Mobility Service Performance Metrics for Availability and Time To Restore to the table and their associated Notes (5 and 6).

Availability	Routine	99.5%	≥ 99.5%	See Notes 5 and 6
Time To Restore (TTR)	Without Dispatch	4 hours	≤ 4 hours	
	With Dispatch	8 hours	≤ 8 hours	

5. MMS availability is calculated as a percentage of the total reporting interval time that MMS is operationally available to the agency. Availability is computed by the standard

$$\text{formula: } \textit{Availability} = \frac{\textit{RI}(\textit{HR}) - \textit{COT}(\textit{HR})}{\textit{RI}(\textit{HR})} \times 100$$

6. MMS MaaS radio access network performance is likely to vary depending on location (e.g., urban, suburban, or rural), as well as the technical specifications and capabilities of the deployed infrastructure, such as the radio access equipment.

29. Section C.2.9.1.4 – added “, 5G,” to 21. Wireless Access Arrangements a) to specifically add 5G.
30. Section C.2.9.3 – for UNI Type 26 updated to state 5G, and remove an outdated standard in the Signaling Type column.

26	3G / 4G LTE / 5G and future evolutions (Cellular Service)	Up to current standard	1. IP (v4/v6)
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3. The estimated dollar value of the contract remains unchanged.
4. Except as provided herein, all prices, terms and conditions of the document referenced in Item 10A remain unchanged and in full force and effect.